

Retail Price \$5.00 PP Number 27 P/N 19330145 Supersedes All Previous Catalogs

#### 2015 CATALOG



NEW Z/28 PARTS!

Suspension, Exhaust, Aero Parts and More for Your Gen V Upgrade! PAGE 18



# NEW! DR525 DRAG RACE Package ready now!

Sealed LS3 Conversion Makes Race-Ready 525HP! PAGE 126



### **Engines and Parts that Fuel Dreams!**

There's nothing like the feeling of hitting the road for the first time in a project vehicle you built. The countless hours in the garage and the skinned knuckles are all worth it the first time you hear your baby rumble to life – and the first time someone at a stoplight shouts, "Nice car!"

Chevrolet Performance has been helping enthusiasts build the cars and trucks of their dreams for more than four decades, and we're making it easier than ever with a growing lineup of crate engines, transmissions, parts and vehicle accessories designed to simplify your decisions, reduce installation time and instill the peace of mind that your investment is money well spent.

We're also adding choices all the time and that's never been more true than 2015, with the addition of all-new manual transmission installation kits designed for all of our engine families. They enable our T-56 Super Magnum six-speed manual to bolt right up to Small-Block, Big-Block and LS engines – including our all-new LT1 crate engine. We've even added the T-56 Super Magnum to our lineup of all-inclusive Connect & Cruise crate powertrain systems.

Back to the LT1 engine for a moment: It's the same production engine used in the seventh-generation Corvette Stingray and our special crate-engine version retains all of its high-tech features, including variable valve timing, direct injection and cylinder deactivation – making it the most technologically advanced Chevrolet V-8 crate engine we've ever offered. To make the installation of the LT1 almost a "plug-and-play" proposition, we have developed a complete controller system. Like everything else in this catalog, it is designed, validated and approved by Chevrolet Performance engineers.

We've also added a number of the Camaro Z/28's performance and suspension components to our comprehensive roster of fifth-gen Camaro parts for 2015, as well as a supercharged 350 COPO Camaro crate engine for serious drag racing. For those who are more budget-oriented, a new spec-class DR525 LS3-based engine will be very popular with weekend warriors as well.

Whether you're looking for appearance and mild performance upgrades or building a take-no-prisoners race car for the drag strip or road course, factory engineering is the common thread linking every item in this catalog. Our engines, parts and vehicle accessories were all designed, validated or approved by engineers who design production parts for the highest-performing vehicles at General Motors, so you're assured they'll fit and perform as expected.

On behalf of everyone here at Chevrolet Performance, I hope you'll find this catalog helpful and inspiring. We have just about everything you need to build the car or truck of your dreams.

All you need to do is supply the dream!

The Chevrolet Performance Team

Every effort is made to make this catalog comprehensive and factual. We reserve the right, however, to make changes at any time, without notice, to materials, equipment, specifications, and availability. Specifications, dimensions, measurements, ratings, and other numbers are based upon design and engineering information, prototypes and laboratory tests. Since some information may have been updated since the time of printing, please check with your dealer for complete details.

The parts listed in this catalog are intended primarily for use in race or "off-highway" vehicles only. Federal law restricts the removal, modification or knowingly making inoperative of any part or element of design installed in compliance with an applicable Federal Motor Vehicle Safety Standard or any part of federally required emission control systems on a motor vehicle used on public roads. Further, many states have enacted laws with various penalties for tampering with, or otherwise modifying any required emission or noise control system. Parts which have been granted an exemption by the California Air Resources Board (CARB) are noted as such.

Unless specifically noted to the contrary herein, vehicles equipped with Chevrolet Performance Parts may not meet Federal Motor Vehicle Safety Standards and emissions regulations and should not be operated on public roads. Chevrolet Performance customers are responsible for ensuring their use of Chevrolet Performance Parts complies with applicable federal, state and local laws, regulations and ordinances.

Many parts intended for racing or other "off-highway" use are not designed or tested for crashworthiness or to meet the safety needs of the motoring public, and may adversely affect the original intended performance or handling characteristics of the vehicle. These parts are designed and intended to be used with experts supervising their installation and use, to help assure the proper and safe operation of the vehicle.

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PERFORMANCE

# PERFORMANCE CENTER

# NEWS

# **NEW for 2015**

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# All-New Z/28 Parts Available for the Gen V Camaro

When Motor Trend pitted the all-new Camaro Z/28 against formidable all-wheel-drive competitors Porsche 911 Turbo S and Nissan GT-R on a road course, they were blown away when the rear-drive Chevy out-hustled them around the track.

Beating those well-established supercars prompted the editors to say the Z/28, "stands as one of the absolute best track-focused cars in the world," and, the editors proclaimed, "Simply put, this is Chevy at its best." In fact, they were so impressed with the Camaro Z/28, they gave it their Best Driver's Car award for 2014 – the only time it has ever gone to an American-brand car.

Chevrolet Performance is thrilled to announce an all-new collection of Z/28 parts for Gen V Camaros. They're the same factory-engineered and validated parts used on the production model to deliver its world-beating track performance.

The collection includes:

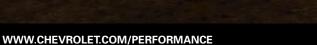
- Aerodynamic components kit that includes many of the downforce-enhancing exterior components that help the production Z/28 deliver up to 1.08 g of cornering force
- Brake ducts that funnel cooling air to the front brakes
- Air intake that features an open air box design with a replaceable air filter
- Exhaust manifolds from the production 7.0L LS7 engine
- Dual-mode exhaust system the same system used on the production model, which delivers quiet performance at lower speeds and greater sound at higher engine speeds
- RECARO sport seats designed for low weight and excellent support for high-performance driving
- Rear differential cooler keeps the rear axle cooler for greater durability and more predictable performance during highperformance driving
- Suspension kit with DSSV® Dampers that rely upon a pair of self-piloted spool valves to control fluid through tuned port shapes rather than conventional deflected disc dampers. The unique dampers are the center of a comprehensive suspension package that also includes higher-rate coil springs, smaller-diameter solid stabilizer bars, and higher-rate suspension bushings.

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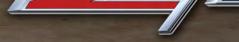
The Z/28 components are designed for compatibility with Camaro SS. Some additional modifications and fabrication may be required; and some components may be adaptable to V-6 models. And because they're designed and tested by General Motors, you can trust they'll fit, perform and last as expected. See page 18 for complete details on all the components.

#### Z/28 ORIGINS

Developed originally to qualify the Camaro for SCCA's popularTrans-Am sedan-racing series, the original Z/28 was a package targeting performance and handling features - just like the 2014-15 models. To match class rules limiting engine displacement to 305 cubic inches, engineers installed the shorter-stroke crankshaft from Chevy's 283 engine in the block of the 327 engine, creating the Z/28's unique, high-revving 302-cubic-inch engine. It was matched with a close-ratio fourspeed transmission, power front disc brakes, quickratio steering box, heavy-duty cooling, a 3.71 axle ratio and a sport suspension. There was no external identification on the original cars and Chevrolet built only 602 of them for 1967. Word spread quickly and the high-winding Z/28's sales jumped to 7,199 in 1968 and 20,302 in 1969.



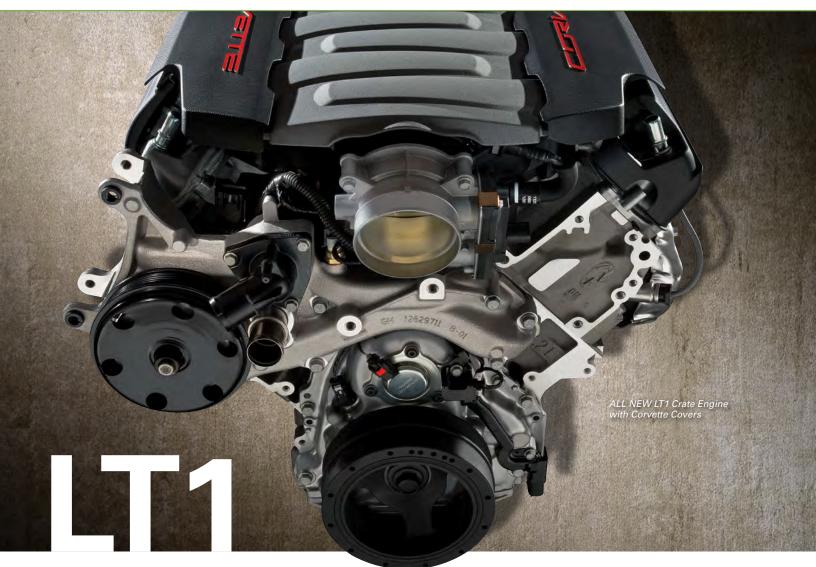
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#### What's NEW

- RECARO Seats
- Suspension Kit
- Exhaust Manifold Package
- Brake Ducts
- Air-Intake (not shown)
- Aero Components (not shown)
- Differential Cooler

#### PERFORMANCE CENTER NEWS



# LT1: The Next Generation of Small-Block Performance

Chevrolet Performance is proud to announce all-new LT1 crate engine packages designed to give your project vehicle a high-tech heart transplant – and take it to a higher level of performance and efficiency!

Introduced on the seventh-generation Corvette Stingray, the 6.2L LT1 V-8 opened the next chapter in the long, historic legacy of the Small-Block engine. It is architecturally similar to the LS family of Small-Block engines, but with a unique block casting, cylinder head design, oiling system and more. It also combines advanced technologies including direct injection, Active Fuel Management (cylinder deactivation) and continuously variable valve timing to support an advanced combustion system. In fact, more than 10 million hours of computational analysis were conducted on the engine program, including 6 million hours (CPU time) dedicated to the advanced combustion system. The result is more power with greater efficiency than any previous Small-Block engine!

Chevrolet Performance's new LT1 crate engine – offered with a wet-sump or dry-sump oiling system – is rated at 460 horsepower and 450 lb-ft of torque; and a controller specially designed for retro-fit applications is included. It retains the operation of all the advanced technology features. See page 204 for complete details.

There are also all-new transmission installation kits specially designed to match the new LT1 and its 8-bolt crankshaft flange with Chevrolet Performance's 4L60-series four-speed automatic transmissions and the T-56 Super Magnum six-speed manual. See page 344 for complete transmission details.

# A Heritage of LT1 Performance

The Gen V LT1 engine that powers the 7th-generation Corvette Stingray is the third Small-Block to wear the historic designation, with each representing important milestones in Chevrolet's performance heritage.

#### 1970-72 LT-1

The first LT-1 (used with a hyphen, unlike later models) offered in the Camaro Z/28 and Corvette was the hottest regular production Gen I Small-Block. The 350-cubic-inch engine was designed for high-rpm horsepower in an era known for fairly low-rpm Big-Block engines. It featured a solid-lifter camshaft, an 11:1 compression ratio, a 780-cfm Holley carburetor and a high-rpm valvetrain, producing 360 horsepower in the Z/28 and 370 horsepower in the Corvette at 6,000 rpm, as well as 380 lb.-ft. of torgue and a sky-high 6,500-rpm redline in its 1970 debut.

#### 1992-97 LT1

Chevrolet revived the LT1 engine designation for an all-new, 350-inch engine in the 1992 Corvette and it would go on to power the 1993-97 Camaro Z/28 and even the 1994-96 Impala SS. It also introduced the second generation of the Small-Block engine family, which was characterized by an all-new, reversed cooling system designed to keep the heads cooler for greater spark advance and higher compressionratio performance. It also featured a crank-triggered ignition system and an updated version of the port fuel injection system. The LT1 launched with 300 horsepower in the Corvette – the first Small-Block with at least 300 hp since the original LT-1 – and eventually hit 330 hp in a special, high-output LT4 version in 1996.

#### 2014+ LT1

Seventeen years after the second-generation LT1, the all-new, Gen V-based LT1 engine debuted in the 2014 Corvette Stingray, where it helped the car sprint from 0 to 60 mph in less than four seconds and cover the guarter-mile in 11.9 seconds. It's also the first LT1 to displace more than 350 cubic inches (376 cid/6.2L). The Gen V LT1 shares architectural similarities with the previous LS-series Small-Block, but with virtually no interchangeable parts. It also introduced new technologies to the Corvette, including direct injection and variable valve timing. A supercharged version of the engine dubbed LT4 - and rated at 650 hp – powers the 2015 Corvette Z06, making it the most powerful regular-production Chevrolet engine in history.



1970 LT1 Stingray with NEW 2015 LT1 Engine

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# All-New DR525 Sealed Drag Race Crate Engine Reduces the Cost of Racing!

Chevrolet Performance's all-new DR525 sealed drag racing crate engine signals an important advancement for drag racing, enabling exciting heads-up racing at a lower cost than custom-built engines. It's an approach Chevrolet Performance implemented in a number of circle track racing series, providing racers a highperformance engine at a great value.

The DR525 is designed as the spec engine for the National Muscle Car Association's (NMCA's) new LS Stock racing class in the LSX Showdown Challenge Series. The 6.2L (376 cubic inches) naturally aspirated engine is rated at 525 horsepower and features several tamper-proof bolts to ensure class compliance. And while it is the spec engine for the LS Stock class, it is legal in other NMCA/LSX Showdown Challenge classes – and other drag racing series.

Technical highlights include:

- 525 horsepower at 6,300 rpm and 489 lb.-ft. of torque at 4,400 rpm
- Production-based, lightweight aluminum cylinder block with six-bolt, cross-bolted main caps
- High-flow, rectangular-port cylinder heads assembled with 2.165/1.590 valves and high-rpm-capable beehive valve springs
- 10.7:1 compression ratio
- Chevrolet Performance ASA hydraulic roller camshaft with 0.525/0.525-inch lift and 226/236 degrees duration
- Lightweight composite intake manifold with a 90mm throttle body
- Two tamper-proof bolts incorporated on the intake manifold, as well as a tamper-proof bolt on the front cover and the oil pan
- Assembly includes production-type cast iron exhaust manifolds; fuel rail and injectors; coil packs, wires and spark plugs; LS3 water pump and damper
- A front accessory drive with alternator, drive belt and more is available separately (P/N 19329418).

The DR525 is offered with two part numbers: 19329009 (includes Chevrolet Performance's muscle car oil pan) or 19329008 (includes fourth-generation F-body oil pan). Chevrolet Performance's customcalibrated E67-type engine control system – part number 19329003 (sold separately) – must be used with the DR525 in the LS Stock class. It features a tamper-proof engine control unit.

See page 126 for a complete technical description of this affordable, durable and powerful racing engine!

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# Compact Powerhouse! Chevrolet Performance's New 'LTG' 2.0L Turbo Crate Engine

If you're looking for something different to power your project car – particularly a compact car or an early street rod without a lot of space under the hood – Chevrolet Performance's new LTG 2.0L turbocharged four-cylinder (P/N 19328837) is the solution!

This technologically advanced compact powerhouse is rated at 272 horsepower and 295 lb.-ft. of torque. That's more horsepower than many V-8 engines from the 1970s and '80s; and even better, 90 percent of peak torque is delivered between 1,700 and 5,500 rpm. In fact, thanks to the turbocharger generating up to 20 pounds of boost, peak torque is sustained between 3,000 and 4,600 rpm.

That means when you go to wide-open throttle, the power comes on immediately and holds steady across the rpm range, for a strong, exhilarating feeling of performance on demand. And with a lower weight than an iron-block V-8 engine, your car's power-to-weight ratio and frontto-rear weight balance are improved.

NEW LTG Engine Controller

Dare to be different with the LTG 2.0L Turbo. You'll never miss those extra four cylinders!

See page 206 for complete details and information on the complementing engine controller kit.

NEW LTG 4-Cylinder Turbocharged Engine and Manual Transmission (assembled)



# Chevrolet Performance is Your Official COPO Camaro and Components Source!

The spirit of the special-order race cars lives on today with Chevrolet's 2015 COPO Camaro program, which includes 69 fully assembled, factory-built race cars and a comprehensive range of official COPO crate engines and vehicle components. They're only available from Chevrolet Performance and they'll help you build a stronger, faster race car.

Chevrolet Performance offers dozens of additional COPO Camaro service parts. Everything from factory-engineered injector harnesses and alternator mounting kits that provide optimum clearance with COPO crate engines to the body in white that Chevrolet uses to build the official COPO Camaro race cars. See page 61 for more details.

Racing enthusiasts who are interested in more information on the COPO program – including registering their interest in one of the 2015 COPO Camaros – can go to www.chevrolet.com/performance to sign up for the COPO Camaro Mailing List. They can also follow the latest COPO information at TheBlock.com – the online automotive community powered by Chevrolet Performance.

## All-New COPO 350 Supercharged Crate Engine

Chevrolet Performance is excited to offer an all-new COPO 350 Supercharged crate engine for 2015! It is the same engine offered exclusively in the 2014 COPO Camaro race cars. It features the high-performance LSX engine block, forged internals that stand up to the cylinder pressures generated by forced induction, LSX cylinder heads with six-bolt clamping strength and a 2.9L Whipple

screw-type supercharger. It is officially rated at 525 horsepower by NHRA.

Put this force-fed powerhouse to work in your race car and get used to triggering the win light! See page 58 for more information.





# **COPO Camaros Rule the Drag Strip!**

Chevrolet Performance's COPO Camaro factory race cars have been shaking up competitors at drag strips for more than three years and they're getting quicker than ever. They enter the 2015 racing season building on the momentum of Bruno Massel's historic win at last summer's Chevrolet Performance U.S. Nationals, in Indianapolis.

Massel drove 2014 COPO Camaro #6 to the win in Stock Eliminator, edging out Joey Wilkes' COPOpowered Camaro race car. He slogged through a ladder of nearly 200 competitors during six days of competition, taking the win light with an 8.82 ET on an 8.79 dial-in time. It was a close race with Wilkes, who ran a flawless 9.978 ET on his 9.97 dial-in, but a lightning-quick 0.043-second reaction time allowed Massel to reel him in at the finish line.

Massel's win was the first NHRA national event victory for a COPO Camaro. In all, about three dozen COPO Camaros and COPO-powered race cars vied for wins at the U.S. Nationals, making it the largest assembly of COPOs to date. The other winners included:

- J.C. Beattie SS/BBA (2012 COPO #8)
- Bob Letellier SS/CA (2012 COPO #34)
- Todd Patterson BB/SA (2014 COPO-powered Camaro)
- Brandon Bakies CC/SA (2013 COPO #21)
- Steve Novosel A/SA (2013 COPO #45)
- Rich Rinke A/S (2013 COPO #64)
- Joey Wilkes B/SA (COPO-powered Camaro).

Every win advances the COPO racing legacy established 45 years ago. If you haven't seen the wheels-up performance of authentic COPO Camaros in action, get yourself to an NHRA track this season and witness drag racing in one of its purest and most exciting forms!

# New Connect & Cruise Manual Transmission Packages!

Chevrolet Performance is adding manual transmission packages to our growing lineup of all-inclusive Connect & Cruise crate powertrain systems. That means you can select a smoothshifting four-speed automatic or the T-56 Super Magnum six-speed manual for each of the six available Connect & Cruise engines:

- LC9 5.3L (326 hp)
- LS3 6.2L (430 hp)
- LSA 6.2L Supercharged (556 hp)
- LS376/480 6.2L (480 hp)
- LS376/525 6.2L (525 hp)
- LS7 7.0L (505 hp)

Perfect for a pro-touring project, each new manual transmission package includes the T-56 Super Magnum transmission, which features the high-strength components used in vehicles such as the Camaro Z/28 and ZL1, packaged in a versatile case with several shifter location options – for more solutions in older vehicles. Each package also includes an all-new transmission installation kit, including the bell housing, which makes installation a cinch.

With Chevrolet Performance's industry-exclusive Connect & Cruise crate powertrain systems, one part number gets you the engine, transmission, electronic controllers and all the necessary wire harnesses. The systems not only simplify your project's powertrain decisions, they're offered at value-driven prices, costing less than sourcing the individual components separately. See page 212 for complete details – and get it together with Chevrolet Performance's new manual-transmission systems!

> LS3 6.2L Manual Connect & Cruise Package

## NEW! T-56 Super Magnum Installation Kits

Chevrolet Performance engineers have developed all-new installation kits that allow our new T-56 Super Magnum six-speed manual transmission (P/N 19329795) to be used with Small-Block, Big-Block and LS engines – and even the all new Gen V LT1 engine from the seventh-generation Corvette Stingray! Each allows easy, bolt-up installation for retro-fit applications in older vehicles.

The T-56 Super Magnum six-speed delivers the strength of the latest TREMEC TR6060 – the same transmission used in the Camaro Z/28 – packaged in a case similar to the fourth-generation F-body. The kits include a bell housing, pilot bearing and more. Most kits include a clutch and pressure plate. See page 353 for complete information.

## **NEW! 4L70-E Automatic** Transmission for LT1 Engine

Chevrolet Performance engineers have created an all-new transmission and installation package that matches our new LT1 crate engines – P/N's 19328728 (wet sump) and 19329997 (dry sump) – from the Corvette Stingray with the proven, durable 4L70-E four-speed automatic transmission for retro-fit applications. It includes a custom bell housing, 8-bolt flexplate and other installation hardware.

If you've already got the transmission, we also offer the bell housing and 8-bolt flexplate separately. See pages 349-350 for more information.

# All-New LS9 CNC-Ported Heads Take LS Performance to the Next Level!

Exceptional airflow characteristics are what give the LS engine family its tremendous performance capability, enabling power levels for street engines that were virtually unattainable in previous-generation Small-Block engines.

Chevrolet Performance's all-new LS9 CNC-ported cylinder head assembly – P/N 19328743 – represents a new benchmark in factory-engineering high-performance, with the strength and durability of the production LS9 cylinder head casting and the airflow enhancements of precision CNC porting. The result is a head that flows about 10 percent more than the production casting, while delivering the greater strength built into the LS9 casting.

The LS9, of course, was the supercharged engine in the C6 Corvette ZR1. To support the higher combustion pressure and temperature that come with forced induction, the heads were produced with a unique Roto-cast method in super-strong A356T6 aluminum alloy. With the Roto-cast method, the mold rotates to more evenly distribute the molten alloy, creating a denser head casting that virtually eliminates porosity. And compared to the similar LS3 head, the LS9 features reinforced webbing and a thicker deck for greater rigidity and minimal distortion. The A356T6 alloy also manages the higher heat of a forced engine more effectively.

In short, Chevrolet Performance's LS9 CNC-ported head assembly is the ultimate production-based

solution for supercharged and turbocharged combinations. Each comes fully assembled with production, lightweight titanium intake valves and sodium-filled exhaust valves, as well as strong beehive-type valve springs that can handle up to .570" lift. Importantly, they can be installed on any LS engine with at least a 4.000" bore using standard 11mm head bolts.

Our new LS9 CNC-ported head represents the pinnacle of Chevrolet Performance's tiered approached to affordable, factory-engineered cylinder head options for LS engine builders. It starts with our productionbased head assemblies such as the LS3 head (P/N 12629063), which deliver great performance out of the box and make excellent retro-fit solutions for many engine combinations. Our CNC-ported LS3 head (P/N 88958758) takes production performance higher with enhanced airflow capability that not only delivers a performance advantage singularly, but optimizes the gains offered with additional modifications such as a "hotter" camshaft.

The LS9 CNC-ported head is the ultimate choice when your production engine-based performance needs to include a blower or turbo. We are able to offer it – and other cylinder heads – at a surprising value, so go to www.chevrolet.com/performance and find a retailer near you for the latest pricing.

When it comes to affordable performance cylinder heads, you have options with Chevrolet Performance!



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- Download the online parts catalog
- Access the FUEL e-news archive
- Explore racing components and the COPO Camaro

It all begins at chevrolet.com/performance



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# TheBLOCK.com Social Forum

The only online community devoted exclusively to Chevrolet Performance news, culture, and more can be found on the all-new BLOCK Web site.

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- Home to enthusiast forums
- Event calendars
- Featured engineer interviews, vehicle builds, and part spotlights

Join the community at theBLOCK.com

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### Factory-Engineered Parts and Accessories for Your New Chevy!

Chevrolet Performance is your source for factory-engineered performance parts and appearance accessories to make the driving experience of your new Chevy more exciting and personal.

Chevrolet Performance offers components for nearly every new Chevy car and truck – including a comprehensive collection of production-based Z/28 and COPO racing parts for fifth-generation Camaro models. We've also got you covered for 2014-15 Corvette Stingray.

Chevrolet Performance parts and accessories are designed and validated to the same standards as regularproduction parts. That means they have the look, feel and durability of regular-production components – and we guarantee them, so you can be confident about your purchase. In fact, most of our production-based parts won't affect your new Chevrolet's new-vehicle warranty when they're installed by your dealer. That's a claim other aftermarket manufacturers can't make.

Your new Chevrolet is packed with performance and style, but only you can make it completely yours. Trust Chevrolet Performance for the best parts for it!

# Camaro Performance Upgrades



# All-New Z/28 Production Parts for Your Gen V Camaro

The Camaro Z/28 is the most track-capable model in its history, building on the legacy of the original, first-generation SCCA Trans Am-series contender. It is a performance car solely focused on track capability. In fact, its unique exterior is designed like a race car to produce downforce that presses the car against the track for greater grip – up to 1.08 g in cornering acceleration – and faster lap times.

Power comes from the LS7 7.0L V-8 that earned its stripes in the C6 Corvette Z06. It's rated at 505 horsepower and is backed by a TREMEC TR6060 six-speed manual transmission.

Every component from our special Z/28 collection is the same, factory-engineered and validated part used on the production vehicles, representing a development regimen that's unmatched by anything in the aftermarket. And because they're designed and tested by General Motors, you can trust they'll fit, perform and last as expected.

The components are designed for compatibility with Camaro SS. Some additional modifications and fabrication may be required; and some components may be adaptable to V-6 models.

Check out our collection and take your Camaro's performance to the next level!



#### **23464729 NEW!** Z/28 Suspension Kit with DSSV<sup>®</sup> Dampers\*

The Z/28 is the first high-volume production road car to employ racing-derived DSSV<sup>®</sup> (Dynamic Suspensions Spool Valve) damper technology from Multimatic. The dampers rely upon a pair of selfpiloted spool valves to control fluid through tuned port shapes rather than conventional deflected disc dampers. The design of the inverted-monotube front strut and aluminum-body monotube rear hydraulic dampers offers maximum response, stiffness and tuning optimized for the track, with the highest level of damper predictability, accuracy and repeatability. The unique dampers are the center of a comprehensive suspension package that also includes higher-rate coil springs, smaller-diameter solid stabilizer bars, and higher-rate suspension bushings. The dampers are matched with optimized stiff spring rates and stabilizer bars in both the front and rear to reduce body movement in hard cornering and acceleration. Also included in the package are front ride and handling links, rear upper control arms, rear trailing links, and toe links which have upgraded stiffer bushings designed to reduce cornering compliance and increase durability on the track.

**NOTE:** Intended for track only application, performs well when combined with high performance tires.

#### The system includes:

art Number	Description	ΩΤΥ
22942442	Performance Emblem	1
22842513	Front Stability Bar Assembly	1
22812943	Rear Stability Bar	1
22761221	Rear Stability Bar Links	2
23105018	Right Side Ride Link	1
23105019	Left Side Ride Link	1
23105014	Left Side Handling Link	1
23105015	Right Side Handling Link	1
23104902	Right Rear Upper Control Arm	1
23104903	Left Rear Upper Control Arm	1
23104900	Rear Lower Trailing Arm	2
22845487	Rear Toe Link	2
22903661	Left Strut	1
22903662	Right Strut	1
23473509	Right Rear Shock Absorber	1
23473510	Left Rear Shock Absorber	1
23475839	Installation Instructions	1

\*See Warranty Statement on page 29



#### **<23484878** NEW!

# 1LE & Z/28 Service Modification Kit (2010-2011 model years only)\*

This kit includes the rear lower control arms and hardware necessary to properly install the stability bars included in the 1LE and Z/28 suspensions. This kit is needed for 2010 and 2011 model year Camaros only, as the size of the stabilizer bar clamp stud changed starting in 2012 for both the front and the rear bar clamps. *\*See Warranty Statement on page 29* 





## 23478424 (driver seat, shown) NEW! 23478428 (passenger seat, shown) NEW!

#### Z/28 RECARO Sport Seats

RECARO is synonymous with performance seating and those developed for the Z/28 feature aggressive bolsters for high-performance driving, as well as cutouts inspired by the five-point harnesses found on racing seats. To save weight, the seats incorporate manual adjustment. They are trimmed in black leather with micro fiber inserts. Heated seats are a standard option in the 6-way powered seats only. "ZL1" and "SS" logos are optional for the 6-way powered seats only. Compatible on 2011+ Camaro coupe models only.

**NOTE:** To maintain vehicle warranty, both driver AND passenger RECARO seats must be installed by an authorized dealer. Seats must match the original vehicle configuration.

#### **RECARO Sport Seat Options include:**

Part Number	Description	Heated Seat	Stitching	Logo
23478424	4-way Manual, Driver Seat	Ν	Dark Steel Gray	—
23478428	2-way Manual, Passenger Seat	Ν	Dark Steel Gray	—
23478425	6-way Power, Driver Seat	Y	2SS-Light Stone	SS
23478429	6-way Power, Passenger Seat	Y	2SS-Light Stone	SS
23478426	6-way Power, Driver Seat	Y	2SS-Light Stone	_
23478430	6-way Power, Passenger Seat	Y	2SS-Light Stone	—
23478427	6-way Power, Driver Seat	Y	ZL1 - Torch Red	ZL1
23478431	6-way Power, Passenger Seat	Y	ZL1 - Torch Red	ZL1



#### **19302762** NEW! Z/28 Exhaust Manifold Package\*

The Z/28 high-flow exhaust manifolds will provide increased airflow to the Camaro LS3/L99 6.2L engine. This kit enables bolt-on installation of the Z/28 dual-mode exhaust system. However, it will not work with the production LS3/L99 exhaust system.

NOTE: No calibration support from GM is available.

\*See Warranty Statement on page 29



#### 23454579 NEW! Z/28 Exhaust Hook-Up Kit

Bolts an LS7 Z/28 cat-back exhaust to a LS3 Gen V Camaro. This is the only kit necessary to clamp the LS7 Z/28 exhaust (P/N 22906768) right up to your production LS3 equipped SS. The Z/28 Exhaust system provides a 26% reduction in back pressure compared to a LS3 equipped Camaro.

#### **22906768 NEW!** Z/28 Cat-Back Exhaust System (not shown)

A complete kit with pipes, mufflers, hangers and exhaust tips assembled as a single unit. It features 2.75" pipes, with 26% less back pressure than a stock LS3 system.

#### **<23216684 NEW**!\*\*

#### Z/28 Rear Differential Module Cooler Kit

The Camaro Z/28 is equipped with an RDM cooling system that circulates cooled transmission fluid through a heat exchanger integrated into the RDM cover. This innovative system reduces oil temperature by over 100°F, helping the differential maintain cool, stable performance throughout the most aggressive track driving sessions. The Z/28 system has greater heat rejection capability than competitors' air cooled RDMs helping to prevent differential component damage from high temperature oil degradation. The integral heat exchanger design also eliminates the weight, noise and complexity of a dedicated external pump and its associated hardware, seen in many aftermarket systems. This Z/28 based RDM cooling kit can be applied to any 2010+ Camaro SS with a manual transmission.

#### Kit Includes:

- Z/28 RDM cover with gasket
- Upper and lower fluid lines
- All mounting hardware, clips brackets, and bolts for proper installation

\*\*Expected availability January, 2015



#### 23454578 NEW! Z/28 Air Intake\*

A unique open air box intake system is used with the Z/28's LS7 engine, featuring a replaceable conical air filter and delivers the highest airflow performance of any production Camaro filter system. The air cleaner seals around the bottom of the hood, reducing the chance recirculated hot air will be drawn into the engine. It is a direct replacement for the intake system on the Camaro SS. The Z/28 air intake provides a 51% reduction in air restriction when compared to a standard LS3 equipped Camaro. Includes hardware that supports 1LE and SS PCV systems. Not recommended for use on L99.

\*See Warranty Statement on page 29



#### 23252398 NEW! Z/28 Brake Ducts

Brake ducts decrease "brake fade", increase brake component life, create secondary cooling of brake fluid and sustain brake pedal feel for longer periods of time. This is completed by a supply of constant fresh air to the back of rotor area. This air supply improves convection of the brake rotor vanes, reducing heat build up compared to conventional air flow, thus increasing brake performance. Fits 2014-2015 SS and 1LE.



#### A 23200130 NEW! Z/28 Wicker Bill Spoiler Kit

The rear spoiler kit contains everything you need to boost the downward force you are looking for on the rear wheels. The wicker blade spoiler extension rigidly attaches with 7 bolts that ensure a lifetime of durability. The spoiler and extension wicker can add over 110 lbs at speeds above 125 MPH. The kit includes, instruction sheet, rear wicker extension, installation drill template, and attaching fasteners. Compatible with the Rear Blade Spoiler (sold separately). *See page 36 for more details.* 



#### 23489551 NEW!\*\*

#### Z/28 Aero Components Kit (not shown)

Take your Camaro's handling performance to the next level with this kit. Select downforce enhancing aero components from the Z/28 are offered in this bolt-on package, including the Z/28 front splitter, Z/28 rear spoiler, underbody closeout panel, and revised Gurney lip extensions. And for even greater rear downforce performance, the Z/28 Wicker Bill Kit is offered above as a great addition to this kit.

\*\*Expected availability 1st Quarter, 2015

#### The system includes:

Part Number	Description	QTY	Part Number	Description	QTY
23498354	Front Splitter Kit	1	23222454	Gurney Lip Extension Kit	1
23227595	Front Splitter Bracket Kit	1	23459995	Under Body Closeout Panel Kit	1
23481656	Rear Blade Spoiler Kit	1			



#### ▲ 23120542

#### Camaro SS Brake Upgrade Kit for Camaro V-6

Upgrades the front and rear brakes for 2010-and-later Camaro V-6 models with the Brembo front and rear brake components from the SS. The front rotors are 14-inch diameter, compared to the 12.6-inch diameter of the V-6 brakes, while the rear rotors are 14.4-inch diameter, compared to the stock 12.4-inch rotors. The SS calipers are aluminum Brembo four-piston units for each corner. It's a more economical option for customers who want greater brake performance on the street and track, but don't need the performance of the ZL1 brakes. The kit includes two front rotors and calipers, two rear rotors and calipers, brake pads, master cylinder and installation hardware.

NOTE: Requires 20" wheels for caliper clearance. (See page 39 for details)

#### The system includes:

Part Number	Description	QTY
23120544	Installation Sheet	1
22956541	Master Brake Cylinder	1
23131778	RR Brake Shield	1
23131777	LR Brake Shield	1
92229712	Front Hose	1
92229713	Front Hose	1
92229716	Rear Hose	2
21012386	Front and Rear Hose Washers	8
11569590	Front and Rear Hose Bolts	4
11611687	Rear Drive Shaft Nut	2
22907156	Front Pad Kit	1

#### 23

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# 22959672 SS V-8 Camaro to ZL1 Brembo Front Brake Conversion Kit<sup>1</sup>

Upgrade the front brakes on your 2010-and-later Camaro SS with the larger brakes from the supercharged Camaro ZL1 – including racing-style two-piece, 14.6-inch front rotors and six-piston Brembo aluminum calipers, in black with the ZL1 logo. That compares with the 14-inch rotors/four-piston calipers on SS models.

The ZL1 two-piece rotors offer greater resistance to warping and potentially longer rotor life, as well as reduced weight. The design features a separate cast iron rotor brake ring mounted to an aluminum "hat" that attaches the brake assembly to the wheel hub. The hat and brake ring cool at different rates, which helps the rotor dissipate heat more effectively. This racing-style disc design enhances braking performance under track operating conditions. Kit includes two rotors, two calipers, pads and mounting hardware.

Add the optional ZL1 rear caliper kit, P/N 23104466, to complement the style of the ZL1 front caliper.

#### The system includes:

Part Number	Description	QTY
22960684	Front Installation Sheet	1
20795300	ZL1 Front LH Rotor	1
20944529	ZL1 Front LH Caliper	1
20944530	ZL1 Front RH Caliper	1
25940448	SPO Front Caliper Pin Kit	2
25940447	SPO Front Service Pad Kit	1
20944523	ZL1 Front LH Hose	1
20944532	ZL1 Front LH Shield	1
20795302	ZL1 Front RH Rotor	1
20944522	ZL1 Front RH Hose	1
20944531	ZL1 Front RH Shield	1
11570788	Caliper to Knuckle Bolts	4
11569590	Front Hose Bolts	2
21012386	Front Hose Washers	4
22942442	Chevrolet Perf. Badge	1

**NOTE:** Requires 20" wheels for caliper clearance. <sup>1</sup>For V-6 Conversion use Complete Kit P/N 22989384 (front and rear)

#### **23104466** SS V-8 Camaro to ZL1 Rear Conversion Kit

Make your SS rear brakes match the look of your front ZL1 conversion. Includes black ZL1 calipers and pads, hardware and instruction sheet.

**NOTE:** Requires 20" wheels for caliper clearance. (See page 39 for details)

#### The system includes:

Part Number	Description	ΩΤΥ
23117967	SSV8 Rear Installation Sheet	1
20944518	ZL1 Rear LH Caliper	1
20944519	ZL1 Rear RH Caliper	1
89047744	SPO Rear Pad Kit	1
89047728	SPO Rear Caliper Pin Kit	2
21012386	Rear Hose Washers (not shown)	4



# **22989384**

#### Camaro V-6 to ZL1 Brake Conversion Kit (Complete Front & Rear Kit)

Upgrade the brakes on your 2010-and-later Camaro V-6 to the system used on the supercharged Camaro ZL1 – including racing-style two-piece, 14.6 front rotors with six-piston Brembo front calipers, 14.4 inch rear rotors with 4-piston Brembo rear calipers and a V-8-specific master cylinder. That compares to the 12.6-inch front and 12.4-inch rear rotors and single-piston sliding calipers on V-6 models.

NOTE: Requires 20" wheels for caliper clearance. (See page 39 for details)

The front system includes:				
Part Number	Description	QTY		
22960684	Front Installation Sheet	1		
20795300	ZL1 Front LH Rotor	1		
20944529	ZL1 Front LH Caliper	1		
20944530	ZL1 Front RH Caliper	1		
25940448	Front Caliper Pin Kit	2		
25940447	Front Service Pad Kit	1		
20944523	ZL1 Front LH Hose	1		
20944532	ZL1 Front LH Shield	1		
20795302	ZL1 Front RH Rotor	1		
20944522	ZL1 Front RH Hose	1		
20944531	ZL1 Front RH Shield	1		
11570788	Caliper to Knuckle Bolts	4		
11569590	Front Hose Bolts	2		
21012386	Front Hose Washers	4		
22942442	Chevrolet Perf. Badge	1		

The	rear s	vstem	includes:
1110	icui s	yatem	monuues.

Part Number	Description	ΩΤΥ		
22989385	Rear Installation Sheet	1		
11515781	Rear Caliper to Knuckle Bolts	4		
92245929	Rear Rotor	2		
20944518	ZL1 Rear RH Caliper	1		
20944519	ZL1 Rear LH Caliper	1		
89047744	Rear Pad Kit	1		
89047728	Rear Caliper Pin Kit	2		
23131777	ZL1 Rear LH Shield	1		
92229716	ZL1 Rear RH & LH Hose	2		
23131778	ZL1 Rear RH Shield	1		
21012386	Front & Rear Hose Washers	4		
22956541	V8 Master Cylinder	1		
11569590	Rear Hose Bolts	2		





#### 23123398 – V-6 Camaro or 23123397 – V-8 Camaro (not shown) Camaro 1LE Track Pack - Street

Upgrade your V-6 or SS Camaro's suspension with the same parts used in the 1LE Trak-Pak. This kit features a stiffer 27mm solid front stabilizer bar and a 28mm solid rear stabilizer bar for improved body control in cornering. The front struts were redesigned with improved damping curves for more body control and quicker response times. It also includes new faster reacting rear monotube shocks to replace the V6 and SS twintube design and combines them with a stiffer rear upper shock mount to increase vehicle agility, both are shared with the ZL1. The bushings in the rear toe link are replaced with spherical bushings to eliminate compliance in cornering, which is also common with the ZL1. The V-6 kit also includes the stiffer front springs used on the 1LE and SS variants.

NOTE: The V-6 1LE suspension kit requires use of SS Brake kit #'s 23120542 and 23120543 for proper rear stabilizer bar clearance (not included).

23123397 V-8 s	system includes:		23123398 V-6 s	system includes:	
Part Number	Description	ΩΤΥ	Part Number	Description	C
11516078	Nut-FRT STAB HYD SHF Link	2	92245257	Spring-FRT	
22942442	Emblem-F/End UPR Tie Bar	1	23123400	Installation - ACSRY	
23123399	Installation - ACSRY	1	11516078	Nut-FRT STAB HYD SHF Link	
11569638	Nut-FRT SUSP Strut MT	2	22942442	Emblem-F/End Upper Tie Bar	
11516078	Nut-RR S/ABS (UPR)	2	23123399	Installation ACSRY	
22845487	Link ASM-RR SUSP ADJ	2	11569638	Nut-FRT SUSP Strut MT	
23115372	Absorber ASM-RR SHK	2	11516078	Nut-RR S/ABS (UPR)	
22922445	Mount ASM-RR S/ABS UPR	1	22845487	Link ASM-RR SUSP ADJ	
22922446	Mount ASM-RR S/ABS UPR	1	23115372	Absorber ASM-RR SHK	
22761221	Link ASM-RR S/ABS UPR	2	22922445	Mount ASM-RR S/ABS UPR	
22786260	Shaft ASM-RR STAB	1	22922446	Mount ASM-RR S/ABS UPR	
22812942	Shaft ASM-FRT STAB	1	22761221	Link ASM-RR STAB SHF	
22812984	Strut ASM-FRT SUSP	1	22786260	Shaft ASM-RR STAB	
22812985	Strut ASM-FRT SUSP	1	22812942	Shaft ASM-FRT STAB	
			22812984	Strut ASM-FRT SUSP	
			22812985	Strut ASM-FRT SUSP	



# 1000

# 22959394

#### **Camaro ZL1 HD Driveline Kit\* - Manual Transmission**

If you're building an ultimate-performance 2010-and-later Camaro, Chevrolet Performance's Camaro ZL1 Driveline Kit delivers the strength required to put big power to the pavement. This kit features the specialty components from the production Camaro ZL1, including a larger, stronger 9.9-inch cast iron differential housing, stronger axles and heavy-duty limited-slip differential. This patent-pending system is designed to ensure that ZL1's tremendous power is delivered smoothly to the ground. A rear-differential cooler is incorporated and reduces temperatures in the differential by more than 100° F (fluid lines must be installed). Asymmetrical half-shafts - a 60mm hollow shaft on the right and a 33mm solid shaft on the left offer different torsional stiffness rates, which work with the limited-slip differential to minimize the chance of wheel hop on hard launches. Also included is a stronger ZL1 prop shaft.

**NOTE:** This change will affect the indicated vehicle speed. Recalibration is required for accurate speedometer reading. Not available from Chevrolet Performance.

#### 22959395 (not shown) Camaro ZL1 HD Driveline Kit\* - Automatic Transmission

All the performance advantages of kit #22959394 described above, but for vehicles equipped with an automatic transmission.

**NOTE:** This change will affect the indicated vehicle speed. Recalibration is required for accurate speedometer reading. Not available from Chevrolet Performance.

\*See Warranty Statement on page 29

#### 19301504 - fits MY 2010-2013 > 19329768 - fits MY 2014-2015 NEW!\*\* Camaro 1LE 3.91 Gear Kit

This lower (higher numerically) ratio rear drive gear kit will increase effective rear wheel torque multiplication in GEN V Camaros by 13% (over standard 3.45 ratio) in a manual transmission-equipped car, and 20% (over standard 3.27 ratio) in an automatic-equipped car. This gearset is the original equipment ratio found in the 2013 - 2015 1LE Camaro package. Reflash of the Speedometer calibration by your dealer is included with the kit. GM provides a calibration and new certification label.

\*\*Expected availability January, 2015

#### The kit includes:

Part Number	Description	QTY
22813040	Gear Kit (shown)	1
92230403	Gasket	1
92230584	Oil Seal	1
90538867	Nut	3
92138569	Bolt	3
92139104	Bolt	3
88900330	Limited Slip differential Oil Additive	1
19301909	Label Altered Vehicle Cert.	1
19301503	Instruction Sheet	1

# 1000

#### Manual system includes:

Manual s	system includes:		Automat	tic system include	s:
Part Number	Description	QTY	Part Number	Description	QTY
20931145	Propshaft	1	22960156	Propshaft	1
20931133	RDM	1	20931134	RDM	1
22960153	RDM Plug/cap	2	22960153	RDM Plug/cap	2
22953760	LH Halfshaft	1	22953760	LH Halfshaft	1
22953759	RH Halfshaft	1	22953759	RH Halfshaft	1
22960154	Trans Flange	1	24256909	Trans Flange	1
89059464	Trans Flange Nut	2	24256278	Trans Flange Nut	1
89059465	Trans Flange Washer	1	22960155	I-Sheet	1
22960155	I-Sheet	1	11611234	Driveshaft Nut	2
11611234	Driveshaft Nut	1	11611965	Driveshaft Washer	2
11611965	Driveshaft Washer	2	11611335	Prop to Trans Bolt	3
11611335	Prop to Trans Bolt	3	11611365	Prop to Trans Nut	3
11611365	Prop to Trans Nut	3	11611336	Prop to RDM Bolt	3
11515758	Prop to Frame Bolt	2	11515758	Prop to Frame Bolt	2
11516878	RDM to Crade Bolt	3	11516878	RDM to Crade Bolt	3
11516078	RDM to Crade Nut	3	11516078	RDM to Crade Nut	3
22942442	Chevrolet Perf. Badge	1	22942442	Chevrolet Perf. Badge	1

vuinnei	-	
22960156	Propshaft	1
20931134	RDM	1
22960153	RDM Plug/cap	2
22953760	LH Halfshaft	1
22953759	RH Halfshaft	1
24256909	Trans Flange	1
24256278	Trans Flange Nut	1
22960155	I-Sheet	1
1611234	Driveshaft Nut	2
1611965	Driveshaft Washer	2
1611335	Prop to Trans Bolt	3
1611365	Prop to Trans Nut	3
1611336	Prop to RDM Bolt	3
1515758	Prop to Frame Bolt	2
1516878	RDM to Crade Bolt	3
1516078	RDM to Crade Nut	3



#### A. 19299460

#### Camaro Short-Throw Suede-Wrapped Shifter Kit

Get quicker, more precise shifts in your manual-transmission Camaro SS with Chevrolet Performance's Camaro ZL1 shifter kit. This is the same shifter used in the production ZL1, which delivers shorter shifts than the shifter in the SS. The kit includes the shifter, installation hardware and a sueded micro fiber shift knob with contrast stitching.

#### 23157703

# Camaro Short-Throw Leather-Wrapped Shifter (not shown)

The production Camaro Performance Package shifter delivers shorter, more precise shifts for a greater feeling of control and more immediate performance. It is a direct replacement for the standard manual shifter on 2010+ Camaro SS models and is similar to the Camaro ZL1 shifter, but with a leather-wrapped shift knob. The kit includes the shifter, shift knob and installation hardware.

#### B. 19301246

#### Air Inlet Kit for LS-Based Crate Engine Installation\*

Designed for universal LS and LSX EFI crate engine installations, this kit contains intake tubes with provisions for the mass airflow meter and vacuum line, along with a reusable, high-performance air filter and mounting hardware. When joined, the kit's straight and elbow tubes provide the optimal distance between the throttle opening and mass airflow meter, including the minimum length of straight tubing required for accurate mass airflow meter operation – saving the time and guesswork involved with fabricating a similar system. The intake tubes are polished and the kit also includes couplers, worm-style clamps and a vacuum hose. The mass airflow meter provision accepts all GM production meters, which must be purchased separately.

\*Only impacts warranty if used as a replacement for production air systems. No calibration or emission certification for OBD II vehicles is available. See Warranty Statement on page 29

**NOTE:** This is a universal kit and may not fit every application. Additional fabrication may be required, but the length of the straight tube must be maintained for accurate mass airflow meter operation.

#### C. 19300535

#### LS3 Power Upgrade Kit – Basic (Heads and Cam only)\*

Increase the power of the LS3 engine in your Corvette or Camaro SS by 40 horsepower with Chevrolet Performance's high-performance heads-and-cam kit. Developed by Chevrolet Performance engineers as a direct replacement for the factoryinstalled heads and camshaft (tuning required), the kit includes our CNC-ported LS3 cylinder heads, which flow more than 350 cfm (intake side), with 276cc intake runners and 2.165"/1.590" valves. The high-lift LS7 camshaft makes the most of the heads' generous airflow attributes, holding the big valves open so the engine can process more air. This kit fits other LS-family engines with at least 4.000" bores. Contents include the camshaft and fully assembled cylinder heads. Head gaskets and cylinder head bolts must be purchased separately.

#### 19301990 LS3 Power Upgrade Kit – Deluxe

#### (Heads, Cam and Components)\* (not shown)

Same as #19300535 (above), but includes cylinder heads, camshaft and components needed to complete the job.

Part Number	Description	ΩΤΥ
88958758	CNC LS3 Cyl Head	2
12638426	LS7 Camshaft	1
12623754	Camshaft Sprocket	1
11588723	Cam Bolts	3
12610046	Head Gasket	2
19258707	Head Bolts	20
12602540	Cover	2
12617944	Exhaust Manifold Gasket	2
12557840	Crankshaft Bolt	1



A Camaro Short-Throw Suede-Wrapped Shifter Kit



B Air Inlet Kit for LS-Based Crate Engine Installation



C LS3 Power Upgrade Kit – Basic

28



LS3 CNC-Ported Cylinder Head D



Camaro 1LE PCV System E



Camaro 1LE Strut Tower Brace H

#### D. 88958758 LS3 CNC-Ported Cylinder Head\*

It flows nearly 10-percent more than the stock cylinder head to promote greater power across the rpm band.

#### 19328743 NEW! LS9 CNC-Ported Head Assembly (not shown)

#### Roto-cast design for additional casting strength

- CNC-Ported to same specs as P/N 88958758 LS3 design
- Assembled with lightweight LS9 components including titanium intake valves, sodium-filled exhaust valves and high-performance beehive-style valve springs

See page 241 for more details

#### E. 12653073 Camaro 1LE PCV System

Crankcase ventilation system designed for the track-oriented Camaro 1LE package, designed for excellent oil separation and crankcase return during high-performance driving and high-load cornering. Simple catch-can-type design screws into oil-fill port in the rocker cover of V-8 and V-6 models.

#### F. 92229651

#### ZL1 Low-Restriction Air Filter

The 580-horsepower supercharged LSA engine in the Camaro ZL1 draws air through a special, low-restriction air filter element. It is a direct replacement for the air filter element in 2010+ Camaro SS models.

#### G. 19260557

#### ZL1 Fuel Pump

The high-capacity fuel pump module from the 2012 Camaro ZL1 drops right into 2010+ Camaro fuel tanks and supports about 600 hp.

**NOTE:** When combined with service part 22756513 and 22756514 fuel pickups, you can expand the amount of fuel available during road course usage on your Camaro.

#### H. 23120485

#### Camaro 1LE Strut Tower Brace

Standard on the Camaro 1LE, this lightweight, aluminum underhood tower-to-tower brace enhances chassis stiffness, contributing to a firmer feel behind the wheel and more-direct steering response. It is a direct bolt-on for 2011+ Camaro SS and V-6 models. Kit includes the brace and installation hardware (not shown).

\*The use of this engine or component in a new Chevrolet vehicle voids the vehicle powertrain warranty and may result in adversely affecting vehicle performance. In some cases, use of certain Chevrolet Performance components may result in the failure of other components or systems, thus voiding the warranty of the failed component or system. Chevrolet Performance components installed in new vehicles do retain their regular warranty coverage unless otherwise noted.

These engines and components have not been tested or validated by GM Engineering for use in these vehicles. Installation of components or engines in non-original applications may require fabrication or modifications that affect other vehicle systems. Certain engines may require modifications to the vehicle for fit and operation.

The installation and operation of these components or replacement engines in new vehicles is intended for off-road operation only.



So you have decided to stop using your Camaro SS merely as a daily driver, and want to dedicate it to dominating on the road course? We can help take you there!

As we have steadily improved the performance of our production Camaro lineup from the SS to the 1LE, ZL1, and culminating with the Z/28, we have continuously offered key performance enhancing parts from each of these performance variants as Chevrolet Performance Accessories to integrate into your Camaro SS, and improve its track acumen.

We have now combined the ultimate selection of these key upgrades, with select service parts and our Chevrolet Performance LS3 Engine upgrades to create an incredibly fast, reliable, and affordable track car that will take the drama out of your build and track events. These parts are designed and tested to meet not only our typical lifetime component and vehicle durability, but also our grueling 24-hour track durability testing.

Why take the risk with the aftermarket when you can transform your car with genuine Chevrolet Performance parts developed and tested by the same team that developed your Camaro SS?

#### THE ULTIMATE SELECTION

	Part Numbers per Model/Year				
Kit Description	Camaro 1LE 2014 and up	Camaro 1LE 2013	Camaro SS 2014 and up	Camaro SS 2010-2011	Camaro SS 2012-2013
Z/28 RDM	23172755	23172755	23172755	23172755	23172755
Z/28 RDM Cooling System Kit <sup>1</sup>	23216684	23216684	23216684	23216684	23216684
Z/28 Half Shaft (Left)	23473010	23473010	23473010	23473010	23473010
Z/28 Half Shaft (Right)	23473011	23473011	23473011	23473011	23473011
Z/28 Aero Package <sup>2</sup>	23489551	_	23489551	_	_
Z/28 Wicker Kit	23200130	_	23200130	_	_
Z/28 Suspension Kit	23464729	23464729	23464729	23464729	23464729
ZL1 Engine Mounts	20952437	20952437	20952437	20952437	20952437
Z/28 Concentric Slave Cylinder	24266013	24266013	24266013	24266013	24266013
Z/28 Induction	23454578	23454578	23454578	23454578	23454578
Z/28 Brake Ducts	23252398	_	23252398	_	_
LS7 Exhaust Adapter	23454579	23454579	23454579	23454579	23454579
LS7 Exhaust System	22906768	22906768	22906768	22906768	22906768
ZL1 Brake Upgrade Kit	22959672	22959672	22959672	22959672	22959672
LS3 Power Upgrade Kit – Deluxe	19301990	19301990	19301990	19301990	19301990
RECARO Seats (Driver/Passenger)	23478424/23478428	23478424/23478428	23478424/23478428	_	23478424/23478428
ZL1 Wheel Hubs/Bearings	_	_	25954415	25954415	25954415
1LE Wheels - Front, 20" x 10"	_	_	22798741	22798741	22798741
1LE Wheels - Rear, 20" x 11"	_	_	22798743	22798743	22798743
1LE Tires - Left	_	_	88878548	88878548	88878548
1LE Tires - Right	_	_	88878549	88878549	88878549
1LE PCV System	_	_	12653073	12653073	12653073
Camaro 1LE Strut Tower Brace	_	_	23120485	23120485	23120485
Short Throw Shifter (Suede) <sup>3</sup>	_	_	19299460	19299460	19299460
ZL1 Fuel Pump	_	_	19260557	19260557	19260557
ZL1 Fuel Pickup Hose	_	_	22756513	22756513	22756513
ZL1 Fuel Pickup Pipe	_	_	22756514	22756514	22756514
1LE Suspension Adapter Kit <sup>4</sup>				23484878	

<sup>1</sup> For Manual Cars only

<sup>2</sup> See page 22 for details

<sup>3</sup> Alternate P/N 23157703, Leather Gear Knob <sup>4</sup> Needed for Z/28 Suspension Upgrade

#### **CAMARO ELECTRONICS**

#### A. Ambient Lighting

This Ambient Lighting package provides a soft glow in 7 colors (blue, red, white, orange, purple, green, yellow) illuminating the console cup holder and footwell area of your Camaro. The color can be controlled via a button in your center console.

Part Number	Year	Detail
23173329	2014-2015	Footwell and Cup Holder
20971892	2014-2014	Cup Holder Lamp Package

Detail

#### **Battery Protection (not shown)**

2011-2015

Keep your vehicle's battery in peak condition with this 110-volt Battery Charger.

110-Volt Battery Charger

### Part Number Year **CAMARO EXTERIOR**

#### **B.** Custom Graphics

20981933

Camaro vehicle graphics by 3M Original Wraps are a great way to add a personal touch to your vehicle. They are specifically designed and crafted for your Camaro. Non-GM Warranty. Warranty by Original Wraps; for information, please contact 1-866-944-9727.

Part Number	Year	Detail
19299164	2011-2015	Lower Thick Stripe Vinyl Wrap by Original Wraps, Gloss White
19299165	2011-2015	Lower Thick Stripe Vinyl Wrap by Original Wraps, Matte Black
19299166	2011-2015	Pointed Angle Stripe Vinyl Wrap by Original Wraps, Matte Black
19299167	2011-2015	Pointed Angle Stripe Vinyl Wrap by Original Wraps, Gloss White
19299168	2011-2015	Center Pin Stripe Vinyl Wrap by Original Wraps, Matte Black
19299169	2011-2015	Center Pin Stripe Vinyl Wrap by Original Wraps, Gloss White
19299170	2011-2015	Dual Stripe Vinyl Wrap by Original Wraps, Matte Black
19299171	2011-2015	Dual Stripe Vinyl Wrap by Original Wraps, Gloss White
19299172	2011-2015	Cowl Vinyl Wrap by Original Wraps, Matte Black
19299173	2011-2015	Cowl Vinyl Wrap by Original Wraps, Matte Silver
19299174	2011-2015	Hood Vinyl Wrap by Original Wraps, Matte Black
19299175	2011-2015	Roof Vinyl Wrap by Original Wraps, Matte Black
19299176	2011-2015	Decklid Vinyl Wrap by Original Wraps, Matte Black
19299177	2011-2015	Hood Vinyl Wrap by Original Wraps, Matte White
19299178	2011-2015	Roof Vinyl Wrap by Original Wraps, Matte White
19299179	2011-2015	Decklid Vinyl Wrap by Original Wraps, Matte White
19299180	2011-2015	Cowl Vinyl Wrap by Original Wraps, White
19299181	2011-2015	Center Pin Stripe Vinyl Wrap by Original Wraps, Matte Black
19299182	2011-2015	Center Pin Stripe Vinyl Wrap by Original Wraps, Gloss White
19299183	2011-2015	Dual Stripe Vinyl Wrap by Original Wraps, Matte Black
19299184	2011-2015	Dual Stripe Vinyl Wrap by Original Wraps, Gloss White

#### C. Decal/Stripe Package - Fender Hash Marks

Add Fender Hash Marks to the front fenders of your Camaro to accentuate the vehicle's powerful style lines.

Part Number Ye	ear	Detail
22798335 20	)12-2015	Stripe Package - Satin Black
<b>22798337</b> 20	)12-2015	Stripe Package - Orange
<b>22798338</b> 20	)12-2015	Stripe Package - White Pearl
<b>22798339</b> 20	)12-2015	Stripe Package - Cyber Gray
22798340 20	)12-2015	Stripe Package - Light Silver
<b>22995860</b> 20	)14-2015	Stripe Package - Red Hot





A Footwell and Cup Holder





B Custom Graphics - Dual Stripe, Matte Black

**B** Custom Graphics - Center Pin Stripe, Gloss White





B Custom Graphics - Lower Thick Stripe, Gloss White



C Fender Hash Marks - Satin Black



Gill Stripes D



Heritage Stripe - White F







Fuel Door - Satin Nickel H

#### D. Decal/Stripe Package - Gill Stripes

Add Gill Stripes to the rear quarter side vents of your Camaro to accentuate the vehicle's powerful style lines.

Part Number	Year	Detail
20972524	2011-2015	Stripe Package - Black

E. Decal/Stripe Package - Performance Decals

Part Number	Year	Detail
23214522	2014-2015	Performance Decal Package, Black
23213279	2014-2015	Performance Decal Package, Gray

#### E. Decal/Stripe Package - Heritage Stripes

Give your Camaro a classic look with these Heritage Stripes. Available in a variety of colors.

Part Number	Year	Detail	
20968499	2011-2015	Stripe Package - White	
20968500	2011-2015	Stripe Package - Black	
20990192	2010-2015	Stripe Package - Silver	
20990193	2014-2015	Stripe Package - Gray	
20990195	2011-2015	Stripe Package - Orange	
22995858	2014-2015	Stripe Package - Blue	
22995859	2014-2015	Stripe Package - Red Hot	

#### Decal/Stripe Package - Hockey Stick Stripes (not shown)

The Hockey Stick Stripe Kit gives you Camaro a classic look with contemporary styling. Contact your Chevrolet dealership for more information.

Part Number	Year	Detail
22995864	2014-2015	Stripe Package - Silver
22995865	2014-2015	Stripe Package - Blue
22995866	2014-2015	Stripe Package - Red
22995872	2014-2015	Stripe Package - Orange
23106918	2014-2015	Stripe Package - White
23106919	2014-2015	Stripe Package - Cyber Gray
23106920	2014-2015	Stripe Package - Black

#### G. Decal/Stripe Package - Rally Stripes

Rally Stripes provide a classic appearance to your Camaro. They're available in several colors. Contact your Chevrolet dealership for more information.

Part Number	Year	Detail
23425861	2014-2015	Stripe Package - Black for V6 Convertible
23425860	2014-2015	Stripe Package - Black for V6 Coupe
23425871	2014-2015	Stripe Package - Black for V8 Convertible
23425870	2014-2015	Stripe Package - Black for V8 Coupe
23425865	2014-2015	Stripe Package - Gray for V6 Convertible
23425864	2014-2015	Stripe Package - Gray for V6 Coupe
23425875	2014-2015	Stripe Package - Gray for V8 Convertible
23425874	2014-2015	Stripe Package - Gray for V8 Coupe
23425869	2014-2015	Stripe Package - Orange for V6 Convertible
23425868	2014-2015	Stripe Package - Orange for V6 Coupe
23425879	2014-2015	Stripe Package - Orange for V8 Convertible
23425878	2014-2015	Stripe Package - Orange for V8 Coupe
23425863	2014-2015	Stripe Package - Silver for V6 Convertible
23425862	2014-2015	Stripe Package - Silver for V6 Coupe
23425873	2014-2015	Stripe Package - Silver for V8 Convertible
23425872	2014-2015	Stripe Package - Silver for V8 Coupe
23425867	2014-2015	Stripe Package - White for V6 Convertible
23425866	2014-2015	Stripe Package - White for V6 Coupe
23425877	2014-2015	Stripe Package - White for V8 Convertible
23425876	2014-2015	Stripe Package - White for V8 Coupe

#### H. Fuel Door

Personalize the exterior of your Camaro with a unique Fuel Door. Available in Chrome or Satin Nickel featuring the Camaro logo.

Part Number	Year	Detail
22959850	2012-2015	Chrome
92212671	2010-2015	Satin Nickel

#### A. Ground Effects

This Ground Effects package creates a dramatic, ground-hugging look for your Camaro. Package includes a front splitter, side rockers, and a rear diffuser with chrome exhaust bezels. Available in select body colors. Not compatible with Quarter Flares/Splash Guards, Performance Exhaust (NPP), and ZL1 Models,

Part Number	Year	Detail
22986797	2014-2015	Paint to Match - price does not include charge for painting. For use on SS Model Vehicles with Performance Exhaust (NPP)
22986798	2014-2015	Red Rock Metallic (G7P) - For use on SS Model Vehicles with Performance Exhaust (NPP)
22986799	2014-2015	Red (G7C) - For use on SS Model Vehicles with Performance Exhaust (NPP)
22986800	2014-2015	Silver Ice (GAN) - For use on SS Model Vehicles with Performance Exhaust (NPP)
22986801	2014-2015	Summit White (GAZ) - For use on SS Model Vehicles with Performance Exhaust (NPP)
22986802	2014-2015	Black (GBA) - For use on SS Model Vehicles with Performance Exhaust (NPP)
22986803	2014-2015	Crystal Red (GBE) - For use on SS Model Vehicles with Performance Exhaust (NPP)
22986804	2014-2015	Ashen Gray (GLJ) - For use on SS Model Vehicles With Performance Exhaust (NPP)
22986805	2014-2015	Blue Ray (GXH) - For use on SS Model Vehicles with Performance Exhaust (NPP)
22986806	2014-2015	Lemon (G7D) - For use on SS Model Vehicles with Performance Exhaust (NPP)
22986809	2014-2015	Paint to Match - price does not include charge for painting. For use on LT Model Vehicles with Performance Exhaust (NPP)
22986810	2014-2015	Silver Ice (GAN) - For use on LT Model Vehicles with Performance Exhaust (NPP)
22986823	2014-2015	Summit White (GAZ) - For use on LT Model Vehicles with Performance Exhaust (NPP)
22986824	2014-2015	Black (GBA) - For use on LT Model Vehicles with Performance Exhaust (NPP)
22986825	2014-2015	Crystal Red (GBE) - For use on LT Model Vehicles with Performance Exhaust (NPP)
22986826	2014-2015	Ashen Gray (GLJ) - For use on LT Model Vehicles with Performance Exhaust (NPP)
22986827	2014-2015	Blue Ray (GXH) - For use on LT Model Vehicles with Performance Exhaust (NPP)
22986828	2014-2015	Lemon (G7D) - For use on LT Model Vehicles with Performance Exhaust (NPP)
22986830	2014-2015	Red Rock Metallic (G7P) - For Use on LT Model Vehicles with Performance Exhaust (NPP)
22986831	2014-2015	Red (G7C) - For use on LT Model Vehicles with Performance Exhaust (NPP)
22986832	2014-2015	Paint to Match - price does not include charge for painting. For use on LT Model Vehicles with Dual Exhaust (N10)
22986833	2014-2015	Silver Ice (GAN) - For use on LT Model Vehicles with Dual Exhaust (N10)
22986834	2014-2015	Summit White (GAZ) - For use on LT Model Vehicles with Dual Exhaust (N10)
22986835	2014-2015	Black (GBA) - For use on LT Model Vehicles With Dual Exhaust (N10)
22986836	2014-2015	Crystal Red (GBE) - For use on LT Model Vehicles With Dual Exhaust (N10)
22986837	2014-2015	Ashen Gray (GLJ) - For use on LT Model Vehicles with Dual Exhaust (N10)
22986838	2014-2015	Blue Ray (GXH) - For use on LT Model Vehicles with Dual Exhaust (N10)
22986839	2014-2015	Lemon (G7D) - For use on LT Model Vehicles with Dual Exhaust (N10)



A Ground Effects



A Ground Effects







Front Fascia Extension - Splitter B







Hood Scoop - Red Hot D

### **B.** Front Fascia Extension

Create a dramatic, ground-hugging appearance for your Camaro with this Ground Effect Package. It includes a front fascia and is available in select body colors.

Part Number	Year	Detail
22997437	2014-2015	Front End Splitter V-8, Black
22997435	2014-2015	Front End Splitter V-8, Silver
22997436	2014-2015	Front End Splitter V-8, White
22997440	2014-2015	Front End Splitter V-8, Blue
22997439	2014-2015	Front End Splitter V-8, Gray
22997438	2014-2015	Front End Splitter V-8, Crystal Red
22997435	2014-2015	Front End Splitter V-8, Silver
22997434	2014-2015	Front End Splitter V-8, Red Hot
22997433	2014-2015	Front End Splitter V-8, Red Rock
22997430	2014-2015	Front End Splitter V-6, Bright Yellow
22997429	2014-2015	Front End Splitter V-6, Blue
22997428	2014-2015	Front End Splitter V-6, Gray
22997427	2014-2015	Front End Splitter V-6, Crystal Red
22997426	2014-2015	Front End Splitter V-6, Black
22997425	2014-2015	Front End Splitter V-6, White
22997424	2014-2015	Front End Splitter V-6, Silver
22997423	2014-2015	Front End Splitter V-6, Red Hot
22997422	2014-2015	Front End Splitter V-6, Red Rock

### C. Grille

Go for the ultimate in customization with this sporty Upper Grille Insert. Designed for perfect fit and easy installation, it replaces the existing grille on your Camaro. Available with select body color surround.

Part Number	Year	Detail
22965837	2014-2015	Grille - Ashen Gray (GLJ)
22965834	2014-2015	Grille - Black (GBA)
22965836	2014-2015	Grille - Blue Ray (GXH)
22965839	2014-2015	Grille - Bright Yellow (G7D)
22965835	2014-2015	Grille - Crystal Red (GBE)
22965840	2014-2015	Grille - Red Hot (G7C)
22965832	2014-2015	Grille - Silver Ice (GAN)
22965833	2014-2015	Grille - Summit White (GAZ)

### D. Hood Scoop Package

Upgrade the unmistakable look of your Camaro with a variety of hood scoops. Choose from body-colored extractors that integrate seamlessly with the color of your Camaro.

Part Number	Year	Detail
23176239	2014-2015	Ashen Gray (GLJ), For Use on SS Model Vehicles
23176238	2014-2015	Black (GBA), For Use on SS Model Vehicles
23176242	2014-2015	Blue Ray (GXH), For Use on SS Model Vehicles
23176244	2014-2015	Bright Yellow (G7D), For Use on SS Model Vehicles
23176245	2014-2015	Crystal Red (GBE), For Use on SS Model Vehicles
23176243	2014-2015	Red Hot (G7C), For Use on SS Model Vehicles
23176246	2014-2015	Red Rock (G7P), For Use on SS Model Vehicles
23176240	2014-2015	Silver Ice (GAN), For Use on SS Model Vehicles
23176241	2014-2015	Summit White (GAZ), For Use on SS Model Vehicles

### A. Spoiler Kits

Personalize the look of your Camaro with a custom raceinspired Spoiler Kit, available in two styles and several body colors. The mounting holes for the High-Wing Spoiler are completely different than the factory spoiler.

### Blade

Part Number	Year	Detail
23209149	2014-2015	Rear Blade Wing Spoiler, Paint To Match
23475085	2014-2015	Rear Spoiler, ZL1 Blade, Ashen Gray Metallic
23475083	2014-2015	Rear Spoiler, ZL1 Blade, Black
23475089	2014-2015	Rear Spoiler, ZL1 Blade, Bright Yellow
23475087	2014-2015	Rear Spoiler, ZL1 Blade, Red Hot
23475088	2014-2015	Rear Spoiler, ZL1 Blade, Red Rock
23475084	2014-2015	Rear Spoiler, ZL1 Blade, Silver Ice Metallic

### High Wing

Part Number	Year	Detail
23481654	2014-2015	Rear Spoiler, Z/28, Ashen Gray Metallic
23481656	2014-2015	Rear Spoiler, Z/28, Black
23481662	2014-2015	Rear Spoiler, Z/28, Blue Velvet Metallic
23481660	2014-2015	Rear Spoiler, Z/28, Bright Yellow
23481655	2014-2015	Rear Spoiler, Z/28, Crystal Red Tintcoat
23481653	2014-2015	Rear Spoiler, Z/28, Red Hot
23481661	2014-2015	Rear Spoiler, Z/28, Red Rock Metallic
23481657	2014-2015	Rear Spoiler, Z/28, Silver Ice Metallic
23481655 23481653 23481661	2014-2015 2014-2015 2014-2015	Rear Spoiler, Z/28, Crystal Red Tintcoat Rear Spoiler, Z/28, Red Hot Rear Spoiler, Z/28, Red Rock Metallic

### Wicker Bill

Part Number	Year	Detail
23200130	2014-2015	Wicker Bill Spoiler Kit

See Page 22 for more Wicker Bill details

### B. Vehicle Cover

Protect your pride and joy with a fitted, indoor or outdoor Vehicle Cover. Our covers are custom-contoured to fit your Camaro's curves like a glove.

Part Number	Year	Detail
20960814	2010-2015	Indoor - Black with Camaro Logo
20960815	2011-2015	Indoor - Silver with Camaro Logo
20960816	2011-2015	Indoor - Red with Camaro Logo
22863449	2012-2015	Indoor - Black with ZL1 Logo
22863451	2012-2015	Outdoor - Red with ZL1 Logo - For use on Coupe Models
22863452	2012-2015	Outdoor - Gray with ZL1 Logo - For use on Coupe Models
22863454	2013-2015	Outdoor - Red with ZL1 Logo - For use on Con- vertible Models
22863455	2013-2015	Outdoor - Gray with ZL1 Logo - For use on Convertible Models
92215993	2010-2015	Outdoor - Red with Black Stripes, Camaro Logo - Coupe
92215994	2010-2015	Outdoor - Gray with Black Stripes, Camaro Logo - Coupe
92223303	2011-2015	Outdoor - Red with Black Stripes, Camaro Logo - Convertible
92223304	2011-2015	Outdoor - Gray with Black Stripes, Camaro Logo - Convertible



- .. ...

A Spoiler Kit - ZL1 Blade Style



A Spoiler Kit - Z/28 High Wing Style, Bright Yellow



A Spoiler Kit - Wicker Bill Style



B Vehicle Cover - Gray with Black Stripes, Camaro Logo







Floor Console Lid, RS Logo D



Floor Mats - Black Carpet, Inferno Orange, Camaro Logo, Red Edging E



Interior Trim Kit - Orange (GCR)



Pedal Cover - Manual G

### **CAMARO INTERIOR**

### C. Door Sill Plates

Accent and help protect the entry area of your Camaro with these Door Sill Plates.

Part Number	Year	Detail
92223800	2010-2015	Door Sill Plates - Front Set, Chevrolet Script Logo - Bright and Black
23213277	2014-2015	Front Door Sill Trim Plate, Performance Logo, Gray

### D. Floor Console Lid

Upgrade your existing Floor Console Lid from vinyl to a soft, thick leather cover. This leather cover is easy to install and is available with various Camaro logos such as RS, SS and ZL1.

Part Number	Year	Detail
22859165	2012-2015	RS Logo
22859167	2012-2015	SS Logo
22992180	2012-2015	ZL1 Logo (Seam Stitch Red)

### E. Floor Mats - Front and Rear Premium All Weather

These Front and Rear Premium All Weather Floor Mats conform to the interior of your Camaro. Their custom designed, deep-patterned grid collects rain, mud, snow and debris; and nibs on the back help keep them in place.

Part Number	Year	Detail
22787711	2011-2015	Premium Carpet - Black Carpet, White Camaro Logo, Red Edging
22808224	2012-2015	Premium - Black Carpet, Mojave Camaro Logo, Mojave Edging
92219641	2010-2015	Premium Carpet - Titanium Carpet, Black Camaro Logo, Black Edging
92221511	2010-2015	Premium Carpet - Black Carpet, Inferno Orange Camaro Logo, Red Edging
92221512	2010-2015	Premium Carpet - Black Carpet, Silver Camaro Logo, Silver Edging

### F. Interior Trim Kit

This four piece Interior Trim Kit complements or contrasts your Camaro's exterior color for a completely custom appearance. Available in four matching body colors: White, Yellow, Silver, and Orange.

Part Number	Year	Detail
22918237	2010-2015	Yellow (GCO)
22918238	2010-2015	Orange (GCR)
22918239	2010-2015	Silver (GAN)
22918240	2010-2015	White (GCN, GAZ)

### G. Pedal Cover

Designed specifically for your Camaro, these high-quality stainless steel Pedal Covers replace existing pedals to provide a sporty performance look and feel to your interior. The covers also feature raised rubber traction surfaces.

Part Number	Year	Detail
22826305	2012-2015	Manual Transmission (MV5 & M10)
22826306	2012-2015	Automatic Transmission (MYB & MYC)

### **CAMARO PERFORMANCE**

### A. Engine Cover

Give your Camaro's V-6 or V-8 engine a stylish, show-quality upgrade with this engine cover. They are available to match most exterior colors, allowing you to complement or contrast the color choices to suit your style.

Part Number	Year	Detail
12643075	2012-2015	V-6 (LFX) - Crystal Red (GBE)
12643077	2012-2015	V-8 (LS3 and L99) - Crystal Red (GBE)
12654765	2013-2015	V-6 (LFX) - Blue Ray (GXH)
12654766	2013-2015	V-8 (LS3 and L99) - Blue Ray (GXH)
12658126	2014-2015	V-6 (LFX) - Red Rock (G7P)
12658127	2014-2015	V-6 (LFX) - Bright Yellow (G7D)
12658128	2014-2015	V-8 (LS3 and L99) - Bright Yellow (G7D)
12658129	2014-2015	V-8 (LS3 and L99) - Red Rock (G7P)
12658130	2014-2015	V-8 (LS3 and L99) - Red Hot (G7C)
12658131	2014-2015	V-6 (LFX) - Red Hot (G7C)
92219186	2013-2015	V-6 (LFX) - Black (GBA)
92247656	2010-2015	V-8 (LS3 and L99) - Black (GBA)

### B. Performance Exhaust Upgrade

Upgrade the look and sound of your Camaro's exhaust system with one of our tuned, emissions-legal bolt-on exhaust kits. They deliver a great performance sound and reduced restriction, which promotes increased power - especially when combined with other performance parts.

Part Number	Year	Detail
23206771	2014-2015	V-8 (LS3) Off-Road Exhaust Upgrade Kit. with tips
23206772	2014-2015	V-8 (LS3) Exhaust Upgrade Kit with Tips
23206773	2014-2015	V-8 (LS3) Exhaust Upgrade Kit, No Tips
23206774	2014-2015	V-6 (LFX) - Exhaust Upgrade Kit, with Tips
23206775	2014-2015	V-6 (LFX) Exhaust Upgrade Kit, without tips
92206990	2010-2013	V-6
92225673	2010-2013	V-6 with Ground Effects
92225672	2010-2013	V-8 LS3 with Ground Effects
92206992	2010-2013	V-8 LS3
92231570	2010-2013	V-8 LS3 Off-Road



A Engine Cover - V-8, Crystal Red



A Engine Cover - V-6, Crystal Red







20-Inch Wheel, EA407, Black C



20-Inch Wheel - EA407, Manoogian Silver C



21-Inch Wheel - EA172, Red Flange Stripe D



21-Inch Wheel - EA708, Multi-Spoke Painted Silver D

### **CAMARO WHEELS**

### C. 20-inch Wheels

Personalize your Camaro with these stylish 20-inch 5-Spoke Accessory Wheels. Validated to GM specifications. Use only GM-approved tire and wheel combinations. See www.chevyaccessories.com for important wheel and tire information.

Part Number	Year	Detail
19301174	2013-2015	20-Inch Wheels - EA896 - 20-Inch x 9-Inch Rear Wheel- 5-Spoke Polished- SEK
19301175	2013-2015	20 Inch Wheels - EA892 - 20-Inch x 8-Inch Front Wheel - Five Spoke Polished - SEK
19301172	2013-2015	20-Inch Wheels - EA407 - 20-Inch x 8-Inch Front Wheel- Alt. Finish - Painted Black - SEO
19301173	2013-2015	20-Inch Wheels - EA407 - 20-Inch x 9-Inch Rear Wheel- Alt. Finish - Painted Black - SEO
19301177	2013-2015	20-Inch Wheels - EA407 - 20-Inch x 8-Inch Front Wheel- Manoogian Silver Painted - SEM
19301176	2013-2015	20-Inch Wheels - EA407 - 20-Inch x 9-Inch Rear Wheel- Manoogian Silver Painted - SEM
19301170	2013-2015	20-Inch Wheels - EA170 - 20-Inch x 9-Inch Front Wheel - 5-Spoke Black Painted - SEL
19301171	2013-2015	20-Inch Wheels - EA171 - 20-Inch x 9-Inch Rear Wheel- 5-Spoke Black Painted - SEL
19301168	2013-2015	20-Inch Wheels - EA892 - 20-Inch x 10-Inch Front Wheel- ZL1/1LE 5-Spoke Black w/ Polished Fangs (not shown) 20-Inch Wheels - EA892 - 20-Inch x 11-Inch Rear Wheel- ZL1/1LE 5-Spoke Black w/ Polished Fangs - RZT- RZT (not shown)

### D. 21-inch Wheels

Personalize your Camaro with these stylish 21-inch Accessory Wheels. Validated to GM specifications. Use only GM-approved tire and wheel combinations. See www.chevyaccessories.com for important wheel and tire information. Not for use on ZL1 or 1LE.

Part Number	Year	Detail
19302759	2013-2015	21-Inch Wheels - EA712 - 21-Inch x 8.5-Inch Front Wheel - Multi-Spoke Chrome - SEP
19302758	2013-2015	21-Inch Wheels - EA712 - 21-Inch x 9.5-Inch Rear Wheel - Multi-Spoke Chrome - SEP
19302857	2013-2015	21-Inch Wheels - EA708 - 21-Inch x 8.5-Inch Front Wheel - Multi-Spoke Painted Silver - SEQ
19302858	2013-2015	21-Inch Wheels - EA711 - 21-Inch x 9.5-Inch Rear Wheel - Multi-Spoke Painted Silver - SEQ
19302760	2011-2015	21-Inch Wheels - EA172, Single Wheel, 21 Inch x 8.5 Inch Front Wheel - Red Flange Stripe with Black Spokes - 5W6
19302761	2011-2015	21-Inch Wheels - EA173, Single Wheel - 21 Inch x 9.5 Inch Rear Wheel - Red Flange Stripe with Black Spokes - 5W6

# Corvette Performance Upgrades

# The Ultimate Complement to the Ultimate Corvette

Precision and performance: they are the inspiration for the all-new 2014 Corvette Stingray. This same level of excellence can be found in Corvette Accessories. Corvette Accessories are designed, engineered and tested by the same team that meticulously crafted this revolutionary sports car. Plus, you'll feel confident knowing that each accessory is backed by a limited warranty<sup>\*</sup>. With Corvette Accessories, this new icon of American performance becomes a true statement of personalization and individual expression.

Corvette Accessories are designed by Chevrolet designers with the styling and functionality that best complement your Corvette Stingray. They are engineered by the same team of engineers who developed your vehicle — and are integrated into the vehicle design for best fit, function and long life. Corvette Accessories are tested to Chevrolet standards for performance, durability and safety. They are protected by the New Vehicle Limited Warranty\* when installed by the Chevrolet dealer or Accessories Distributor Installer (ADI) at the time of delivery and can be serviced by Chevrolet dealerships nationwide.

\*See dealer for details



Luggage, Roller A



Luggage, Duffel A



Cargo Security Shade B

### Genuine Corvette Accessories For Your C7 Stingray:

### **CORVETTE CARGO MANAGEMENT**

### A. Luggage

Arrive in style with luggage specially designed for the Corvette brand. A five-piece luggage set, including a suitcase with roller wheels, a backpack and messenger bag are all available featuring the Cross-Flags logo.

Part Number	Year	Detail
22970468	2014-2015	Luggage, Roller
22970469	2014-2015	Luggage, Backpack
22970470	2014-2015	Luggage, Duffel, 40L
22970471	2014-2015	Luggage, Messenger
23152911	2014-2015	Luggage, Duffel, 70L
22970472	2014-2015	Luggage, Five-Piece

### Storage Bags (not shown)

Handy Storage Bags for your Corvette. The Removable Roof Panel Storage Bag stows your roof panel and helps prevent scratches when it's not in use.

Part Number	Year	Detail
22944817	2014-2015	Removable Roof Panel Storage Bag - Crossed-Flag Logo, Black

### B. Cargo Security Shade

Conceal possessions in the rear of your Corvette with this Cargo Security Shade. It's available in Black with the Cross-Flags logo.

Part Number	Year	Detail
22952948	2014-2015	Upper and Lower Shade Crossed-Flag Logo, For 1LT Models, Black
22952947	2014-2015	Upper Shade Crossed-Flag Logo, For 2LT and 3LT Models, Black



### **CORVETTE EXTERIOR**

### A. Grille

Add a distinct look to the front of your Corvette with a Cyber Gray Grille insert that dresses up the front of your Corvette while providing protection from road debris. Add the Front Bumper Molding for states that require a front license plate.

Part Number	Year	Detail
22987426	2014-2014	Grille, Cyber Gray

### B. Front Aero Panel

For states that require a front license plate, this Front License Plate Frame Kit fastens to the front fascia without necessitating any hole drilling in the bodywork. Available in select exterior body colors. Available in fourth quarter.

Part Number	Year	Detail
22979545	2014-2015	Carbon Flash

### License Plate Holder - Rear (not shown)

This body-color Rear License Plate Holder matches the exact color of your Corvette to provide a clean, elegant look.

Part Number	Year	Detail
22910406	2014-2015	Carbon Flash

### C. Spoiler Kit

Add style to your Corvette with a body-color Rear Spoiler that replaces the standard black spoiler.

### High Wing

Part Number	Year	Detail
22908984	2014-2015	High Wing Spoiler, Black (GBA), not for use on Z51
22908985	2014-2015	High Wing Spoiler, Crystal Red (GBE), not for use on Z51
22908980	2014-2015	High Wing Spoiler, Laguna Blue (G7H), not for use on Z51
22908981	2014-2015	High Wing Spoiler, Lime Rock Green (G7J), not for use on Z51
22908989	2014-2015	High Wing Spoiler, Night Race Blue Metallic (GXH), not for use on Z51
22881387	2014-2015	High Wing Spoiler, Paint to Match - price does not include charge for painting, not for use on Z51
22908983	2014-2015	High Wing Spoiler, Silver (GAN), not for use on Z51
22908987	2014-2015	High Wing Spoiler, Torch Red (GKZ), not for use on Z51
22908982	2014-2015	High Wing Spoiler, Velocity Yellow (G8A), not for use on Z51
22908986	2014-2015	High Wing Spoiler, Cyber Gray (GBV), not for use on Z51

### Blade

Part Number	Year	Detail
22967764	2014-2015	Blade, Arctic White (G8G)
22967771	2014-2015	Blade, Black (GBA)
22989472	2014-2015	Blade, Carbon Flash
22967769	2014-2015	Blade, Crystal Red (GBE)
22967770	2014-2015	Blade, Laguna Blue (G7H)
22967763	2014-2015	Blade, Lime Rock Green (G7J)
22967765	2014-2015	Blade, Night Race Blue Metallic (GXH)
22967772	2014-2015	Blade, Prime - Paint to Match - price does not include charge for painting
22967773	2014-2015	Blade, Silver (GAN)
22967767	2014-2015	Blade, Torch Red (GKZ)
22967774	2014-2015	Blade, Velocity Yellow (G8A)
23167640	2014-2015	Rear Spoiler, Fusion Gray

### Wicker Bill

Part Number	Year	Detail
23486749	2014-2015	Wicker BIII Spoiler, Black (for High Wing Spoiler only)



A Grille - Cyber Gray



B Front Aero Panel





C Spoiler Kit - High Wing, Black





**C** Spoiler Kit - Wicker Bill (for High Wing Spoiler only)



Underhood Liner - Stingray Logo D



Outdoor Stingray Vehicle Cover, Crossed Flag Logo, Black E



Splash Guards, Front Molded **F** 



Splash Guards, Rear Molded F

### D. Underhood Liner

Go ahead and pop the hood to show off your engine compartment. This Underhood Liner attaches to your Corvette's hood to provide a detailed appearance and is available with different logos; Crossed-Flag and Stingray in Black. Underhood lamp sold separately.

Part Number	Year	Detail
22807697	2014-2015	Crossed-Flag Logo
22980028	2014-2015	Stingray Logo

### E. Vehicle Cover

These Vehicle Covers help protect your finish, and feature Corvette-specific logos. The interior Dust Covers, designed for interior storage, shield the surface of your Corvette from dust and dirt. An all-weather outdoor Vehicle Cover provides waterproof, breathable outdoor protection. Each cover includes a duffle-style storage bag, which can also be used to stash miscellaneous items.

Part Number	Year	Detail
23142881	2014-2015	Indoor Dust Cover, Crossed-Flag Logo, Gray
23142882	2014-2015	Indoor Dust Cover, Crossed-Flag Logo, Kalahari
23142888	2014-2015	Indoor Dust Cover, Crossed-Flag Logo, Red
23142883	2014-2015	Indoor Dust Cover, Stingray Logo Logo, Black
23142884	2014-2015	All Weather Outdoor Cover, Stingray Logo, Black
23142885	2014-2015	All Weather Outdoor Cover, Stingray Logo, Gray
23187874	2015-2015	Vehicle Cover, For Z06, Indoor, Galvanized Cool
23187875	2015-2015	Vehicle Cover, For Z06, Indoor, Blue
23187876	2015-2015	Vehicle Cover, For Z06, Outdoor, Black
23187877	2015-2015	Vehicle Cover, For Z06, Outdoor, Redline

### F. Splash Guards

Designed to accent the exterior of your Corvette, these Molded Splash Guards fit directly behind the front and rear wheels to help protect against tire splash and mud.

Part Number	Year	Detail
22935635	2014-2015	Splash Guards, Front Molded
22935639	2014-2015	Splash Guards, Rear Molded

### **CORVETTE INTERIOR**

### A. Floor Mats - Cargo Premium Carpet

This Premium Carpet Cargo Mat provides a perfect fit in the rear cargo area of your Corvette to help keep carpet clean.

Part Number	Year	Detail
22801642	2014-2015	Black
23469812	2015-2015	Black with Z06 Logo

### B. Floor Mats - Front Premium Carpet Mats

Add a custom appearance and protect your Corvette Stingray's front carpet with Front Premium Carpet Mats, featuring attractive logos in a choice of colors. They offer a precise factory fit and protect the interior from dirt, mud, snow and debris.

Part Number	Year	Detail
19301566	2014-2015	Black
19301568	2014-2015	Brownstone
23476291	2015-2015	With Z06 Logo, Galvanized
23476289	2015-2015	With Z06 Logo, Black with Red stitch
23476288	2015-2015	With Z06 Logo, Black with Mohave stitch
23476290	2015-2015	With Z06 Logo, Black with Blue stitch
23476280	2015-2015	With Z06 Logo, Black

### C. Door Sill Plates

These Door Sill Plates add the finishing touch to the entry area of your Corvette, while protecting the paint as you enter and exit the cockpit. Available in several different looks to complement your 'Vette.

Part Number	Year	Detail
23146465	2014-2015	Door Sill Plates



A Floor Mats - Cargo Premium Carpet, Black



B Floor Mats - Gray

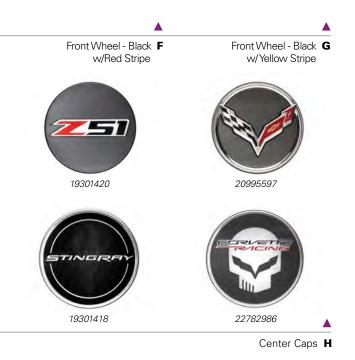
B Floor Mats - Brownstone











### **CORVETTE WHEELS**

### D. Chrome Wheels

Make a dramatic modification to the appearance of your Corvette with these 5-spoke Accessory Wheels. Validated to GM specifications. Use only GM-approved tire and wheel combinations. See www.chevyaccessories.com for important wheel and tire information.

Part Number	Year	Detail
19302113	2014-2015	19-Inch Wheel - YA113F Front Wheel - Chrome 5-Spoke - 5YU
19302115	2014-2015	20-Inch Wheel - YA115R Rear Wheel - Chrome 5-Spoke - 5YU

### E. Silver Painted Wheels

Make a dramatic modification to the appearance of your Corvette with these 5-spoke Accessory Wheels. Validated to GM specifications. Use only GM-approved tire and wheel combinations. See www.chevyaccessories.com for important wheel and tire information.

Part Number	Year	Detail
19302114	2014-2015	19-Inch Wheel - YA115R Front Wheel - Silver 5-Spoke - 5YU
19302116	2014-2015	20-Inch Wheel - YA116R Rear Wheel - Silver Painted 5-Spoke - 5YV

### F. 19"/20" Wheels - Black with Red Stripe

Make a dramatic modification to the appearance of your Corvette with these 10-spoke Satin Black with Red Stripe Accessory Wheels. Features the crossed-flags logo on the center cap. Use only GM-approved wheel and tire combinations.

Part Number	Year	Detail
19302117	2014-2015	YA117F Front Wheel, Satin Black Finish with Red Stripe - 5YZ, 19" wheel
19302118	2014-2015	YA118F Rear Wheel, Satin Black Finish with Red Stripe - 5YZ, 20" wheel

### G. 19"/20" Wheels - Black with Yellow Stripe

Make a dramatic modification to the appearance of your Corvette with these 10-spoke Satin Black with Yellow Stripe Accessory Wheels. Features the crossed-flags logo on the center cap. Use only GM-approved wheel and tire combinations.

Part Number	Year	Detail
19302119	2014-2015	YA119F Front Wheel, Satin Black Finish with Red Stripe - 5Z2, 19" wheel
19302120	2014-2015	YA120F Rear Wheel, Satin Black Finish with Red Stripe - 5Z2, 20" wheel

### H. Center Caps

Custom Center Caps specifically designed for your Corvette wheels. Made of durable material to resist corrosion for long life.

Part Number	Year	Detail
20995597	2014-2015	Center Cap - Crossed-Flag Logo, Argent, Service Component
22782982	2014-2015	Center Cap - Crossed-Flag Logo, Black, Service Component
22926205	2014-2015	Center Cap - Z51 Logo, Metallic Gray, Service Component
22782986	2014-2015	Center Cap - Jake Logo
19301420	2014-2015	Center Cap - Z51 Logo
19301418	2014-2015	Center Cap - Stingray Logo

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### PERFORMANCE UPGRADES & ACCESSORIES



### **SS PERFORMANCE**

### A. Engine Cover

Give your SS engine an upgrade with this stylish Engine Cover. It's available in Red Hot. Contact your Chevrolet dealership for more information.

Part Number	Year	Detail
92295830	2014-2015	Engine Cover - Red Hot







Splash Guards - Front Molded **B** 

Splash Guards - Rear Molded B



Spoiler Kit C



Fog Lamps D

Wheel Lock Kit F



Floor Mats E

### SS EXTERIOR

### **B.** Splash Guards - Front Molded

Designed to accent the exterior of your SS, these Molded Splash Guards fit directly behind the front wheels to help protect against tire splash and mud.

Part Number	Year	Detail
92277968	2014-2015	Front Molded Splash Guard

### Splash Guards - Rear Molded

Designed to accent the exterior of your SS, these Molded Splash Guards fit directly behind the front wheels to help protect against tire splash and mud. They feature the Holden logo.

Part Number	Year	Detail
92267788	2014-2015	Rear Molded Splash Guard

### C. Spoiler Kit

Personalize the look of your SS with a Phantom Black flushmounted Spoiler Kit. Contact your Chevrolet dealership for more information.

Part Number	Year	Detail
92272982	2014-2015	Rear Spoiler, Phantom Black

### D. Fog Lamps

The Front Fog Lamp Bezel for SS incorporates seamless style with function.

Part Number	Year	Detail	
92272733	2014-2015	Front Fog Lamp Bezel - Alt Finish, Black surround	

### **SS INTERIOR**

### E. Floor Mats - Front and Rear Carpet Replacements

These Front and Rear Carpet Replacement Floor Mats duplicate the original production floor mats exactly and help protect the carpet from mud, water, road salt and dirt. They are available in Black with Red stitching.

Part Number	Year	Detail
92264567	2014-2015	Black Mat with Red Stitching

### SS SECURITY AND PROTECTION

### F. Wheel Lock Kit

Help deter thieves from taking the wheels off your SS with this Wheel Lock Kit in a stainless steel finish. The kit includes four locks and key.

Part Number	Year	Detail
92290023	2014-2015	Wheel Lock Kit - Stainless Steel Finish (includes 4 wheel locks and 1 key)



# Inhale ...

Give your 1.4L Turbo a breath of clean, cool air with this performance air intake kit. Designed for factory fit, with Performance looks. Calibration included for dealer installation.

# Exhale ...

The Sonic Performance High Flow Exhaust system sounds and looks great, with a chrome stainless steel tip proudly showing the Chevy Bowtie to your friends! This low-restriction system and included dealer-installed calibration will provide 10 more HP (up to 148 HP) and 10% increase in torque (+15 ft.-lbs.)

# Handle ...

It takes a tuned suspension to complement your Sonic's performance-oriented wheels and tires. The engineers at Chevrolet Performance have designed the Sonic suspension components to optimize vehicle handling performance, and improve the stance at the same time. This kit uses the "RS" fast-reacting shock valving, but lowers the "RS" by 10mm, and the base model by 20mm. It utilizes the "RS" front struts assembled with a different spring and jounce bumper. The rear springs and shocks are redesigned to accommodate the new suspension travel. This package lowers the center of gravity of your vehicle, which results in improved handling.



Chevrolet Performance Induction Kit A



SONIC PERFORMANCE UPGRADES

### A. Chevrolet Performance Induction Kit

Dealer installed calibration ensures your vehicle will maintain functionality of its engine diagnostics. Kit includes air cleaner assembly, calibration authorization code, and 50 state legal emission certification label.

Part Number	Year	Detail
23169952	2012-2015	Air Cleaner Kit

### **Chevrolet Performance Suspension Kits (not shown)**

Our engineers have designed the Sonic suspension components to optimize vehicle handling performance, and improve the stance. This kit uses the "RS" fast-reacting shock valving but lowers the "RS" by 10mm, and the base model by 20mm. It utilizes the "RS" front struts assembled with a different spring and jounce bumper. The rear springs and shocks are redesigned to accommodate the new suspension travel. This package lowers the center of gravity of your vehicle, which results in improved handling.

### Sonic Performance Suspension Kit P/N 23158161 includes:

		-
Part Number	Year	Detail
23158167	2012-2015	Installation Instructions
96859128	2012-2015	Front Suspension Jounce Bumper
95481254	2012-2015	Front Strut
95483008	2012-2015	Front Strut
23158165	2012-2015	Rear Shock Absorber
23158164	2012-2015	Rear Spring
23158163	2012-2015	Front Spring
22942442	2012-2015	Chevrolet Performance Badge
		-

### Sonic RS Performance Suspension Kit P/N 23158162 includes:

		-	
Part Number	Year	Detail	
23158167	2012-2015	Installation Instructions	
23158165	2012-2015	Rear Shock Absorber	
23158164	2012-2015	Rear Spring	
23158163	2012-2015	Front Spring	
22942442	2012-2015	Chevrolet Performance Badge	

### B. 1.4L Turbo Stage Kit with High Flow Exhaust System

This low-restriction system and included dealer-installed calibration will provide 10 more HP (up to 148 HP) and 10% increase in torque (+15 lb.-ft.). Kit includes exhaust system, calibration, premium fuel label and new 50 state legal emission certification label.

NOTE: 2012-2013 vehicles require a new high capacity 2014 manual clutch. See your dealer for Service Part Number information.

Part Number	Year	Detail
23444736	2012-2015	Exhaust Kit (1.4L turbo - Base Hatchback)
23444737	2012-2015	Exhaust Kit (1.4L turbo - RS Hatchback)
23451716	2012-2015	Exhaust Kit (1.4L turbo - Sedan)

### 19303797 NEW! Sonic Performance Clutch Kit (not shown)

This increased torque capacity system includes a larger-thanstock flywheel, clutch disk and pressure plate, along with new attaching bolts.

NOTE: Must be used on 2012-2014 Sonics that have installed P/N's 23444736, 23444737, 23451716 Stage Kits.

# Silverado Performance Upgrades



### A. Exhaust Tip

Add a sporty appearance to your Silverado with Dual-walled Exhaust Tips made from highly polished, stainless steel.

Part Number	Year	Detail
22799814	2014-2015	Bowtie Logo, Dual Wall, Angle Cut, Highly Polished
22911703	2014-2015	No Logo, Dual Wall, Angle Cut, Highly Polished for 6.0L (LC8, L96) or 6.2L (L86) Engines
23435023	2014-2015	Exhaust Tip - OE for Cat-Back, Dual Wall, Angle Cut, No Logo, Not for Use with Borla® Cat-Back

### SILVERADO BED PRODUCTS

### Tie Down Rings - Bed Mounted (not shown)

Enhance the cargo capability of your vehicle with these Bed Tie-Down Rings flush-mounted into the stake pockets. They recede out of sight when not in use.

Part Number	Year	Detail
23146899	2014-2015	Set of 4, Removable



REF



A Exhaust Tip - Bowtie Logo



Tonneau Cover - Soft Folding B



Tonneau Cover - Hard Folding C



Tonneau Cover - Soft Roll-Up D



Tool Box E

### B. Tonneau Cover - Soft Folding

This Soft Folding Tonneau Cover is constructed of durable, lightweight black grained vinyl to help protect truck bed cargo from the elements. The tri-fold design allows for quick and easy installation and removal.

Part Number	Year	Detail
22895471	2014-2015	5' 8" Short Box, Hi Gloss Vinyl, Black
22895472	2014-2015	6'6" Standard Box, High Gloss Vinyl, Black
22895473	2014-2015	Black Tri-Fold, 8' Long Box

### C. Tonneau Cover - Hard Folding

These Hard Folding Tonneau covers are engineered to provide quick and easy access to your truck's cargo area, while offering the ultimate protection for your cargo. The flat and smooth tri-fold design allows easy opening and closing.

Part Number	Year	Detail
19301291	2014-2015	5'8" Short Box, High Gloss Vinyl, Black
19302797	2014-2015	6'6" Standard Box, High Gloss Vinyl, Black
19302798	2014-2015	5'8" Short Box, High Gloss Vinyl, Black, with Personal Caddy
19302799	2014-2015	6'6" Standard Box, High Gloss Vinyl, Black, with Personal Caddy
22834742	2014-2015	5'8" Short Box, High Gloss Vinyl, Black
22834743	2014-2015	6'6" Standard Box, High Gloss Vinyl, Black
22834744	2014-2015	8' Long Box, High Gloss Vinyl, Black

### D. Tonneau Cover - Soft Roll-Up

This Soft Roll-Up Tonneau Cover is constructed of durable, lightweight black grained vinyl to help protect truck bed cargo from the elements.

Part Number	Year	Detail
22772361	2014-2015	Black with Embossed Bowtie Logo, Crew Cab, 5'8" Short Box
22772362	2014-2015	Black with Embossed Bowtie Logo, 6'6" Standard Box
22772363	2014-2015	Black with Embossed Bowtie Logo, 8' Long Box

### E. Tool Box

This hardworking Tool Box can handle up to 250 lbs. of storage and has many great features; it mounts securely to the bed of your vehicle without drilling; integrated handle makes it easy to remove and carry, and it has a removable sliding tray with rubber mat.

Part Number	Year	Detail
19170990	2014-2015	Stationary, Bowtie Logo, Diamond Patterned
19260344	2014-2015	Gull Wing Tool Box by UWS - a division of Thule®
19299117	2014-2015	Cross Over Deep Well Aluminum Toolbox by UWS A Division of Thule®
19299118	2014-2015	Cross Over Deep Well Toolbox (For Use with Alumi- num Full Ladder Rack) by UWS A Division of Thule®
19302652	2014-2015	Low Profile Tool Box by UWS - a division of Thule®
19303349	2014-2015	Black Low Profile Single Lid Tool Box

### SILVERADO EXTERIOR

Fuel Door (not shown)

Add personality to the exterior of your vehicle with this stylish Chrome Fuel Door.

Part Number	Year	Detail
22832419	2014-2015	Chrome, 6'6" Standard Box and 8' Long Box
22832420	2014-2015	Chrome, 5'8" Short Box, Crew Cab

Silverado Exterior Continued

### A. Assist Steps

Stylish Assist Steps with textured step pads make it easier to get in and out of your Silverado. Available in 4-inch round or 6-inch rectangular, with either chrome or black powder coat finish. Both finishes add great style and excellent corrosion protection.

Part Number	Year	Detail
22805433	2014-2015	4-Inch round, black, for use on regular cab models with gas engine (Iv3)
22805432	2014-2015	4-Inch round, chrome, for use on regular cab models with gas engine (Iv3)
22805434	2014-2015	4-Inch round, chrome, for use on extended cab models with gas engine (Iv3, 183, 186, Ic8, and 196)
22805435	2014-2015	4-Inch round, black, for use on extended cab mod- els with gas engine (Iv3, I83, I86, Ic8, and I96)
22805436	2014-2015	4-Inch round, chrome, for use on crew cab models with gas engine (Iv3, I83, and I86)
22805437	2014-2015	4-Inch round, black, for use on crew cab models with gas engine (Iv3, I83, I86 and I96)
22805438	2014-2015	6-Inch oval, chrome, for use on regular cab models with gas engine (Iv1, Iv3, I83, Ic8, and I96)
22805439	2014-2015	6-Inch oval, black, for use on regular cab models with gas engine (Iv1, Iv3, I83, Ic8, and I96)
22805440	2014-2015	6-Inch rectangular, chrome, for use on extended cab models with gas engine (Iv3, I83, I86, Ic8, and I96)
22805441	2014-2015	6-Inch rectangular, black, for use on extended cab models with gas engine (Iv3, I83, I86, Ic8, and I96)
22805442	2014-2015	6-Inch rectangular, chrome, for use on crew cab models with gas engine (Iv3, I83, I86, and I96)
22805443	2014-2015	6-Inch rectangular, black, for use on crew cab models with gas engine (Iv3, I83, I86, and I96)

### B. Molded Hood Protector

Deflect road debris and insects while helping to shield the hood of your Silverado from stone damage with this customdesigned Molded Hood Protector. Provides a precise fit by following the contour of your hood.

Part Number	Year	Detail
19302679	2014-2015	Molded Hood Protector - Smoke Black
19302745	2014-2015	Molded Hood Protector - Chrome by EGR®

### Bodyside Molding Package (not shown)

Add accent styling and protection to your vehicle with this Bodyside Molding Package in Chrome.

Part Number	Year	Detail
22775457	2014-2015	Chrome, For use on Regular Cab models
22775458	2014-2015	Chrome, For use on Crew Cab models
22775459	2014-2015	Chrome, For use on Double Cab models

### C. Grille

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Enhance the front end of your all-new Silverado with this Chrome Grille. It's designed specifically for your vehicle.

Part Number	Year	Detail
23194173	2014-2015	Grille, Body Color Surround w/Black Mesh, Black
23194170	2014-2015	Grille, Body Color Surround w/Black Mesh, Deep Ruby Metallic
23194171	2014-2015	Grille, Body Color Surround w/Black Mesh, Silver Ice Metallic
23194174	2014-2015	Grille, Body Color Surround w/Black Mesh, Summit White
23194172	2014-2015	Grille, Body Color Surround w/Black Mesh, Victory Red
23194167	2014-2015	Grille, Body Color Surround w/Chrome Mesh, Black
23194165	2014-2015	Grille, Body Color Surround w/Chrome Mesh, Silver Ice Metallic
23194166	2014-2015	Grille, Body Color Surround w/Chrome Mesh, Victory Red
23194164	2014-2015	Grille, Body Color Surround w/Chrome Mesh, Deep Ruby Metallic
23194168	2014-2015	Grille, Body Color Surround w/Chrome Mesh, Summit White



A Assist Steps - 4-inch Round, Chrome



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B Molded Hood Protector, Smoke Black





**C** Grille - Black with Black Mesh



C Grille - Victory Red with Black Mesh



Center Cap - Chrome **D** 



22-Inch Wheel - SEV, High-Gloss Black E



<sup>22-</sup>Inch Wheel - SF1, Silver E

### SILVERADO WHEELS & ACCESSORIES

### D. Center Cap

These Custom Center Caps are specifically designed for your Silverado wheels and feature the Chevy Bowtie logo. They're made of durable material to resist corrosion for a long life.

Part Number	Year	Detail
19301595	2014-2015	Center Cap, Brushed Aluminum
19301597	2014-2015	Center Cap, Bright Aluminum
19301593	2014-2015	Center Cap, Chrome

### E. 22-Inch Wheels

Personalize your vehicle with these attractive Accessory Wheels, validated to GM specifications. Available with center cap and lug nuts. Use only GM-approved tire and wheel combinations. See www.chevyaccessories.com for important tire and wheel information.

Part Number	Year	Detail
19301157	2014-2015	22-Inch Wheel - CK157 Chrome - SEZ
19301158	2014-2015	22-Inch Wheel - CK158 Chrome - SEU
19301160	2014-2015	22-Inch Wheel - CK160 Ultra-Bright Machined - High Gloss Black - SEW
19301161	2014-2015	22-Inch Wheel - CK161 Ultra-Bright Machined - Manoogian Silver - SF0
19301162	2014-2015	22-Inch Wheel - CK162 High-Gloss Black - SEV
19301163	2014-2015	22-Inch Wheel - CK163 Silver - SF1
19301164	2014-2015	22-Inch Wheel - CK164 Silver with Black Inserts - RX1
19301190	2014-2015	22-Inch Wheel - CK190 Silver with Chrome Inserts - RXN

# Colorado Performance Upgrades

### COLORADO BED PRODUCTS

### A. Tonneau Cover (Soft Folding)

Shield cargo from harsh weather with this Soft Folding Tonneau Cover. It's constructed with integrated crossbows and easily rolls up to allow full access to the bed. It's available in Black with an embossed Chevrolet Bowtie logo.

Part Number	Year	Detail
23462049	2015-2015	Tonneau Cover - Soft Folding, for use with 5' Short Box
23462048	2015-2015	Tonneau Cover - Soft Folding, for use with 6' Long Box

### Tonneau Cover (Soft Roll-Up) (not shown)

Shield cargo in Colorado while helping to protect the bed from harsh weather with this Soft Roll-Up Tonneau Cover. It's constructed with (or without) integrated crossbows and easily rolls up to allow full access to the bed.

Part Number	Year	Detail
22894983	2015-2015	Embossed with Bowtie Logo, Black, 5' Short Box
22894985	2015-2015	Embossed with Bowtie Logo, Black, 6' Long Box





A Tonneau Cover (Soft Folding)



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Assist Steps, 5-Inch Rectangular, Black C





Splash Guards (Front Molded) D

Splash Guards (Rear Molded) E



Front Premium All Weather Floor Mats

### B. Bed Net

Help secure items in the bed of your Colorado with this Bed Net. Heavy-duty stretch shock cords radiate from a stainless steel center ring to focus the net's strength at the center of the load, where it's needed. It includes mounting hardware for easy installation.

Part Number	Year	Detail
12343595	2015-2015	Bed Net, Black

### **COLORADO EXTERIOR**

### C. Assist Steps

These Assist Steps are engineered to provide a sturdy step when entering or exiting your Colorado. They feature textured, traction-gripping step surfaces and are designed to enhance the overall appearance of your truck.

Part Number	Year	Detail
22929606	2015-2015	Assist Steps, 3-inch Step Bars, Black - Crew Cab
22929605	2015-2015	Assist Steps, 3-inch Step Bars, Black - Extended Cab
22905646	2015-2015	Assist Steps, 5-inch Rectangular, Black - Crew Cab
22905644	2015-2015	Assist Steps, 5-inch Rectangular, Black - Extended Cab
22905647	2015-2015	Assist Steps, 5-inch Rectangular, Chrome - Crew Cab
22905645	2015-2015	Assist Steps, 5-inch Rectangular, Chrome - Extended Cab

### D. Splash Guards (Front Molded)

Designed to accent the exterior of your Colorado, these Front Molded Splash Guards fit directly behind the front wheels to help protect against tire splash and mud.

Part Number	Year	Detail
22958431	2015-2015	Splash Guards - Front Molded

### E. Splash Guards - Rear Molded with Bowtie Logo

Designed to accent the exterior of your Colorado, these Rear Molded Splash Guards fit directly behind the rear wheels to help protect against tire splash and mud.

Part Number	Year	Detail	
22958435	2015-2015	Splash Guards - Rear Molded, with Bowtie Logo	

### **COLORADO INTERIOR**

### F. Floor Mats (Front Premium - All-Weather)

These Premium All-Weather Front Floor Mats conform to the front floor, while nibs on the back help hold them in place. The custom-designed, deep-patterned grid helps collect rain, mud, snow and debris. There are multiple versions of this accessory. Contact your Chevrolet dealership for more information.

Part Number	Year	Detail
22963075	2015-2015	Front Premium All Weather, Bowtie Logo, Black
22968487	2015-2015	Front Premium All Weather, Z71 Logo, Black

### Floor Mats (Rear Premium - All-Weather) (not shown)

These Premium All-Weather Floor Mats for Colorado conform to the rear floor, while nibs on the back help hold them in place. The custom-designed, deep-patterned grid helps collect rain, mud, snow and debris.

Part Number	Year	Detail
23227113	2015-2015	Rear Premium All Weather, Black - Crew Cab
23227110	2015-2015	Rear Premium All Weather, Black - Extended





# Your Official Source for COPO Crate Engines and Components

Chevrolet Performance is proud to announce the successful COPO Camaro program is back for 2015, again led by a production run of 69 factory-engineered, hand-assembled race cars – and offering official COPO racing engines and vehicle components for all drag racers.

New for 2015 is the COPO 350 supercharged crate engine, which is rated at 525 horsepower by NHRA. It adds to the range of naturally aspirated and supercharged crate engines that are helping sportsman racers conquer classes throughout the Stock and Super Stock ranks.

Racers and builders can also select from dozens of additional COPO Camaro service parts to help construct a more competitive race car.

When you use official COPO Camaro engines and components, you're part of one of the most enduring legacies in drag racing!

AMPER

COPO 427 CID

56



# **COPO Camaro Program**

# **COPO Crate Engines**

Chevrolet Performance's COPO crate engines are engineered for NHRA's Stock Eliminator and Super Stock classes, offering sportsman racers a range of factory-developed-and-assembled racing engines.

The 350, 396 and 427 naturally aspirated engines make a race car eligible for NHRA Stock Eliminator classes from AA/S to D/S, based primarily on curb weight and horsepower ratings. The 350 S/C engine makes cars eligible for AAA/S and AA/S classes. Consult the NHRA rule book at nhra.com for class and compliance guidelines.

Chevrolet Performance engineers designed and tested the engines with the same methods used to develop production engines, ensuring their performance and durability; and each engine is hand-assembled in a specialty build facility.

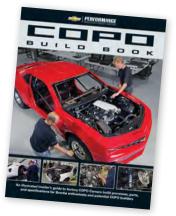
# **COPO Vehicle Components**

Chevrolet Performance's COPO Camaro vehicle components are factory-engineered or factoryapproved after conforming to General Motors production-vehicle standards – and all are approved by NHRA for competition. They enable racers to build their cars to comparable standards of the production race cars, with a full range of high-performance parts.

Additional components such as the LSX Bowtie block are available from Chevrolet Performance. See page 70 for a complete COPO Camaro service parts list.

# **COPO Camaro Build Book**

Chevrolet Performance's *COPO Camaro Build Book* (P/N 88958767) provides a step-by-step look at the assembly of the production race cars through hundreds of color photos, which can assist racers when it comes to building their own race car.





# 19304010 NEW! (2014) COPO 350 S/C - 525 hp

The new COPO 350 Supercharged is the same engine offered exclusively in the 2014 COPO Camaro race cars. It features the high-performance LSX engine block, forged internals that stand up to the cylinder pressures generated by forced induction, LSX cylinder heads with six-bolt clamping strength and a 2.9L Whipple screw-type supercharger.

## TECH SPECS:

Displacement:	350 cu in (5.7L)
Compression Ratio:	10.2:1
Cylinder Block:	LSX cast iron
Bore x Stroke (in):	4.065 x 3.370
Crankshaft:	Forged steel
Connecting Rods:	Forged steel
Pistons:	Forged dome
Cylinder Heads:	LSX-LS7 aluminum 6-bolt
Induction:	Boosted
Intake Manifold:	2.9L Whipple
Camshaft Type:	Hydraulic roller
Camshaft Lift (int./exh.):	.640/.640-inch
Camshaft Duration (int./exh.):	244/255 deg. @.050-inch



# 19304009 (2014) COPO 427 - 390 hp

A proven combination, the COPO 427 gets a lighter, custom aluminum oil pan and a 90mm throttle body as standard equipment. The lightweight LS7 block and smaller throttle body should prove to be a real winner in your late model COPO Camaro.

## **TECH SPECS:**

Displacement:	427 cu in (7.0L)
<b>Compression Ratio</b> :	13.5:1
Cylinder Block:	LS7 cast aluminum
Bore x Stroke (in):	4.125 x 4.000
Crankshaft:	Forged steel
Connecting Rods:	Forged steel
Pistons:	Forged dome
Cylinder Heads:	LS7 aluminum
Induction:	Natural - EFI
Intake Manifold:	Holley Hi-Ram
Camshaft Type:	Hydraulic roller
Camshaft Lift (int./exh.):	.630/.630-inch
Camshaft Duration (int./exh.):	233/276 deg. @ .050-inch

### ADDITIONAL COPO CRATE ENGINE OPTIONS

### 17802825 (2012-2013) COPO 427 - 425 hp (not shown)

The COPO 427 uses the large-bore cylinder block and high-flow cylinder heads of the LS7 engine and complements them with a high-compression rotating assembly to deliver big power from its large displacement. Its lightweight aluminum block and heads revive the spirit of the original ZL1 all-aluminum 427 Big-Block that helped forge the COPO legacy in 1969.

### TECH SPECS:

427 cu in (7.0L)
13.5:1
LS7 cast aluminum
4.125 x 4.000
Forged steel
Forged steel
Forged dome
LS7 aluminum
Natural
Holley Hi-Ram
Hydraulic roller
.630/.630-inch
233/276 deg. @ .050-inch

### 19301608 (2013-2014)

### COPO 396 - 404 hp (not shown)

With the displacement of a classic Chevrolet Big-Block, the lightweight, all-aluminum COPO 396 racing engine delivers power reminiscent of vintage muscle cars, but with the high-rpm capability and vehicle balance dynamics that only an LS engine can deliver. An all-forged rotating assembly makes it a durable performer, too!

### TECH SPECS:

Displacement:	396 cu in (6.5L)
Compression Ratio:	10.5:1
Cylinder Block:	LS3 cast aluminum
Bore x Stroke (in):	4.065 x 3.825
Crankshaft:	Forged steel
Connecting Rods:	Forged steel
Pistons:	Forged flat top
Cylinder Heads:	LS3 aluminum
Induction:	Natural
Intake Manifold:	Holley Hi-Ram
Camshaft Type:	Hydraulic roller
Camshaft Lift (int./exh.):	.595/.595-inch
Camshaft Duration (int./exh.):	233/276 deg. @ .050-inch

# 19301609 (2013-2014)

### COPO 350 - 350 hp (not shown)

The entry-level COPO racing engine is a bit of a sleeper that has capabilities far beyond what the modest specs might indicate. Its high-flow LS3 cylinder heads help deliver high rpm power, that will move the car through the top-end lights quickly.

### **TECH SPECS:**

Displacement:	350 cu in (5.7L)
Compression Ratio:	10.7:1
Cylinder Block:	LS7 cast aluminum
Bore x Stroke (in):	4.125 x 3.270
Crankshaft:	Forged steel
Connecting Rods:	Forged steel
Pistons:	Forged dome
Cylinder Heads:	LS3 aluminum
Induction:	Natural
Intake Manifold:	Holley Hi-Ram
Camshaft Type:	Hydraulic roller
Camshaft Lift (int./exh.):	.525/.525-inch
Camshaft Duration (int./exh.):	226/236 deg.@.050-inch



Additional COPO Crate Engine Options Continued

### A. 17802826 (2012)

### COPO 327 2.9L S/C - 500 hp

Don't let the smaller displacement fool you. This COPO racing engine packs a supercharged punch, thanks to a 2.9L Whipple twin-screw supercharger. It forces air into a pair of LSX-LS7 6-bolt heads mounted on a strong LSX Bowtie block, for a potent combination of exceptional power and strength.

### TECH SPECS:

Displacement:	327 cu in (5.3L)
Compression Ratio:	10.2:1
Cylinder Block:	LSX cast iron
Bore x Stroke (in):	4.065 x 3.150
Crankshaft:	Forged steel
Connecting Rods:	Forged steel
Pistons:	Forged dome
Cylinder Heads:	LSX-LS7 aluminum
Induction:	Boosted
Supercharger:	2.9L Whipple
Camshaft Type:	Hydraulic roller
Camshaft Lift (int./exh.):	.640/.640-inch
Camshaft Duration (int./exh.):	244/255 deg. @ .050-inch

### B. 17802827 (2012)

### COPO 327 4.0L S/C - 550 hp

The most powerful supercharged COPO crate engine is designed for NHRA's A Super Stock class and uses a large, 4.0L compressor to generate tremendous horsepower. Its foundation is the sturdy LSX cylinder block, with a tough, all-forged rotating assembly and the big-displacement Whipple blower. Like the other COPO crate engines, this one uses the high-flow LSX-LS7 6-bolt heads to move as much air as possible.

### TECH SPECS:

Displacement:	327 cu in (5.3L)
Compression Ratio:	10.2:1
Cylinder Block:	LSX cast iron
Bore x Stroke (in):	4.065 x 3.150
Crankshaft:	Forged steel
Connecting Rods:	Forged steel
Pistons:	Forged dome
Cylinder Heads:	LSX-LS7 aluminum
Induction:	Boosted
Intake Manifold:	4.0-L Whipple
Camshaft Type:	Hydraulic roller
Camshaft Lift (int./exh.):	.640/.640-inch
Camshaft Duration (int./exh.):	244/255 deg. @ .050-inch



A COPO 327 2.9L S/C Crate Engine



B COPO 327 4.0L S/C Crate Engine



COPO 396/390 Long Block Replacement Engine C



COPO 427/425 Intake Manifold for LS7 Heads D



COPO 427/425 Throttle Body E



COPO 350/350 Steel Replacement Crank Shaft F

Flat Top







COPO 396/390 and 350/350 Piston G

COPO 350/350 Piston H

### **COPO ENGINE COMPONENTS**

The factory-engineered COPO Camaro racing engines deliver the power to win, and Chevrolet Performance is proud to offer many of the same components that go into hand-assembled engines for the production cars and our very own COPO 427 (7.0L) and 327 (5.3L) crate engines. Use them to build your own high-performance engine for the street or strip, starting with our lightweight LS7 cylinder block – the same used in the COPO 427 engine – or the durable and economical LSX Bowtie block.

### C. 19301614

### COPO 396/390 Long Block

Replacement long-block engine for factory COPO 396/375

### 19299607

### COPO 427/425 Long Block (not shown)

Replacement long-block engine for factory COPO 427/425

### 19301615

### COPO 350/350 Long Block (not shown)

• Replacement long-block engine for factory COPO 350/327

### D. 17802810

### COPO 427/425 Intake for LS7 Heads

 The COPO race-only intake manifold is a Holley Hi-Ram with fuel rails

### 19301195

### COPO 350/350 and 396/390 for LS3 Heads (not shown)

 The COPO race-only intake manifold is a Holley Hi-Ram with fuel rails

### E. 17802828

### Throttle Body – COPO 427/425

Mechanical throttle body used on COPO racing engines, COPO engraved on top of housing

### 19301616

# Throttle Body – COPO 350/350, 396/390 and 427/430 hp (not shown)

 Mechanical throttle body used on COPO racing engines, COPO engraved on top of housing

### 19300083

### Throttle Body - COPO 327/2.9L S/C (not shown)

Mechanical throttle body used on COPO racing engines, COPO engraved on top of housing

### 19300085

### Throttle Body - COPO 327/4.0L S/C (not shown)

 Mechanical throttle body used on COPO racing engines, COPO engraved on top of housing

### F. 19301559

- COPO 350/350 Steel Replacement Crank Shaft
- Crankshaft for COPO engines

### 19301270

COPO 396/390 Steel Replacement Crank Shaft (not shown)

Crankshaft for COPO engines

### 19299608

### COPO 427/425 and 427/430 Steel Replacement Crank Shaft (not shown)

Crankshaft for COPO engines

### G. 19301556

COPO 396/390 and 350/350 Piston (flat top)
Forged aluminum piston with rings

### H. 19301558

### COPO 350/350 Piston (dome top)

• Forged aluminum high-dome piston with rings

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COPO Engine Components Continued

### A. 17802818

### **COPO LS7 CNC Head Assembly**

The high-revving horsepower of the COPO 427 racing engines is enabled by the high-flow LS7 CNC cylinder head, which features a 12-degree valve angle for efficient airflow at high rpm. The head is fully CNC machined and the 356-T6 aluminum casting features 275cc (nominal) intake ports, 90cc exhaust ports and 70cc combustion chambers. There's also a thick, 5/8" deck for exceptional (nominal) strength. The assembled head includes:

- 2.205" titanium intake valves
- 1.615" sodium-filled exhaust valves
- Max-Life Beehive-type valve springs
- Valve retainers and locks
- Intake and exhaust stem seals
- Intake lash cap

### B. 17802804

### COPO LS7 CNC Head

All the same high-flow attributes as the assembled head described above, but delivered unassembled. Valves and valvetrain components must be purchased separately.

 Intake, exhaust and combustion chambers are optimized for COPO drag-race engines.

**NOTE:** All COPO 350 and 396 racing cylinder heads are built with the same "Max-life" valve springs and hardened spring seats as the 327S/C and the 427 N/A, plus, they include lightweight hollow-stem LS3 intake valves and lightweight LS9 hollow-stem exhaust valves.

### 19166979

### LSX-DR CNC Ported Cylinder Head (not shown)

- Fully CNC ported
- 356-T6 aluminum racing head. 5/8" thick deck
- LSX-DR rectangle intake port design requires LSX-DR intake manifold
- LSX-CT/DR spread port exhaust port pattern
- Cast-in down-nozzle bosses (not machined)
- Designed for up to 2.280" intake and 1.620" exhaust valves (4.165" minimum bore)
- Machined for 1.660" valve springs. 11° valve angle
- Minimum 4.125" bore
- 313cc CNC'd intake ports. 116cc CNC'd exhaust ports
- 50cc CNC'd combustion chambers
- Requires 19201808 shaft-mount Rocker Kit
- Capable of over 900 naturally aspirated horsepower!
- Installed on LSX454R engine assembly
- See page 245 for images and information

### 19202986

### LSX-DR Cylinder Head (not shown)

- Rough machined seats and guides for cylinder head porters to work their magic!
- See page 246 for images and information



A COPO CNC-Cylinder Head Assembly (Combustion Chamber)



A COPO CNC-Cylinder Head Assembly (Exhaust)



B Bare COPO CNC-Cylinder Head (Combustion Chamber)



B Bare COPO CNC Cylinder Head (Intake)



**B** Close-up shots of the COPO-specific CNC porting applied to an LS7 head



COPO LS7-Style Exhaust Header Gasket C





COPO LS7-Style Intake Valve D COPO LS7-Style Exhaust Valve E



- COPO LS7-Style Intake **F** Rocker Arm
- COPO LS7-Style Exhaust G Rocker Arm



COPO Alternator Mounting Kit H



COPO Injector Harness

### C. 12594171

### COPO LS7-Style Exhaust Header Gaskets

High-performance exhaust header gaskets designed for the high-temperature operation of the COPO racing engines. Fits the exhaust port configuration of LS7-style cylinder heads. Package includes two gaskets.

### D. 12591644

### COPO LS7-Style Intake Valve

Lightweight titanium 2.205" intake valve, as used on the COPO racing engines and production LS7 engine. Use to assemble COPO LS7 CNC Bare Head 17802804. Sold individually. Eight required per engine.

## E. 12618110

### COPO LS7-Style Exhaust Valve

Sodium-filled 1.615" exhaust valve stands up to the high temperatures experienced by racing engines, especially supercharged applications. Use to assemble COPO LS7 CNC Bare Head 17802804. Sold individually. Eight required per engine.

### F. 12579615

### COPO LS7-Style Intake Rocker Arm

Durable, pedestal-mount cast iron rocker arm with 1.8 ratio. Unique offset design accommodates the LS7's valve arrangement. Self-aligning design with self-locking rocker arm nut. Sold individually. Eight required per engine.

### G. 12579617

### COPO LS7-Style Exhaust Rocker Arm

Durable, pedestal-mount cast iron rocker arm with 1.8 ratio. Unique offset design accommodates the LS7's valve arrangement. Self-aligning design with self-locking rocker arm nut. Sold individually. Eight required per engine.

### H. 19299546

### **COPO Alternator Mounting Kit**

High-output alternator mounting kit designed for proper clearance in the factory-built COPO Camaro drag race vehicles.

### l. 19299611

### COPO Injector Harness

Designed to fit all normally aspirated COPO engines with Hi-Ram intake manifold.

### 19299612

### **COPO Injector Harness (not shown)**

Designed to fit all supercharged COPO engines.

COPO Engine Components Continued

### A. 19301143

### **Fuel Rail Fitting**

Four fuel rail fittings are required for all normally aspirated COPO engines.

### **B. 19301144**

### Oil Pump

LS production-style gerotor-type oil pump modified to maintain oil pressure at high rpm's for engines using a conventional wet-sump lubrication system.

### C. 19299313

### Damper/Hub Pulley Kit

Special Chevrolet Performance/ATI SFI-approved harmonic damper with front hub adapter, pulley and engine damper.

### 19304012

### COPO Oil Pan Service Bolt Kit (not shown)

Oil Pan attaching bolts for aluminum aftermarket oil pan.

### D. 12633906

### Front Engine Block Cover Kit

Front engine cover for Gen IV Small-Block. Kit includes camshaft sensor and harness, cover gasket, front crankshaft seal and bolts.







C Damper/Hub Pulley Kit



D Front Engine Block Cover Kit



Rear Engine Block Cover Kit E



Valley Cover Kit **F** 



Air Induction Tube (2.9L S/C) G



Air Induction Tube (7.0L)

E. 12633904

### Rear Engine Block Cover Kit

Rear engine cover for Gen IV Small-Block. Kit includes cover, cover gasket and rear crankshaft seal.

## F. 12570471

### Valley Cover Kit

Engine block valley cover for Gen IV Small-Block (without Active Fuel Management). Kit includes aluminum cover, bolts, gasket and O-rings.

### G. 19299624

### Air Induction Tube\*

Air Intake – 5.3L (327) Engine with 2.9L Supercharger Air intake system for use with 5.3L supercharged COPO crate engine 17802826, with 2.9L supercharger.

### H. 19299621

### Air Induction Tube\* Air Intake – 7.0L (427) Engine

Air intake system for use with 7.0L 427 COPO crate engine 17802825.

### 19300087

### Air Induction Tube\* (not shown) Air Intake – 4.0L S/C COPO

Air intake system for use with 4.0L S/C COPO crate engine 17802827.

### COPO ENGINE CONTROL MODULES AND HARNESSES

Part Number	Description
19299289	Engine Control Harness
19299610	Engine Control Jumper (427)
19299611	Injector Harness (427)
19299612	Injector Harness (327)
19299290	Engine Control Harness Jumper (327) Both
19299291	Engine Control Harness Jumper (327)/4.0L
19299292	Engine Control MEFI 5-427
19299293	Engine Control MEFI 5-327/2.9
19299294	Engine Control MEFI 5-327/4.0
TK40015*	Crank Case Breather Cam
19299546	Alternator Mount Kit
19329258	Alternator
19328593	Alternator Pulley (large diameter - 3 1/2")
12223861	Map Sensor
12569240	Map Sensor (427)
10480003	COPO LS Starter Assembly

\*Chevrolet Performance does not service the COPO air filter elements. Replacement air filter elements are readily available in the retail automotive aftermarket.

### **COPO VEHICLE COMPONENTS**

Build your own COPO Camaro race car with the same parts used on the production models, including the unique, lightweight hood emblazoned with the COPO name and drivetrain mount kits that make installing a high-performance powertrain and racing-style solid rear axle easier – and without time-consuming fabrication. Start with one of our Chevrolet Performance Camaro bodies-in-white and build your COPO your way!

### A. 19243374

### **Camaro Body-in-White**

Chevrolet Performance's Gen V Camaro Body-in-White is the smart choice and affordable foundation on which to build a COPO replica or other Camaro race car. It includes an assembled body structure, including the front fenders, hood, roof, doors, rear quarters and trunk lid. The structure also includes the complete floorpans and chassis rails. It is delivered as a painted body shell (color availability is limited), with no additional components or materials. The bodies do not have vehicle identification numbers, so they may be used only as racing vehicles that will never be licensed for street driving.

### B. 22950678

### COPO Camaro Cowl-Induction Style Hood

Lightweight composite hood with high-rise cowl-induction styling to clear tall racing engines, featuring the Chevrolet Bowtie and the COPO logo embossed on the underside. Designed for hinged/ strut opening or adaptable to racing hood pins. Delivered ready to paint.

### 23177465

### COPO Carbon Fiber Hood (not shown)

Want to take off 12 lbs in a few minutes? Swap out your composite COPO hood for this high-tech carbon-fiber piece to improve your launch times.

### C. TK10004

### **COPO Rear Suspension Installation Kit\***

This kit includes brackets and other hardware to mount a solid rear axle and coil-spring suspension in place of the productionstyle independent rear suspension. Tailored design is a direct fit. Made of heavy-gauge steel. Requires welding.

### D. TK20001

### **COPO Powertrain Mounting Kit\***

Heavy-duty engine mounts and transmission mount for installation of racing engine and transmission in the fifth-generation Camaro body. Conforms to NHRA Stock and Super Stock class guidelines.



A Body-in-White



B COPO Camaro Cowl-Induction Hood (Top)



B COPO Camaro Cowl-Induction Hood (Underside)



C Rear Suspension Installation Kit



D Powertrain Mounting Kit

\*Not serviced by Chevrolet Performance. To order, contact COPO Parts Direct at: 855.267.6685 or www.COPOpartsdirect.com.





COPO Rear Wheel E COPO Front Wheel F mission 8888**88 []]]] \* \*** 

NEW! COPO Weight Box H

NEW!

COPO Wheelie Bar Kit G



E. TK50005 NEW!

- **COPO Drag Racing Rear Wheel\***
- 15" x 9.75" polished 5 on 4.75" bolt pattern ٠
- ٠
- .625" lug studs • Manufactured by WELD Racing

### F. TK50004 NEW! **COPO Drag Racing Front Wheel\***

- 15" x 4" polished
- 5 on 4.75" bolt pattern • .500" lug studs
- Manufactured by WELD Racing
- G. TK10007 NEW!
  - **COPO Wheelie Bar Kit\*** 
    - Adjustable for optimum traction

### H. TK10000 NEW! **COPO Weight Box\***

• Rugged steel construction

- I. TK10006 NEW! **COPO Parachute Kit\*** 
  - 10' cross-form, black
- J. TK80015 NEW! **COPO Parachute Tag\*** 
  - Red canvas with white vinyl COPO logo

\*Not serviced by Chevrolet Performance. To order, contact COPO Parts Direct at: 855.267.6685 or www.COPOpartsdirect.com.

COPO Vehicle Components Continued

### A. TK30001

### COPO Switch Panel Assembly\*

Powertrain switch kit includes switches and jumper connector to plug into COPO wiring harness (not included). Switches include engine start/stop, ignition, fuel pump and auxiliary fan.

**NOTE:** Camaro production radio panel not included - COPO factory installation replaces radio screen with switch kit.

### B. TK70002

### Gauge Panel\*

Auxiliary gauge panel, as used in the COPO Camaro production vehicles. Holds four 2-5/8". gauges (not included) and includes jumper connector for the COPO wiring harness (not included). Mounts on the instrument panel.

### GAUGES

### C. 880445

Tachometer

5" Tach, 10,000 RPM with shift indicator light.

### D. 880447

Oil Pressure

2-1/16" Oil pressure - 0-100PSI

### E. 880446

Water Temperature 2-1/16" Water Temperature – 100°- 260°

### F. 880444

Voltmeter

2-1/16" Voltmeter - 8-18 volts

### G. 880448

**Transmission Temperature** 2-1/16" Trans Temperature – 100°- 260°

### H. 880449

**Fuel Pressure** 

2-1/16" Fuel Pressure - 0-100 PSI

NOTE: GM Licensed Parts. See page 380 for more information.



A COPO Switch Kit



**B** COPO Gauge Housing Panel





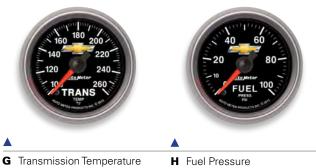
C Tachometer

D Oil Pressure



E Water Temperature

F Voltmeter



\*Not serviced by Chevrolet Performance. To order, contact COPO Parts Direct at: 855.267.6685 or www.COPOpartsdirect.com.

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COPO Camaro 2012 Graphics Package |



COPO Camaro 2013 Graphics Package J



### NEW!

COPO Camaro 2014 Graphics Package (Hood Decal) K



COPO Camaro 2014 Graphics Package (Rear Decal) K

### **COPO GRAPHICS**

### I. COPO Camaro 2012 Graphics Package

Add a touch of color to your Camaro race car. Original equipment option on 2012 COPO Camaro.

Part Number	Description
22951636	Chevy Racing Blue (not shown)
22951637	Metallic White (not shown)
22951638	Flat Black (not shown)
22951639	Inferno Orange

### J. COPO Camaro 2013 Graphics Package

Dress your Camaro race car in authentic COPO body-side graphics. High-quality die-cut vinyl available in inferno orange, blue, white and black. Kit includes fender and hood graphics.

Part Number	Description
23162262	Inferno Orange (not shown)
23162259	Chevy Racing Blue
23162260	Metallic White (not shown)
23162261	Flat Black (not shown)

### K. COPO Camaro 2014 Graphics Package NEW!

Includes engine cubic-inch (hood application) and COPO graphic on rear quarter-panel.

Part Number	Description
23494503	COPO Graphics Metallic White w/427 engine designator
23494504	COPO Graphics 40 Gloss Black w/427 engine designator (shown)
23494505	COPO Graphics Inferno Orange w/427 engine designator
23494506	COPO Graphics Chevy Racing Blue w/427 engine designator
23494514	COPO Graphics Metallic White w/350 SC engine designator
23494515	COPO Graphics 40 Gloss Black w/350 SC engine designator
23494516	COPO Graphics Inferno Orange w/350 SC engine designator
23494517	COPO Graphics Chevy Racing Blue w/350 SC engine designator
23225974	COPO Graphics Metallic White w/350 engine designator
23225975	COPO Graphics 40 Gloss Black w/350 engine designator
23225976	COPO Graphics Inferno Orange w/350 engine designator
23225977	COPO Graphics Chevy Racing Blue w/350 engine designator
23225978	COPO Graphics Metallic White w/396 engine designator
23225979	COPO Graphics 40 Gloss Black w/396 engine designator
23225980	COPO Graphics Inferno Orange w/396 engine designator
23225981	COPO Graphics Chevy Racing Blue w/396 engine designator

### 2014 COPO Camaro Service Parts - Manual Transmission Application

		2014			
Item	ΩΤΥ	427/430 HP	396/390 HP	350/350 HP	350 SC/530 HP
Engine Assembly	1	19304009	19301608	19301609	19304010
Exhaust Gaskets	2	12617944	12617944	12617944	N/A
Bolt, Exhaust Manifold	16	12552344	12552344	12552344	N/A
Harness, Engine Control	1	19301111	19301111	19301111	N/A
Harness, Engine Control Map Jumper	1	19301112	19301112	19301112	N/A
Harness 327/4.0 Tps Jumper	1	N/A	N/A	N/A	N/A
Harness, Injector	1	19299611	19299611	19299611	N/A
Module, Engine Control,	1	19302703	19302704	19302705	N/A
Fuel Rail Fittings	4	19301143	19301143	19301143	19301143
Air Induction Tube	1	N/A	N/A	N/A	N/A
Mount Kit, Alternator	1	19299546	19299546	19299546	N/A
Alternator	1	19329258	19329258	19329258	N/A
Alternator Pulley	1	19328593	19328593	19328593	N/A
Map Sensor	1	12591290	12591290	12591290	12592525
Harness, Alternator Excite	1	19301113	19301113	19301113	N/A
Sensor, Water Temp	1	19328612	19328612	19328612	N/A
Adapter, Water Temp Sens	1	19328613	19328613	19328613	N/A

### 2014 COPO Camaro Service Parts - Automatic Transmission Application

		2014			
ltem	ΩΤΥ	427/430 HP	396/390 HP	350/350 HP	350 SC/530 HP
Engine Assembly	1	19304009	19301608	19301609	19304010
Exhaust Gaskets	2	12617944	12617944	12617944	12617944
Bolt, Exhaust Manifold	16	12552344	12552344	12552344	12552344
Harness, Engine Control	1	19301111	19301111	19301111	19301111
Harness, Engine Control Map Jumper	1	19301112	19301112	19301112	19301112
Harness 327/4.0 Tps Jumper	1	N/A	N/A	N/A	N/A
Harness, Injector	1	19299611	19299611	19299611	19299612
Module, Engine Control,	1	19301200	19301610	19301611	19302942
Fuel Rail Fittings	4	19301143	19301143	19301143	19328601
Air Induction Tube	1	N/A	N/A	N/A	N/A
Air Filter	1	N/A	N/A	N/A	N/A
Mount Kit, Alternator	1	19299546	19299546	19299546	19299546
Alternator	1	19329258	19329258	19329258	19329258
Alternator Pulley	1	19328593	19328593	19328593	19328593
Map Sensor	1	12591290	12591290	12591290	12592525
Harness, Alternator Excite	1	19301113	19301113	19301113	19301113

### 2014 COPO Camaro Service Parts - Manual and Automatic Transmission Application

		2014			
ltem	ΩΤΥ	427/430 HP	396/390 HP	350/350 HP	350 SC/530 HP
Long Block ASM	1	19328698	19301614	19301615	19328600
Intake KIT	1	17802810	19301195	19301195	N/A
Supercharger KIT	1	N/A	N/A	N/A	19299308
Throttle Body	1	19301616	19301616	19301616	19300083
TPS Sensor	1	17123852	17123852	17123852	17123852
Throttle cable bracket	1	19299618	19299618	19299618	19299623
Valve cover breather cap	2	19299619	19299619	19299619	19299619
Block Asm	1	19213580	12623967	19213580	19260093
Crank	1	19299608	19301270	19301559	19302944
Rods	8	17802817	19301271	17802816	17802816
Piston	8	N/A	19301556	N/A	19302939
Piston, .005" O.S.	8	19303524	N/A	19303523	N/A
Ring kit, piston	8	17802822	19301557	17802822	19302367
Oil Pump	1	19301144	19301144	19301144	19301144
Damper ASM	1	19299313	19299313	19299313	17802805
Pick-up Tube	1	19301149	19301149	19301149	19301149
Head w/Valves	2	17802818	12629063	12629063	19301209
Head ASM	1	17802804	19302061	19302061	19301208
Retainer, intake	4	17802819	17802819	17802819	17802819
Retainer, exhaust	4	17802819	12596508	12596508	17802819
Push Rods	16	12593344	19301617	19301617	19328609
Valve Cover	2	19301147	19301147	19301147	19301147
Oil Dipstick tube	1	19301148	19301148	19301148	19301148

#### 2013 COPO Camaro Service Parts - Manual Transmission Application

			2013			2012	
Item	QTY	427	396	350	427	327 w/2.9 SC	327 w/4.0L
Engine Assembly	1	17802825	19301608	19301609	17802825		
Exhaust Gaskets	2	12617944	12617944	12617944	12617944	12617944	12617944
Bolt, Exhaust Manifold	16	12552344	12552344	12552344	12552344	12552344	12552344
Harness, Engine Control	1	19301111	19301111	19301111	19299289	19299289	19299289
Harness, Engine Control Map Jumper	1	19301112	19301112	19301112	19299610	19299290	19299290
Harness 327/4.0 Tps Jmpr	1	N/A	N/A	N/A	N/A	N/A	19299291
Harness, Injector	1	19299611	19299611	19299611	19299611	19299612	19299612
Module, Engine Control,	1	19302703	19302704	19302705	19299292	19299293	19299294
Fuel Rail Fittings	4	19301143	19301143	19301143	19301143	New P/N	New P/N
Air Induction Tube	1	19299621	19299621	19299621	19299621	19299624	19300087
Mount Kit, Alternator	1	19299546	19299546	19299546	19299546	19299546	19299546
Alternator	1	19329258	19329258	19329258	19329258	19329258	19329258
Alternator Pulley	1	19328593	19328593	19328593	19328593	19328593	19328593
Map Sensor	1	12591290	12591290	12591290	N/A	N/A	N/A
Harness, Alternator Excite	1	19301113	19301113	19301113	19301113	19301113	19301113

# 2013/2012 COPO Camaro Service Parts - Automatic Transmission Application

			2013			2012	
ltem	QTY	427	396	350	427	327 w/2.9 SC	327 w/4.0L
Engine Assembly	1	17802825	19301608	19301609	17802825	17802826	17802827
Exhaust Gaskets	2	12617944	12617944	12617944	12617944	12617944	12617944
Bolt, Exhaust Manifold	16	12552344	12552344	12552344	12552344	12552344	12552344
Harness, Engine Control	1	19301111	19301111	19301111	19299289	19299289	19299289
Harness, Engine Control Map Jumper	1	19301112	19301112	19301112	19299610	19299290	19299290
Harness 327/4.0 Tps Jmpr	1	N/A	N/A	N/A	N/A	N/A	19299291
Harness, Injector	1	19299611	19299611	19299611	19299611	19299612	19299612
Module, Engine Control,	1	19301200	19301610	19301611	19299292	19299293	19299294
Fuel Rail Fittings	4	19301143	19301143	19301143	19301143	New P/N	New P/N
Air Induction Tube	1	19299621	19299621	19299621	19299621	19299624	19300087
Air Filter	1	19299622	19299622	19299622	19299622	19299625	19300088
Mount Kit, Alternator	1	19299546	19299546	19299546	19299546	19299546	19299546
Alternator	1	19329258	19329258	19329258	19329258	19329258	19329258
Alternator Pulley	1	19328593	19328593	19328593	19328593	19328593	19328593
Map Sensor	1	12591290	12591290	12591290	12591290	12223861	12223861
Harness, Alternator Excite	1	19301113	19301113	19301113	19301113	19301113	19301113

# 2013/2012 COPO Camaro Service Parts - Automatic Transmission Application

			2013			2012	
ltem	ΩΤΥ	427	396	350	427	327 w/2.9 SC	327 w/4.0L
Long Block ASM	1	19299607	19301614	19301615	19299607	17802803	17802803
Intake KIT	1	17802810	19301195	19301195	17802810	N/A	N/A
Supercharger KIT	1	N/A	N/A	N/A	N/A	19299308	19299308
Throttle Body	1	17802828	19301616	19301616	17802828	19300083	19300085
TPS Sensor	1	17123852	17123852	17123852	17123852	17123852	17123852
Throttle cable bracket	1	19299618	19299618	19299618	19299618	19299623	N/A
Valve cover breather cap	2	19299619	19299619	19299619	19299619	19299619	19299619
Block Asm	1	19213580	12623967	19213580	19213580	19260093	19260093
Crank	1	19299608	19301270	19301559	19299608	17802815	17802815
Rods	8	17802817	19301271	17802816	17802817	17802816	17802816
Piston	8	17802821	19301556	19301558	17802821	17802823	17802823
Piston, .005" O.S.	8	19303524	N/A	19303523	19303524	N/A	N/A
Ring kit, piston	8	17802822	19301557	17802822	17802822	17802824	17802824
Oil Pump	1	19301144	19301144	19301144	19301144	19301144	19301144
Damper ASM	1	19299313	19299313	19299313	19299313	17802805	17802805
Pick-up Tube	1	19301149	19301149	19301149	19301149	19301149	19301149
Head w/valves	2	17802818	12629063	12629063	17802818	19301209	19301209
Head ASM	1	17802804	19302061	19302061	17802804	19301208	19301208
Retainer, intake	4	17802819	17802819	17802819	17802819	17802819	17802819
Retainer, exhaust	4	17802819	12596508	12596508	17802819	17802819	17802819
Push Rods	16	12593344	19301617	19301617	12593344	12593344	12593344
Valve Cover	2	19301147	19301147	19301147	19301147	19301147	19301147
Oil Dipstick tube	1	19301148	19301148	19301148	12570787	12570787	12570787

NOTE: COPO Licensed Parts are not serviced by Chevrolet Performance. To order, contact COPO Parts Direct at: 855.267.6685 or www.COPOpartsdirect.com.



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29711

# CRATE ENGINES & Engine Components

# Factory-Engineered Performance You Can Depend On

Building a high-performance engine or selecting the best crate engine for your project vehicle requires trust – and you can trust Chevrolet Performance to deliver the power you want with engines and parts that perform dependably.

Our engineers design, test and validate Chevrolet Performance engines and components to the same rigorous standards as production vehicle parts, ensuring a perfect fit and performance that doesn't sacrifice quality or durability. In fact, many of our performance parts for late-model vehicles and LS engines – including our all-new lineup of Camaro Z/28 parts – are based on production components.

When it comes to crate engines, Chevrolet Performance leads the industry with an unmatched range of Small-Block, Big-Block and LS-series packages. Better still, every Chevrolet Performance crate engine is all-new, from the intake manifold to the oil pan, so there's nothing to worry about regarding the condition of "seasoned" parts or rebuilds. That goes double for our brand-new cylinder blocks.

Don't settle for less on your project. Trust Chevrolet Performance to deliver power, durability, quality and convenience!

Featured on this spread: NEW LT1 6.2L Crate Engine Fast Burn Aluminum Cylinder Head Lightweight Starter Hydra-Matic 4L65-E Four-Speed Automatic Transmission



# **Crate Engine Quick Reference Charts**

# **Chevy Small-Block V-8**

Part Number	Description	Engine Size	Weight	hp	Torque	Trans*	Page	Warranty
19244450	350/290 HP Deluxe Kit	350 cu in	-	290	326	А	98	C
12499529	350/290 HP–Economy Performance Engine	350 cu in	352	290	332	А	99	C
19210009	350 HO Turn-Key–with Iron Vortec Heads	350 cu in	575	330	380	А	100	C
19210008	350 HO Deluxe–with Iron Vortec Heads	350 cu in	481	330	380	А	101	0
19210007	350 HO Base–with Iron Vortec Heads	350 cu in	298	330	380	А	101	C
12499120	Ram Jet 350–PFI with Iron Vortec Heads	350 cu in	517	350	400	А	102	C
19301293	ZZ5 350 Base	350 cu in	510	400	400	А	104	C
9301294	ZZ5 350 Turn-Key	350 cu in	410	400	400	А	106	C
12499101	HT383 Base–Performance Engine	383 cu in	405	340	435	А	108	C
2499106	383 Partial Engine	383 cu in	335	N/A	N/A	А	109	C
7800393	HT383E	383 cu in	450	340	435	А	110	C
9154775	ZZ383 Base	383 cu in	410	425	449	А	112	0
19301295	ZZ383 Deluxe	383 cu in	410	450	450	А	114	C
ircle Trac	ck Racing Engines							
	Description	Engine Size	Weight	hp	Torque	Trans*	Page	Warrant
9258602	CT350	350 cu in	451	350	390	N/A	118	8
8958603	CT355	350 cu in	402	355	405	N/A	120	8
9318604	CT400	350 cu in	466	400	400	N/A	122	8
9271821	CT525	376 cu in	415	525	471	N/A	124	8
9329008	DR525 with Gen IV F-car oil pan	376 cu in	415	525	489	В	126	8
9329009	DR525 with muscle car oil pan	376 cu in	415	525	489	В	126	8
S Family	v Small-Block V-8							
Part Number	Description	Engine Size	Weight	hp	Torque	Trans*	Page	Warrant
9259918	LC9 5.3L	5.3L	-	320	335	А	188	0
9301326	LS3 6.2L–Corvette Gen IV V-8	6.2L	415	430	424	А	190	0
9301358	LS376/480–EFI LS3 Gen IV V-8	6.2L	415	480	475	В	192	0
9301359	LS376/515–Carbureted LS3 Gen IV V-8	6.2L	415	515	469	В	194	0
9301360	LS376/525–EFI LS3 Gen IV V-8	6.2L	415	525	489	В	196	0
9260164	LSA 6.2L SC	6.2L	-	556	551	С	198	0
9260165	LS9 6.2L SC	6.2L	-	638	604	N/A	200	C
9244098	LS7 7.0L–Corvette Z06	7.0L	440	505	470	В	202	C
				460	465	Е	204	Ô
9328728	LT1 with wet sump	6.2L		400		-		
19328728 19329997	LT1 with wet sump LT1 with dry sump	6.2L 6.2L	_	460	465	E	204	C

### \*Recommended Transmissions

Trans	Part Number	Description	Page
Α	19260380	Hydra-Matic 4L65-E Four-Speed Automatic	348
В	19299055	SuperMatic <sup>™</sup> 4L70-E Four-Speed Automatic	348
C	19300175	SuperMatic <sup>™</sup> 4L85-E Four-Speed Automatic	348
D	19328976	Production LTG 6-Speed Manual	355
E	19329645	SuperMatic <sup>™</sup> 4L70-E Four-Speed Automatic - LT1	348

Part Number	Description	<b>Engine Size</b>	Weight	hp	Torque	Trans*	Page	Warrantv
19260831	LSX376-B8	6.2L	_	450	444	C	220	O
19299306	LSX376-B15	6.2L	_	450	444	С	222	C
19260833	LSX454–Base Assembly	7.4L	-	620	590	N/A	224	C
19260835	LSX454R	7.4L	-	770	612	N/A	226	8
Chovy Bic	J-Block V-8							
Part Number		Engine Size	Weight	hp	Torque	Trans*	Page	Warranty
19166392	Anniversary Edition 427	427 cu in	460	430	444	С	278	O
19166393	ZZ427/480	427 cu in	520	480	490	С	280	0
12568774	454 HO–with Iron Heads and Roller Cam	454 cu in	590	425	500	С	282	C
12498778	454 Partial Engine	454 cu in	361	N/A	N/A	С	283	C
12498777	ZZ454/440–440 Horsepower with Aluminum Heads	454 cu in	522	440	500	С	284	C
88890534	HT502—Truck Replacement Engine	502 cu in	557	377	512	С	286	0
12568782	502 Partial Engine	502 cu in	402	N/A	N/A	С	287	C
12568778	502 HO—with Iron Heads and Roller Cam	502 cu in	602	450	550	С	288	0
19201332	ZZ502 Deluxe–Assembled Kit, with Aluminum Heads	502 cu in	611	502	567	С	290	C
12371171	ZZ502 Deluxe–Unassembled Kit, with Aluminum Heads	502 cu in	602	502	567	С	291	0
12496963	ZZ502 Base Engine, with Aluminum Heads	502 cu in	504	502	567	С	292	C
12371204	ZZ502 Base–Unassembled Kit, with Aluminum Heads	502 cu in	532	502	567	С	293	0
	Ram Jet 502–PFI with Aluminum Heads	502 cu in	608	502	565	С	294	C

572 cu in

572 cu in

572 cu in

484 cu in

580

514

\_

602

620

620

720

315/3751

650

650

685

390/475<sup>1</sup>

С

С

С

296

297

298

300

0

0

#### **GM Parts Crate Engines\*\***

Vortec 8.0L

ZZ572/620 Deluxe

ZZ572/620 Base

ZZ572/720R Deluxe

19201333

12498792

19201334

19256938

Part Number	Description	Engine Size	Weight	hp	Torque	Trans*	Page	Warranty
12607031	2.2L L61	134 cu in	-	135–143	142	N/A	357	
19178806	2.8L I-4	2.8L	-	175	185	N/A	357	
89060432	3.5L LX9	3.5L	-	200	220	N/A	357	
19168948	3.8L V-6	3.8L	-	200	230	N/A	357	
12491864	4.2L LL8	256 cu in	-	275	275	N/A	358	
12491869	4.3L LU3	262 cu in	-	180–200	245–260	N/A	358	
12457703	4.8L LR4	292 cu in	-	275	285-290	N/A	358	
12457705	5.3L LM7/L59	325 cu in	-	285	325-330	N/A	358	
10067353	5.7L Gen 0	350 cu in	-	195	N/A	N/A	359	
12568758	5.7L Gen I	350 cu in	-	N/A	N/A	N/A	359	
19301553	6.0L LQ4/LQ9	364 cu in	-	300-325	360-370	N/A	359	
19328726	7.4L L19/L29	454 cu in	-	230–270	N/A	N/A	359	
19299576	8.1L L18	496 cu in	-	225-340	350-455	N/A	356	

NOTE: Weights include crates and all packaging material. Approximate crate weight is 30 lbs.

<sup>1</sup> Rating with CNG/Rating with Gasoline

\*\*This is a sample listing of GM Parts Crate Engines. Please see your GM dealer for the entire GM engine portfolio.

#### Warranty Information



*Chevrolet Performance Crate Engines include a 24-month or 50,000-mile limited warranty.* 



Chevrolet Performance Parts include a 12-month/unlimited mile limited warranty.



Chevrolet Performance Racing Crate Engines are excluded from limited warranty.



*GM Parts Engines offer a 36-month or 100,000-mile limited warranty when the engine is installed in a recommended application.* 



# **Torque Converter Quick Reference Chart**

Automatic Transmission Torque Converter Match Listing

Engine P/N	Description	Displac.	hp	Torque	4L60 Family		4L80 Family		
					and 4L70-	/latic 4L65-E ·E (LS bell)	Fits Superl	Vatic 4L85-E	
					Converter P/N	Stall Range	Converter P/N	Stall Range	
Chevy Sm	nall-Block V-8								
19244450	350/290 HP Deluxe	350 cu in	290	332	19299800	2,400-2,800	N/A	N/A	
19210009	350 HO Turn-Key–with Iron Vortec Heads	350 cu in	330	380	19299800	2,400-2,800	N/A	N/A	
12499120	Ram Jet 350–PFI with Iron Vortec Heads	350 cu in	350	400	19299800	2,400-2,800	19299804	2,400-2,800	
19301294	ZZ5 Turn-Key–with Aluminum Vortec Heads	350 cu in	400	400	19299801	3,000-3,400	19299805	3,000-3,400	
12499101	HT383 Base–Performance Engine	383 cu in	340	435	19299800	2,400-2,800	19299804	2,400-2,800	
19301295	ZZ383–High-Performance Engine	383 cu in	450	450	19299801	3,000-3,400	19299805	3,000-3,400	
Chevy LS	/LSX V-8								
19259918	LC9–5.3L	6.2L	326	350	19299802	2,400-2,800	19299806	2,400-2,800	
19258004	LC9–E-Rod Kit Automatic	5.3L	326	350	19299802	2,400-2,800	19299806	2,400-2,800	
19301326	LS3–Corvette Gen IV V-8	6.2L	430	424	19299802	2,400-2,800	19299806	2,400-2,800	
19257230	LS3–E-Rod Kit Automatic	6.2L	430	424	19299802	2,400-2,800	19299806	2,400-2,800	
19301358	LS376/480–LS3 Gen IV V-8	6.2L	480	475	19299803	3,000-3,400	19299807	3,000-3,400	
19301359	LS376/515–Carbureted LS3 Gen IV V-8	6.2L	515	469	19299803	3,000-3,400	19299807	3,000-3,400	
19301360	LS376/525–LS3 Gen IV ASA Camshaft	6.2L	525	489	19299803	3,000-3,400	19299807	3,000-3,400	
19329009	DR525 (with muscle car oil pan)	6.2L	525	489	N/A	N/A	N/A	N/A	
19329008	DR525 (with Gen IV F car oil pan)	6.2L	525	489	N/A	N/A	N/A	N/A	
19260164	LSA–Supercharged Gen IV V-8	6.2L	556	551	N/A	N/A	19299806	2,400-2,800	
19260165	LS9–Supercharged Gen IV V-8	6.2L	638	604	N/A	N/A	19299806	2,400-2,800	
19244098	LS7–2006 Corvette Z06	7.0L	505	470	19299803	3,000-3,400	19299807	3,000-3,400	
	Optional LS7 (depending on application)	7.0L	505	470	19299802	2,400-2,800	19299806	2,400-2,800	
19260831	LSX376–B8	6.2L	450	444	19299802	2,400-2,800	19299806	2,400-2,800	
19299306	LSX376–B15	6.2L	450	444	N/A	N/A	N/A	N/A	
19260833	LSX454	7.4L	620	590	N/A	N/A	19299807	3,000-3,400	
19260835	LSX454R	7.4L	750+	680+	N/A	N/A	N/A	N/A	
19328728	LT1 (with wet sump)	6.2L	460	465	19299802	N/A	19299806	N/A	
19329997	LT1 (with dry sump)	6.2L	460	465	19299802	N/A	19299806	N/A	
2nevy Big 19166393	J-Block V-8 ZZ427/480	427 cu in	480	490	19299801	3,000-3,400	19299805	3,000-3,400	
19166392	427–Anniversary Edition	427 cu in	430	444	19299801	3,000-3,400	19299805	3,000-3,400	
12568774	454 HO–with Iron Heads and Roller Cam	454 cu in	425	500	19299800	2,400-2,800	19299804	2,400-2,800	
12498777	ZZ454/440–440 Horsepower with Aluminum Heads	454 cu in	440	500	19299800	2,400-2,800	19299804	2,400-2,800	
88890534	HT502–Truck Replacement Engine	502 cu in	377	512	19299800	2,400-2,800	19299804	2,400-2,800	
12568778	502 HO–with Iron Heads and Roller Cam	502 cu in	450	550	19299800	2,400-2,800	19299804	2,400-2,800	
12496963	ZZ502 Base Engine–with Aluminum Heads	502 cu in	502	567	19299801	3,000-3,400	19299805	3,000-3,400	
19201332	ZZ502 Deluxe–(Deluxe/Assembled) with Aluminum Heads	502 cu in	502	567	19299801	3,000-3,400	19299805	3,000-3,400	
12499121	Ram Jet 502–PFI with Aluminum Heads	502 cu in	502	565	19299801	3,000-3,400	19299805	3,000-3,400	
19201333	ZZ572/620 Deluxe	572 cu in	620	650	N/A	0,000 0,400 N/A	19299805	3,000-3,400	
19201334	ZZ572/720R Deluxe	572 cu in	720	685	N/A	N/A	19299805	3,000-3,400	

# **Different Levels of Engine Assemblies**

Recognizing that each customer has unique needs, Chevrolet Performance offers four distinct levels of Crate Engines, covering the gamut from starter Partial engines to complete Turn-Key engines that are ready to be dropped into your favorite vehicle. This variety gives builders the opportunity to customize an engine as much or as little as they need to meet their expectations.



#### **Partial Engine**

This is for the builder who wants to start essentially from the block up. These engines typically include the block and reciprocating assembly. It allows the builder to choose the heads, cam and intake combination he/she wants.



### Base

The Base engine assembly typically includes, block, crank, pistons, cam, heads and valve covers, but allows the builder to pick the carburetor/injection system and intake manifold they desire.



#### Deluxe

The Deluxe crate engines are essentially ready to fire up, as they ship with the distributor installed, harmonic balancer bolted on and the carburetor in the crate. All you need to do is put the parts together and go!



## Turn-Key

We told our engineers to have some fun and assemble engines the way they think it should be done ... we then took their combinations, built them up and put them in a crate that ships right to your dealer. The Turn-Key engines represent an outstanding value, and they are perfect for enthusiasts who have built a chassis and need reliable power to get it down the road.

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# LT1 6.2L

# **The Next Generation Of Small-Block Performance!**

The next era in Small-Block performance is here! We've taken the all-new LT1 small block from the seventh-generation Corvette Stingray and developed a crate engine package that is "plug and play" ready for the optional controller system. Like the production engine, Chevrolet Performance's LT1 crate engine features direct injection, variable valve timing and even cylinder deactivation to give your project the latest in high-tech performance!

Here's what you need to build the LT1 as shown:

LT1 6.2L Crate Engine	19329997
Intake Manifold with "Corvette" name (left)	12641720*
Intake Manifold with "Corvette" name (right)	12643709*
Rocker Cover Insulator (left)	12651067*
Rocker Cover Insulator (right)	12649256*

Add the following additional Chevrolet Performance parts to get up and running in less time.

Engine Control System	19303137
Front Engine Accessory Drive	19329990

To learn more about this engine, please turn to page 204.

\*Not available through Chevrolet Performance. See your dealer for details.

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# 350/290 HP

# A Living Legend – The Classic 350 Small-Block

Powerful, affordable and infinitely adaptable, the classic 350 Small-Block is the cornerstone of the performance industry and nobody knows it better than Chevrolet Performance. Our 350/290 HP crate engine is assembled with all-new parts, including a brand-new block with sturdy four-bolt mains, making it a great alternative to rebuilding. Dress it up with our chrome accessories to make it all yours!

Here's what you need to build the 350/290 HP as shown:

350/290 HP Deluxe Crate Engine	19244450
670-cfm Holley Carburetor	19170092
HEI Distributor	
Push-In Oil Filler Cap	12341993
Chrome Water Neck	12342024
Spark Plug Wires	12361051
Long-Style Water Pump	88894341
Balancer	
High Capacity Fuel Pump	12355612
Spark Plug Wire Loom Kit	141-638*

#### To learn more about this engine, please turn to page 98.

\*For more information on these and other Licensed Parts, turn to page 370. NOTE: Engine may not come with all the parts shown in photo. See your dealer for more details DRESSED ENGINES

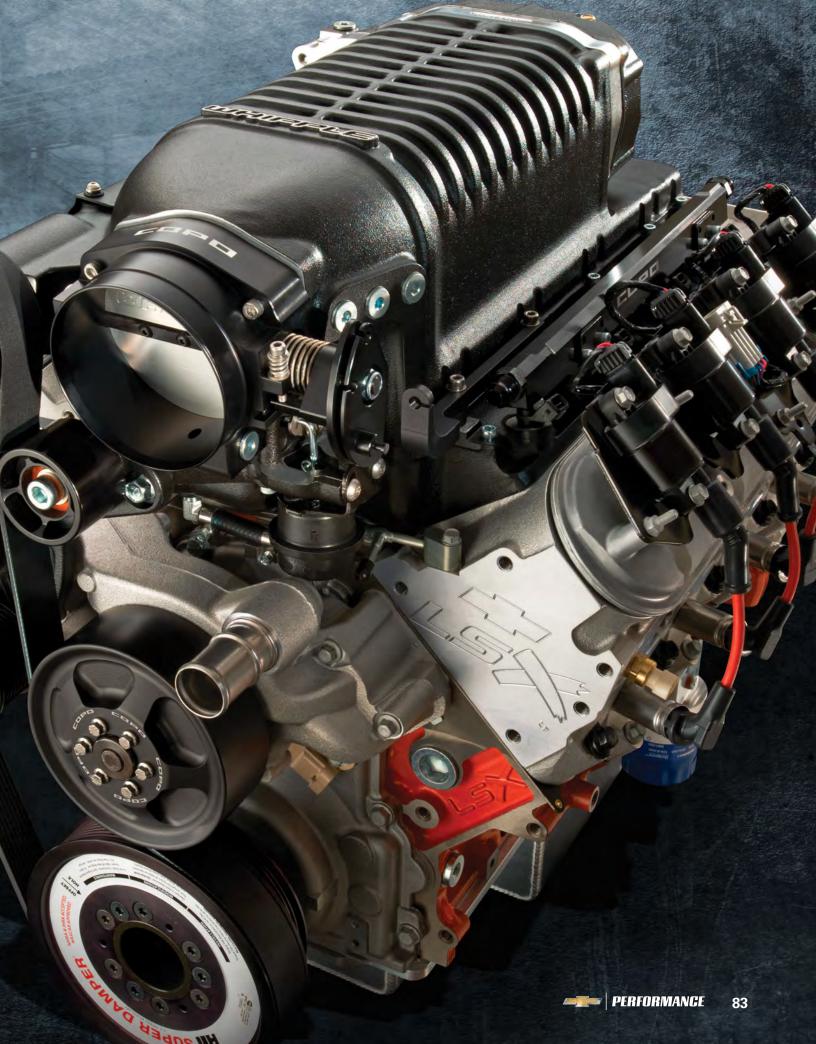
# Legendary COPO Power For Your Race Car!

Put the power of the COPO Camaro racing program in your race car with our latest COPO racing crate engine! It matches the specifications of the 350 supercharged engine used in the production COPO Camaro race cars - and it's hand-built at the Chevrolet Performance Race Engineering shop.

Image shown includes:

Add the following additional Chevrolet Performance parts to get up and running in less time:

To learn more about this engine, please turn to page 58.



#### DRESSED ENGINES

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# **Our Small-Block Stroker Is Stronger Than Ever!**

There's nothing like the satisfying feeling of immediate power when you dip into the torque reserves of Chevrolet Performance's ZZ383. Its 450 lb.-ft. is enough to pull you back in the seat and put a grin on your face! Cylinder heads featuring LS-style beehive valve springs enable great high-rpm performance and durability – complementing all that torque with 450 horsepower!

Here's what you need to build the ZZ383 as shown:

ZZ383 Deluxe Crate Engine	19301295
Distributor	93440806
Chevrolet Logo Chrome Air Cleaner	12342071
Holley 770-cfm Carburetor	19170093
Raised-Letter Bowtie Valve Covers	10185064
Chrome Breather Cap	12341989
Push-In Oil Filler Cap	12341993
Chrome Water Neck	12342024
Spark Plug Wire Set	12361051
Wire Loom Kit	141-638*

Add the following additional Chevrolet Performance parts to get up and running in less time:

High Capacity Fuel Pump	6415325
Chrome High-Torque Mini Starter	12363128

To learn more about this engine, please turn to page 114.

\*For more information on these and other Licensed Parts, turn to page 370.



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# **Our First Sealed Drag Racing Crate Engine!**

Our all-new DR525 sealed racing crate engine was developed for NMCA's new LS Stock in the LSX Shootout Series, bringing Chevrolet Performance's approach to value-driven racing that we established in circle track racing. Based on the LS3 engine, it is rated at 525 horsepower and features tamper-proof fasteners for class compliance. It's also legal for other classes, making it the perfect power plant for your racing endeavor!

Image shown includes:

Add the following additional Chevrolet Performance parts to get up and running in less time:

Engine Controller & Harness	
Front End Accessory Drive Kit	
Starter	

To learn more about this engine, please turn to page 126.



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#### **DRESSED** ENGINES

# LS376/515 6.2L

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# A Modern Performer Developed For Your Vintage Ride!

Blending traditional style with modern performance, Chevrolet Performance's specialized LS376/515 6.2L crate engine is designed for retro-fit applications using a carburetor. It's the perfect choice for your classic, hot rod, muscle car or old truck – and compared to original engines that used iron blocks and heads, this LS376/515 6.2L is all lightweight aluminum, including the block, heads and intake manifold!

Here's what you need to build the LS376/515 6.2L as shown:

LS376/515 6.2L Crate Engine	19301539
Chevrolet Logo Chrome Air Cleaner	12342071
770 cfm Carburetor	19170093

Add the following additional Chevrolet Performance parts to get up and running in less time.

Ignition Module	19171130
Starter	10465385

#### To learn more about this engine, please turn to page 194.



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# Winning Performance and Durability You Can Count On!

Chevrolet Performance's CT400 circle track crate engine is designed to produce the power you need to stay in front of the pack and deliver it with the durability you can depend on all season. The super-tough bottom end is matched with Fast Burn heads featuring LS-style beehive valve springs, for greater high-rpm performance and durability. See you in the winner's circle!

Image shown includes:

Add

CT400 Crate Engine	
the following additional Chevrolet Performance pa	rts to get up and running in less time
Starter	
Water Pump	19168604

#### To learn more about this engine, please turn to page 122.

DRESSED ENGINES

# LSX454



# **Modern Performance Packed In Classic Cubic Inches!**

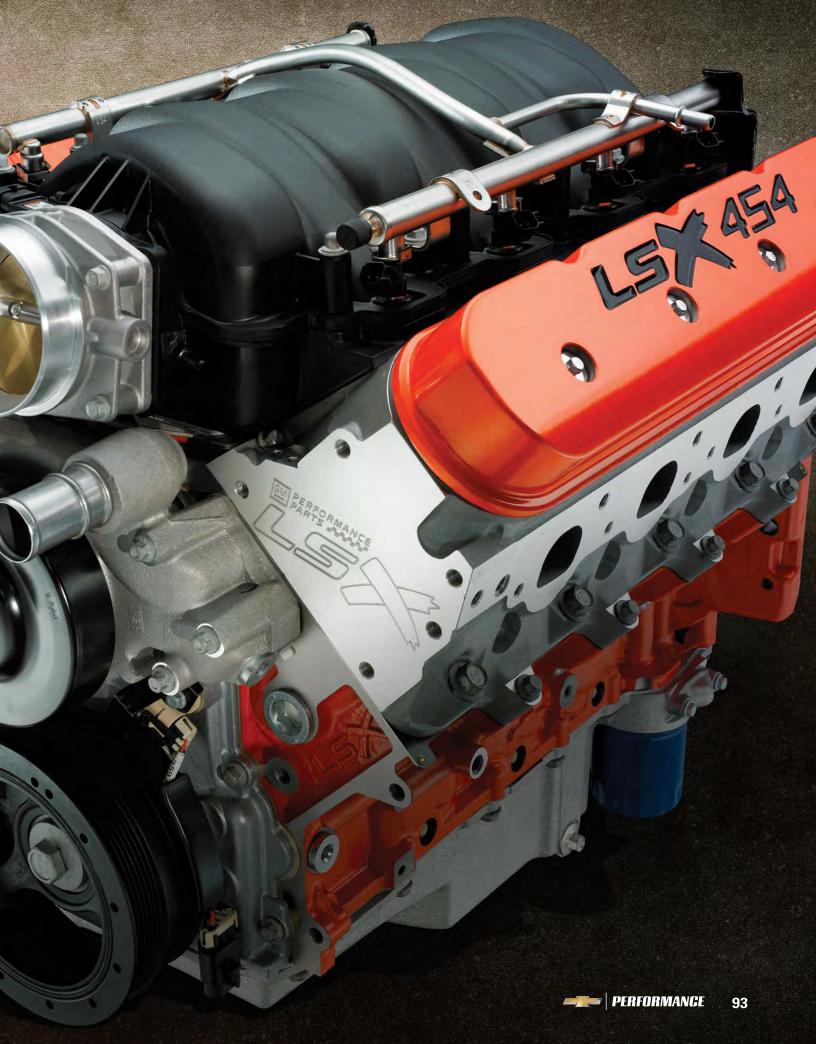
Got a vintage resto-mod or pro touring project and want the best of yesterday and today? Chevrolet Performance's LSX454 delivers the displacement and comparable power of the classic 454 Big-Block, but at a fraction of its size and weight – and with the count-on-it assurance of modern fuel injection. The LSX Bowtie Block makes it tough and affordable!

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Here's what you need to build the LSX454 as shown:

LSX454 Crate Engine	
Intake Manifold Assembly	

To learn more about this engine, please turn to page 224.



# ZZ572/720R

# The Ultimate Big Block Racing Engine!

Looking to get your race car into the 9's? The ZZ572/720R is your ticket to ride! With 720 horsepower and 685 lb.-ft. of torque, it's the biggest, baddest and most-powerful Big-Block available from Chevrolet Performance – featuring an all-forged rotating assembly, rectangular-port aluminum cylinder heads with huge 113cc intake ports and 2.25/1.88-inch valves. You don't mess around with the ZZ572/720R – you win!

Here's what you need to build the ZZ572/720R as shown:

ZZ572/720R Crate Engine	19201334
Chrome Water Neck	

Add the following additional Chevrolet Performance parts to get up and running in less time:

Street Performance Fuel Pump	25115899
Starter	12606096

#### To learn more about this engine, please turn to page 298.



# PERFORMANCE

# SMALL-BLOCK Crate Engines

Engines Shown From Left: ZZ5 350, RamJet 350, 350/290 HP

# **The Classic American V-8 Engine**

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It's been 60 years since Chevrolet introduced its compact, powerful overhead-valve V-8 engine – and none of its designers could have predicted the cultural impact and enduring legacy for the engine that would come to be known as the Small-Block.

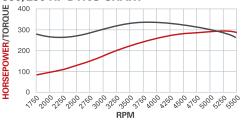
With the Small-Block as popular as ever, Chevrolet Performance engineers have continued to refine and enhance its performance capability, including adapting contemporary features such as LS-style valvetrain systems on some engines, giving them a broader power range.

All of our Small-Block crate engines are built with brand-new parts and most feature blocks with durable four-bolt main caps, which you won't find in many salvage yard core engines.

At 60, the Small-Block is looking great and running harder than ever!







# An Affordable Icon

The 350 Small-Block is the cornerstone of the performance world and the 350/290 HP is our most affordable – and most popular – high-performance Small-Block crate engine. The 350/290 HP Deluxe adds an aluminum intake manifold\* and chrome dress-up kit to create one of the most stylish and value-driven engines on the market.

Like all Chevrolet Performance Small-Block crate engines, the 350/290 is built with a brand-new block. It's got four-bolt main caps – a feature that's almost impossible to find in cores – and it's filled with a tough rotating assembly featuring aluminum pistons delivering an 8.0:1 compression ratio. There's also a smooth hydraulic camshaft that helps build power with great idle quality.

Chevrolet Performance has all the parts needed to get your 350/290 HP engine running, from the starter and distributor to the plug wires and more. If you want even more power, our high-performance cylinder heads will take this stout Small-Block to the next level.

\*Holley 670-cfm carburetor P/N 19170092 recommended for use with the 350/290 HP Deluxe.

#### 350/290 HP DELUXE TECH SPECS

Part Number:	19244450
Engine Type:	Chevy Small-Block V-8
Displacement (cu in):	350
Bore x Stroke (in):	4.000 x 3.480
Block (P/N 10066034):	Cast-iron with 4-bolt main caps
Crankshaft (P/N 93426651):	Nodular iron
Connecting Rods (P/N 10108688):	Powdered metal steel
Pistons (P/N 93422884):	Cast-aluminum
Camshaft Type (P/N 3896962):	Hydraulic flat tappet
Camshaft Lift (in):	.450 intake /.460 exhaust
Camshaft Duration (@.050 in):	222° intake / 222° exhaust
Cylinder Heads (P/N 93438648):	Iron; 76cc chambers
Valve Size (in):	1.94 intake / 1.50 exhaust
Compression Ratio:	8.0:1
Rocker Arms (P/N 10089648):	Stamped steel
Rocker Arm Ratio:	1.5:1
Recommended Fuel:	87 octane
Ignition Timing:	Base 10° BTDC, 32° Total
Maximum Recommended rpm:	5,300
Balanced:	Internal

### INSTALLATION NOTES

- Use neutral balance harmonic damper P/N 12551537
- Use internally balanced flexplate P/N 471529 for automatic transmission or flywheel P/N 14085720 for manual transmission (not included)
- Power ratings based on tests with Holley 670-cfm carburetor P/N 19170092 (not included)
- Does not accept Chevrolet Performance roller lifter assemblies
- Designed for pre-1976 street vehicles or any off-road vehicle
- Not intended for marine applications
- See the Valve Covers section on page 152 for selection of chrome, polished and aluminum valve covers
- Pre-1986-style 2-piece rear main seal block
- Recommended for use in vehicles with 6,000 GVW or less



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Chevrolet Performance Crate Engines include a 24-month or 50,000-mile/80,000-kilometer limited warranty.



Chevrolet Performance <u>does not</u> utilize any used or remanufactured parts in this crate engine, except for the starter, alternator and power steering pump.

Shown with 670-cfm carburetor (not included)

CHEVROLET



### 12499529 350/290 HP

The 350/290 crate engine is also available without the manifold and chrome dress-up kit. Use this even more economical version to build the final combination to your specifications.

#### 19260380 Hydra-Matic 4L65-E Four-Speed **Automatic Transmission**

Electronically controlled four-speed overdrive transmission. Suitable for engines producing up to 430 lb.-ft. of torque.

See page 346 for torque converter application

See page 128 for our complete line of Small-Block components



93440806 **HEI Distributor** Page 166

**AVAILABLE ENGINE RELATED PARTS & ACCESSORIES** 



12361146 **High-Torque Mini-Starter** Page 174





12355612 **Fuel Pump, Street** Performance Page 177



12497698 Serpentine Accessory **Drive System** Page 164

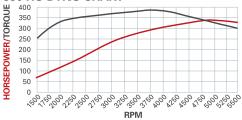
19212657 Transmission Controller Page 350

WWW.CHEVROLET.COM/PERFORMANCE



# **350 HO Turn-Key** 19210009 **(a) (b) (b) (c) (c**





# The Classic 350 Ready to Rock!

Forget rebuilding! Our 350 HO is assembled with all-new parts and high-flow heads, giving you more power than just about any production-spec Small-Block ever installed at the factory: 330 hp and 380 satisfying lb.-ft. of torque. It's affordable power with dependability you can count on.

A brand-new block with four-bolt main caps is the foundation for the 350 HO, which is topped with iron Vortec heads fitted with 1.94/1.50-inch valves. Its durable rotating assembly has aluminum pistons delivering a 9.0:1 compression ratio, while a hydraulic flat-tappet camshaft requires no periodic lash adjustments.

As one of our Turn-Key crate engines, the 350 HO Turn-Key comes with the intake manifold and distributor installed. It also includes the carburetor, front-accessory kit, starter, fuel pump and spark plug wires.

#### **350 HOTURN-KEY TECH SPECS**

Part Number:	19210009
Engine Type:	Chevy Small-Block V-8
Displacement (cu in):	350
Bore x Stroke (in):	4.000 x 3.480
Block (P/N 10105123):	Cast-iron with 4-bolt main caps
Crankshaft (P/N 14088526):	Nodular iron
Connecting Rods (P/N 10108688):	Powdered metal steel
Pistons (P/N 12514101):	Cast-aluminum
Camshaft Type (P/N 24502476):	Hydraulic flat tappet
Camshaft Lift (in):	.435 intake / .460 exhaust
Cylinder Heads (P/N 12558060):	Vortec iron; 64cc chambers
Valve Size (in):	1.940 intake / 1.500 exhaust
Compression Ratio:	9.0:1 nominal
Rocker Arms (P/N 10089648):	Stamped steel
Rocker Arm Ratio:	1.5:1
Water Pump (P/N 88894341):	Cast iron, long-style
Flexplate (P/N 14088765):	12.750"
Recommended Fuel:	92 octane
Ignition Timing:	Base 10° BTDC, 32° Total
Maximum Recommended rpm:	5,500
Balanced:	External

#### **INSTALLATION NOTES**

- Comes with externally balanced flexplate for automatic transmission; requires externally balanced flywheel for manual transmission. See chart on page 161
- Has right-side oil dipstick
- Requires fuel line from fuel pump to carburetor
- Fuel pump pressure is pre-set; fuel pressure regulator not required
- Some assembly and minor engine tuning required
- Designed for pre-1976 street vehicles or any off-road vehicle
- Not intended for marine applications



Chevrolet Performance Crate Engines include a 24-month or 50,000-mile/80,000-kilometer limited warranty.



Chevrolet Performance <u>does not</u> utilize any used or remanufactured parts in this crate engine, except for the starter, alternator and power steering pump.



# 19210008 🕲 🛇 350 HO Deluxe

Like the 350 HO Turn-Key crate engine, the 350 HO Deluxe is rated at 330 horsepower and 380 lb.-ft. of torque. The intake manifold, carburetor and distributor are included, but not installed.

# Call Call Call

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# 19210007 🕲 🛇 350 HO Base

All the same, important, power-building elements as the Turn-Key and Deluxe versions, but it comes without an intake manifold, carburetor or distributor.

See page 128 for our complete line of Small-Block components



19260380 Hydra-Matic 4L65E Automatic Transmission Page 348

**AVAILABLE ENGINE RELATED PARTS & ACCESSORIES** 









**19212657 Transmission Controller** *Page 350* 

19299800 Torque Conve Page 346



12497985 Aluminum Chrome Valve Covers Page 153

Page 153

# RAM JET 350 DYNO CHART 12499120 (C) (S 200 rpm) (23,500 rpm) (23,500

# Vintage Style and Modern Performance

Chevrolet Performance's unique Ram Jet 350 combines the classic look of the original Rochester mechanical injection system with the dependability and optimized performance of contemporary port fuel injection. It's the perfect combination for a resto-mod hot rod.

A brand-new engine block is matched with a durable rotating assembly that delivers a pump-gas-friendly 9.0:1 compression ratio, as well as a smooth hydraulic roller camshaft that complements power delivery with a great idle quality. The engine's unique intake manifold and plenum is 9.75 inches tall, offering plenty of clearance to fit under the hood of most vehicles without modifications.

The Ram Jet 350 crate engine kit includes a MEFI 4 engine controller, wiring harness and a detailed instruction guide to make adding this retro-style EFI system a complete DIY project. Additional components are required, including a high-pressure fuel pump and front-end accessory drive system.

#### **RAM JET 350 TECH SPECS**

Part Number:	12499120
Engine Type:	Chevy Small-Block V-8
Displacement (cu in):	350
Bore x Stroke (in) :	4.000 x 3.480
Block:	Cast-iron with 2-bolt main caps
Crankshaft (P/N 10243068):	Cast-iron
Connecting Rods (P/N 10108688):	Powdered metal steel
Pistons (P/N 12571703):	Hypereutectic aluminum
Camshaft Type (P/N 14097395):	Hydraulic roller
Camshaft Lift (in):	.460 intake / .481 exhaust
Camshaft Duration (@.050 in):	196° intake / 206° exhaust
Cylinder Heads (P/N 12528913):	Vortec iron; 64cc chambers
Valve Size (in):	1.940 intake / 1.500 exhaust
Compression Ratio:	9.0:1 nominal
Rocker Arms (P/N 12367346):	Aluminum roller style
Rocker Arm Ratio:	1.6
Recommended Fuel:	92 octane
Ignition Timing:	Base 10° BTDC, 32° Total
Maximum Recommended rpm:	5,500
Balanced:	External

**NOTE:** Distributor with melonized steel gear MUST be used with long-blocks and Partial engines with steel camshafts, or engine damage will occur.

#### **INSTALLATION NOTES**

- Comes with externally balanced, manual transmission flywheel; change to externally balanced flexplate for automatic transmission applications. See chart on page 161
- Installer to supply 12-volt power source and fuel pump
- See instructions for fuel pump recommendation
- Designed for pre-1976 street vehicles or any off-road vehicle
- Not intended for marine applications
- IMPORTANT! For a safe, proper and trouble-free engine break-in, the MEFI 4 computer has a "green" mode that controls rpm during the break-in period. During this period, engine speed is limited to 4,000 rpm in the first hour, 4,500 rpm in the second hour and 5,500 rpm in the third hour



Chevrolet Performance Crate Engines include a 24-month or 50,000-mile/80,000-kilometer limited warranty.



Chevrolet Performance <u>does not</u> utilize any used or remanufactured parts in this crate engine, except for the starter, alternator and power steering pump.







**AVAILABLE ENGINE RELATED PARTS & ACCESSORIES** 

### Hydra-Matic 4L65-E Four-Speed Automatic Transmission

Electronically controlled four-speed overdrive transmission. Suitable for engines producing up to 430 lb.-ft. of torque.

See page 346 for torque converter application



# 12497698 Serpentine Accessory Drive System

The complete kit you need to finish off the crate engine in your vehicle.

See page 164 for details.

See page 128 for our complete line of Small-Block components



**10465143** Lightweight Starter (remanufactured) Page 174



**12497979 Aluminum Black Crinkle Valve Covers** *Page 153* 





19212657



**19299800 Torque Converter** *Page 346* 

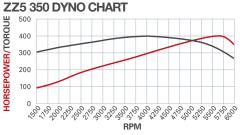


12497985 Aluminum Chrome Valve Covers Page 153

Transmission Controller Page 350



**400 lb.-ft.** @ 3.500 rpm



# A New 'ZZ' Legend

Building on the strength and power of the legendary ZZ4 Small-Block, our engineers upped the ante with a revised cylinder head design, new valvetrain components and more to create the all-new ZZ5 – a 400-horsepower 350 with loads of low-end torque. In fact, the new ZZ5 produces at least 300 lb.-ft. of torque by only 1,500 rpm, for a thrilling feeling of immediate performance.

We start the assembly with a new block featuring strong four-bolt main caps, along with a forged steel crankshaft and durable high-silicon aluminum pistons. We also use lightweight aluminum cylinder head castings based on the proven Fast Burn design, but with LS-style "beehive" valve springs that enable greater high-rpm performance and durability.

The ZZ5 350 Base crate engine kit includes the intake manifold, distributor, water pump, damper and flexplate. A four-barrel carburetor and additional components are required to finish the assembly – all available from Chevrolet Performance.

#### **ZZ5 350 BASE TECH SPECS**

Part Number:	19301293
Engine Type:	Chevy Small-Block V-8
Displacement (cu in):	350
Bore x Stroke (in):	4.000 x 3.480
Block (P/N 10105123):	Cast-iron with 4-bolt main caps
Crankshaft (P/N 12556307):	Forged steel
Connecting Rods (P/N 10108688):	Powdered metal
Pistons (P/N 10159436):	Hypereutectic aluminum
Camshaft Type (P/N 10185071):	Hydraulic roller
Camshaft Lift (in):	.474 intake / .510 exhaust
Camshaft Duration (@.050 in):	208° intake / 221° exhaust
Cylinder Heads (P/N 19300955):	Fast Burn aluminum; 62cc chambers
Valve Size (in):	2.000 intake / 1.550 exhaust
Compression Ratio:	9.72:1 nominal
Rocker Arms (P/N 10089648):	Stamped steel
Rocker Arm Ratio:	1.5:1
Recommended Fuel:	92 octane
Ignition Timing:	Base 10° BTDC, 32° Total
Maximum Recommended rpm:	5800
Balanced:	External

**NOTE:** Distributor with melonized steel gear MUST be used with long-blocks and Partial engines with steel camshafts, or engine damage will occur.

### INSTALLATION NOTES

- Comes with 12.750" externally balanced 153-tooth automatic transmission flexplate. Change to externally balanced flywheel for normal transmission applications. See chart on page 161
- Requires fuel line from fuel pump to carburetor
- Designed for pre-1976 street vehicles or any off-road vehicle
- Some assembly and minor engine tuning required
- Designed for pre-1976 street vehicles or any off-road vehicle
- Not intended for marine application



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Chevrolet Performance Crate Engines include a 24-month or 50,000-mile/80,000-kilometer limited warranty.



Chevrolet Performance <u>does not</u> utilize any used or remanufactured parts in this crate engine, except for the starter, alternator and power steering pump.



## 12561723 🙆 🛇 **ZZ5** Partial Engine

The ZZ5 is based on the popular ZZ4 partial engine assembly and includes the forged steel crankshaft, LT1-style high-silicon pistons and connecting rods.



### 19260380 Hydra-Matic 4L65-E Four-Speed **Automatic Transmission**

Electronically controlled four-speed overdrive transmission. Suitable for engines producing up to 430 lb.-ft. of torque.

See page 346 for torque converter application

## **AVAILABLE ENGINE RELATED PARTS & ACCESSORIES**



19210728 **Roller Rocker Arm** Set, 1.5:1 Ratio Page 151

19299800

Page 346

**Torque Converter** 



12497979 Aluminum Black **Crinkle Valve Covers** Page 153

See page 128 for our complete line of Small-Block components

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19212657 Transmission Controller Page 350

WWW.CHEVROLET.COM/PERFORMANCE

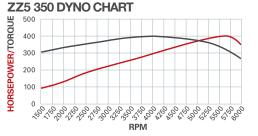
12480127

**Valve Covers** 

Page 152

Short Aluminum





# The Ultimate 'ZZ' Crate Engine Package

Chevrolet Performance's all-new ZZ5 350 uses updated Fast Burn cylinder heads equipped with LS-style beehive valve springs for greater high-rpm performance. It's rated at 400 horsepower and 400 lb.-ft. of torque – more than any Small-Block engine ever offered in a production Chevrolet muscle car or Corvette!

The ZZ5's assembly starts with a new block featuring strong four-bolt main caps, and it's filled with a forged steel crankshaft and durable high-silicon aluminum pistons. We also use lightweight aluminum cylinder head castings based on the proven Fast Burn design, but with LS-style "beehive" valve springs that enable greater high-rpm performance and durability.

The ZZ5 350 Turn-Key engine package includes the distributor, carburetor and balancer installed. The starter, fuel pump air conditioning pump, alternator, front-end accessory drive kit and more are also included.

#### **ZZ5 350 TURN-KEY TECH SPECS**

Part Number:	19301294
Engine Type:	Chevy Small-Block V-8
Displacement (cu in):	350
Bore x Stroke (in):	4.000 x 3.480
Block (P/N 10105123):	Cast-iron with 4-bolt main caps
Crankshaft (P/N 12556307):	Forged steel
Connecting Rods (P/N 10108688):	Powdered metal
Pistons (P/N 10159436):	Hypereutectic aluminum
Camshaft Type (P/N 10185071):	Hydraulic roller
Camshaft Lift (in):	.474 intake / .510 exhaust
Camshaft Duration (@.050 in):	208° intake / 221° exhaust
Cylinder Heads (P/N 19300955):	Fast Burn aluminum; 62cc chambers
Valve Size (in):	2.000 intake / 1.550 exhaust
Compression Ratio:	9.72:1 nominal
Rocker Arms (P/N 10089648):	Stamped steel
Rocker Arm Ratio:	1.5:1
Recommended Fuel:	92 octane
Ignition Timing:	Base 10° BTDC, 32° Total
Maximum Recommended rpm:	5800
Balanced:	External

**NOTE:** Distributor with melonized steel gear MUST be used with long-blocks and Partial engines with steel camshafts, or engine damage will occur.

#### **INSTALLATION NOTES**

- Comes with 12.750" externally balanced 153-tooth automatic transmission flexplate. Change to externally balanced flywheel for manual transmission applications. See chart on page 161
- Requires fuel line from fuel pump to carburetor
- Designed for pre-1976 street vehicles or any off-road vehicle
- Some assembly and minor engine tuning required
- Designed for pre-1976 street vehicles or any off-road vehicle
- Not intended for marine application



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Chevrolet Performance Crate Engines include a 24-month or 50,000-mile/80,000-kilometer limited warranty.



Chevrolet Performance <u>does not</u> utilize any used or remanufactured parts in this crate engine, except for the starter, alternator and power steering pump.



# 12561723 🕲 🛇 ZZ5 Partial Engine

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The ZZ5 is based on the popular ZZ4 partial engine assembly and includes the forged steel crankshaft, LT1-style high-silicon pistons and connecting rods.



# 19260380 Hydra-Matic 4L65-E Four-Speed Automatic Transmission

Electronically controlled four-speed overdrive transmission. Suitable for engines producing up to 430 lb.-ft. of torque.

See page 346 for torque converter application

# **AVAILABLE ENGINE RELATED PARTS & ACCESSORIES**

19210728

Set, 1.5:1 Ratio

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**Roller Rocker Arm** 

# 12497979 Aluminum Black Crinkle Valve Covers Page 153



See page 128 for our complete line of Small-Block components

THURN





**19299800 Torque Converter** *Page 346* 

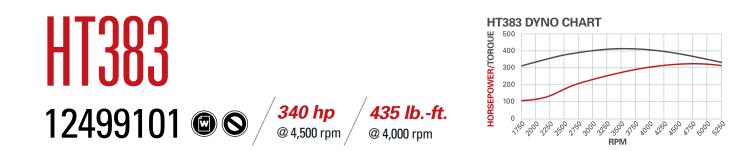


12480127 Short Aluminum Valve Covers Page 152 Mir Pag 192126



**19212657 Transmission Controller** *Page 350* 

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# **Big Torque for Your Truck**

Got a pre-1980 GM truck with a tired Small-Block? Forget the rebuild and take your trusty truck's capability to the next level with our big-torque HT383 crate engine. Its extra displacement and unique parts are designed to build a wide, flat torque curve that maintains at least 400 lb.-ft. between 2,500 and 4,000 rpm. That's power you simply won't get with a stock-type rebuild.

Built for true truck strength, the engine starts with a brand-new block with four-bolt main caps – a strength-enhancing feature most production truck blocks don't have. We then fill the block with a forged steel crankshaft and a smooth hydraulic roller camshaft, then top it off with iron Vortec heads. Its 9.1:1 compression ratio is perfect for regular gasoline at all altitudes and engine loads.

We deliver the HT383 with an aluminum intake manifold, ready for you to swap over the accessories from your tired engine. It's also backed by a 24-month/50,000-mile (80,000 km) limited warranty.

# **HT383 TECH SPECS**

Part Number:	12499101
Engine Type:	Chevy Small-Block V-8
Displacement (cu in):	383
Bore x Stroke (in):	4.000 x 3.800
Block (P/N 88962516):	Cast-iron with 4-bolt main caps
Crankshaft (P/N 12489436):	4340 forged steel
Connecting Rods (P/N 12497624):	Heavy-duty PM steel
Pistons (P/N 12499103):	Hypereutectic aluminum
Camshaft Type (P/N 14097395):	Hydraulic roller
Camshaft Lift (in):	.431 intake / .451 exhaust
Camshaft Duration (@.050 in):	196° intake / 206° exhaust
Cylinder Heads (P/N 12558060):	Vortec iron; 64cc chambers
Valve Size (in):	1.940 intake / 1.500 exhaust
Compression Ratio:	9.1:1
Rocker Arms (P/N 10089648):	Stamped steel
Rocker Arm Ratio:	1.5:1
Water Pump (P/N 88894341):	Cast iron
Recommended Fuel:	87 octane
Ignition Timing:	Base 10° BTDC, 32° Total
Maximum Recommended rpm:	5,000
Balanced:	External

**NOTE:** Distributor with melonized steel gear MUST be used with long-blocks and Partial engines with steel camshafts, or engine damage will occur.

# **INSTALLATION NOTES**

- Requires addition of carburetor, ignition and starter (not included)
- Rochester Quadrajet or Holley 770-cfm carburetor recommended
- Comes with 12.75-inch externally balanced 153-tooth automatic transmission flexplate. Requires externally balanced flywheel for manual transmission. See chart on page 161
- Has right-side oil dipstick
- Designed for pre-1976 street vehicles or any off-road vehicle
- Not intended for marine applications



Chevrolet Performance Crate Engines include a 24-month or 50,000-mile/80,000-kilometer limited warranty.



Chevrolet Performance <u>does not</u> utilize any used or remanufactured parts in this crate engine, except for the starter, alternator and power steering pump.

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# 12499106 **383 Partial Engine**

The heart of the HT383 comes with 4.000-inch-bore/3.800-inch-stroke reciprocating assembly already installed, including a forged steel crankshaft, heavy-duty connecting rods and durable aluminum-alloy pistons.



# 19260380 Hydra-Matic 4L65-E Four-Speed **Automatic Transmission**

Electronically controlled four-speed overdrive transmission. Suitable for engines producing up to 430 lb.-ft. of torque.

See page 346 for torque converter application

See page 128 for our complete line of Small-Block components



93440806 **HEI Distributor** Page 166

**AVAILABLE ENGINE RELATED PARTS & ACCESSORIES** 

12497979 Aluminum Black **Crinkle Valve Covers** Page 153







19170093 Carburetor, Holley 770-cfm Page 176



12497985 **Aluminum Chrome Valve Covers** Page 153

19212657 Transmission Controller Page 350



/ GREATER TORQUE

/ ENHANCED TOWING

/ BETTER ALTERNATIVE TO A REBUILD

/ INCLUDES ALL NEW PARTS

# **Emissions-Legal Stroker for Trucks**

Chevrolet Performance's HT383E crate engine is an affordable and more powerful emissions-legal direct replacement for the tired 350 engine in your 1996-99 full-size GM truck or SUV. The larger displacement delivers up to 10 percent more horsepower and more usable torque for effortless towing. It is extra power you won't get with a stock-type rebuild or reconditioned used engine.

435 lb.-ft.

@ 4,000 rpm

Like our standard HT383, this crate engine starts with a brand-new block with four-bolt main caps, a forged steel crankshaft, a smooth hydraulic roller camshaft and a set of iron Vortec heads. Its 9.1:1 compression ratio is perfect for regular gasoline at all altitudes and engine loads. It also includes a new distributor, water pump and other components that would need to be replaced during a rebuild.

The HT383E is designed to replace the L31 5.7-liter engine in half-ton models of the Silverado, Suburban, Tahoe, Sierra and Yukon. Simply swap the intake manifold, throttle body, exhaust manifolds and other accessories from the original 350.

# **HT383E TECH SPECS**

Part Number:	17800393
Engine Type:	Chevy Small-Block V-8
Displacement (cu in):	383
Bore x Stroke (in):	4.000 x 3.800
Block (P/N 88962516):	Cast-iron with 4-bolt main caps
Crankshaft (P/N 12489436):	4340 forged steel
Connecting Rods (P/N 12497624):	Heavy-duty PM steel
Pistons (P/N 12499103):	Hypereutectic aluminum
Camshaft Type (P/N 14097395):	Hydraulic roller
Camshaft Lift (in):	.431 intake / .451 exhaust
Camshaft Duration (@.050 in):	196° intake / 206° exhaust
Cylinder Heads (P/N 12558060):	Vortec iron; 64cc chambers
Valve Size (in):	1.940 intake / 1.500 exhaust
Compression Ratio:	9.1:1
Rocker Arms (P/N 10089648):	Stamped steel
Rocker Arm Ratio:	1.5:1
Water Pump (P/N 88894341):	Cast-iron
Recommended Fuel:	87 octane
Maximum Recommended rpm:	5,000
Balanced:	External

**NOTE:** Distributor with melonized steel gear MUST be used with long-blocks and Partial engines with steel camshafts, or engine damage will occur.

# **INSTALLATION NOTES**

- Requires the reuse of the stock intake manifold, wiring harness, and fuel injection system
- Due to calibration variances between half, three-quarter- and one-ton vehicles, this engine is designed for half-ton trucks and SUVs only
- This engine is not emissions-legal in CA or states that have adopted CA emissions regulations
- Comes with 12.75-inch externally balanced 153-tooth automatic transmission flexplate. Requires externally balanced flywheel for manual transmission. See chart on page 161
- Has right-side dipstick
- Not available as a Partial
- Performance recalibration of ECU will significantly increase torque and horsepower



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Chevrolet Performance Crate Engines include a 24-month or 50,000-mile/80,000-kilometer limited warranty.



Chevrolet Performance <u>does not</u> utilize any used or remanufactured parts in this crate engine, except for the starter, alternator and power steering pump.



# 12497698 **Serpentine Accessory Drive System**

and and an

The complete kit you need to finish off the crate engine in your vehicle.

See page 164 for details



# 19260380 Hydra-Matic 4L65-E Four-Speed **Automatic Transmission**

Electronically controlled four-speed overdrive transmission. Suitable for engines producing up to 430 lb.-ft. of torque.

See page 346 for torque converter application

# See page 128 for our complete line of Small-Block components



12497979 Aluminum Black **Crinkle Valve Covers** Page 153

**AVAILABLE ENGINE RELATED PARTS & ACCESSORIES** 



19210728 **Roller Rocker Arm** Set, 1.5:1 Ratio Page 151







24502521 **Spark Plug Wires** 135° Boot Page 175



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# **The Classic Small-Block Stroker**

Chevrolet never offered a 383 Small-Block in production vehicles, but Chevrolet Performance's ZZ383 is a factoryengineered take on the unique, big-torque "stroker" configuration. And better than building your own with a reconditioned block and other components, ours is all-new from the oil pan to the valve covers – and everything in between!

Our brand-new block with four-bolt main caps is the foundation for the ZZ383 and it is matched with a tough, forged steel crankshaft and high-strength connecting rods. A hydraulic roller camshaft with more the 0.500-inch lift and high-flow aluminum Fast Burn heads with 2.00/1.55-inch valves enable tremendous airflow. The engine is equipped with pre-2013 Fast Burn cylinder heads and valve springs, but they can be updated to 2013-later beehive-spring specifications with spring conversion kit P/N 19300952.

The Base engine package includes a cast iron water pump and balancer. The induction system, ignition system and other accessories must be purchased separately. Use high-rise intake P/N 12496822 and Holley 770-cfm four barrel carburetor P/N 19170093 to achieve the listed horsepower and torque ratings.

NOTE: Limited availability due to component changes.

# **ZZ383 BASE TECH SPECS**

Part Number:	19154775						
Engine Type:	Chevy Small-Block V-8						
Displacement (cu in):	383						
Bore x Stroke (in):	4.000 x 3.800						
Block (P/N 88962516):	Cast-iron with 4-bolt main caps						
Crankshaft (P/N 12489436):	4340 forged steel						
Connecting Rods (P/N 12497624):	Heavy-duty PM steel						
Pistons (P/N 12499103):	Hypereutectic aluminum						
Camshaft Type (P/N 19210723):	Hydraulic roller						
Camshaft Lift (in):	.509 intake / .528 exhaust						
Camshaft Duration (@.050 in):	222° intake / 230° exhaust						
Cylinder Heads (P/N 12464298):	Fast Burn aluminum; 62cc chambers						
Valve Size (in):	2.000 intake / 1.550 exhaust						
Compression Ratio:	9.6:1						
Rocker Arms (P/N 12367345):	Aluminum roller style						
Rocker Arm Ratio:	1.5:1						
Recommended Fuel:	92 octane						
Ignition Timing:	Base 10° BTDC, 32° Total						
Maximum Recommended rpm:	6,000						
Balanced:	External						

**NOTE:** Distributor with melonized steel gear MUST be used with long-blocks and Partial engines with steel camshafts, or engine damage will occur.

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Chevrolet Performance Crate Engines include a 24-month or 50,000-mile/80,000-kilometer limited warranty.



Chevrolet Performance <u>does not</u> utilize any used or remanufactured parts in this crate engine, except for the starter, alternator and power steering pump.

# **INSTALLATION NOTES**

- Requires addition of carburetor, ignition, intake manifold, fuel pump, and starter (not included)
- 425 horsepower rating achieved during GM testing with high-rise single-plane intake manifold (P/N 12496822) and a 770-cfm carburetor with vacuum secondaries
- Chevrolet Performance dual-plane intake manifold (P/N 12366573) may be used to avoid hood clearance problems, but peak power may decrease by approximately 15-20 horsepower
- Comes with 1986-1999 350-style externally balanced flywheel for manual transmission. See chart on page 161
- Designed for pre-1976 street vehicles or any off-road vehicle
- Not intended for marine applications

- PERFORMANCE



# 12499106 🕲 🛇 383 Partial Engine

The heart of the HT383 comes with 4.000-inch-bore/3.800-inch-stroke reciprocating assembly already installed, including a forged steel crankshaft, heavy-duty connecting rods and durable aluminum-alloy pistons.

# 19260380 Hydra-Matic 4L65-E Four-Speed Automatic Transmission

Electronically controlled four-speed overdrive transmission. Suitable for engines producing up to 430 lb.-ft. of torque.

See page 346 for torque converter application

See page 128 for our complete line of Small-Block components



**93440806 HEI Distributor** *Page 166* 

**AVAILABLE ENGINE RELATED PARTS & ACCESSORIES** 



12497698 Serpentine Accessory Drive System Page 164







**19212657** Transmission Controller Page 350



**19299800 Torque Converter** *Page 346* 



**12480127** Short Aluminum Valve Covers Page 152



# More Power with High-Flowing Fast Burn Heads

Chevrolet Performance engineers continue to refine the classic Small-Block for even greater performance and this power-enhanced ZZ383 crate engine is their latest triumph. Improved Fast Burn cylinder heads and a specific high-flow aluminum intake manifold push horsepower to 450 – a 25-hp jump! Torque increases to 450 lb.-ft.

The updated Fast Burn cylinder heads feature 2.00/1.55-inch valves, a unique combustion chamber design and LS-style beehive valve springs support greater high-rpm performance and durability. A hydraulic roller camshaft with more the 0.500-inch lift optimizes the airflow enabled by the high-flow head design.

Our ZZ383 Deluxe package comes complete with oil pan, water pump, and balancer. The block is brand-new and features four-bolt main caps; and the engine also features a tough forged steel crankshaft. Use the Holley 770-cfm four-barrel carburetor (P/N 19170093) to make the most of the engine's capability and achieve the listed horsepower and torque ratings.

# **ZZ383 DELUXE TECH SPECS**

Part Number:	
	19301295
Engine Type:	Chevy Small-Block V-8
Displacement (cu in):	383
Bore x Stroke (in):	4.000 x 3.800
Block (P/N 88962513):	Cast-iron with 4-bolt main caps
Crankshaft (P/N 12489436):	Forged steel
Connecting Rods (P/N 12497624):	Heavy-duty PM steel
Pistons (P/N 12499103):	Hypereutectic aluminum
Camshaft Type (P/N 19210723):	Hydraulic roller
Valve Lift (in):	.509 intake / .528 exhaust
Camshaft Duration (@.050 in):	222° intake / 230° exhaust
Cylinder Heads (P/N 19300955):	Fast Burn aluminum; 62cc chambers
Valve Size (in):	2.000 intake / 1.550 exhaust
Compression Ratio:	9.6:1
Rocker Arms (P/N 10089648):	Aluminum roller style
Rocker Arm Ratio:	1.5:1
Recommended Fuel:	92 octane
Ignition Timing:	Base 10° BTDC, 32° Total
Maximum Recommended rpm:	6,000
Balanced:	External

**NOTE:** Distributor with melonized steel gear MUST be used with long-blocks and Partial engines with steel camshafts, or engine damage will occur.

# **INSTALLATION NOTES**

- Horsepower was developed with a 770 cfm Holley carburetor, P/N 19170093 (not included)
- Requires addition of carburetor, ignition, fuel pump and starter (not included)
- Comes with 12.75-inch automatic transmission flexplate. Requires 1986-1999 350-style externally balanced flywheel for manual transmissions, See chart on page 161
- Designed for pre-1976 street vehicles or any off-road vehicle
- Not intended for marine applications

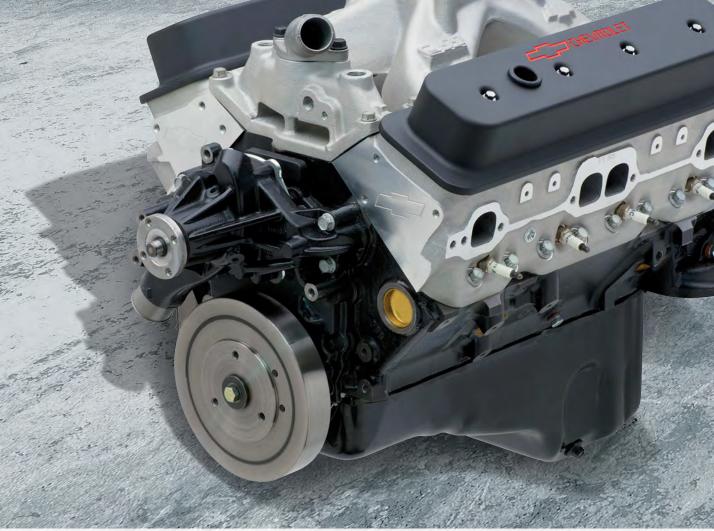


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Chevrolet Performance Crate Engines include a 24-month or 50,000-mile/80,000-kilometer limited warranty.



Chevrolet Performance <u>does not</u> utilize any used or remanufactured parts in this crate engine, except for the starter, alternator and power steering pump.





# 12499106 🕲 🛇 383 Partial Engine

The heart of the HT383 comes with 4.000-inch-bore/3.800-inch-stroke reciprocating assembly already installed, including a forged steel crankshaft, heavy-duty connecting rods and durable aluminum-alloy pistons.

# 19260380 Hydra-Matic 4L65-E Four-Speed Automatic Transmission

Electronically controlled four-speed overdrive transmission. Suitable for engines producing up to 430 lb.-ft. of torque.

See page 346 for torque converter application

See page 128 for our complete line of Small-Block components



**93440806 HEI Distributor** *Page 166* 

**AVAILABLE ENGINE RELATED PARTS & ACCESSORIES** 



12497698 Serpentine Accessory Drive System Page 164



**19212657 Transmission Controller** *Page 350* 



**19299800** Torque Converter Page 346



12480127 Short Aluminum

Short Aluminum Valve Covers Page 152 • • • • • • • •



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# PERFORMANCE CIPCLE TRACK Crate Engines

PERFORMANCE



# **Engineered to Win!**

Winning is why you race. But when you spend more time working on your engine, winning isn't as important as surviving the season. Chevrolet Performance Circle Track crate engines are engineered to perform with great durability. That means less time under the hood and more time focused on the checkered flag.

Our Circle Track crate engines are built with brand-new parts, from the cylinder block and rotating assembly to the heads and all the supporting accessories. In fact, our 350 Small-Block engines feature blocks with four-bolt mains - a strength-enhancing design most used blocks don't have.

Along with horsepower, Chevrolet Performance crate engines are engineered to last, saving you money that's better spent on the rest of your racing program and saving time that's better spent behind the wheel, not under the hood!



CT350 Page 118



CT400 Page 122



CT525 **Page 124** 







# Powerful, Durable and Affordable!

Chevrolet Performance's durable CT350 is the engine budget-conscious racers can depend on for competitive performance and low maintenance.

It is based on our popular 350 HO high-performance street crate engine and features a strong four-bolt-main block and iron Vortec cylinder heads. A unique dual-pattern camshaft helps deliver more than 300 lb.-ft. of torque between 2,000 and 5,500 rpm – peaking at 390 lb.-ft. at 3,800 rpm. With that much pulling power, you can hold a gear longer, keeping the engine in its sweet spot for quicker laps.

We assemble the CT350 with an 8-quart circle track racing oil pan, balancer, HEI distributor and an aluminum high-rise, dual-intake manifold. Add your carburetor, starter, spark plugs, wires and water pump – all available from Chevrolet Performance – and you'll be ready for the starting line!

# CT350 TECH SPECS

Part Number:	19258602
Engine Type:	Chevy Small-Block V-8
Displacement (cu in):	350
Bore x Stroke (in):	4.000 x 3.480
Block (P/N 10105123):	Cast-iron with 4-bolt main caps
Crankshaft (P/N 10243068):	Nodular iron
Connecting Rods (P/N 10108688):	Powdered metal steel
Pistons (P/N 94672680):	Hypereutectic aluminum
Camshaft Type (P/N 24502476):	Hydraulic flat tappet
Camshaft Lift (in):	.435 intake / .460 exhaust
Camshaft Duration (@.050 in):	212° intake / 222° exhaust
Cylinder Heads (P/N 12558060):	Vortec iron; 64cc chambers
Valve Size (in):	1.940 intake / 1.500 exhaust
Compression Ratio:	9.12:1 Nominal
Rocker Arms (P/N 10089648):	Stamped steel
Rocker Arm Ratio:	1.5:1
Recommended Fuel:	92 octane
Ignition Timing:	Base 10° BTDC, 32° Total
Maximum Recommended rpm:	5,500
Balanced:	External

**NOTE:** Distributor with melonized steel gear MUST be used with long-blocks and Partial engines with steel camshafts, or engine damage will occur.

# **INSTALLATION NOTES**

- Requires addition of carburetor, starter, water pump, plug wires and exhaust system (not included)
- Requires an externally balanced flywheel (not included). See page 161 for flywheel selection
- The 8-quart Circle Track oil pan is 8 inches deep at the sump. It will clear most GM rear-steer chassis with stock engine location
- For Circle Track Racing only Not intended for street use.



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Chevrolet Performance Racing Crate Engines are excluded from limited warranty.



Chevrolet Performance <u>does not</u> utilize any used or remanufactured parts in this crate engine, except for the starter, alternator and power steering pump.



# **AVAILABLE ENGINE RELATED PARTS & ACCESSORIES**



88894341 Water Pump, Long Style Page 163





19170092 670-cfm Page 176



See page 128 for our complete line of Small-Block components



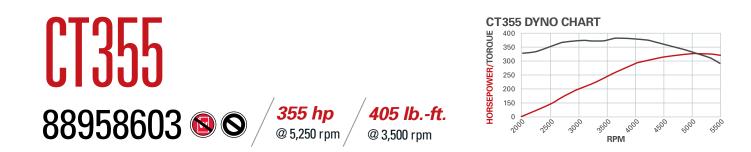


12355612 Fuel Pump, Street Performance Page 177



**Carburetor, Holley** 

12361051 Spark Plug Wire Set Page 175



# Win with ZZ4 Power!

Our engineers have adapted the powerful and durable ZZ4 350 for the rigors of circle track racing in the CT355 crate engine.

The CT 355's strength lies in its ZZ4 bottom end, which includes a cast-iron block with four-bolt mains, a forged-steel crankshaft and high-silicon pistons. A steel hydraulic roller camshaft actuates valves in the high-flow aluminum ZZ4 heads, which boast 163cc intake ports and 1.94/1.50-inch valves. This combination makes good power and great torque: 355 hp and 405 lb.-ft.

Like our other Circle Track crate engines, the CT355 includes a racing oil pan with a dual kick-out design. It also includes a valve cover breather kit, a special "kool nut" rocker arm nut design, a dual-plane aluminum high-rise intake manifold, cast iron water pump, HEI distributor and balancer. You add the carburetor, starter and spark plug wires – all available from Chevrolet Performance.

# **CT355 TECH SPECS**

Part Number:	88958603
Engine Type:	Chevy Small-Block V-8
Displacement (cu in):	350
Bore x Stroke (in):	4.000 x 3.480
Block (P/N 10105123):	Cast-iron with 4-bolt main caps
Crankshaft (P/N 12556307):	Forged steel
Connecting Rods (P/N 10108688):	Powdered metal steel
Pistons (P/N 10159436):	Hypereutectic aluminum
Camshaft Type (P/N 10185071):	Steel hydraulic roller
Camshaft Lift (in):	.474 intake / .510 exhaust
Camshaft Duration (@.050 in):	208° intake / 221° exhaust
Cylinder Heads (P/N 12556463):	Aluminum; 58cc chambers
Valve Size (in):	1.940 intake / 1.500 exhaust
Compression Ratio:	10.16:1 Nominal
Rocker Arms (P/N 10089648):	Stamped steel
Rocker Arm Ratio:	1.5:1
Recommended Fuel:	92 octane
Ignition Timing:	Base 10° BTDC, 32° Total
Maximum Recommended rpm:	5,800

**NOTE:** Distributor with melonized steel gear MUST be used with long-blocks and Partial engines with steel camshafts, or engine damage will occur.

# **INSTALLATION NOTES**

- Requires addition of carburetor, starter, plug wires and exhaust system (not included)
- Requires an externally balanced flywheel (not included). See page 161 for flywheel selection.
- The 8-quart Circle Track oil pan is 7 inches deep at the sump. It will clear most GM rear-steer chassis with stock engine location.
- For Circle Track Racing only Not intended for street use.



Chevrolet Performance Racing Crate Engines are excluded from limited warranty.



Chevrolet Performance <u>does not</u> utilize any used or remanufactured parts in this crate engine, except for the starter, alternator and power steering pump.



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# **AVAILABLE ENGINE RELATED PARTS & ACCESSORIES**



**12361146 High-Torque Mini Starter** *Page 174* 



**19170092 Carburetor, Holley 670-cfm** *Page 176* 



12355612 Fuel Pump, Street Performance Page 177



12342080 Air Cleaner, High-Performance Design Page 176

See page 128 for our complete line of Small-Block components

**12361051 Spark Plug Wire Set** *Page 175* 



# **High-Revving Performance and Durability**

Chevrolet Performance's CT400 racing crate engine now features Fast Burn cylinder heads with LS-style beehive valve springs that enable greater high-rpm performance and durability. They allow the engine to rev higher to make the most of every cubic inch of air drawn through it.

The beehive springs are part of the lightweight aluminum cylinder assemblies, which are based on the proven Fast Burn design, with large intake runners and 2.00/1.55-inch valves. The CT400 also has a tough bottom end, anchored by a forged steel crankshaft and strong aluminum pistons installed in a brand-new block with four-bolt mains.

The assembly also includes an open-plenum high-rise intake manifold, a racing-only 8-quart circle track oil pan with a dual kick-out design, a valve cover breather kit and aluminum roller rocker arms.

# **CT400 TECH SPECS**

Part Number:	19318604
Engine Type:	Chevy Small-Block V-8
Displacement (cu in):	350
Bore x Stroke (in):	4.000 x 3.480
Block (P/N 10105123):	Cast-iron with 4-bolt main caps
Crankshaft (P/N 12556307):	Forged steel
Connecting Rods (P/N 10108688):	Powdered metal
Pistons (P/N 10159436):	Hypereutectic aluminum
Camshaft Type (P/N 10185071):	Steel hydraulic roller
Valve Lift (in):	.474 intake / .510 exhaust
Camshaft Duration (@.050 in):	208° intake / 221° exhaust
Cylinder Heads (P/N 19300955):	Fast Burn aluminum; 62cc chambers
Valve Size (in):	2.000 intake / 1.550 exhaust
Compression Ratio:	9.72:1 Nominal
Rocker Arms (P/N 19210724):	Aluminum; roller style
Rocker Arm Ratio:	1.5:1
Recommended Fuel:	92 octane
Ignition Timing:	Base 10° BTDC, 32° Total
Maximum Recommended rpm:	5,800
Balanced:	External

**NOTE:** Distributor with melonized steel gear MUST be used with long-blocks and Partial engines with steel camshafts, or engine damage will occur.

# **INSTALLATION NOTES**

- Requires addition of carburetor, starter, ignition, plug wires, water pump, distributor and exhaust system (not included)
- Requires an externally balanced flywheel (not included). See page 161 for flywheel selection
- The 8-quart Circle Track oil pan is 7 inches deep at the sump. It will clear most GM rear-steer chassis with stock engine location
- For Circle Track Racing only Not intended for street use.



122

Chevrolet Performance Racing Crate Engines are excluded from limited warranty.



Chevrolet Performance <u>does not</u> utilize any used or remanufactured parts in this crate engine, except for the starter, alternator and power steering pump.

CIRCLE TRACK CRATE ENGINES

# **AVAILABLE ENGINE RELATED PARTS & ACCESSORIES**



PERFORMANCE

88961867 **Distributor, Aluminum Billet HEI** Page 166





19170092 670-cfm Page 176



See page 128 for our complete line of Small-Block components





12355612 Fuel Pump, Street Performance Page 177



**Carburetor, Holley** 





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# Lightweight, High-RPM LS Power!

Chevrolet Performance's deep-breathing, high-revving CT525 6.2L crate engine is based on the LS engine family and delivers serious power for serious racing series, including Super Late Model and modifieds.

It is similar to the 6.2L LS3, but we've adapted it to circle track racing with a carbureted intake manifold, 6-quart racing oil pan and more. The engine is lightweight and strong, using an aluminum block with cross-bolted 6-bolt main caps and high-flow LS3 rectangular-port cylinder heads.

The CT525 6.2L comes with coil-on-plug ignition, a water pump, exhaust manifolds and an SFI-certified balancer. It also comes with a 14-inch/168-tooth automatic transmission flexplate. All that's needed to complete the assembly is a carburetor, starter and our LSX ignition controller P/N 19171130 – all available from Chevrolet Performance.

# **CT525 TECH SPECS**

Part Number:	19271821
Engine Type:	LS-Series Gen IV Small-Block V-8
Displacement (cu in):	376 cu in (6.2L)
Bore x Stroke (in):	4.065 x 3.62 (103.25 x 92mm)
Block (P/N 12623967):	Cast-aluminum with 6-bolt, cross bolted main caps
Crankshaft (P/N 12597569):	Nodular Iron
Connecting Rods (P/N 12607475):	Powdered metal
Pistons (P/N 19207287):	Hypereutectic aluminum
Camshaft Type (P/N 88958770):	Hydraulic roller
Valve Lift (in):	.525 intake / .525 exhaust
Camshaft Duration (@.050 in):	226° intake / 236° exhaust
Cylinder Heads (P/N 12629063):	LS3 rectangular port; aluminum as-cast with 68cc chambers
Valve Size (in):	2.165 intake / 1.590 exhaust
Compression Ratio:	10.7:1 Nominal
Rocker Arms (P/N 12569167 int):	Investment-cast, roller trunnion
Rocker Arms (P/N 10214664 exh):	Investment-cast, roller trunnion
Rocker Arm Ratio:	1.7:1
Recommended Fuel:	92 octane
Reluctor Wheel:	58x
Maximum Recommended rpm:	6,700
Balanced:	Internal

# **INSTALLATION NOTES**

- Use LSX ignition controller P/N 19171130 (not included, shown on next page)
- Requires addition of carburetor, starter, exhaust system, and front accessory drive system
- Includes 14" 168-tooth automatic transmission flexplate
- The 6-quart Circle Track oil pan is designed to clear most GM rear-steer chassis with stock engine location. Requires external oil filter and cooler (will increase capacity to approximately 8 quarts)
- For Circle Track Racing only Not intended for street use.



124

Chevrolet Performance Racing Crate Engines are excluded from limited warranty.



Chevrolet Performance <u>does not</u> utilize any used or remanufactured parts in this crate engine, except for the starter, alternator and power steering pump.

**NOTE:** Final production version may differ slightly in content from photo shown.

# **AVAILABLE ENGINE RELATED PARTS & ACCESSORIES**



**19171130 LSX Ignition Controller** *Page 274* 

**19170092 Carburetor, Holley 670-cfm** *Page 176* 



**12342071 Air Cleaner, Classic Design** *Page 166* 





**10465385 LS-Series Starter** *Page 270* 

See page 128 for our complete line of Small-Block components



# **Big Power for LSX Stock Drag Racing**

Chevrolet Performance's all-new DR525 sealed drag racing crate engine signals an important advancement for drag racing, enabling exciting heads-up racing at a lower cost than custom-built engines. It's an approach Chevrolet Performance implemented in a number of circle track racing series, providing racers a high-performance engine at a great value.

The DR525 is designed as the spec engine for NMCA's new LS Stock racing class in the LSX Showdown Challenge Series. The 6.2L (376 cubic inches) naturally aspirated engine is rated at 525 horsepower and features several tamper-proof seals to ensure class compliance. And while it is the spec engine for the LS Stock class, it is legal in other NMCA/LSX Showdown Challenge classes – and other drag racing series.

It is offered with two part numbers: 19329009 (includes Chevrolet Performance's muscle car oil pan) or 19329008 (includes fourth-generation F-body oil pan). Chevrolet Performance's custom-calibrated E67-type engine control system – P/N 19329003 (sold separately) – must be used with the DR525 in the LS Stock class. It features a tamper-proof engine control unit.

# **DR525 TECH SPECS**

Part Number:	19329009 (w/muscle car oil pan) 19329008 (w/GenIV F-car oil pan)
Engine Type:	LS-Series Gen IV Small-Block V-8
Displacement (cu in):	376 cu in (6.2L)
Bore x Stroke (in):	4.065 x 3.622 (103.25 x 92mm)
Block (P/N 12623967):	Cast aluminum with 6-bolt, cross-bolted main caps
Crankshaft (P/N 12597569):	Nodular iron
Connecting Rods (P/N 12607475):	Powdered metal
Pistons (P/N 19207287):	Hypereutectic aluminum
Camshaft Type (P/N 88958770):	Hydraulic roller
Valve Lift (in):	0.525" intake / 0.525" exhaust
Camshaft Duration (@0.050 in):	226° intake / 236° exhaust
Cylinder Heads (P/N 12629063):	Aluminum L92-style port; as cast with 68cc chambers
Valve Size (in):	2.165 intake / 1.590 exhaust
Compression ratio:	10.7:1
Rocker Arms (P/N 12569167 int):	Investment cast, roller trunnion
Rocker Arms (P/N 10214664 exh):	Investment cast, roller trunnion
Rocker Arm Ratio:	1.7:1
Recommended Fuel:	92 octane
Maximum Recommended RPM:	6,600
Reluctor Wheel:	58x
Balanced:	Internal

# **INSTALLATION NOTES**

- Assembly does not include electronics
- Use DR525 Engine Controller Kit for engine operation, P/N 19329003
- Intended for off-road, drag racing vehicles
- Not intended for marine applications
- Front-End Accessory Drive Kit, P/N 19329418, not included with engine assembly (not shown)



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Chevrolet Performance Racing Crate Engines are excluded from limited warranty.



Chevrolet Performance <u>does not</u> utilize any used or remanufactured parts in this crate engine, except for the starter, alternator and power steering pump.

DR525 with muscle car oil pan P/N 19329009

**NEW** 

# **AVAILABLE ENGINE RELATED PARTS & ACCESSORIES**



**19329003 Controller and Harness** *Page 273* 



19299055 4L70E 4-Speed Automatic Transmission Page 348



**19299803 Torque Converter** *Page 346* 



**10465385** LS-Series Starter Page 270



19329795 T56 Super Magnum Six-Speed Manual Transmission Page 351



See page 128 for our complete line of Small-Block components

**19329620 LS/LT Bell Housing** *Page 351* 

WWW.CHEVROLET.COM/PERFORMANCE

# SMALL-BLOCK Engine Components

# All-New, Factory-Engineered Parts for the Classic V-8!

PERFORMANCE

It's been 60 years since Chevrolet introduced the legendary Small-Block engine and we've been refining its performance and durability ever since! That means our comprehensive range of Small-Block components is unmatched in the industry.

Chevrolet Performance's Small-Block lineup is rooted in brand-new GM cylinder blocks, rotating parts and cylinder heads. There's no reason to settle for used, reconditioned or "seasoned" parts, because Chevrolet Performance parts are competitively priced and often deliver greater strength and performance than used production components – including blocks with stronger four-bolt main caps. That's a design feature almost all used cores don't have.

The Chevy Small-Block is a living legend and nobody knows how to build power in them like Chevrolet Performance. Trust us when you're building your next engine!



Blocks and Components Page 130

Pistons and Piston Rings

Page 159



Valve Components Page 149

Oil Pans, Oil Pumps,

Page 164

Gaskets and Components







Intake Manifolds, Gaskets and Components Page 167



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Electrical and Fuel Components Page 174



Crankshafts
Page 160

Bowtie Sportsman Block

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# **Chevy Small-Block Quick Reference Chart**

# **Cast-Iron Small-Blocks**

Part Number	Cast #	Deck Height	Lifter Pattern	Cyl Wall	Bore Range	Main Bolt	Main Bolt Degree	Cap Material	Crank Jnl Size	Oiling	Seal Type	Max Stroke	Weight (Ibs)	Max HP	Usage	Page Number
10243869	10243878	9.025"	Std	Open	3.737" - 3.840"	2	Straight	Iron	350	Wet	1 pc	3.750"	185	350	Street	130
10105123	14093638	9.025"	Std	Open	4.000"-4.030"	4	Straight	Gray iron	350	Wet	1 pc	3.750"	181	350	Street	131
19171109	_	9.025"	Std	Open	4.004" - 4.030"	4	Straight	Gray iron	350	Wet	1 pc	3.800"	181	450	Street	131
10066034	_	9.025"	Std	Open	4.000"-4.030"	4	Straight	Gray iron	350	Wet	2 pc	3.750"	181	350	Street	131
12480174	10051184	9.025"	Std	Siamese	3.980" - 4.155"	4	20°	Nodular	350	Wet	1 pc	3.750"	196	500	Amateur	132
12480047	10051184	9.025"	Std	Siamese	3.980" - 4.155"	4	20°	Nodular	350	Wet	2 pc	3.750"	208	500	Amateur	133
12480175	10051184	9.025"	Std	Siamese	4.117" - 4.155"	4	20°	Nodular	350	Wet	1 pc	3.750"	196	500	Amateur	133
12480157	10051184	9.025"	Std	Siamese	4.117" - 4.155"	4	20°	Nodular	350	Wet	2 pc	3.750"	196	500	Amateur	133
12480049	10051184	9.025"	Std	Siamese	3.980" - 4.155"	4	20°	Nodular	400	Wet	2 pc	3.750"	208	500	Amateur	133
12480159	10051184	9.025"	Std	Siamese	4.117" – 4.155"	4	20°	Nodular	400	Wet	2 pc	3.750"	196	500	Amateur	133
24502503	10051184	9.025"	Std	Siamese	3.980" - 4.155"	4	20°	Steel	350	Wet	2 pc	3.750"	208	700	Pro	134

# Short Deck Cast-Iron Small-Blocks

Part Number	Cast #	Deck Height	Lifter Pattern	Cyl Wall	Bore Range	Main Bolt	Main Bolt Degree	Cap Material	Crank Jnl Size	Oiling	Seal Type	Max Stroke	Weight (Ibs)	Max HP	Usage	Page Number
24502650	24502650C	8.325"	None	Siamese	3.980'' - 4.185''	4	20°	Steel	283	Dry	2 pc	3.250"	167	800	Pro	135

# **Aluminum Small-Blocks**

Part Number	Cast #	Deck Height	Lifter Pattern	Cyl Wall	Bore Range	Main Bolt	Main Bolt Degree	Cap Material	Crank Jnl Size	Oiling	Seal Type	Max Stroke	Weight (Ibs)	Max HP	Usage	Page Number
10185075	10134398	9.025"	Std	Siamese	3.986" - 4.135"	4	20°	Steel	350	Wet	2 pc	3.750"	90	800	Pro	Disc.
10134400	10134398	9.025"	Std	Siamese	4.117" – 4.135"	4	20°	Steel	400	Dry	2 pc	3.750"	89	800	Pro	136
24502495	24502495	9.525"	Std	Siamese	4.117" - 4.135"	4	20°	Steel	400	Dry	2 pc	4.125"	101	850	Pro	136

# A. 10243869 NEW!

What's Old is New Again!

# **Original 305 V-8 Production Block**

(re-introduced for Sprint Car Spec Racing)

- Original, standard-bore block
- Uses production Small-Block components
- Fully machined
- Original 2-bolt cast-iron main cap design
- Economical alternative to expensive aftermarket design



# ▲ NEW!

A 305 V-8 Production Block (top, front)



# ▲ NEW!

A 305 V-8 Production Block (bottom, rear)



Production Based Block (front) B



Production Based Block (rear) B

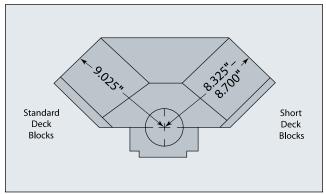




Straight 4-Bolt Mains B

Production-Based Block **B** (front, top)

# **Deck Height Diagram**



# **PRODUCTION BASED BLOCKS**

When building a mild Small-Block performance engine or a replacement for a stock engine, brand-new, production-based blocks from Chevrolet Performance give you strength, accuracy and peace of mind that can't be assured in a rebuilt core. And unlike so many of the used cores, ours all feature four-bolt main caps for extra strength – there's no reason to settle for a two-bolt block. Each new cylinder block is machined to production-spec tolerances and is manufactured to the exact specifications of pre-1986 or 1986-later engines.

# Production-Based Block Technical Notes:

- Standard 350 main journal sizes
- Non-siamese bores
- Production-spec cylinder wall thickness
- Lifter valleys machined for hydraulic-roller and flat-tappet valvetrains

See the chart on page 130 for complete specifications

# B. 10105123

# 350 Bare Block (1986–Later Style), 1-Piece Rear Main Seal

- Cast-iron 4-bolt block
- 4.000" bore
- Machined for hydraulic roller or flat tappets

# 19171109

### 383 Bare Block (1986-Later Style), 1-Piece Rear Main Seal

- Cast-iron 4-bolt block
- 4.004" bore
- Torque plate honed
- Clearanced for 3.800" stroker crankshaft
- Machined for hydraulic roller or flat tappets

# 10066034

# 350 Bare Block (Pre-1986 Style), 2-Piece Rear Main Seal

- Cast-iron 4-bolt block
- 4.000" bore
- Can be used for 302, 327, or 350 engines
- Machined for flat tappets only
- Used in 1973-1985 GM Goodwrench 350 engines

# **BOWTIE SPORTSMAN BLOCKS**

Step up to serious street/strip performance when you choose a Chevrolet Performance Sportsman Block. These iron blocks provide a rock-solid foundation for any application in the 350–500-horsepower range, be it drag strip, circle track or high-performance street machine. These highly versatile blocks are available in a variety of finish options that enable maximum flexibility for building a wide range of engine combos. Most of the blocks have siamesed cylinder walls<sup>1</sup> and 4-bolt main caps<sup>2</sup> that are secured with Grade-8 bolts. Chevrolet Performance Bowtie Sportsman Blocks have 9.025-inch deck heights.

**NOTE:** Bowtie blocks are called out by main journal sizes (i.e., 283, 350 or 400) and then by bore size (i.e., 283, 305, 350 or 400) if the bore is not standard to the main size. Example: P/N 24502650 – "283 Main-350 Bore size" – has standard 283 main journal sizes; however the bore is standard 350 size.

# Bowtie Sportsman Block Technical Notes:

- Standard 9.025-inch deck height
- Nominal cylinder wall thickness is 0.340-inch
- Minimum cylinder wall bore thickness on 4.155-inch bore is 0.225-inches (excluding P/N 10051181, 10051183, and 10185047)
- Extra-thick deck surfaces have blind-tapped bolt holes for improved head gasket sealing
- Priority main oiling system
- Main bearing bulkheads are 0.900-inch thick and use Grade-8 bolts
- All five cam bearing locations require 2.000-inch O.D. (1.867-inch I.D.) bearings P/N 12370843 (except block P/N 10051183)
- Tall lifter bore blocks may require clearancing the top of the lifter bores for some roller lifters
- Lifter valley oil scavenging boss below bell housing flange is present, but not drilled and tapped
- Oil dipstick holes are not drilled
- Timing system clearance must be checked

See the chart on page 130 for complete specifications.

# 4-Bolt 350 Main Blocks

# A. 12480174

- 350 Bowtie Sportsman Block, 1-Piece Rear Main Seal
- · CNC-machined cast-iron competition block
- +/-0.001" machining tolerances
- 4-bolt nodular mains, splayed caps on center 3 mains
- 3.980" finished bore
- 4.155" max bore (siamese cylinder bores)
- Extra smooth gasket surfaces for better seal
- Tall lifter bores
- Comes with rear seal adapter

<sup>1</sup>Siamesed cylinder walls have thicker cylinder wall material with no water between the bores. This allows for a bigger bore; a bigger bore allows for more cubic inches and more power!

<sup>2</sup>4-bolt mains have more material and more fasteners holding the crank in the block (4-bolts per main instead of just 2). 4-bolt mains help maintain the integrity of the block when you drop the hammer!



A Sportsman Block (front)



A Sportsman Block (rear, for use with 1-piece seal adapter)







A 4-Bolt Splayed Main Caps



350 Bowtie Sportsman Block, 2-Piece Rear Main Seal B



350 Bowtie Sportsman Block, 2-Piece Rear Main Seal B



350 Bowtie Sportsman Block, Valley (top front) B

# **B. 12480047**

# 350 Bowtie Sportsman Block, 2-Piece Rear Main Seal

- CNC-machined cast-iron competition block
- +/-0.001" machining tolerances
- 4-bolt nodular mains, splayed caps on center three mains
- 3.980" finished bore
  - 4.155" max bore (siamese cylinder bores) Extra smooth gasket surfaces for better seal
- Extra smooth gTall lifter bores

### 12480175

### 350 Main, 400 Bore Size Bowtie Sportsman Block, 1-Piece Rear Main Seal (not shown)

- CNC-machined cast-iron competition block
- +/-0.001" machining tolerances
- 4-bolt nodular mains, splayed caps on center three mains
- 4.117" finished bore
- 4.155" max bore (siamese cylinder bores)
- Extra smooth gasket surfaces for better seal
- Tall lifter bores
- Comes with rear seal adapter

# 12480157

### 350 Main, 400 Bore Size Bowtie Sportsman Block, 2-Piece Rear Main Seal (not shown)

- CNC-machined cast-iron competition block
- +/-0.001" machining tolerances
- · 4-bolt nodular mains, splayed caps on center three mains
- 4.117" finished bore
- 4.155" max bore (siamese cylinder bores)
- Extra smooth gasket surfaces for better seal
- Tall lifter bores

# 4-Bolt 400 Main Blocks

# 12480049

# 400 Main, 350 Bore Size Bowtie Sportsman Block, 2-Piece Rear Main Seal (not shown)

- CNC-machined cast-iron competition block
- +/-0.001" machining tolerances
- 4-bolt nodular mains, splayed caps on center three mains
- 3.980" finished bore
- 4.155" max bore (siamese cylinder bores)
- Extra smooth gasket surfaces for better seal
- Tall lifter bores

# 12480159

# 400 Bowtie Sportsman Block, 2-Piece Rear Main Seal (not shown)

- CNC-machined cast-iron competition block
- +/-0.001" machining tolerances
- 4-bolt nodular mains, splayed caps on center three mains
- 4.117" finished bore
- 4.155" max bore (siamese cylinder bores)
- Extra smooth gasket surfaces for better seal
- Tall lifter bores

# CHEVROLET PERFORMANCE RACE BLOCKS

Chevrolet Performance Race Blocks are all about serious horsepower. Precision is the operative word for them, from start to finish, so you can depend on them to get you to the finish line first. Chevrolet Performance Race Blocks use only the highest-grade materials and machining techniques. The blocks are CNC-machined<sup>1</sup> with closer tolerances than Bowtie blocks. Race blocks feature full race-prep machining and 4-bolt splayed<sup>2</sup> main caps. Chevrolet Performance Race Blocks have proven themselves repeatedly in NASCAR and NHRA-sanctioned races. Chevrolet Performance race blocks have the power and reliability to put your car in the winner's circle.

See the chart on page 130 for complete specifications.

# Chevrolet Performance Race Block Technical Notes:

- Precision CNC-machining means +/- 0.001-inch tolerances.
- Cylinder bore wall thickness is 0.225" minimum at 4.155" bore. A sonic bore check data sheet is provided with block
- Nominal wall thickness of cylinder bores is 0.340"
- Cylinder decks, front and rear of case, oil pan rail surfaces and head dowel pins are blueprinted
- Extra-thick deck surfaces have blind-tapped head bolt holes for superior head gasket sealing
- Enlarged cam bosses allow custom machining for larger bearings
- Non-standard cam bearings are required (see each block for details)
- Extra-thick main bearing bulkhead is machined at 5°
- Bearing cap inner bolts are spread 0.210" to allow machining for 400 journal crankshafts
- Premium quality main studs and SAE 8620 steel main bearing caps
- Priority main oiling system
- Billet wet sump rear main cap can be adapted to dry sump with plugs
- 2-piece rear main crankshafts and pre-1986 oil pans are required
- Use of some aftermarket mechanical roller lifters may require clearancing top of lifter bores
- Timing system clearance should be checked before engine assembly
- Lifter valley oil scavenging boss below bell housing flange is not drilled or tapped
- Oil dipstick holes are not drilled

# 24502503

# 350 Cast-Iron Bowtie Race Block (not shown)

- Cast-iron competition block right out of the box
- 4-bolt steel mains, 20° splayed caps on center three mains
  2.000" O.D. cam bearings (1.867" I.D.) required at all
- five locations
- 3.980" finished bore
- 4.155" max bore (siamese cylinder bores)
- 9.025" deck height
- Oil galleries for dry sump system are oversized and tapped for pipe plugs
- Supplied with sonic data sheet
- Tested to over 700 horsepower!



<sup>2</sup> Splayed main caps have additional material for added strength in securing the crankshaft. This reduces the chance of "throwing" a crankshaft.



A Short-Deck Race Block (top front)



-

A Short-Deck Race Block (top rear)





A 2-Piece Rear Main Seal

A 4-Bolt Splayed Main Caps



Short-Deck Race Block (bottom front) A



Short-Deck Race Block (bottom rear) A



2-Piece Rear Main Seal A

# A. 24502650

# 283 Main, 350 Bore Size Short-Deck Bowtie Race Block

- CNC cast-iron competition block designed for drag racing, road racing or restricted oval track racing!
- 4-bolt steel mains, 20° splayed caps on center three mains
- 8.325" deck (Standard deck blocks are 9.025 inches), can be machined to 8.200" deck height
- Camshaft is raised 0.433" to 4.955"
- Cam bearing bores machined for 2.250" O.D. x 1.875
   roller bearings
- 3.980" rough bore
- 4.185" max bore (minimum of .250" cylinder bore wall thickness)
- Integral oil restrictors
- Must use Big-Block water pump, must raise water pump with adapters for balancers larger than 6"
- Olds Aurora V-8 bell housing bolt pattern (12.25" max flywheel diameter)
- Lifter holes and cylinder head bolt holes are not drilled
- Will accept standard, SB2.2 and splayed valve lifter patterns
- Can be machined to accept any Small-Block Chevy cylinder head
- Shorter than production pushrods required
- Tested to over 800 horsepower!
- Water jacket core plugs are 1.5" press-in
- Oil galley plugs are AN O-ring style

# ALUMINUM RACE BLOCKS

Less weight and the same great horsepower are the benefits of a Chevrolet Performance Aluminum Race Block. Chevrolet Performance Aluminum Race Blocks provide the same competition-level strength and reliability of our cast-iron Race Blocks, but their lighter weight improves chassis dynamics. The supertough A-356 aluminum competition blocks are CNCmachined to +/- 0.001-inch tolerances. Chevrolet Performance Aluminum Race Blocks are ideal for road racing applications or high horsepower turbocharged engines.\*

See chart on page 130 for complete specifications.

# Chevrolet Performance Aluminum Race Block

# **Technical Notes:**

- Extra-thick deck surfaces with blind-tapped head bolt holes for improved head gasket sealing
- Centrifugally spun cast-iron cylinder sleeves
- 2-piece rear-main crankshafts and pre-1986 oil pans required
- Enlarged cam bosses allow machining for larger cam bearings
- 2.000" O.D. (1.867" I.D.) cam bearings P/N 12370843 required
  Blocks may require clearancing at top of lifter bores (0.842") for some roller lifters
- Timing system clearance should be checked before engine assembly
- Extra thick main bearing bulkhead machined at 5°
- Premium main studs and steel main bearing caps
- Priority main oiling system
- Billet wet sump rear main cap can be converted to dry sump with plugs
- Oil dipstick holes not drilled
- Comes with dowel pins

# A. 10134400

# 400 Aluminum Bare Block

- A-356 aluminum competition block
- CNC-machined
- Siamesed bores with increased wall thickness
- 4.117" rough-finished bore
- 4.135" maximum bore
- 3.750" maximum stroke
- Splayed 4-bolt steel mains
- 400 main size
- Dry sump use only
- Tested to more than 800 horsepower!

# 24502495

# 400 Aluminum Tall Deck Bare Block (not shown)

- A-356 aluminum competition block
- CNC-machined
- Siamesed bores with increased wall thickness
- 4.117" rough-finished bore
- 4.135" maximum bore
- 4.125" maximum stroke
- Splayed 4-bolt steel mains
- 400 main size
- Dry sump use only
- Tested to more than 800 horsepower!



A 400 Aluminum Race Block (front)





A 400 Aluminum Race Block (rear)



\* Proposed applications have not been specifically tested or validated by Chevrolet Performance.





Universal Engine Lift Brackets **B** 



Freeze Plug, 1-5/8" brass C Cylinder Sleeve (standard) D



Main Bearing Kit 383 Engine (standard) E



Main Bearing Kit, Sportsman Blocks F

# CYLINDER BLOCK COMPONENTS

# B. 12363238

# Universal Engine Lift Brackets

- Designed to bolt to the end of cylinder heads for removal and installation of the engine
- Made from 0.200" steel and have .880" x 1.000" hook slots Use with 3/8" or 7/16" bolts
- Use with 3/8" or 7/16" bolts
- Includes two brackets and two 7/16" bolts

# C. 88891749

# Freeze Plug, 1-5/8" Brass

 Corrosion-resistant brass freeze plug is recommended for marine applications

# 10121044

# Rear Oil Seal, 2-Piece Design (not shown)

- Rear oil seal for V-8 and V-6 engines with pre-1985 style 2-piece oil seal design
- Used by many NASCAR teams for superior leak protection

### D. 12480004

### Cylinder Sleeve (standard)

 Standard-bore steel cylinder sleeve for new-design aluminum Small-Block V-8 and 90° V-6 aluminum blocks, including P/N 10134400, P/N 10134351, P/N 10185075, and P/N 10134371

NOTE: Sleeve has 3.980" bore; can be overbored to 4.135".

### 12480018

### **Oil Galley Plugs, Aluminum Blocks (not shown)**

 Replacement oil galley plugs for all GM aluminum engine blocks, size AN -06

# E. 12499102

# Main Bearing Kit, 383 Engine (standard)

Complete main bearing kit for 383-cubic-inch Small-Block V-8 with standard-size mains

# F. 12480108

### Main Bearing Bolt Kit, Sportsman Blocks

- Sturdy main bearing cap bolts designed specifically for the following Chevrolet Performance Sportsman Racing Blocks: P/N 12480047, P/N 12480049, P/N 12480157, P/N 12480159, P/N 12480174 and P/N 12480175
- Bolts are Grade-8 with 12-point heads and black oxide-coated

# FRONT COVER, TIMING POINTERS, FUEL PUMP BLOCK-OFF PLATE

# A. 3991435

# Timing Pointer, 6.750" and 7" Balancer

- Steel timing pointer bolts onto engines with 6.750" or 7" balancers
- Pointer is not chrome

# B. 12342089 🕕

# Small-Block Chrome Timing Cover

- Attractive chrome cover for 1969–1991 Small-Block V-8 and all 90° V-6 engines
- Direct replacement for covers that use bolt-on timing pointer
   Direct replacement of the second sec
- Supplied with GM oil seal (replacement oil seal P/N 10111769)

# C. 12562818 🕕

- Front Cover
  - With crank trigger plug
  - Includes bolts, seal and gasket

# D. 12341998

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# Small-Block Fuel Pump Block-Off Plate

- Plate has stamped Bowtie logo
- Special non-asbestos gasket included



# Timing Covers: Additional Required Components

Part Number	Bolts (Quantity)	Seals (Quantity)	Gasket (Quantity)	Bolt Grommets (Quantity)	Engine Application
12342089	11561767 (10)	14090906 (1)	10108435 (1)	N/A	19258602, 19210009, 19210007, 19210008
12562818	10213293 (6) 12551135 (2)	10228655 (1)	N/A	10213294 (8)	12499101, 12499106, 12499101, 19318604, 19301294, 19301295 19301293, 24502609, 88958603, 19201330

# Small-Block Cylinder Heads: Quick Reference Chart

Part Number	Description	Casting Number	Material	Port Size	Port Type	Valve Angle	Chbr CC's	lnt Viv	Exh Vlv	Exh Port	Plug Type	Heat Riser	Rocker Stud	Notes	Page Number
12363287	LT4	12555690	Alum	195	—	23	54.4	2.000	1.550	LT4	Angled	No	Screw-in	For LT1 or LT4	142
19300956	Fast Burn ZZ5	12367712	Alum	210	Vortec	23	62	2.000	1.550	LT4	Angled	No	Screw-in	Bare 19300955	N/S
19300955	Fast Burn ZZ5	12367712	Alum	210	Vortec	23	62	2.000	1.550	LT4	Angled	No	Screw-in	Assembly	143
12556463	ZZ4	10088113	Alum	163	—	23	58	1.940	1.500	LT4	Angled	No	Screw-in	ZZ4 Assembly	141
12529093	Vortec	10239906 or 12558062	Iron	170	Vortec	23	64	1.940	1.500	LT4	Straight	No	Press	Bare 12558060	N/S
12558060	Vortec	10239906 or 12558062	Iron	170	Vortec	23	64	1.940	1.500	LT4	Straight	No	Press	Assembly	139
25534351	Small-Port Vortec Bowtie	25534351	Iron	185	Vortec	23	66	2.000	1.550	LT4	Straight	No	Screw-in	Bare 25534421	N/S
25534445	Large-Port Vortec Bowtie	25534371	Iron	225	Vortec	23	66	2.000	1.550	LT4	Straight	No	Screw-in	Bare 25534446	N/S
25534421	Small-Port Vortec Bowtie	25534351	Iron	185	Vortec	23	66	2.000	1.550	LT4	Straight	No	Screw-in	Assembly	140
25534446	Large-Port Vortec Bowtie	25534371	Iron	225	Vortec	23	66	2.000	1.550	LT4	Straight	No	Screw-in	Assembly	140
24502580	18° Semi	10134363	Alum	215	18°	18	60	—	—	18°	Angled	No	Shaft	No seats/guides	144
24502615	15°	10134363	Alum	210	18°	15	35-37	—	—	18°	Angled	No	Shaft	No seats/guides	144
12480129	SB2.2	12480011	Alum	_	SB2.2	SB2.2	48	2.150	1.625	SB2.2	Angled	No	Shaft	No seats/guides	147
12480011	SB2.2 Bare	12480011	Alum	—	SB2.2	SB2.2	48	2.150	1.625	SB2.2	Angled	No	Shaft	No seats/guides	147
88958667	R0X SB2.2	88958667	Alum	_	SB2.2	SB2.2	28	2.150	1.625	SB2.2	_	_	Shaft	No seats/guides	N/S
12480146	Rough Bare Splay	10185040	Alum	—	Splayed	Splay	45	2.200	1.650	Splayed	Angled	No	Shaft	Rough mach 24502517	145
12480147	Semi-Machined Splay	10185040	Alum	_	Splayed	Splay	45	2.200	1.650	Splayed	Angled	No	Shaft	Semi-mach 12480146	145
24502517	Splayed valve	10185040	Alum	—	Splayed	Splay	45	2.200	1.650	Splayed	Angled	No	Shaft	No seats/guides	145
12480153	R0X splayed	12480153	Alum	—	Splayed	Splay	_	_		Splayed	—	_	Shaft	No seats/guides	146



Cast-iron Vortec Cylinder Head (exhaust)



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Cast-iron Vortec Cylinder Head (intake) E



# SERVICE REPLACEMENT HEADS

These cylinder heads are direct replacements for OEM heads on 1987-and-newer GM Small-Block V-8 engines. Save time and worry by replacing tired or damaged cylinder heads with new ones from Chevrolet Performance.

# Service Replacement Head Technical Notes:

- Cast-iron
- Use 1.940"/1.500" valves
- Straight spark plug design
- No heat risers provided

# 93438649 🕕

# Cylinder Head Assembly With Valves For 290 HP (not shown)

This cast-iron cylinder head is for use on 350/290 hp crate engines and Goodwrench base 350 V-8 (P/N 10067353).

- Bare head P/N 93438648
- Standard 6-bolt intake manifold pattern
- 76cc combustion chamber

### This head is assembled with the following components:

			<b>U</b> 1
12550909	Exhaust Valves	10241744	Intake Spring Retainer
10241743	Intake Valves	14042575	Exhaust Spring Retainer
94666580	Valve Springs	10212810	Intake Seals
24503856	Valve Locks	12564852	Exhaust Seals

# **VORTEC CYLINDER HEADS**

An easy way to gain 20-40 horsepower on any 1955-and-newer Small-Block Chevrolet V-8 (except later-style LT1/LT4 engines with reverse-flow cooling) is by installing a set of Vortec cylinder heads. These value-priced cast-iron cylinder heads use modified combustion chambers and high velocity port technology to provide improved performance. Vortec cylinder heads significantly outflow non-Vortec service replacement cylinder heads and earlier OEM cast-iron heads. These cylinder heads are ideal for applications up to 350 horsepower, but they require Vortec-specific intake manifolds.

### E. 12558060 🕕

# **Cast-iron Vortec Cylinder Head Assembly**

- Completely assembled with 1.940"/1.500" valves
- Uses bare head 12529093
- 64cc combustion chamber
- Straight spark plugs
- No heat risers
- Requires Vortec-specific intake manifold
- Camshafts with more than 0.475" lift require machining valve guide bosses and checking valve seal to valve spring retainer clearance
- Can be machined for 2.020"/1.600" valves
- Rocker arm studs can be pinned or drilled and tapped to 3/8"
- Valve spring seat diameter is 1.280"
- Casting number 10239906 or 12558062

# This head is assembled with the following components

····· ································						
10241743	Intake Valves	10241744	Valve Spring Retainer			
12550909	Exhaust Valves	10212810	Intake Seals			
10212811	Valve Springs	12564852	Exhaust Seals			
24503856	Valve Locks					



# **VORTEC BOWTIE CYLINDER HEADS**

Vortec Bowtie cylinder heads are the most powerful cast-iron heads offered by Chevrolet Performance. These upgraded production cylinder heads are ideal for 400-450 horsepower street and racing (great for circle track applications) engines. Vortec Bowtie cylinder heads come with bigger valves, a thicker deck surface and 66cc combustion chambers. The heads provide outstanding low-lift flow numbers (the more air you flow, the more potential power) and Fast Burn performance all in an affordable, cast-iron head.

# Vortec Bowtie Cylinder Head Technical Notes:

- Cast-iron small runner or large runner cylinder heads\*
- 66cc combustion chambers
- 0.450" deck thickness
- Hardened exhaust valve seats
- Machined for 2.000"/1.550" valves
- Maximum 0.530" valve lift (without modifications)
- Straight spark plug design
- No heat risers
- Drilled and tapped for 7/16"-14 screw-in studs
- Dual bolt patterns for Vortec and early style intake manifolds (early model P/N 10051103; Vortec intakes P/N 12366573,12496820,12496821, 12496822 or 12489371)
- Use intake gasket P/N 89017465 for Vortec intakes or dual pattern intake gasket P/N 19301685 for early model intakes or Vortec design intake manifolds
- Dual bolt patterns for perimeter-style and center-bolt valve covers
- Vortec intake manifold three-step torque specs: 2 lb.-ft.; 9 lb.-ft.; 11 lb.-ft.

# A. 25534421

# Small Port Vortec Bowtie Cylinder Head Assembly

- Completely assembled, ready to bolt on
- 185cc intake ports
- 65cc exhaust ports
- Use Fel-Pro<sup>®</sup> P/N 1470 exhaust gasket
- Bare head P/N 25534351, available separately

# 25534446 🕕

### Large Port Vortec Bowtie Head Assembly (not shown)

- Completely assembled, ready to bolt-on
- Improved air flow (281 cfm @ 0.600")
- 225cc intake ports
- 77cc exhaust ports
- 65cc combustion chambers
- Use Fel-Pro® P/N 1470 exhaust gasket (minor trimming may be necessary)
- Bare head P/N 25534445, available separately

### This head is assembled with the following components:

12363757	Intake Valves	19169661	Valve Spring Retainers
12363758	Exhaust Valves	10212810	Valve Stem Seals
12551483	Valve Springs	24503856	Valve Locks
12552126	3/8" Rocker Studs		

\*Larger intake and exhaust ports allow for a greater volume of air to pass through the engine. The more air you flow, the more power you can make.



# **BUILDER'S TIP**

# MACHINING THE VORTEC HEAD FOR GREATER VALVE LIFT

The Small-Block Vortec cylinder head delivers great airflow, but is limited to valve lift of about 0.450-inch in stock form – otherwise the valve stem seals will be crushed. The valve guide bosses can be easily machined down to provide greater stem seal clearance. You'll want about 0.050-inch stem-to-retainer clearance at maximum valve lift. Also, the spring seats are easily machined to accept larger-diameter valve springs that are necessary to complement a higher-lift camshaft.



**\_**\_\_

A Small and Large-Port Vortec Bowtie Heads (intake) Bare head shown



A Small-Port Vortec Bowtie Head (exhaust) Bare head shown



A Small-Port Vortec Bowtie Head (chamber)



ZZ4 Aluminum Cylinder Head Assembly (intake) **B** 



ZZ4 Aluminum Cylinder Head Assembly (exhaust) B



ZZ4 Aluminum Cylinder Head Assembly (combustion chamber) B

# THE ZZ4 ALUMINUM HEAD

The revolutionary lightweight ZZ4 aluminum cylinder head was a key component of the highly successful Corvette L98 Small-Block V-8 engine (1985-1990). Chevrolet Performance offers that same cylinder head as a complete assembly, with D-shaped exhaust ports<sup>1</sup> (they increase post-combustion scavenging for increased power), high-velocity exhaust runners and centrally located spark plugs<sup>2</sup> that improve air/fuel mixture burn efficiency for increased power potential. The ZZ4 aluminum cylinder head is ideal for a great variety of engine applications.

# B. 12556463 🕕

# ZZ4 Aluminum Cylinder Head Assembly

- Aluminum performance head used on ZZ4 engines
- Completely assembled with 1.940"/1.500" valves
- 163cc intake port
- 58cc combustion chamber
- No heat riser
- Angled spark plugs (5/8" hex, 3/4" reach, tapered plugs)
- 1.48" Valve spring seat diameter
- Screw-in studs (3/8" top, 7/16" bottom)
- Use head gaskets with stainless steel fire rings
- Raised, machined rocker rails
- Raised exhaust ports .100", requires Fel-Pro® gasket P/N 1470
- Use rail type rockers P/N 10089648, or kit P/N 19210728 (roller rockers!)
- Casting P/N 10088113

# This head is assembled with the following components:

12550909	Exhaust Valves	19169661	Valve Spring Retainers
10241743	Intake Valves	10212810	Intake Valve Stem Seals
12551483	Valve Springs (16)	10212810	Exhaust Valve Stem Seals
10212809	Valve Spring Shims	24503856	Valve Locks
12552126	3/8" Rocker Studs		

<sup>1</sup>D-shaped exhaust ports increase the scavenging of the exhaust after combustion. The quicker you can get the exhaust out, the quicker you can get the air/fuel mixture into the combustion chamber. And, that equals big power!

<sup>2</sup>Centrally-located spark plugs allow for a more efficient flame front and air/fuel mixture burn during combustion, greatly increasing the power potential of the cylinder head.

# THE LT4 ALUMINUM HEAD

The LT4 aluminum cylinder head represents another benchmark in Chevrolet high performance engine technology. This premium-quality aluminum cylinder head is designed for use on 1992-and-newer LT1 and LT4 Small-Block engines with reverse-flow cooling systems. LT4 aluminum cylinder heads are key components of any contemporary high-horsepower GM Small-Block engine buildup.

# A. 12363287

# LT4 Aluminum Cylinder Head Assembly

- Aluminum performance head
- Can only be used on 1992 newer LT1 and LT4 engines
- Completely assembled with 2.000"/1.550" valves
- 195cc intake port
- 54.4cc combustion chamber
- No heat riser
- Angled spark plugs (5/8" hex, 3/8" reach, tapered plugs)
- 1.480" Valve spring seat diameter
- Screw-in studs (3/8" top, 7/16" bottom)
- Use head gaskets with stainless steel fire rings
- Raised, machined rocker rails
- Raised exhaust ports .100", requires Fel-Pro® gasket P/N 1470
- Use rail type rockers P/N 10089648, or kit P/N 12370838 (roller rockers!)

### This head is assembled with the following components:

12555331	Intake Valves	19169661	Valve Spring Retainers
12551313	Exhaust Valves	10212810	Valve Stem Seals
12551483	Valve Springs	10212809	Valve Spring Shims
12552126	3/8" Rocker Studs	24503856	Valve Locks



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A LT4 Aluminum Cylinder Head Assembly (intake)



A LT4 Aluminum Cylinder Head Assembly (exhaust)



A LT4 Aluminum Cylinder Head Assembly (combustion chamber)



Fast Burn Cylinder Head B



Fast Burn Cylinder Head (intake) B



Fast Burn Cylinder Head (exhaust) B



Fast Burn Cylinder Head (combustion chamber) B

# **ALUMINUM FAST BURN HEADS**

Chevrolet Performance's Fast Burn 23-degree cylinder heads deliver maximum performance for Small-Block engines. A new head casting - distinguished by new Chevy bowtie logos at each end - and new valvetrain with high-rpm, LS-style beehivetype valve springs stretches the performance range of the heads to enable greater power - including a 25-hp increase in our ZZ383 crate engine! Fast Burn technology delivers more horsepower by increasing cylinder pressures, which maximizes the air/fuel mixture's combustion. The 62cc combustion chamber is designed for used with flat-top pistons. The CNCmachined Fast Burn heads require no additional porting for optimal performance, so all you need to do is bolt them onto your Small-Block and go! They can be used on any Small-Block engine with at least 4.000-inch bores and the standard-flow coolant system. Not for use on Gen II 1992-96 LT1/LT4 engines with reverse-flow cooling system.

# B. 19300955 🕕

### Fast Burn Aluminum Cylinder Head Assembly

- CNC-machined aluminum performance cylinder head
- Completely assembled with 2.000"/1.550" valves
- 210cc intake port, roof raised .240"
  - 78cc D-shaped exhaust ports, raised .200" requires
- Fel-Pro® exhaust gasket P/N 1470 (may require minor trimming) 62cc combustion chamber, .400" deck (can be milled to .060")
- No heat riser
- Angled spark plugs (5/8" hex, 3/4" reach, tapered plugs)
- 1.48" valve spring seat diameter
- Use head gaskets with stainless steel fire rings
- Raised, machined rocker rails
- .530" maximum valve lift (without modifications)
- Screw-in studs (3/8" top, 7/16" bottom)
- New "time-serts" prevents oil migration through rocker studs
- Dual bolt patterns for perimeter-bolt and center-bolt valve covers
- Dual bolt patterns for Vortec and early-model intake manifolds
- Use bare head P/N 19300956
- Use production intake gasket P/N 19301685

### This head is assembled with the following components:

12555331	Intake valves (4)	19301708	Valve spring retainers (8)
12551313	Exhaust valves (4)	19301709	Valve stem key (16)
12625033	Valve springs (8)	12552126	Valve rocker arm studs (8)
19301707	Valve spring seats (8)	10168519	Valve guides (8)
10212810	Valve stem seals (8)	12346004	Valve rocker arm stud sealer



### ALUMINUM RACING CYLINDER HEADS

The same superior Chevrolet Performance technology that professional NASCAR and NHRA racers have used to win races for decades is available for you to use in your racecar. The Chevrolet Performance Aluminum Racing Cylinder Heads are part of an extensive family of high-performance inline-valve heads, designed specifically for race-winning engines.

Chevrolet Performance Aluminum Racing Cylinder Heads start with castings designed with thicker decks and manifold flange areas. The combustion chambers are designed for competition and air passages are maximized for high-velocity airflow. These cylinder heads thrive on high compression and high rpm. Used in conjunction with optimized short-block, intake and valvetrain combos, these heads are part of an "instant-on" powerplant – the kind of engine that will put you in the winner's circle.

Chevrolet Performance engineers dramatically altered the valve architecture to improve airflow and maximize efficiency. These aluminum racing cylinder heads are only available unported, so you must have them custom-ported to your specific requirements.

### Aluminum Racing Head Technical Notes:

- Made of 355-T7 aluminum
- Extra-thick decks for angle milling or heavy flat milling
- Extra port material for professional porting
- Recommended for use with 4.000" to 4.155" cylinder bores
- Revised location angled spark plugs (14mm, 5/8" hex, 3/4" reach, gasketed plugs)
- Raised and revised location intake and exhaust ports for superior airflow above 0.600" valve lift
- Modified valve angles (not production 23°)
- Longer-than-stock valves required
- Designed for aftermarket shaft-mount rocker systems
- Perimeter-bolt-pattern-type valve covers required
- Specific 18°/15° intake manifold bolt patterns
- Recommended intake manifolds: P/N 24502481 or 24502653 (with valley plate P/N 24502654)
- Intake manifold gasket P/N 10185007

### A. 24502580

### Semi-Finished 18° Cylinder Head

- Fully machined, semi-finished, no seats or guides
- Non-CNC ports and combustion chamber are "as-cast"
- 60cc "as-cast" combustion chambers
- Designed for up to 2.200"/1.625" valves
- 215cc "as-cast" intake ports
- .080" extra material on deck face, and .055" on intake face

### 24502615

### Semi-Finished 15° Cylinder Head

- · Fully machined, semi-finished, no seats or guides
- Non-CNC ported, ports and combustion chamber are "as-cast"
- Great head for NHRA Comp-Eliminator, both V-8 and 4-cylinder applications!
- Casting has been "rolled" 2°, Valve-guides are also tipped 1°
- 210cc "as-cast" intake ports
- 35-37cc "as-cast" combustion chamber
- Capable of over 900 horsepower
- Multi-NHRA world records



- 4

A 15°/18° Cylinder Head (exhaust)



A 15°/18° Cylinder Head (intake)



A 15°/18° Cylinder Head (combustion chamber)

# SPLAYED-VALVE ALUMINUM RACE CYLINDER HEADS

Chevrolet Performance Splayed-Valve Aluminum Race Cylinder Heads are extremely aggressive, all-out competition heads and not intended for street use. Splayed valves point both intake and exhaust valves at the center of the cylinder bore. As the valves open, they move away from the edges of the bore. That allows maximum-size valves to be installed without increasing bore size. The result is dramatically increased airflow, compared to inline-valve-design cylinder heads.

The castings have a 0.240-inch minimum port wall thickness, which leaves ample room for extensive custom porting. Intake valves are angled 16-degrees to the deck surface and splayed 4-degrees. Exhaust valve angles are 11-degrees with a 4-degree splay. Making more than 1000 naturally aspirated horsepower with these cylinder heads is easily achievable.

# Aluminum Splayed Valve Race Head Technical Notes:

- Made of 355-T7 aluminum
- No valve seats or guides provided
- Extra-thick decks for angle milling or heavy flat milling
- Extra port material (0.240") for professional porting
  - Completely revised intake and exhaust ports provide ultimate airflow potential
- 45cc "as-cast" combustion chambers
- Modified valve angles (16° x 4° intake, and 11° by 4° exhaust)
- Designed for longer-than-stock 2.200" and 1.650" valves
- Valve spring pads accommodate 1.625" diameter springs
- Revised location angled spark plugs (14mm, 5/8" hex, 3/4" reach, gasketed plugs)
- Designed for aftermarket shaft-mount rocker systems
- Custom-fabricated intake manifold required
- P/N 10185042 intake manifold gasket required
- Valve cover gaskets P/N 10185043 required

### 12480146

### **Rough-Machined Splayed-Valve Aluminum** Cylinder Head (not shown)

- Main surfaces are machined, exhaust bolt pattern is machined
- Head bolt and dowel holes, intake bolt holes, spark plug holes and pushrod holes are not machined
- Valve guides, valve seats, valve spring seats and rocker stands are not machined
- Valve locations and angles may be relocated
- 240cc "as-cast" intake ports
- 78cc "as-cast" exhaust ports
- 45cc "as-cast" combustion chambers

### 12480147

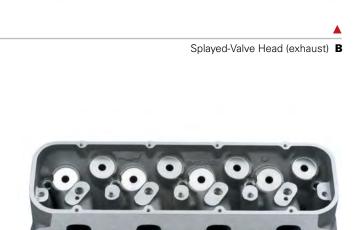
### Semi-Machined Splayed-Valve Aluminum Cylinder Head (not shown)

- Main surfaces are machined; exhaust bolt pattern, valve guides and spark plug holes are machined
- Head bolt holes, dowel holes, intake bolt holes, pushrod holes are not machined
- Valve seats, spring seats and rocker stands are not machined
- 240cc "as-cast" intake ports
- 78cc "as-cast" exhaust ports
- 45cc "as-cast" combustion chambers
- Same casting as P/N 12480146

# B. 24502517

# Splayed-Valve Aluminum Cylinder Head

- Semi-machined aluminum race head
- 240cc "as-cast" intake ports 78cc "as-cast" exhaust ports 45cc "as-cast" combustion chambers
- Same casting as P/N 12480146



Splayed-Valve Head (intake) B



Splayed-Valve Head (combustion chamber) B

PERFORMANCE 145 Splayed-Valve Aluminum Race Cylinder Heads Continued

# A. 12480153

### Splayed-Valve 4.500 Bore Center Aluminum Cylinder Head

- Semi-machined aluminum race head
- Great for NHRA competition with dual carburetors
- As-cast ports and combustion chambers for ٠ professional finishing
- Use mid-deck block with 4.500" main bore machining •
- Special larger head-bolt pattern, 3/8" fasteners, 19 holes
  240cc "as-cast peanut" intake ports
- 78cc "as-cast peanut" exhaust ports
- 40cc "as-cast" combustion chambers

### 88958684

### Splayed-Valve 4.500 Bore Center Aluminum Cylinder Head Cubed (not shown)

- Great for NHRA competition with dual carburetors
  240cc "as-cast peanut" intake ports
- 78cc "as-cast peanut" exhaust ports
- "Cubed" aluminum race head •
- Bare head, no seats or guides



A Splayed-Valve 4.500 Bore Center Cylinder Head (exhaust)



A Splayed-Valve 4.500 Bore Center Cylinder Head (intake)



# A Splayed-Valve 4.500 Bore Center Cylinder Head (combustion chamber)



SB2.2 Cylinder Head (exhaust) B



SB2.2 Cylinder Head (intake) B



SB2.2 Cylinder Head (combustion chamber) B

# SB2.2 NASCAR RACE CYLINDER HEADS

The Chevrolet Performance SB2 NASCAR racing head was designed to improve durability, simplify preparation procedures, and reduce the overall cost of building and maintaining a Small-Block Chevrolet racing engine. It is ideal for single-four-barrel carburetor applications due to having "mirror" design intake ports and all eight ports being angled toward the center of the engine. Spark plug holes were moved toward the bore center for improved combustion efficiency. 48cc combustion chambers permit 12.1:1-compression-ratio flat-top pistons.

### Aluminum SB2.2 NASCAR Race Head Technical Notes:

- 355-T7 X-rayed and "hipped" \* aluminum competition cylinder heads
- Extra-thick decks for heavy flat milling
- Extra material around ports for professional porting
  Combustion chambers are very small, shallow and wedge shaped
- Precision T-washers installed in all four center head bolt bosses
- Designed for longer-than-stock 2.150" and 1.625" valves
- Valve spring pads accommodate 1.625" diameter springs
- Modified valve angles, 11° x 4° intake and 8° x 0° exhaust
- Designed for aftermarket shaft-mount rocker systems
- Revised location angled spark plugs (14mm, 5/8" hex, 3/4" reach, gasketed plugs)
- Requires specific left- and right-hand pistons
- Valve cover P/N 12480006
- Replacement AN -08 intake port plugs available as P/N 12480171

# **B. 12480011**

### Semi-Finished SB2.2 Aluminum Cylinder Head

- Aluminum NASCAR-accepted head
- Bare head, no seats or guides installed
- Standard .500" guide holes
- As cast "peanut" ports
- 48cc "as-cast" combustion chamber

### 12480129

### Semi-Finished SB2.2 Aluminum Cylinder Head (not shown)

- Aluminum NASCAR-accepted head
- Bare head, no seats or guides
- Reduced size .375" diameter guide holes
- "As-cast peanut" ports
- 48cc "as-cast" combustion chamber

\*HIP is the acronym for Hot Isostatic Pressure. This process puts the heads in a sealed vessel where a vacuum is first used to remove room air and any possible contaminants. The vessel is filled with high pressure nitrogen (up to 30,000-psi) and then heated to the required temperature and sustained for a determined amount of time. The cooling process is also a controlled procedure to ensure maximum strength and proper heat treat. This extreme high pressure and heat removes almost 100% of the internal porosities that are generated during the casting process. The material integrity, strength and fatigue life increases significantly.

	Cylinder Heads: Additional Required Components								
Part Number	Head Gaskets (Quantity)	Bolts (Quantity)	Spark Plug	Engine Application					
93438649	10105117 (2)	10168525 (14), 10168526 (4), 10168527 (16)	N/A	12499529					
93438648	10105117 (2)	10168525 (14), 10168526 (4), 10168527 (16)	N/A	12499529					
12558060	10105117 (2) OR 12557236 (2)	10168525 (14), 10168526 (4), 10168527 (16)	19300749	19258602, 19210009, 12499101, 19210007, 19210008					
19300955	10105117 (2) OR 12557236 (2)	10168525 (14), 10168526 (4), 10168527 (16)	5614210	19318604, 19301295, 19301293, 19301294					
12556463	12557236 (2)	10168525 (14), 10168526 (4), 10168527 (16)	5614210	24502609, 88958603, 19201330					
25534446	10105117 (2), 10185054 (2) or 12363763 (2)	10168525 (14), 10168526 (4), 10168527 (16)	N/A	12366573, 12496820, 12496822, 12496820					

### **OVERHAUL GASKET KITS**

# A. 19201171

### **Rebuild Gasket Kit**

 Fits 350 HO, HT383 and Circle Track engine P/N 88958602 and P/N 19258602

# This kit includes the following items:

Part Number	Description	Quantity
10105117	Head Gaskets	2
10108676	Oil Pan Gasket Set	1
12555771	Rear Main Seal Housing Gasket	1
89017465	Intake Manifold Gasket Set	1
10105135	Water Outlet Gasket	1
10108435	Front Cover Gasket	1
12560223	Fuel Pump Adapter Gasket	1
3754587	Water Pump Gaskets	2
10108445	Distributor Gasket	1
10046089	Valve Cover Gaskets	2
12554314	Crankshaft Rear Main Seal	1

# B. 19201172

### Rebuild Gasket Kit

• Fits Fast Burn 385, ZZ5, ZZ383 and Circle Track engines P/N 88958604 and P/N 19318604

### This kit includes the following items:

	U U	
Part Number	Description	Quantity
12557236	Head Gaskets	2
10108676	Oil Pan Gasket Set	1
12555771	Rear Main Seal Housing Gasket	1
19301685	Intake Manifold Gasket Set	1
10105135	Water Outlet Gasket	1
12560223	Fuel Pump Adapter Gasket	1
3754587	Water Pump Gaskets	2
10108445	Distributor Gasket	1
10046089	Valve Cover Gaskets	2
12554314	Crankshaft Rear Main Seal	1
12554314	Crankshaft Rear Main Seal	1

### CYLINDER HEAD GASKETS AND HEAD BOLTS

Chevrolet Performance cylinder head gaskets, cylinder head bolts and cylinder head studs are the finest-quality parts available. Their superior construction ensures optimum sealing between cylinder heads and the engine block.

Gasket packages contain one gasket unless otherwise specified. Head gaskets are available in a variety of materials and thicknesses. Use the proper gasket to maintain compression ratios and minimum piston-to-cylinder-head clearances.

### C. 10105117

### **Composition Head Gasket**

- Composition head gasket with stainless steel fire ring
- For stock or mildly modified engines with 4.0" cylinder bores
- Fits cast-iron or aluminum heads
- Used on Ram Jet 350
- 0.028" compressed thickness

### 3830711

### Steel Shim Head Gasket (not shown)

- For stock and mildly modified engines with 4.0" cylinder bores
- 0.026" compressed thickness

# 12557236

# Composition Head Gasket (not shown)

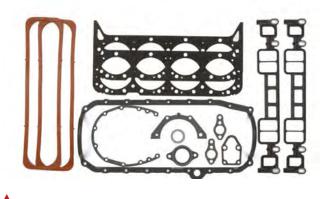
- Stainless steel fire rings
- Fits aluminum or cast-iron heads
- Used on ZZ4 and 350 HO engines
- 0.051" compressed thickness

# D. 10185054

# Heavy-Duty Composition Head Gasket

- Teflon-coated
- Pre-flattened wire O-rings around each cylinder
- For competition engines with cylinder bores of 4.0" to 4.125"
  0.041" compressed thickness
- 0.041 compressed thickness

**NOTE:** Drill steam holes when used on 400-ci Small-Blocks. Gasket does not require re-torquing.

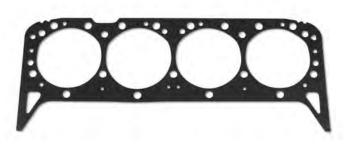


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A Rebuild Gasket Kit



B Rebuild Gasket Kit



**C** Composition Head Gasket



D Heavy-Duty Composition Head Gasket

148



Intake Valve **J** 

# 10168457

### LT1 Head Gasket (Aluminum Head, not shown)

- Composition gasket for 1992-2001 aluminum head LT1 engines
- 0.050" compressed thickness

### E. 12499223

# Cylinder Head Installation Kit (5.7L L31 Engine)

- Comprehensive kit
- Includes 2 cylinder head gaskets, 2 valve cover gaskets, 2 intake manifold gasket sets and 2 exhaust manifold gaskets
- 0.028" compressed thickness

Part Number	Description	Quantity
10105117	Cylinder Head Gaskets	2
10046089	Valve Cover Gaskets	2
89017465	Intake Manifold Gaskets	2
12550033	Exhaust Manifold Gaskets	2

### **HEAD BOLTS AND STUDS**

### 14011040

- Hardened Washer (not shown)
- 0.450" I.D. x 0.778" O.D.
- Sold individually

# F. 10051155

- **Hardened Washer** • 0.450" | D x 0.750" O D
  - 0.450" I.D. x 0.750" O.D. Sold individually
- For Phase 6 and raised-runner aluminum heads

### G. 14044866

### **Cylinder Head Stud Nut**

- Magnafluxed 12-point 4037 steel 7/16"-20 nut
- Sold individually

### H. 585927

•

### **Cylinder Head Dowel Pin**

- Dowel pin 5/16" diameter by 9/16" long
- For all Small-Block V-8 and 90° V-6 engines

# l. 12495499

### Cylinder Head Bolt Kit

- For iron or aluminum heads
- Includes 14 of P/N 10168525, 4 of P/N 10168526, 16 of P/N 10168527, and thread sealant

### SMALL-BLOCK VALVES

### J. Intake Valves

Part Number	Valve Size	Stem Size	Description
10241743	1.940"	11/32"	Stock replacement valve used in all of our crate en- gines except CT350/400, Fast Burn 385 and ZZ383/425
12555331	2.000"	11/32"	Stock replacement valve used in the 1996 LT4 engine, and in our CT350/400, Fast Burn 385 and ZZ383/425 also in LT4 and Fast Burn heads
12363757	2.000"	11/32"	Stainless steel valves with undercut stems to improve air flow, single groove design, chrome plated stems to reduce wear, hardened tips to withstand high loads

### K. Exhaust Valves

Part Number	Valve Size	Stem Size	Description
12550909	1.500"	11/32"	Stock replacement valve used in all of our crate en- gines except CT350/400, Fast Burn 385 and ZZ383/425
12551313	1.550"	11/32"	Stock replacement valve used in the 1996 LT4 engine, and in our CT350/400, Fast Burn 385 and ZZ383/425; also in LT4 and Fast Burn heads

Exhaust Valve K

### SMALL-BLOCK VALVE SPRINGS

-		-						
Part Number	Spring Type	Outside Diameter	Pressure at Installed Height	Solid height	Average Weight (Ibs @ in)	Retainer Part Number	Valve Seal kit	Technical Notes
94666580	Single w/ damper	1.241"	80#@1.700"	1.150"	267	14003715	10132715	Production spring for 350/290 HP engines
10134358	Single w/ damper	1.273"	110#@1.700"	1.160"	356	14003974	10132715	Chrome silicone steel; use with aluminum heads P/N 12556463; orange color code
330585	Dual	1.379"	140# @ 1.750"	1.150"	325	_	10132715	Use with cam P/N 3927140, and all moderate lift racing cams
10206040	Single spring	1.300"	85#@1.780"	1.260"	373	10168424	N/A	1992–1993 LT1 production Corvette engine
12625033	Single spring	1.320"	101#@1.780"	1.220"	332	19301708	N/A	CT400, ZZ5 and ZZ383 engines (Beehive Spring)
12499224	Spring kit	1.320"	101#@1.780"	1.220"	332	19301708	N/A	Kit of 16 springs P/N 12625033 (Beehive Spring)
10212811	Single spring	1.250"	80#@1.700"	1.200"	256	10241744	N/A	CT350/350, 350HO engines
19154761	Spring kit	1.250"	80#@1.700"	1.200"	256	10241744	N/A	Kit of 16 Springs P/N 10212811 (see above)
12499224 10212811	Spring kit Single spring	1.320" 1.250"	101# @ 1.780" 80# @ 1.700"	1.220" 1.200"	332 256	19301708 10241744	N/A N/A	Kit of 16 springs P/N 12625033 (Beehive Spring) CT350/350, 350HO engines



### 19300952

### **Beehive Spring Conversion Kit**

Convert the valvetrain on your aluminum Fast Burn heads to the beehive-type system used on Chevrolet Performance's latest Fast Burn heads (P/N 19300955) - and used on the ZZ5 and ZZ383 crate engines, and CT400 - to gain greater high-rpm capability and valvetrain stability. The springs, retainers and other hardware are direct replacements for the conventional springs and hardware, with no machining of the valve spring seat required. The engine's existing intake and exhaust valves are retained, allowing installation without cylinder head removal if compressed air or another method is used to hold the valves closed. The engine's existing rocker arms are also retained. The kit comes with components to convert a pair of cylinder heads, including:

(1)

Part Number Description Quantity 12625033 Spring 16 19301708 16 Cap 19301707 Seat 16 19301709 Keeper 32

NOTE: The conversion kit is intended only for Fast Burn heads and is not compatible with Vortec heads because of insufficient room for the spring seats.

### Service Kit Includes:

Part Number	Description	Quantity
12499224	Spring	16
19303149	Сар	8
19303150	Seat	8
19302868	Keeper	16

NOTE: Must use with P/N 19210728 or P/N 1921079 Rocker Arms for adequate clearance.

### VALVE SPRING COMPONENTS

Part Number	Description	Technical Notes
10212809	LT4 Valve Spring Shim	Lightweight shims as used on 1996 LT4 Corvette special LT service heads P/N 12363287, and Fast Burn heads. Use with spring P/N 12551483
10185066	Spring Shim	Used on ZZ3 series 350 HO engines. Spacer is 1.350" O.D. x 0.561" I.D. x .050" thick
3875916	Spring Shim	55/64" I.D. x 1-31/64" 0.D. x 0.015" thick
10212810	Valve Stem Seal	Used on LT4 and ZZ4 heads as well as Chevrolet Performance Parts head assemblies P/N 25534421, 25534431, 12363287 and 12464298
12511890	Valve Stem Seal Kit	Late-model V-8 seal kit for 11/32" diameter valve stems. Includes eight intake seals, eight exhaust seals and 16 oil stem seals <b>NOTE</b> : Check for seal-to-guide interference with high-lift cams
10241744	Valve Spring Retainer	Used on 350 H0, 350 Ram Jet and HT383
10045007	Valve Spring Retainer	For all ZZ3 series engines. <b>NOTE:</b> When converting ZZZ, ZZ1 or ZZ2 engines to ZZ3 series cap, valve spring shield must be removed and add cap P/N 10045007, seal P/N 460483, and spacer P/N 10185066.
19171528	LT4 Valve Spring Cap Kit	Kit for 5.7L LT4 engines. Includes 16 P/N 10212808 lightweight retainers. Use with spring kit P/N 12495494 and key kit P/N 12495503 Used on ZZ4, Fast Burn, LT4 and iron Vortec Bowtie heads
19169661	Heavy Duty Vortec Valve Spring Retainer	Fits Fast Burn and Vortec Bowtie cylinder heads. Designed for circle track racing
12495503	Valve Spring Key Kit	Kit includes 32 keys of P/N 24503856 for 11/32" valve stems. Use on all Small-Block V-8 engines

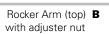


Rocker Arm Kit, Steel, 1.5 Ratio A



Roller Rocker Arm Set B







Rocker Arm (bottom) B



# **ROCKER ARMS**

# A. 12495490

### Rocker Arm Kit, Steel, 1.5 Ratio (set of 16)

- ٠ Self-aligning, high-quality rockers have a nominal 1.5:1 ratio
- Includes 16 stamped steel rockers with pivot balls and nuts ٠
- Use P/N 10089648 for single service part; for 3/8" studs

NOTE: Not recommended for mechanical lifter camshafts.

### Aluminum Roller Rocker Arm 3/8" Studs

These Chevrolet Performance aluminum roller rocker arms resemble the ones used in the 1996 Corvette LT4 engine, except the trunnions have been machined to fit early-model 3/8-inch rocker studs. The arms are self-aligning with improved stiffness. They will accommodate up to 0.575" valve lift. They are available in 1.5:1 and 1.6:1 ratios.

# **B. 19210728**

### Roller Rocker Arm Set, 1.5:1 Ratio

- Set of 16, 3/8" stud 1.5:1 ratio roller rockers
- Use P/N 19210724 for single service part

# 19210729

### Roller Rocker Arm Set, 1.6:1 Ratio (not shown)

• Set of 16, 3/8" stud 1.6:1 ratio roller rockers • Use P/N 19210725 for single service part

**NOTE:** When using a high-lift camshaft, check valve spring coil bind, retainer-to-seal clearance and piston-to-valve clearance. Check for adequate pushrod clearance when using on cast-iron heads. It may be necessary to remove valve cover drippers for proper rocker arm clearance.

NOTE: P/N 19210729 cannot be used on ZZ3 engines with orange valve springs.

# C. 19210725

### Adjuster Nut for Roller Rocker Arm

- 3/8" adjustment nut
- Used on both aluminum rocker arm kits P/N 12370838 and P/N 12370839

### D. 19210731

### "Kool Nut" (single)

- Special rocker arm nuts are used on GM Circle Track engine P/N 19258602, 88958602
- Can be used with any stamped steel rocker arm

### VALVE COVERS

People can't see the beautiful porting artistry inside your Chevrolet Performance aluminum cylinder heads, but they can, and do, see the valve covers. To make sure your GM engine looks as great as it runs, Chevrolet Performance offers a wide selection of precision-engineered, branded valve covers. The valve covers are either aluminum or stamped steel. They're designed to seal tightly and minimize the chance of oil leakage. Taller competition valve covers are made to easily clear high performance valvetrain components.

**NOTE:** Valve covers are sold in pairs unless otherwise specified. Valve covers cannot be used with 15° or 18° heads unless otherwise stated.

# A. 10185064

### **Tall Aluminum Valve Covers**

- Competition racing valve cover displays the Chevrolet name and Bowtie logo
- Natural cast finish
- No holes for PCV or oil fill, but has bosses for drilling them
- Designed for pre-1986 engines with perimeter hold downs
- Can be used with 15° and 18° heads
- Use P/N 10185052 for single service part

### B. 12480127

### **Short Aluminum Valve Covers**

- Cast-aluminum Chevy Bowtie-design valve cover is similar to P/N 10185064 except it is a short style with a PVC hole in both covers (grommets included)
- Natural cast finish
- Designed for pre-1986 engines with perimeter hold downs
- Covers have oil baffle
- Not to be used with the 350/290 crate engine

**NOTE:** For use with 1.5 ratio stamped rocker arms only.

### C. 24502466

### Tall Valve Covers, No Logo

- Create your own custom valve covers!
- Cast-aluminum valve cover is similar to P/N 10185064, but has no logo
- Cast with extra material to permit milling a custom logo

NOTE: Sold as single piece. Order 2 per engine.

### D. 12341670

### **Chrome Short Valve Covers**

- Short chrome valve covers, with baffle
- For use on pre-1986 engines with perimeter hold downs
- Chevrolet and the Bowtie logo are embossed on top

**NOTE:** For use with 1.5 ratio stamped rocker arms only.

### E. 12497978 🕖

### Polished Aluminum Valve Covers, Center Bolt Design

- Die-cast aluminum valve covers
- Polished to a bright shine
- Approximately 1/4" taller than production covers
- · For use on 1986-and-newer engines with center hold-downs
- Kit includes bolts, washers and seals
- Installed on ZZ5 crate engines

**NOTE:** Use valve cover gasket P/N 10046089 and replacement bolt and seal kit P/N 12497980.



- Tall Aluminum Valve Covers





B Short Aluminum Valve Covers



- **C** Tall Valve Covers, No Logo



- 4
- D Chrome Short Valve Covers



E Polished Aluminum Valve Covers, Center Bolt Design





Chrome-Finish Aluminum Valve Covers, Center Bolt Design G



Circle Track Valve Covers, Center Bolt Design H



Original Corvette V-8 Valve Covers



Mid-Year Corvette Valve Covers J

# F. 12497979

# Aluminum Black Crinkle Valve Covers, Center Bolt Design

- Die-cast with black crinkle finish
- Approximately 1/4" taller than production covers
- For use on 1986-and-newer engines with center hold-downs
- Kit includes bolts, washers and seals
- Factory installed on new ZZ383 crate engines ٠

NOTE: Use valve cover gasket P/N 10046089 and replacement bolt and seal kit P/N 12497980.

# G. 12497985 🕕

٠

# Chrome-Finish Aluminum Valve Covers, Center Bolt Design

- Die-cast with chrome finish
- Approximately 1/4" taller than production covers For use on 1986-and-newer engines with center hold-downs
- Kit includes bolts, washers and seals

NOTE: Use valve cover gasket P/N 10046089 and replacement bolt and seal kit P/N 12497980.

# H. 25534359 🕕

### **Circle Track Valve Covers, Center Bolt Design**

- Sheet metal valve cover kit designed for Gen I design circle track engines equipped with center hold-down cylinder heads
- Covers equipped with 2 breather pipes on 1 cover and no pipes on the other

NOTE: Use breather kit P/N 25534355 (2 come in kit).

### I. 3726086

### **Original Corvette V-8 Valve Covers**

- 1956-1959 V-8
- Off-set bolt holes will not fit newer V-8 heads
- NOTE: Sold as single piece. Order 2 per engine.

### J. Mid-Year Corvette Valve Covers

These mid-year, finned Corvette valve covers are polished ٠ to a high luster

# 474208

- 1970-1977
- Has breather hole with Corvette "crossed flag" emblem ٠

### 474207

- 1970-1977
- Has breather hole and an oil-filler cap provision
- Cap not included







Valve Covers Continued

### A. 25534420

### Pontiac 301-455 Valve Covers

- Stylish covers fit 301-455 cubic-inch Pontiac engines manufactured from 1965-1979
- Designed for stock valvetrains and may not clear aftermarket rocker arms, springs or stud girdles
- Each cover has one 1.220" hole on left side for oil fill cap; or grommet for PCV or fresh air inlet
- Covers have a natural aluminum finish with machined Pontiac name and logo
- Includes 2 covers and grommet kit P/N 12341988

**NOTE:** Does not fit Small-Block Chevy head

# ADAPTERS, HARDWARE AND BREATHERS

### B. 12497980

### **Chrome Bolt Kit, Center Bolt Design**

- Service replacement parts for 1986-and-newer center holddown design, die-cast aluminum valve covers in chrome, crinkle, and polished finishes
- Will not fit production valve covers

### 12356818

- Chrome Hold-Down Bolt (not shown)
- Chrome valve cover hold-down bolt
- Used on all 1986-and-newer engines with center hold-down design stamped valve covers

**NOTE:** Package contains 1 bolt. Order 4 per valve cover.

# 10066008

### Black Hold-Down Bolt (not shown)

- Black valve cover hold-down bolt
- Used on all 1986-and-newer engines with center hold-down design stamped valve covers

NOTE: Package contains 1 bolt. Order 4 per valve cover.

# C. 88962074

### Oil Baffle Tube

- Pushes easily into most valve covers that have an oil baffle
- Requires breather P/N 25534355; used on ZZ572 engines

### D. 25534355

### **Circle Track Breather**

- Special breathers are for circle track valve covers used on circle track and ZZ572 engines
- Chrome breathers are 1-3/8", hose-clamp-style with the Bowtie logo on top
- Installs on the left-side of each valve cover
- Kit includes two breathers



### A Pontiac 301-455 V-8 Valve Covers





- B Chrome Bolt Kit, Center Bolt Design
- C Oil Baffle Tube

Small-Block



D Circle Track Breather

N/A

### Valve Covers: Additional Required Components $( \mathbf{L} )$ Gaskets (Qty) Bolts (Qty) Grommets (Qty) **Oil Fillers (Oty) Engine Application** Part Number 25534359 10046089 (2) 3989350 (1) 93439687 (1) 19258602, 88958603, 88958604 N/A 12497979 10046089 (2) 12497980 (8) 12341988 (8) N/A Small-Block 12497985 10046089 (2) 12497980 (8) 12341988 (8) N/A Small-Block

12497980 (8)

12497978

10046089 (2)

12341988 (8)



# E. 12341993

Push-In Oil Filler Cap

• For valve covers with 1.22" hole

### 19131218

- Chrome Push-In Breather (not shown)
- 2-3/4" O.D. x 1-1/2" tall with 3/4" nipple
- Used on our Fast Burn 385, ZZ4 and 350 engines

### F. 12341986

### **Hold-Down Clamps**

- Clamps to minimize distortion of valve cover flanges on 1955-1986 Chevrolet Small-Block V-8 and 90° V-6 engines
- 4 clamps per package; order 2 per engine

### G. 14082321

### Spring Bar Retainer

- Special steel retainers prevent oil leaks
- Use under the valve cover bolts
- Distribute clamping force over a large area and prevent deformation of the flanges
- Narrow retainers are engineered to fit pre-1986 engines with perimeter-style hold downs

NOTE: Package contains 1 retainer. Order 4 per valve cover.

# H. 14044820

- Spring Bar Retainer, Chrome-Plated
- Similar to retainer P/N 14082321 described above
  Chrome-plated to match chrome valve covers

**NOTE:** Package contains 1 retainer. Order 4 per valve cover.

### 3933964

### Valve Cover Gasket (not shown)

- Cork-type gasket
- Fits all valve covers with perimeter hold-down bolts
- 1 gasket per package

### 10046089

### Valve Cover Gasket (not shown)

• For '86 and newer center hold down design valve covers

# SMALL-BLOCK PUSHRODS

Pushrods are that critical connection between the camshaft and the rocker arms. These seemingly innocuous parts play a very important role in the combustion process. That's why Chevrolet Performance pushrods are designed for heavy-duty street and competition applications. They are case-hardened for use with pushrod guideplates.

Pushrods are available in standard and 0.100-inch extended lengths. The longer pushrods can be used to restore correct valvetrain geometry when using a high-lift camshaft with a small base circle. They are also recommended when longer-than-stock valves are installed.



Heavy-Duty Pushrod Kit (0.100" longer than stock)

Part Number	Material	Diameter	Length	Usage	Description
14044874	1010 steel	5/16"	7.724"	Flat tappet	(1) Heavy-duty heat-treated .075" wall, hardened tip inserts; standard length.
366277	1010 steel	5/16"	7.824"	Flat tappet	(1) Heavy-duty heat-treated .075" wall, hardened tip inserts. +.100 long
10046173	1010 steel	5/16"	7.122"	Hyd. roller	(1) Heavy-duty heat-treated .060" wall, standard length; for use in early ZZ-series engines with guideplates
12371041	1010 steel	5/16"	7.122"	Hyd. roller	(16) Heavy-duty .060" wall, standard length; for use in 2nd design ZZ-series engines without guideplates Use P/N 10241740 for single piece
10241740	1010 steel	5/16"	7.122"	Hyd. roller	(1) Heavy-duty .060" wall, standard length; for use in 2nd design ZZ-series engines without guideplates

### SMALL-BLOCK GUIDEPLATES

# 3973418 (not shown)

### Pushrod Guideplate (cast-iron head)

- For use with production and Bowtie cast-iron cylinder heads with screw-in studs
- Can also be used with aluminum Bowtie V-6 head
- Should not be used with self-aligning rockers
- Pushrod slots are 0.325"
- For 90° V-6, use on cylinders 1, 2, 5 and 6; guideplate must ٠ be ground to clear valve cover hold-down bolts
- Four required per head

# **ROCKER ARM STUDS**

# 3921912 (not shown)

### Screw-In Rocker Stud (7/16" big-Block style)

- Beefy 7/16" Big-Block V-8 rocker studs
- Improve valvetrain stability of any Small-Block V-8 or 90° V-6 racing engine by minimizing rocker stud flex
- Fits any Small-Block V-8 or 90° V-6 cylinder head machined for screw-in studs
- Requires rocker arm for 7/16" stud

### A. 12371058

### Screw-In Rocker Stud Kit (LT1, LT4 style)

- 3/8" studs are used on all late-model LT1, LT4.
- Kit includes 16 pieces; for single stud usage, use
- P/N 12552126
- Lower thread section is 7/16-14

# VALVE LIFTERS AND COMPONENTS

### B. 12371042

# Hydraulic Roller Lifter Kit

- Designed for 1986-and-later engines
- Second-design lifters are used in late-model 350 HO engines and use a higher checkball spring preload
- Includes 16 lifters of P/N 17120735, 8 valve lifter guides, 1 valve lifter guide retainer, 4 retainer bolts, and 4 retainer washers
- This lifter kit plus pushrod kit P/N 12371041 and a roller-tappet design camshaft converts your engine to a roller-lifter engine
- For single lifter usage, use P/N 17120735

# C. 88958652

### Valve Lifter Guide, "Quick Cam"

- For use on Gen I GM Small-Blocks (block must be drilled and tapped)
- For use with hydraulic roller lifters only
- Makes it possible to remove the camshaft without removing the intake and lifters
- Enough friction in the guide to hold the lifters in place if the rocker arms are backed off and the camshaft is rotated two full revolutions to push up the lifters

**NOTE:** Package services one lifter bank.

### D. 12371044

- Hydraulic Lifter Kit (set of 16)
- Used on 1986-and-older Gen I and Gen II-style engines
- Kit includes 16 hydraulic flat tappet lifters of P/N 5232720, and is designed for use with standard-length pushrod kit P/N 12495491 or 0.100" longer kit P/N 12371057
- Use P/N 5232720 for single lifter pieces



A Screw-In Rocker Stud Kit (LT1, LT4 style)



B Hydraulic Roller Lifter Kit



C Valve Lifter Guide, "Quick Cam" D Hydraulic Lifter Kit



# SMALL BLOCK CAMSHAFTS AND COMPONENTS

A great deal of exacting engineering, extensive development/testing, and precision manufacturing practices go into every Chevrolet Performance camshaft. In many ways, the camshaft can be considered the heart of a high-performance engine. This vital function is why Chevrolet Performance puts so much effort into making sure its camshafts deliver maximum power and drivability.

NOTE: IMPORTANT! Distributor with melonized steel gear MUST be used with steel camshafts or engine damage will occur.

Part Number	Description	Duration @ .050" Lift (deg)	Maximum Lift (in) w/1.5 rocker	Lobe Centerline (deg)	Technical Notes
3896962	Hydraulic flat tappet	I: 222 / E: 222	I: .450 / E: .460	114	Used in 350/290 HP crate engine
24502476	Hydraulic flat tappet	l: 212 / E: 222	I: .435 / E: .460	112.5	Used in 350 HO and CT350 engines
14097395	Hydraulic roller design	I: 196 / E: 206	I: .431 / E: .451	109	For the HT383 truck engine with 1.5 rockers
10185071	Hydraulic roller tappet	I: 208 / E: 221	l: .474 / E: .510	112	For ZZ3, 350 HO, ZZ4, Fast Burn 385 engines; use with spring P/N 10134358 or 12551483
<b>24502586</b> (1.5 rocker)	Hydraulic roller (LT4 hot cam)	l: 218 / E:228	1.5 rocker I: .492 / E: .492	112	Service only; for all V-8 engines with roller cams. (See note below chart)
<b>24502586</b> (1.6 rocker)	Hydraulic roller (LT4 hot cam)	l: 218 / E:228	1.6 rocker I: .525 / E: .525	112	Service only; for all V-8 engines with roller cams. (See note below chart)
<b>12480002</b> (1.6 rocker)	Hydraulic roller (LT4 hot cam kit)	l: 218 / E:228	1.6 rocker I: .525 / E: .525	112	Same as P/N 24502586 except this is a kit that includes 1.6 ratio aluminum rockers, valve springs, and retainers
19210723	Hydraulic roller design	I: 222 / E: 230	I: .509 / E: .528	112	Off-highway use only; contains eccentric for mechanical fuel pump
19244485	Hydraulic roller design	I: 234 / E: 242	I: .539 / E: .558	112	Off-highway use only; contains eccentric for mechanical fuel pump

The LT4 camshaft P/N 24502586 was designed to be used in many different engines. The following change may be necessary for correct engine assembly: For LT1 and L98 engines (pre-1996) the dowel pin in the end of the camshaft must be pushed in so extension from end of cam is .30"+/- .01". For 1996 LT1 and LT4 engines, the dowel pin is in the correct position extending .620" from the end of the camshaft. This cam has a fuel pump lobe.

# CAMSHAFT KITS, RETAINERS AND REAR COVER KITS

Part Number	Description	Technical Notes
12499229	5.7L Vortec Camshaft Install Kit (not shown)	Convenient, inclusive kit. Includes 2 water pump gaskets, intake manifold gasket set, 2 valve cover gaskets, a distributor gasket and a front crankshaft seal assembly
10088128	Camshaft Retainer (not shown)	First design with 3.620" bolt center as used on ZZZ, ZZ1 and ZZ2 engines
10168501	Camshaft Retainer (not shown)	Second design with 3.294" bolt center as used on ZZ3 and ZZ4 engines
24502459	Camshaft Rear Cover Kit (not shown)	Cover and O-ring gasket for sealing rear camshaft hole on all "CNC" aluminum and iron blocks. Includes bolts



# ▲ 12480002 350 Hot Cam Kit

Off-highway kit converts production LT1 engine for showroom stock racing. Improves Small-Block originally equipped with roller tappet camshaft for significant horsepower gains. For roller lifter blocks only. Lifters are not included (re-use original roller lifters).

### This kit includes the following items:

-	
Description	Quantity
Camshaft	1
Roller Rocker Arms	16
Valve Springs	16
Valve Caps	16
Retainers	16
Valve Keys	16
Valve Spring Shims	16
	Camshaft Roller Rocker Arms Valve Springs Valve Caps Retainers Valve Keys

# CONNECTING RODS AND COMPONENTS

# A. 12495071

### **Connecting Rod Kit**

- High-quality, 5.700" powdered metal (PM) connecting rods
- For competition or street applications below 500 horsepower
- Replaces the old "pink rods" and are the same rods used in LT1 and LT4 Corvette engines
- Includes 8 P/N 10108688 rods, available individually

### 17803091

### 383 Connecting Rod Kit, 2nd Design (not shown)

383-cubic-inch engines

- Notched to clear camshaft in most stroked Small-Block applications
- Second design, with chamfer
- Standard 0.927" pin and 2.100" rod journal
- Cap held on by stud and nut, not standard type bolt
- Good to 550 horsepower
- Use P/N 17803091 for single service part

### B. 17800761

# Connecting Rod Bearing Kit, 383 Engine (standard)

- 8 heavy-duty bearings
- Second design, without chamfer
- For all 383-cubic-inch engines

### C. 12491166

### Connecting Rod Stud and Nut Kit, 383 Engine

- Studs and 12-point nuts (16 each) for all 383-cubic-inch engines
- Use with connecting rod P/N 12497624





A Connecting Rod Kit



B Connecting Rod Bearing Kit, 383 Engine



**C** Connecting Rod Stud and Nut Kit, 383 Engine



# PISTONS AND PISTON RINGS

Compressing the air/fuel mixture and dealing with the explosive forces inside an engine's cylinders isn't a job for weak parts. That's why Chevrolet Performance pistons are premium quality and factory-tested to withstand the rigors of high-performance street and competition engines. Chevrolet Performance pistons are available in a variety of compression ratios and bore sizes. They're sold individually, unless otherwise specified, and wrist pins are included.

### Pistons

Part Number	Engine Size	<b>Compression Ratio</b>	Head Chamber Volume	Size	Pin Type	Technical Notes
93422884	350	8.5:1	76cc	Standard	Pressed	350/290 HP
10159436	350	10:1	58cc	Standard	Pressed	5.7L HO, ZZ4 and LT1; high silicon aluminum
12514101	350	9.1:1	64cc	Standard	Pressed	350-cid 300 hp and 330 hp service engine with "SP" ID
88962542	383	9.1:1 / 9.7:1*	64cc/62cc	Standard	Pressed	383 engine, first or second design
88962748	383	9.1:1 / 9.7:1*	64cc/62cc	+0.005	Pressed	383 engine, second design
88962749	383	9.1:1 / 9.7:1*	64cc/62cc	+0.030	Pressed	383 engine, first or second design
12499103	383	9.1:1 / 9.7:1*	64cc/62cc	+0.005	Pressed	Kit containing 8 of P/N 88962748 (383 engine, second design)
12499104	383	9.1:1 / 9.7:1*	64cc/62cc	+0.030	Pressed	Kit containing 8 of P/N 88962749 (383 engine, second design)

\*Compression Ratio based on .028" thick head gasket.

# **Piston Rings**

Part Number	Bore Size	Oversize	<b>Ring Thickness</b>	Description
12528817	4.000"	Standard	_	Low tension rings for ZZ4, LT1, and LT4 engines
12499135	4.000"	Standard	_	Premium quality standard-size rings for 1st design 383 engines
12499136	4.000"	+.030"	_	Premium quality rings for 383 engines
12499107	4.000"	+.005"	_	Set of 8 ring packs
12499231	4.000"	Standard	—	Set of 8 ring packs of P/N 12528817





# CAST VS. FORGED - PICKING THE RIGHT PISTONS

It's the classic engine builder's dilemma: cast or forged pistons? Conventional wisdom holds that forged aluminum pistons are hands-down the stronger option. And while it's true they are generally stronger than hypereutectic cast aluminum pistons, it's not to say cast pistons are weak. In fact, modern hypereutectic pistons are made with higher silicon content and offer exceptional strength, as well as thermal properties that generally make them quieter. When determining which piston material to use on your project, a good rule of thumb is this: go forged if the engine is targeted at more than 550 horsepower and/or uses a power-adder, such as a supercharger, turbo or nitrous. Otherwise, save a little money and use the sturdy, modern hypereutectic pistons.



# CRANKSHAFTS

A crankshaft is that massive piece of convoluted steel that holds the whole engine together. An engine is essentially a pump, and without a strong crankshaft, the pump won't work. Chevrolet Performance puts the same top-quality engineering and manufacturing processes into its crankshafts as it does all its parts. These crankshafts are the same ones used in Chevrolet Performance crate engines. The crankshafts are available in cast-iron and forged steel. Forged crankshafts should be used for higher-horsepower applications.

Part Number	Description	Technical Notes
14088526	Crankshaft, Cast-iron (not shown)	Nodular cast-iron with 3.480" stroke and 2.100" diameter rod journals. 1-piece rear main seal crankshaft for 300- and 330-horsepower engines. <i>NOTE: This crank does not have a pilot bearing.</i>
12556307	Crankshaft, Forged Steel (used in late-style ZZ4 engine; not shown)	Forged 1053 steel crankshaft used in post-November 1998 ZZ4 engines. Replaces all cast or steel ZZ4 crankshafts. <i>NOTE:</i> Must be used with connecting rod P/N 10108688 and piston P/N 10159436.
12489436	Crankshaft, 383-Cubic-Inch Forged Steel (shown above)	Forged 4340 steel crankshaft used to create 383-cubic-inch engines with 3.800" stroke. Rod journals are 2.100". Mains are standard 350 size. <b>NOTE:</b> Should be used with connecting rods P/N 19169670, bearing kit P/N 17800761, standard pistons P/N 88962748 or 0.030" oversize pistons P/N 88962749, balancer P/N 12498008, and 1986-and-later one-piece crank seal design flywheel or flexplate.
14061685	Roller Pilot Bearing (not shown)	Used in high-performance manual transmission applications

\*Compression Ratio based on .028" thick head gasket.



ZZ5 and CT400 Engine Balancer (P/N 19301706)

# BALANCERS AND PULLEYS



383 Crate Engine Balancer w/1-Piece Crank Seal (P/N 12498008)



Racing Balancer (P/N 24502534 & 24502535)

Balancers are relatively small parts that play a big role in how smooth an engine runs. Balancers are also known as torsional dampers or harmonic balancers, which is indicative of how they help control unwanted crankshaft vibrations. By controlling vibrations, Chevrolet Performance balancers help engines run smoothly, which also extends engine life.

# Small-Block Balancers

Part Number	Engine Application	Outside Diameter	Technical Notes	
12551537	1969-up 305 and 350; 90V-6 competition (not shown)	6.750"	Smaller size for limited clearance. Timing mark is 10 degrees before keyway centerline. Use with timing pointer P/N 3991435	
19301706	1970-74 350; ZZ5 and CT 400 crate engine	8"	Nodular iron. Inertia ring is 1-11/16" wide. Use with timing pointer P/N 3991436. For externally balanced engines	
12498008	383 crate engine with 1-piece crank seal	8"	Use with 383 engine components and crankshaft P/N 12489436. For externally balanced engines. Counter weight can be removed for neutral balance	
24502534	All racing. Accepts standard pulleys	7.074"	NASCAR-approved and specially tuned up to 9000 rpm. Uses standard crank hub diameter	
24502535	All racing	7.074"	NASCAR-approved and specially tuned. Use with large-diameter 1.598" crankshaft hub	
Pullevs and Bolts				

ruleys and boils					
Part Number	Engine Application	Technical Notes			
3858533	Crankshaft Pulley, 6-5/8" (not shown)	Two-groove, high-rpm, 6-5/8" pulley. For engines with short water pump. <b>NOTE:</b> Can be used with a water pump pulley and belt P/N 9433722 without an idler pulley or alternator.			
9440024	Crankshaft Bolt (not shown)	Positive retention 7/16"-20 x 2-1/4" bolt for engines with tapped crank snouts. Use with washer P/N 14001829			



Lightweight Flywheel, 1986-up

Standard-Weight Flywheel, 1986-up

12-3/4" Flexplate

14" Flexplate

# FLYWHEELS AND FLEXPLATES

At the opposite end of the crankshaft from the balancer are flywheels and flexplates, which connect the engine to either manual (flywheels) or automatic (flexplates) transmissions. Chevrolet Performance offers both internally and externally balanced flywheels and flexplates. It is critical that you use the correct design for your engine application.

IMPORTANT: All Chevy Small-Block and Big-Block engines with one-piece crankshaft seal require an externally balanced flywheel or flexplate.

# **Small-Block Flywheels**

Part Number	Year of Engine	Outside Diameter	Crank Flange Bolt Pattern	Clutch Diameter	Starter Ring Gear Teeth	Technical Notes
14085720	1955–1985	12.750"	3.580"	10.400"	153	For 2-piece crank seal. Lightweight nodular iron; weighs approximately 15 pounds
3991469	1955–1985	14"	3.580"	10.400"; 11.000"	168	For 2-piece crank seal
14088646	1986—up	12.750"	3.000"	10.000"	153	For 1-piece crank seal. Lightweight nodular iron; weighs approximately 17 pounds
14088650	1986–up	12.750"	3.000"	10.400"	153	Standard-weight flywheel for 1-piece crank seal
14088648	1986–up	14"	3.000"	11.000"; 11.850"	168	For 1-piece crank seal

# **Small-Block Flexplates**

Part Number	Year of Engine	Outside Diameter	Crank Flange Bolt Pattern	<b>Clutch Diameter</b>	Starter Ring Gear Teeth	Technical Notes
471598	1955–1985	14"	3.580"	10.750"; 11.500"	168	For internally balanced engine with 2-piece crank seal
471529	1955–1985	12.750"	3.580"	9.750"; 10.750"	153	For internally balanced engine with 2-piece crank seal*
14088765	1986–up	12.750"	3.000"	10.750"	153	For externally balanced 1-piece crank seal*
12554824	1986—up	14"	3.000"	11.500"	168	Heavy-duty flexplate with increased thickness for 1-piece crank seal, externally balanced
14088761	1986–up	14"	3.000"	10.750"; 11.500"	168	For 1-piece crank seal, externally balanced

\*NOTE: will not work with new SuperMatic™ torque converters

# Bolts

Part Number	Description	Technical Notes
12337973	Flywheel Bolt (not shown)	Fits all Chevy Small-Block V-8, Big-Block V-8 and 90° V-6 engines. Sold individually; 6 required per engine
3727207	Flexplate Bolt (not shown)	Fits all Chevy Small-Block V-8, Big-Block V-8 and 90° V-6 engines. Sold individually; 6 required per engine



# SMALL-BLOCK OIL PUMP OVERKILL

Over the years, many engine builders have employed Big-Block oil pumps on high-performance Small-Blocks. Unless you're building a dedicated racing engine, that's not necessarily a great idea. There are advantages to the Big-Block pump, but with its 3/4-inch pickup tube, it's very easy to suck all the oil out of a standard-capacity Small-Block oil pan, starving the engine at higher rpm. For most street/strip combinations, a Small-Block pump with the standard 5/8-inch pickup tube is adequate. If you're going to try the Big-Block pump, make sure to use a large-capacity pan and don't let the oil level get low!

### TIMING CHAINS AND SPROCKETS

The timing chain connects the crankshaft to the camshaft and ensures those two key components work in a synchronized manner. Chevrolet Performance's strong, accurate timing chains and sprockets provide top performance and dependable service.

# A. 12371043

### Single Roller Timing Chain Kit

- Performance kit for all 1987-and-newer engines with roller ٠ lifter camshaft, except LT1, LT4 and LS-Series
- Includes chain P/N 14088783, crank sprocket P/N 14088784, ٠ cam sprocket P/N 12552129, retainers and bolts

NOTE: Will not work with flat tappet camshafts or LT1 and LT4 engines.

# B. 12370835

### **Extreme-Duty Timing Chain Kit, LT1 and LT4 Engines**

- Performance upgrade, extreme-duty timing chain kit for 1995-and-newer LT1 and LT4 engines
- Includes roller timing chain P/N 14088783, crankshaft sprocket P/N 14088784, camshaft sprocket P/N 10214880 and water pump gear P/N 12551728
- Use with pin drive camshaft only ٠

### 14088783

### **Roller Timing Chain (not shown)**

- Heavy-duty, single-roller chain for ZZ-design 350 HO engine Use with crank sprocket P/N 14088784 and cam sprocket
- P/N 12552129

### 14088784

### Crankshaft Sprocket (not shown)

Single-roller-type for ZZ-design 350 HO engine

### 12552129

# **Camshaft Sprocket (not shown)**

• Single-roller-type for ZZ-design 350 HO engine

### C. 9424877

### Camshaft Bolt

• 5/16"-18 x 0.750" bolt (3 required)

# 12554553 **Camshaft Dowel Pin (not shown)**

### 12555887

### LT4 Timing Chain (not shown)

- Quiet roller design for all LT4 engines
- Use with crank sprocket P/N 12555886 and cam sprocket P/N 12555885

# D. 12367600

### LT1/LT4 Front Cover Plug

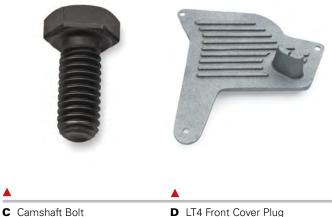
- Covers the hole on the front cover of a 1996 LT4 engine when original distributor is removed and replaced with rear-mounted distributor
- Must be used with 1995 to 1997 timing covers. Will not fit the earlier covers that had non-vented opti-spark units



A Single Roller Timing Chain Kit



B Extreme Duty Timing Chain Kit, LT1 and LT4 Engines







Water Pump, Long-Style E



Aluminum Water Pump, Short-Style F

Water Pump Pulley G

# WATER PUMPS, PULLEYS AND COMPONENTS

# E. 88894341

# Water Pump, Long-Style

- Late-style cast-iron pump with long mounting legs, reinforced snout and 3/4" diameter shaft
- End of shaft is reduced to 5/8" diameter
- Use with 350 HO, 383 and ZZ4 engines

# F. 19168604

### Aluminum Water Pump, Short-Style

- Saves weight over comparable iron pumpCasting has short-style mounting legs used on
- pre-1982 CorvettesPump has reinforced 3/4" diameter snout and a large
- hub with dual bolt patterns

**NOTE**: Pump housing has a boss which can be drilled and tapped for a cam stop. Can be used with the ZZ4 engine with composite front timing cover by exchanging the bolts that hold the rear sheet metal plate to the pump with pan-head bolts P/N 14010976 or equivalent aftermarket bolts.

**NOTE:** Cam stop boss may interfere on engines with 8" damper. Some clearancing may be required.

### 25534390

# R0X Water Pump Housing with Cassette (not shown)

- Housing bolts directly to the block
- Block openings are spread to 9.400"
- Standard front inlet and outlet openings
- Includes Water Pump Cassette P/N 25534391

# G. 3942992

### Water Pump Pulley

- Fits 1971-and-newer and short-leg water pumps with large hubs
- **NOTE:** Must be modified to fit water pump with 3/4" shaft.

# ACCESSORY DRIVE SYSTEMS

# A. 12497698

- Serpentine Accessory Drive System (with Air Conditioning)
- Fits Gen I-style engines
- Deluxe kit includes all the components and hardware necessary to install on an engine with air conditioning, including water pump, alternator, power steering pump and idler bracket; belt included

### The system includes:

-				
10055800	Secondary Air Injector Pump Bracket			
88964863	Air Compressor Assembly (CR4)			
10129569	Idler Belt Pulley Bracket			
19201601	Water Pump Kit			
10055880	Water Pump Pulley			
10055879	Crankshaft Pulley			
19152464	Alternator Assembly – 105 AMP (reman)			
88987962	Alternator Connector (with lead)			
10055798	Drive Belt Tensioner Assembly			
88986814	Belt (fan, water pump, A/C, power steering pump, and alternator)			
10105212	Alternator and Power Steering Bracket			
88985115	Power Steering Pump (reman)			
12605677	Power Steering Pulley			

# 12497697

# Serpentine Accessory Drive System

# (without Air Conditioning, not shown)

- Fits Gen I-style engines
- Deluxe kit includes all the components and hardware necessary to install on an engine without air conditioning, including water pump, alternator, power steering pump and idler bracket; belt included
- Includes all components from above kit, minus air compressor assembly

# OIL PANS, OIL PUMPS, GASKETS AND COMPONENTS

Oil is your engine's lifeblood and a high-quality Chevrolet Performance oil pan keeps it where it belongs. Our properly designed and manufactured oil pans fit right and, along with matching gaskets, prevent leaks for years of trouble-free service. Chevrolet Performance has oil pans for street and competition applications.

(Oil pans are sold without dipsticks or other hardware unless otherwise specified.)

It's important to note that Chevrolet V-8 and V-6 engines were redesigned in 1986 to include a one-piece rear main seal. That change required a correspondingly new oil pan design. For pre-1986 engines, there is a newer one-piece pan gasket available. Oil pans and gaskets are not interchangeable between early and late design engines. Blocks that have been machined for a one-piece real main seal require seal adapter P/N 10051118 and must use the newer-style oil pan and gasket.

# B. 12557558

### Oil Pan, 1986-1992 F-Car and ZZ4

- Four-quart pan used on ZZ4 crate engines and 1986-92 Camaro and Firebird
- Internal baffling and right-hand dipstick
- Designed for 1-piece rear main and 1-piece oil pan gasket
- Fits with crankshaft seal adapter P/N 10051118 (discontinued)

**NOTE:** Use with oil pan rail reinforcement P/N 12553058 (LH) and 12553059 (RH).

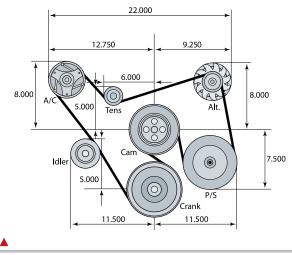
### C. 360450

### Oil Pan, Z/28-Style (2-Piece Rear Main Seal)

- Four-quart oil pan fits 1970-79 Camaro and 1979 Corvette
- Internal baffling and a left-hand dipstick
- Use with 2-piece rear main seal on 1955–1979 blocks
- Requires gasket P/N 14079399



A Serpentine Accessory Drive System (with air conditioning)

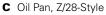


A Serpentine Accessory Drive System (with air conditioning)



B Oil Pan, 1986–1992 F-car and ZZ4







Circle Track "Late Model" Oil Pan D



Windage Tray E



Windage Tray F

25534353

### Circle Track "Factory Stock" Oil Pan (not shown)

- Special black-powder-coated 8-quart circle track pan is used ٠ in the Circle Track engine P/N 19258602
- 8" sump has a single 3.5" kickout on the right-hand side Includes a fully louvered windage tray, oil scraper, three trap
- doors, oil level plug, and 3/4" oil pick-up tube 8" deep
- •

### D. 25534354

### Circle Track "Late-Model" Oil Pan

- Special black-powder-coated, 8-quart circle track pan is used in ٠ the factory stock engines P/N 88958603 and P/N 88958604
- 7" sump has a 3.500" kickout on both sides •
- Includes a fully louvered windage tray, three crankshaft scrapers, six trap doors, two runners, an oil temperature fitting provision, oil level plug, and 5/8" oil pick-up tube 7" deep
- Oil pickup tube available separately P/N 19171997

### 10108676

### Oil Pan Gasket, 1-Piece Rear Main Seal (not shown)

Neoprene 1-piece gasket for 1986-and-newer engines

### E. 3927136

### Windage Tray

- Separates the oil in the pan sump from the rotating crank assembly to reduce aeration of the oil
- Aids in oil control and minimizes oil slosh under hard braking • Use with oil pan P/N 360450

NOTE: Requires five mounting studs P/N 14087508 for 1968-and-later blocks. Use mounting studs P/N 3872718 with pre-1968 blocks. On 400-cubic-inch Small-Blocks the baffle requires modifying by elongating mounting holes. Check tray clearance with long-stroke crankshafts and/or non-stock connecting rods.

### F. 12554816

### Windage Tray

- Flat oil pan baffle used with 1986-1996 Corvette pan P/N 10055765
- For 1968-and-newer blocks, use five mounting studs P/N 14087508
- For pre-1968 blocks, use studs P/N 3872718



Adapter	



Oil Pump, High Volume



Part Number	Description	Technical Notes
93427692	Oil Pump, High-Pressure LT1/LT4-Style (not shown)	Production-style high-pressure 1993-1997 LT1/LT4 oil pump with 1.200" gears. Produces 60-70-psi oil pressure; screen not included
14044872	Oil Pump, High Volume	High-volume pump has 1.500" gears for increased volume. Approximately 25 percent more capacity than a production pump at standard pressure; pick-up not included
10046007	Oil Pump Bolt (not shown)	Fits all models, 7/16"-14 x 2 3/8"
3998287	Oil Pump Shaft (not shown)	Fits all 1959-and-newer engines
3764554	Oil Pump Shaft Retainer (not shown)	Fits all 1959-and-newer engines. Use with oil pump shaft P/N 3998287
3848911	Oil Pump Spring (not shown)	Regulates oil pressure at approximately 70 psi. Use with high-volume pump, P/N 12555884 <b>NOTE:</b> Minimum recommended oil pressure for off-highway use is 65 psi at engine operating speed.
19299222	Oil Filter Adapter	Mounts a spin-on cartridge for Gen I and II Small-Block V-8s. Contains a filter bypass valve and requires two attaching bolts, P/N 3951644
24241872	Magnetic Drain Plug (not shown)	Catches and holds small pieces of metal before they can cause engine damage

Oil Filter

### DISTRIBUTORS AND COMPONENTS

High-quality, durable and dependable Chevrolet Performance distributors optimize the performance of your GM engine. These distributors are interchangeable among standard GM Small-Block and Big-Block V-8s. For tall-deck engines, use adjustable slip collar distributor P/N 10093387.

**NOTE:** Melonized distributor gear P/N 10456413 is required on all Chevrolet Performance crate engines, or serious damage will occur.

### A. 93440806

### Distributor, HEI

- Cast aluminum distributor for all Small-Block and Big-Block V-8 engine assemblies
- High-performance mechanical advance curve
- Vacuum advance canister included
- Use connector P/N 12167658 to attach tachometer and 12-volt power supply wire to distributor
- Includes module P/N 19180771, cap P/N 19110931 and rotor P/N 19110934

### B. 88961867

### **Distributor, Billet HEI**

- CNC-machined billet aluminum housing provides great strength
- Ball-bearing guide, oversized shaft and long sintered bushing for stability
- Offers mechanical advance and vacuum advance
- Includes brass terminal cap
- Use connector P/N 12167658 to attach tachometer and 12-volt power supply wire to distributor

### C. 1104060

### Distributor, Ram Jet 350 and Ram Jet 502

- Used on the fuel-injected Ram Jet 350 and Ram Jet 502
- Includes ignition module P/N 10482830, cap P/N 19166099 and rotor P/N 10477219

### 1103952

### Distributor, Late-Model EFI (not shown)

- Used on late-model V-8 engines with fuel injection and computer controls
- Kit includes ignition module, cap and rotor

### D. 10093387

### Distributor, Adjustable Slip Collar

- Designed for competition use
- Billet aluminum housing
- Ball-bearing guide
- Adjustable mechanical advance
- Magnetic pickup
- Uses standard cap and rotor
- Adjustable slip collar for tall-deck blocks or to compensate for cylinder head or block machining

### 19052845

### Distributor Gear (not shown)

Melonized gear for distributor P/N 1103952

### 10456413

### **Distributor Gear (not shown)**

- Melonized iron gear is required on all Chevrolet Performance crate engines
- Failure to use this gear will affect the engine warranty

NOTE: Supplied on distributor P/N 93440806.

### 12167658

# Connector, HEI Distributor Power and Tachometer (not shown)

 Used to attach the power and tachometer wires to the cap of the HEI distributor

### 12498335

### Coil, HEI (not shown)

Production HEI coil



A Distributor, HEI



B Distributor, Billet HEI





**C** Distributor, Ram Jet 350 & Ram Jet 502



D Distributor, Adjustable Slip Collar



Intake Manifold, ZZ Series E



Intake Manifold, Vortec Head Design F



Intake Manifold, Vortec Head Design (Dual Pattern Carb Mount) G

# INTAKE MANIFOLDS, GASKETS AND COMPONENTS

Intake manifolds distribute the air/fuel mixture to the appropriate cylinders. Intake manifold design is geared toward the end usage, whether that is a street performance engine or an all-out competition application. The wide range of Chevrolet Performance intake manifolds means there is an ideal manifold for your every need. There are cast-iron and aluminum intake manifolds for carbureted and fuel injected applications. Chevrolet Performance intake manifolds were designed specifically for GM engines, so you know they will deliver O.E. performance.

# E. 10185063 🕕

# Intake Manifold, ZZ Series

- Aluminum manifold used on all ZZ series 350 HO engines
- Can be used on all Small-Blocks through 1986
  Dual-pattern carburetor flange is approximately 1/2" lower
- than the 1970 LT1 intake, yet produces the same horsepower
  Provisions for all late-model accessory brackets, EGR, and
- an integral hot-air choke
  A heat shield can be mounted underneath for improved performance

### F. 12366573 😱

### Intake Manifold, Vortec Head Design

- Designed for 283-400-cubic-inch engines using Vortec cylinder heads P/N 12558060, P/N 19300956, P/N 19300955, P/N 25534421, or P/N 25534446
- Has 4-bolts per side to attach it to these cylinder heads
  Aluminum high-rise design maximizes horsepower and
- Additing in the design maximizes no septime and delivers a broad torque curve
   Accepts a square-bore 4150-style carburetor and includes
- Accepts a square-bore 4150-style carburetor and includes externally plumbed hot water crossover passage
- Use manifold gasket P/N 89017465 and eight attachment bolts, P/N 12550027

**NOTE:** Vortec heads were originally released on 1996-1999 truck engines. Check for hood clearance, especially with Corvette.

### G. 12496820 🕕

### Intake Manifold, Vortec Head Design (Dual Pattern Carb Mount)

- This dual-bolt-pattern aluminum manifold will work with all Vortec cylinder heads P/N 12529093, P/N 12558060, P/N 12497186, P/N 12464298, P/N 25534421, or P/N 25534446
- Will accept Holley or Quadrajet-style carburetors
- Will accept an EGR valve, P/N 17052693
- To block EGR port, use P/N 12556596
- Requires intake manifold gasket kit P/N 19301685 and 8 special manifold bolts, P/N 12550027



Intake Manifolds, Gaskets and Components Continued

# A. 12496821

### Intake Manifold, Vortec Head Design for TBI

- Designed for throttle-body fuel injection
- Aluminum intake will work with all Vortec cylinder heads, including P/N 12558060, P/N 19300956, P/N 19300955, P/N 25534421, or P/N 25534446
- Also accepts EGR

NOTE: The exhaust manifold from 1996-and-newer pickup trucks with RPO L31 350 engine, P/N 12557828, is drilled and tapped to accept an EGR tube. EGR pipe P/N 10220275 can be used with EGR Valve P/N 19210662 and gasket P/N 12337972. This manifold is primarily intended for use with Vortec heads on pre-1996 engine blocks. Blocks manufactured in 1995 or earlier have thermostat bypass passage from the block directly to the water pump. If manifold is used on 1996 and later engines (which do not have the bypass in the block), you must run a coolant bypass line from the manifold to the 5/8" hose nipple on the water pump (passenger's side). Suggested routing is from the 3/8 NPSF boss on manifold to the water pump.

# B. 12496822 🕕

### Intake Manifold, Eliminator Vortec Head Design

- Designed to deliver the most power and torque with Vortec cylinder head P/N 12529093, P/N 12558060, P/N 12497186, P/N 12464298, P/N 25534421 or P/N 25534446
- Use intake manifold gasket kit P/N 19301685 and 8 special manifold bolts P/N 12550027

### C. 24502592

### LT1 Intake Manifold

- Fits 1992-1996 Gen II LT1 engines and permits the use of a carburetor
- Long runners increase engine torque up to 30 lb.-ft. without sacrificing top-end horsepower
- There are no water coolant holes on this manifold



A Intake Manifold, Vortec Head Design for TBI



B Intake Manifold, Eliminator Vortec Head Design



C LT1 Intake Manifold



Bowtie Intake Manifold, Raised Runner D



Bowtie Intake Manifold, Standard Runner E



Ram Jet Fuel Injection Manifold Kit (less electronics) F

# D. 10051103

### Bowtie Intake Manifold, Raised Runner

- Runners of this single-plane aluminum intake manifold are • raised .200" to match the ports of Bowtie cylinder head P/N 10051101 (discontinued)
- Air gap beneath the runners isolates the intake charge from hot engine oil
  - A 2" carburetor spacer is recommended Accepts standard-flange 4-bbl carb
- ٠
- For competition use only, as there are no heat riser passages

### E. 10051102

### Bowtie Intake Manifold, Standard Runner

This standard-runner manifold is based on the raised-runner intake P/N 10051103 (see above)

### F. 12498032

### Ram Jet Fuel Injection Manifold Kit (less electronics)

- Retro-fit fuel injection kit will fit V-8 engines using Vortec cylinder heads P/N 12558060, P/N 19300956, P/N 19300955, P/N 25534421, or P/N 25534446
- Must be used with an aftermarket ECU and wiring harness with the proper calibration
- The same as used on Ram Jet 350 engine P/N 12499120. (MEFI with ECU and Wire Harness Kit P/N 12499116 is not calibrated for anything other than Ram Jet 350.)

### Kit includes the following (as well as brackets, sensors, bolts, nuts, gaskets, and other small parts):

88959339	Instruction Manual	12489371	Intake Manifold
17096144	Throttle Body	12598697	Coil
12097982	Ignition Wire	1104060	Distributor
12498951	Air Cleaner	12553918	Injector Rail
17124248	8 Fuel Injectors	12614973	MAP Sensor
10456126	Knock Sensor	15326386	Engine Temp Sensor
17123897	Fuel Pressure Regulator		

NOTE: It does not include ECU or wiring harness, which must be sourced separately.

# 12489371 🕕

- Ram Jet 350 Intake Manifold (not shown)
- Used on the Ram Jet 350 engine assembly P/N 12499120 Bare manifold only - no throttle body, injector rails, injectors,
- bracket or other components See P/N 12498032 for complete manifold kit

# **RAM JET ELECTRONICS**

Part Number	Description	Technical Notes
88962717	MEFI 4 ECU, Ram Jet 350 (not shown)	Replacement ECU for all Ram Jet 350 crate engines, MEFI 3 P/N 12495515 or MEFI 4 P/N 12499120 MEFI 4 Ram Jet engine is a closed-loop system that gives a much smoother idle and improved performance <b>NOTE</b> : Replacing the ECU on MEFI 3 Ram Jet engine P/N 12495515 requires using new wire harness kit P/N 12499116, or use jumper wire P/N 88963118 to use MEFI 4 ECU as an open-loop system.
12499116	MEFI 4 ECU and Wire Harness Kit, Ram Jet 350 (not shown)	Use to convert a Ram Jet 350 from MEFI 3 to the newer MEFI 4 design, which provides a better idle through closed-loop operation. Includes ECU module P/N 88962717, wire harness P/N 88961967, oxygen sensor P/N 19178918, intake air temp sensor P/N 25036751, and oxygen sensor fitting P/N 15156588 <b>NOTE:</b> ECU is programmed with a "green mode" that controls the rpm for the break-in period. During this period, engine speed is limited to 4,000 rpm in the first hour, 4,500 rpm in the second hour and 5,500 rpm in the third hour.
88961967	MEFI 4 ECU Wire Harness, Ram Jet 350 (not shown)	Designed to be used with the MEFI 4 Ram Jet 350 P/N 12499120 and MEFI 4 ECU P/N 88962717
15156588	Fitting, Oxygen Sensor (not shown)	Used on all MEFI 4 electronic controlled ignition systems. Should be welded into the exhaust pipe so the oxygen sensor can be screwed into the exhaust system
12489492	MEFI 3 ECU Wire Harness, Ram Jet 350 (not shown)	Designed for use with the MEFI 3 350 Ram Jet engine P/N 12495515 using ECU P/N 12489488





# **BOWTIE COMPETITION MANIFOLDS**

# A. 24502481 🕕

# Intake Manifold, 18° Competition

- Developed for NASCAR's shorter tracks and works well on Trans-Am-series engines
- Features smaller runners and less plenum volume, which enhances mid-range torque
- Aluminum intake fits 18° heads casting
- Manifold is ideal for 310-cubic-inch road racing and 358-cubic-inch short track engines
- Manifold flanges are 0.590" thick to promote a good gasket seal
- An auxiliary water line boss at the rear of the casting improves water flow
- Weight 22.5 lbs
- Volume 2700cc

# B. 24502653 🕕

### Intake Manifold, Spider Design

- A 2-piece 'dry' aluminum manifold "spider" consisting of the runners and plenum only
- The runners, called the spider assembly by racers, along with valley plate assembly the common term for the bottom section of the intake (see P/N 24502654 below) are designed for use with the 18° cylinder heads with a date code of June 1996 or newer

# C. 24502654 🛈

### Valley Plate Assembly

- Universal aluminum valley plate is designed for use with 18° cylinder heads
- Can be used with dedicated 2-piece manifold spiders, existing 1-piece intake manifolds which have been properly machined for use as a dry manifold, or fabricated manifold designs
- Valley plate assembly consists of the valley plate P/N 24502652, the inspection cover P/N 24502651, O-ring material and eight retaining bolts
- Valley plate has cast-in integral passages to equalize coolant flow from the front and the rear of the cylinder heads
- Fits heads dated June 1996 and later

**NOTE:** Important information about gasket matching: Gasket flanges are machined to provide the proper port alignment with standard runner locations. Runners in heads and manifold must be matched by engine builder. Often, the gasket will line up with the top of the port so removal is required at the bottom of the port. Gaskets that can be used with this manifold are: Fel-Pro<sup>®</sup> P/N 1205 and P/N 1206, and Mr. Gasket<sup>®</sup> P/N 102. Always match the gasket to the cylinder head you plan to use to ensure a correct fit.



A Intake Manifold, 18° Competition



B Intake Manifold, Spider Design







Intake Manifold, Spider Restrictor Design – SB2.2 D



Intake Manifold, Spider Design – SB2.2 E



Valley Plate Assembly, SB2.2 F

# NASCAR INTAKE MANIFOLDS

# D. 12480096

# Intake Manifold, Spider Restrictor Design – SB2.2

- Aluminum manifold has more material in the runners and ٠ plenum to accept more flexibility in porting
- Designed for NASCAR restrictor-plate racing and is used with valley plate assembly P/N 12370840 (see below)

# E. 88958617

# Intake Manifold, Spider Design – SB2.2

- · Designed for NASCAR-style racing and high-rpm engines Additional aluminum in the runners and plenum allows more flexibility in porting
- Must be used with valley plate assembly P/N 12370840 or P/N 88958659

### 12370840

### Valley Plate Assembly, SB2.2 (not shown)

Aluminum valley cover is used with manifold runners P/N 12480096 and P/N 88958617 on SB2.2 cylinder heads for NASCAR racing

# F. 88958659

### Valley Plate Assembly, SB2.2

- Aluminum valley cover is used with manifold runners P/N 12480096, P/N 88958617 and P/N 88958691
- Does not incorporate an inspection cover, but has revised integral water passage for improved coolant flow from the front and rear of the cylinder heads
- Uses AN -24 fitting for water outlet; can use reducer for -20 fitting

### 88958670

### Valley Plate Assembly, R0X (not shown)

• Fits R0X manifold and R0X head P/N 88958667

Intake Manifolds: Additional Required Components	
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Part Number	Gaskets (Quantity)	Bolts (Quantity)	Engine Application
12366573	89017465 (1)	12550027 (8)	19258602, 19301294, 19301293
12496820	89017465 (1)	12550027 (8)	19210009, 12499101, 19210008, 12499101
12496822	89017465 (1)	12550027 (8)	88958604, Vortec Heads
10185063	12525810 (1)	14091544 (8), 88891769 (2)	24502906, 88958603
12489371	89017465 (1)	12550027	12499120, 12495515
12496821	89017465 (1)	12550027 (8)	Vortec Head for TBI
24502481	10185007	N/A	18° high-port racing heads
24502653	10185007	N/A	18° high-port racing heads
24502654	10185007	N/A	18° high-port racing heads



# **COVERS AND PLUGS**

# A. 14094792

### **Choke Hole Cover**

- Covers the choke hole on the 350 HO manifold P/N 10185063
- Use gasket P/N 14096848 and screw P/N 9442184
   with washer P/N 9439511

# B. 6269414

### Cover, EGR Valve

- Covers the EGR valve port on the 350 HO manifold P/N 10185063
- Use gasket P/N 12554530 and screw P/N 9442184 with washer P/N 9439511

# C. 12556596

### Plug, EGR Pipe Hole

 7/8"-15 plug is used to seal off EGR pipe holes on intake manifold P/N 12496820 and P/N 12496821

# CHROME WATER NECKS

# D. 12342024

# Water Neck

- Chrome water neck with neoprene O-ring and chrome bolts
- For 1966-1975 full-size Chevrolet, Camaro, and Chevelle V-8 engines

### 10108470

Aluminum Water Outlet (not shown)



A Choke Hole Cover





B Cover, EGR Valve



C Plug, EGR Pipe Hole



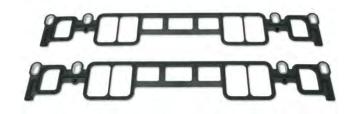
D Water Neck



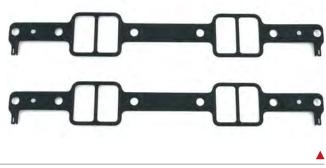
Gasket Kit, 1971-1986 and ZZ350 E



Gasket Kit, Vortec Design F



Gasket Kit, Production Vortec Design G



Gasket Kit, LT4 H

# INTAKE MANIFOLD GASKETS

# E. 10147994

### Gasket Kit, 1971-1986 and ZZ350

- For 302-350 high-performance Small-Blocks built from 1971-1986, and all ZZ350 high-performance engines
- Gaskets fit standard intake port location
- Do not use with raised runner cylinder heads
   Includes 2 gaskets
- Includes 2 gaskets

# F. 19301685

### Gasket Kit, Fast-Burn Aluminum Vortec Design

- Designed for Vortec heads, P/N 12558060, P/N 19300955, P/N 19300955 and P/N 19300956 only
- Gasket thickness is 0.120" (1/8"), post size is 1.080" x 2.160" with tapered wall, Print-O-Seal design
- Has both early style 6-bolt pattern and Vortec 4-bolt pattern
  Includes 2 gaskets
- G 90017/65

# G. 89017465

- Gasket Kit, Production Vortec Design
  Production gasket for all Vortec-design cylinder heads (4-bolt attachment to cylinder heads P/N 12529093 and Debut 0555000000
- P/N 12558060)
  Requires the use of GM attachment bolt P/N 12550027, because the bolt has a ball design on the end that seats in the head so it will not crush the intake manifold gasket
- Includes 2 gaskets

### H. 12528884

### Gasket Kit, LT4

- Used on the LT4 engine P/N 12371172
- Can be used with all LT4 heads and is designed not to cover
- part of the cylinder head opening as production gaskets do Includes 2 gaskets

### 10185042

### Gasket Kit, Splayed-Valve (not shown)

- Used only on the splayed-valve V-8 cylinder heads P/N 24502517
- Includes 2 gaskets

### 10185007

### Gasket Kit, 18-Degree High Port Heads (not shown)

- Used only with V-8 18° high port cylinder heads
- P/N 10134363 and P/N 24502580
- Includes 2 gaskets

### 12524653

### Gasket Kit, LT1 4-bbl Conversion (not shown)

- · Required when installing a 4-bbl manifold on any LT1 engine
- Includes 2 gaskets

### STARTERS AND ALTERNATORS

Flywheels with two different diameters are used on Chevrolet Small-Block, Big-Block, and 90° V-6 engines. Large flywheels are 14" in diameter and have 168 teeth on the starter ring gear. Small-diameter flywheels are 12.750" in diameter, with 153 teeth on the ring gear.

This difference in flywheel diameters requires two distinct starter housings. Starter noses used with large-diameter flywheels have two offset bolt holes, while starters for small flywheels have two bolt holes that are parallel to the back of the block. Most Chevy blocks are drilled for both types of starters.

### Starters

# A. 12361146 🕕

### **High-Torque Mini Starter**

- Gear reduction starter is designed for 1958-1996 V-8 and all 90° V-6 engines
- Compact design provides increased clearance
- Weighs only 10.5 pounds and has a gear reduction of 3.75:1
- Equipped with a dual bolt pattern for 12.750" (153-tooth) and 14" (168-tooth) flywheels
- Housing can be rotated to clear exhaust systems
  Includes starter, mounting bolts, shims, gaskets and
- electrical connectors

**NOTE:** Not recommended for competition use.

# B. 12363128 🕕

### High-Torque Mini Starter, Chrome

Same as starter P/N 12361146 (see above), but with a chrome housing

# C. 10465143 🛈

### Lightweight Starter (remanufactured)

- Lightweight high-performance starter was originally used on 1993-1997 Camaros and Firebirds with the LT1 engine
  Can be used on any Small-Block or Big-Block engine with
- a 12.750", 153-tooth flywheel
  D. 19302919

# Lightweight Starter, Big-Block and Small-Block

 Gear reduction starter can be used on Big-Block and Small-Block engines with a 14", 168-tooth flywheel

# Alternators

### 88958690

### Alternator, 90-Amp (Competition Use, not shown)

- Proven in NASCAR use
- Similar to P/N 1001641
- CS121 design housing
- Serpentine belt pulley
- Hand-assembled and dyno-tested



A High-Torque Mini Starter

B High-Torque Mini Starter, Chrome



C Lightweight Starter 12.75" Flywheel (remanufactured)



-

**D** Lightweight Starter 14" Flywheel

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# Starters: Additional Required Components

Part Number	Bolts (Quantity)	Engine Application
12361146	14097279 (1), 14097278 (1)	Small-Block (except LT or LS Engines)
10465143	14097279 (1), 14097278 (1)	Small-Block (except LT or LS Engines) and 19210009, 19301294
12363128	14097278 (1)	Small-Block (except LT or LS Engines)
19302919	12338064 (2)	Big Block and 12499121, 19201332, 12499121, 12371171

**PERFORMANGE** 



Rev Limiter for CD Ignition Controller E



Chevrolet Bowtie Spark Plug Wire Set F (90° Boots Shown)



Spark Plug Wire Set (135° Boot Shown) G



Wire Loom Kit H

# **ELECTRONIC CONTROL REV LIMITER**

# E. 10037379

### **Rev Limiter for CD Ignition Controller**

- Plugs directly into the GM High Performance CD Ignition Controller P/N 10037378
- The rpm limit is set with plug-in rpm modules
- Kit is supplied with 6,000, 7,000, and 8,000 rpm modules

# **CHASSIS WIRING HARNESS**

If you're building a hot rod or restoring an old muscle car, Chevrolet Performance inclusive wiring harness kits make a great replacement for old, worn or damaged wires. These universal wiring kits come with the wires pre-installed on the fuse block, so wiring the vehicle is simply a matter of mounting the fuse block and routing the wires. Each wire is preprinted with the necessary application and is GM-color-coded. The kits also come with all necessary fuses, flashers, horn relay, tach leads, wire ties and grommets. High-temperature, 275°F wire is used - one size larger than factory specs. In all, it's everything you need to electrify your vintage GM car or truck!

### 12355691

### 12-Circuit Wiring Harness (not shown)

 Basic system is wired for: heat/air conditioning, brake lights, coil, electric fan, emergency flashers, gauges/dash instruments, headlamps, horn, radio, turn signals, wipers, dome light and third brake light.

NOTE: These universal systems will re-wire any car, truck or competition vehicle using a GM-keyed column. Kits come with extra-long wire to accommodate almost any vehicle.

# **SPARK PLUG WIRES**

# F. 12361051

### **Chevrolet Bowtie Logo Wires**

Chevrolet Performance spark plug wire kits are designed to fit your GM engine, eliminating the guesswork in selecting the correct length. These performance 8mm spark plug wires exhibit only 600 ohms per foot of resistance, with high noise suppression capabilities. Features include red wires with white Chevrolet insignia and black boots. Manufactured with double-wall silicone construction.

- Kits include a 10" coil wire for engines, such as Ram Jet 350 and ZZ572 engines that have remote-coil HEI, plus four wire separators and HEI terminals and boots for the distributor cap.
- Custom-fit set designed to be used with black wire loom P/N 12495502 or chrome wire loom P/N 12342049.

# G. 24502521 🕕

### **GM Racing Wires**

Superior quality racing plug wires used by NASCAR teams. Designed to route over the valve cover, with 135° spark plug boots.

### H. 12496806

### Wire Loom Kit

- Stainless-steel supports with the Bowtie logo laser-cut in each of the six supports.
- Twelve retainers, bolts and washers are supplied to bolt to the side of the head.
- Use with spark plug wire set P/N 12361051 and P/N 12361057.

Spark Plug Wires: Additional Required Components						
Part Number	Engine Type	Loom Number	Logo	Ends	Routing	Engine Application
12361051	Small-Block	12496806	Bowtie	90°	Below valve covers	Small-Block with 90° spark plug boots
24502521	NASCAR	N/A	None	135°	Over valve covers	





# **CARBURETORS AND THROTTLE BODIES**

Chevrolet Performance has the right carburetor or throttle body to complete your new crate engine, or give life to your rebuilt engine. Then, top off your engine with one of our great-looking air cleaners.

### Carburetors

### 19170097

### Carburetor, Holley 650-cfm (not shown)

- Holley 4150-style 650-cfm 4-bbl carburetor
- Features show-car-quality polished finish
- Mechanical secondaries
- Manual choke
- Four-corner idle adjustment
- Power valve blowout protection
- Bolts and gaskets included
- Replaces Holley 4160 600-cfm carburetor P/N 12497147

### A. 19170092

### Carburetor, Holley 670-cfm

- Holley 4160-style 670-cfm 4-bbl carburetor
- Features show-car-quality polished finish
- Dual-feed center-hung fuel bowls
- Vacuum secondaries
- Electric choke
- Power valve blowout protection
- Quick-change adjustable vacuum secondary
- · Bolts and gaskets included

### 19170093

### Carburetor, Holley 770-cfm (not shown)

- Holley 4160-style 770-cfm 4-bbl carburetor
- Features show-car-quality polished finish
- Dual feed, center-hung float bowls
- Vacuum secondaries
- Automatic electric choke
- Quick-change adjustable vacuum secondary
- Recommended for Small-Block and Big-Block engines,
- including street, competition, towing and off-road vehiclesBolts and gaskets included
- Replaces Holley 4160 750-cfm carburetor P/N 12485506

# **Throttle Bodies**

### 17096144

### Throttle Body, Ram Jet 350 (not shown)

- Used on the Ram Jet 350 crate engine
- Use throttle body gasket P/N 12551240 and bolt P/N 11588714 for installation
- Single 75mm blades

# **AIR CLEANERS**

### B. 12342071

### Air Cleaner, Chevrolet-Logo Classic Design

- 14" round classic-style air cleaner
- Has chrome lid with embossed Chevrolet name and Bowtie attaching nut
- Fits most 4-bbl and 2-bbl carburetors
- Does not fit Dominator-style carburetors

### C. 12342080

### Air Cleaner, Chevrolet-Logo High-Performance Design

- 14" round high-performance-style air cleaner
- Has chrome lid with embossed Chevrolet name
- Fits most 4-bbl and 2-bbl carburetors
- Does not fit Dominator-style carburetors

**NOTE:** Check clearance between hood and top of air cleaner. Minimum clearance is 3.750" from top of carburetor gasket area to underside of hood.

### D. 12498951

### Air Cleaner, Ram Jet 350

- Designed for use with throttle body on Ram Jet 350 crate engine
- Can be used on other applications



A Carburetor, Holley 670-cfm



B Air Cleaner, Chevrolet Logo Classic Design



C Air Cleaner, Chevrolet Logo High-Performance Design





D Air Cleaner, Ram Jet 350

176



# FUEL PUMPS AND COMPONENTS

# E. 6415325

# Fuel Pump, High Capacity, Small-Block

- For use on carbureted engines
  Pump has 7 psi shutoff pressure and free flowing rate of 30 gph
- Lower housing can be rotated to reposition inlet and outlet ports

# F. 12355612

# Fuel Pump, Street Performance, Small-Block

- For use on carbureted engines
- Pump has 7 psi shutoff pressure and a free-flow rating of 110 gph
- Lower housing can be rotated to reposition inlet and outlet ports
- 3/8" 18 inlet

# G. 12355613

- Fuel Pump, Competition, Small-Block
- For use on carbureted racing engines
  Pump has 9 psi shutoff pressure and a free-flow rating of 115 gph
- Lower housing can be rotated to reposition inlet and outlet ports
- 1/2" 14 inlet

# H. 854619

# Fuel Filter

- High-capacity in-line filter
- Suitable for all high-performance carbureted applications
- 5/16" inlet and outlet

# l. 12341998

# Small-Block Fuel Pump Block-Off Plate

- Plate has stamped Bowtie logo
- Special non-asbestos gasket included

# ELECTRIC FUEL PUMPS

# J. 6472657

# Electric Fuel Pump

- For use on all carbureted engines
- Flows 30-40 gph at 6-9 psi

# K. 25115899

- Electric Fuel Pump, High-Output
- Heavy-duty 12-volt electric rotary pump
- Flows 72 gph at 6-8 psi

PERFORMANCE

150 St 100

COPLOTIO

# See LS-SERIES Crate Engines

SKINGERER A

6

0.

Engines Shown From Left: LS9 6.2L SC, LS7 7.0L, LS376/515

# The Hottest Trend in Engine Swaps

From street rods and resto-mod muscle cars to off-roaders and race cars of every type, LS-engine power is the hottest trend in the industry – and nobody offers more ready-to-install LS crate engines than Chevrolet Performance!

Our lineup of production-based and custom-engineered high-performance crate engines is second to none – and we've even added the all-new LT1 6.2L from the C7 Corvette, representing the fifth generation of the venerable Small-Block family. Chevrolet Performance's E-ROD lineup of LS crate engines is designed to be compliant with California emissions requirements and each carries a CARB EO number that makes it legal for pre-1996 vehicles.

We've also got the parts you need – including controllers and accessory drive systems – to help finish the installation and get your crate engine running in your project vehicle quicker and with less hassle.

Add it all up and it's clear Chevrolet Performance is the only source you need for LS power!



# The LS Engine Family Tree

#### Everything you wanted to know about GM's 21st Century Small-Block, but were afraid to ask!

#### LS HERITAGE

The engine family commonly called the LS series debuted in 1997. General Motors called it the Gen III small-block, with the iron-block versions in trucks and the all-aluminum LS1 version introduced in the then-new CS Corvette. A year later, the LS1 replaced the Gen II LT1 small-block in Camaros and Firebirds. The LS1 displaced 5.7 liters, similar to the previous-generation small-block, but the cubic-inch measurement differed slightly: 346 for the LS1 vs. the traditional 350 cubes.

In 1999, the Gen III platform spawned the higher-performance LS6 that was standard in the Corvette Z06. In 2005, the Gen IV branch of the LS family was born, differing from the Gen III with cast-in provisions for fuel-saving cylinder deactivation, larger displacements and revised camshaft sensing. The performance versions of the Gen IV include the LS2, LS3, LS9 supercharged and LS7.

GM has continued to refer its modern V-8 engine family as Gen III and Gen IV, but to the enthusiasts who quickly grasped the tremendous performance potential of the engines, every engine based on the platform is nicknamed "LS." The range of production engines from the LS platform is wide. On the truck side, iron-block engines have included 4.8L and 5.3L versions, as well as all-aluminum 6.0L and 6.2L premium engines. Car engines include 5.3L, 5.7L, 6.0L, 6.2L and 7.0L displacements – including some configured for front-wheel-drive.

#### **GEN III VS GEN IV**

Despite some significant differences between Gen III and Gen IV cylinder blocks, all LS engines share common traits that include:

- 4.400" bore centers (like the original Small-Block)
- 6-bolt, cross-bolted main bearing caps
- Center main thrust bearing
- 9.240" deck height
- 4-bolt-per-cylinder head bolt pattern
- 0.842" lifter bores
- Distributorless, coil-near-plug ignition system

The most distinguishing differences between Gen III and Gen IV cylinder blocks are larger bores (on some engines), different camshaft position sensor locations – front timing cover area on Gen IV blocks and top-rear position on Gen III blocks – and, on most Gen IV blocks, cast-in provisions for GM's Active Fuel Management cylinder deactivation system.

There is great interchangeability between all LS engines, including between Gen III and Gen IV versions. Cylinder heads, crankshafts, intake manifolds and more can be mixed and matched – but the devil is in the details. Not every head matches every intake manifold and not every crankshaft works with every engine combination. Will Handzel's "How to Build High-Performance Chevy LS1/LS6 V-8s" – P/N 88958786 – is a great reference source that outlines the more specific differences and interchangeability among Gen III-based engines.

#### LS1/LS6

LS1 5.7L (346-cu-in) engines were produced between the 1997 and 2004 model years in the United States (Corvette, Camaro, Firebird and GTO) and stretching into 2005 in other markets (primarily Australia). The LS6 was introduced in 2001 in the Corvette Z06 and was manufactured through 2005, where it also was found in the Cadillac CTS-V. The LS1 and LS6 share a 5.7L displacement, but the LS6 production engine uses a unique block casting with enhanced strength, greater bay-to-bay breathing capability and other minor differences. The heads, intake manifolds and camshaft also are unique LS6 parts.

#### LS2/L76/L77

In 2005, the LS2 6.0L (364 cu in) engine and the Gen IV design changes debuted. In GM performance vehicles, it was offered in the Corvette, GTO and even the heritage-styled SSR roadster. It was the standard engine in the Pontiac G8 GT (L76) and is now the V-8 offered in the new Chevrolet Caprice Police Pursuit Vehicle (L77). This engine is one of the most adaptable in the LS family, as LS1, LS6, LS3 and L92/L94 cylinder heads work well on it.

#### LS3/L99

Introduced on the 2008 Corvette, the LS3 brought LS base performance to an unprecedented level: 430 horsepower from 6.2L (376 cu in) – making it the most powerful base Corvette engine in history. The LS3 block not only has larger bores than the LS2, but a strengthened casting to support more powerful 6.2L engines, including the LS9 supercharged engine of the Corvette ZR1. The LS3 was offered in the Pontiac G8 GXP and is also the standard V-8 engine in the fifth-generation Camaro SS. The L99 version is equipped with GM's fuel-saving Active Fuel Management cylinder deactivation system and is standard on Camaro SS models equipped with an automatic transmission. A unique version of the LS3 used in some Corvette Grand Sport applications incorporates a dry-sump oiling system.

#### LS4

Perhaps the most unique application of the LS engine in a car, the LS4 is a 5.3L version used in the front-wheel-drive Chevrolet Impala SS and Pontiac Grand Prix GXP. The LS4 has an aluminum block and unique, low-profile front-end accessory system, including a "flattened" water pump, to accommodate the transverse mounting position within the Impala and Grand Prix. It is rated at 303 horsepower and 323 lb-ft of torque.

#### LS7

A legend in its own time. The LS7 was the standard engine in the C6 Corvette Z06 and its 7.0L displacement (427 cubic inches) makes it the largest LS engine offered in a production car. It is the production engine in the 2015 Z28 Camaro. Unlike LS1/LS6 engines, the LS7 uses a Siamese-bore cylinder block design – required for its big, 4.125-inch bores. Competition-proven heads and lightweight components, such as titanium rods and intake valves, make the LS7 a street-tuned racing engine, with 505 horsepower.

#### LS9

The most powerful production engine ever from GM, the LS9 is the 6.2L supercharged and charge-cooled engine of the Corvette ZR1. It is rated at an astonishing 638 horsepower. The LS9 uses the strengthened 6.2L block with stronger, roto-cast cylinder heads and a sixth-generation 2.3L Roots-type supercharger. Like the LS7, it uses a dry-sump oiling system. It is the ultimate production LS engine.

#### LSA

This supercharged 6.2L engine is standard in the Cadillac CTS-V series and the 2012-2014 Camaro ZL1. Although similar to the LS9 in design, it is built with several differences, including hypereutectic pistons vs. the LS9's forged pistons; and a smaller, 1.9L supercharger. It also has an eight-bolt flywheel vs. the LS9's nine-bolt pattern. The LSA has a unique charge-cooler design on top of the supercharger – with differences between the Cadillac and Camaro ZL1 applications. Horsepower varies between the CTS and Camaro models, too – it is rated at 556 horsepower in the Cadillacs and approximately 580 horsepower in the Camaro ZL1.

#### **GEN III & GEN IV VORTEC TRUCK ENGINES**

Although performance car engines have typically carried "LS" designations, truck engines built on this platform have been dubbed Vortec. They are generally distinguished by iron cylinder blocks and smaller displacements than car engines. Interestingly, a 5.7L Vortec "LS" engine has never been offered. Here's a quick rundown of the previous and current-production LS truck engines:

• 4.8L – The smallest-displacement LS engine (293 cu in); it uses an iron block with 3.78-inch bores and aluminum heads.

• 5.3L – The most common LS truck engine, it uses the same iron block with 3.78-inch bores as the 4.8L, but with a larger, 3.62-inch stroke (327 cu in). Later versions equipped for Active Fuel Management and 2010-and-newer versions feature variable valve timing (cam phasing). Manufactured with iron and aluminum cylinder blocks.

#### Gen III, IV, Small-Block Crate Engines

Part Number	Description	Liters	CID	Block Material	HP	Torque	Bore	Stroke
19165628	LS327/327	5.3	327	CI	327	347	3.780	3.622
17801267 (discontinued)	LS1	5.7	346	AL	350	365	3.898	3.622
19165484 (discontinued)	LS2	6.0	364	AL	400	400	4.000	3.622
17802134 (discontinued)	LS364/440	6.0	364	AL	440	404	4.000	3.622
19301358	LS376/480	6.2	376	AL	485	475	4.065	3.622
19301359	LS376/515	6.2	376	AL	515	469	4.065	3.622
19301360	LS376/525	6.2	376	AL	525	489	4.065	3.622
19301326	LS3	6.2	376	AL	430	424	4.065	3.622
19260164	LSA	6.2	376	AL	556	551	4.065	3.622
19260165	LS9	6.2	376	AL	638	604	4.065	3.622
19271821*	CT525	6.2	376	AL	525	471	4.065	3.622
19244098	LS7	7.0	427	AL	505	470	4.125	4.000
19260831	LSX376 B-8	6.2	376	CI	450	444	4.060	3.620
19299306	LSX376 B-15	6.2	376	CI	450+	444	4.060	3.620
19260833	LSX454	7.4	454	CI	620	590	4.185	4.125
19260835	LSX454R	7.4	454	CI	750+	700+	4.185	4.125

\*For circle-track racing only. Not for street use.

• 6.0L – Used primarily in ¾-ton and 1-ton trucks, the 6.0L (364 cu in) uses an iron block (LY6) or aluminum block (L76) and aluminum heads, with provisions for Active Fuel Management; some equipped with variable valve timing.

• 6.2L – Commonly referred to by its L92, L9H or L94 engine codes, the 6.2L (376 cu in) engine uses an aluminum block and heads, and incorporates advanced technology including variable valve timing. The L92 is used primarily as a high-performance engine for the Cadillac Escalade and GMC Yukon Denali.

#### **MORE ABOUT THE VORTEC 5.3L**

With more than 10 years in service in millions of Chevy and GMC trucks, vans and SUVs, the Vortec 5.3L engine is poised to become the classic 350 small-block of the LS engine family. With millions in service, they are readily available and affordable on the used-engine market. Most feature iron cylinder blocks, but some have an aluminum engine block that is about 80 pounds lighter. Adapting a 5.3L to a hot rod project is easier with Chevrolet Performance's 5.3L controller kit, part number 19256514, which is tailored to retro-fit installations by "turning off" some of the production features that are unnecessary for a vintage car, including the cylinder-deactivating Active Fuel Management. It covers 2007-2009 applications (non-cam-phased) with the following engine codes:

- LC9 (2007-2009) LH8 (2008-2009) LMG (2007-2009)
- LY5 (2007-2009) LMF (2008-2009)

#### LSX CRATE ENGINES

Chevrolet Performance LSX series of crate engines is based on the LSX Bowtie Block and uses a number of production-based and LSX high-performance parts to deliver ultimate-performance engines that were never offered in production vehicles. They include:

- LSX376-B8 An economical crate engine that uses the LSX block, LS3 rotating parts and the LS3 cylinder heads. It is offered without an oil pan or induction system, so that they can be tailored for the project vehicle.
- LSX376-B15 Designed to accommodate additional power adders, or boost up to 15 PSI, includes forged pistons, forged crank and 6-bolt LSX-LS3 cylinder heads.
- LSX454 The displacement of the classic big-block, with an all-forged rotating assembly and LSX-LS7 six-bolt cylinder heads. It is rated at 620 hp with a carburetor and 580 with an LS7 fuel injection system.
- LSX454R A high-compression (13.1:1) version of the LSX454 designed for drag racing, featuring a mechanical roller cam, high-rise intake and more. It is capable of more than 750 horsepower.

#### NON-PRODUCTION CYLINDER BLOCKS

**C5R:** Developed for the factory-backed Corvette racing program, the C5R cylinder block has been manufactured in comparatively small quantities since 2000. They are manufactured with a unique aluminum alloy for greater strength and undergo a variety of specialized machining and inspection processes, including "hipping" to increase strength and X-raying that ensures against unacceptable porosity. A Siamese bore design with 4.117-inch finished bores enables 7.0L (427-cu-in) displacements. The C5R uses billet steel main caps with premium, 4340 fasteners. Racing-quality head studs are also included. All LS series heads will work with the C5R block, but maximum performance depends on maximum airflow.

LSX Bowtie Block (standard and tall-deck): Introduced in 2007, the LSX Bowtie Block is a durable and affordable cast iron casting that was designed to support extreme high-performance combinations, including provisions for six-bolts-per-cylinder head fastening. It has a Siamese bore design with 3.880-inch bores that must be finished to 3.898-inches – with a 4.200-inch recommended maximum bore. Maximum stroke can reach 4.25-inches, but rotating assembly interference on the cylinder must be taken into account for strokes greater than 4.125-inches; heavy metal is required for crankshaft balancing of larger-stroke combinations. Standard versions feature decks 0.020-inch taller than LS production blocks, with the tall-deck version manufactured with a 9.720-inch semi-finished deck height. The oiling system is a true priority-main system and all LS small-block heads work with the engine. Higher-airflow heads, such as LS7, LSX-DR, LSX-CT and C5R, are recommended.

#### **CRANKSHAFTS**

Generally, LS crankshafts are similar in design, with identical 2.100inch rod and 2.560-inch main journal sizes and a common rear main seal. All LS engines use iron crankshafts except the LS7, LS9, LSA and LSX454; they used forged steel cranks (4.00-inch stroke on the LS7; 3.62-inch stroke on the LS9 and LSA; and 4.125-inch on the LSX454).

The crankshaft sensing function of the distributorless ignition system depends on reading the toothed reluctor wheel on the crankshaft. Early LS engines mostly used 24-tooth wheels and upgraded a few years ago to 58-tooth (also known as 58X) wheels. When building an LS engine, it is imperative the correct reluctor wheel is used with the compatible crankshaft position sensor and ignition controller.

The crankshafts are mostly interchangeable, but the snouts on LS7 and LS9 crankshafts are approximately 1-inch longer to accommodate their two-stage oil pumps that work with the engines' dry-sump oiling systems – the same goes for certain Corvette applications of the LS3, which was available with a dry-sump system, as well. These forged crankshafts can be used on wet-sump engines by using a few specific components and/or modifications.

The LS Engine Family Tree Continued on next page

The LS Engine Family Tree Continued

#### SPECIAL NOTE ABOUT CRANKSHAFT BOLT PATTERNS

Almost all LS-engine crankshafts use a 6-bolt flywheel/flexplate bolt pattern, but the LS9 uses a 9-bolt pattern and the LSA and LSX454 engines use an 8-bolt pattern.

#### **CONNECTING RODS**

LS connecting rods are very similar and interchangeable. Most are made of forged powdered metal, while the LS7 and LS9 rods are forged titanium – with the LS9 rods featuring a unique forging designed for the pressure and power level of forced induction. Rods lengths are similar, too, at 6.098-inch for 5.3L, 5.7L, 6.0L and 6.2L (including LSA) engines. The 4.8L engine uses 6.275-inch rods and the LS7 uses 6.067-inch rods. The LS9 uses 5.990-inch rods. Since 2006, LS rods use bushed small ends. Also, LS6 rod bolts, P/N 11600158, offer a strength-enhancing upgrade to pre-2000 engines.

#### PISTONS

The LS9 is the only production LS engine with forged aluminum pistons; all the others use hypereutectic (cast) aluminum alloy pistons – varied mostly by diameter to accommodate various bore sizes. LS cast pistons shouldn't be used on applications greater than approximately 550 horsepower. Also, the LS7 piston's inner bracing requires the use of the matching LS7 connecting rod.

#### GEN 5 SMALL BLOCK: ENTER THE 'LT' ENGINES

Introduced on the seventh-generation C7 Corvette Stingray and GM's full-size trucks and SUVs for 2014, the Gen V Small Block ushered in the next era of historic engine family. Like every generation that came before, it features the same cam-in-block architecture and 4.400-inch bore centers (the distance between the centers of each cylinder) that were born with the original small block in 1955.

Dubbed EcoTec3 in the new trucks – including a 4.3L V-6, 5.3L V-8 and 6.2L V-8 – and carrying historic "LT" designations in the Corvette, the Gen V engine family delivers greater efficiency, performance and durability, thanks to a combination of advanced technologies including direct injection, Active Fuel Management (cylinder deactivation) and camshaft phasing (variable valve timing) that support an advanced combustion system.

Structurally, the Gen-V small-block is similar to the Gen III/IV engines, including a deep-skirt cylinder block. Refinements and new or revised components are used throughout, including a revised cooling system and all-new cylinder heads. The engine is also designed to accommodate an engine-driven high-pressure fuel pump for the direct-injection system.

**NOTE:** While structurally similar, almost none of the parts and components from the Gen V are interchangeable with Gen III and Gen IV engines.

#### CYLINDER BLOCK AND OILING SYSTEM

The all-new Gen-V cylinder block shares two key design elements with GM's original small-block V-8: a 90-degree cylinder angle and 4.400-inch bore centers. And compared to the Gen IV versions, the Gen V's aluminum cylinder block casting is all-new, but based on the same basic architecture. It was refined and modified to accommodate the mounting of the engine-driven fuel pump and vacuum pump. It also incorporates new engine mount attachments, new knock sensor locations, improved sealing and oil-spray piston cooling.

The oiling system is revised and features a new, dual-pressure-control and variable-displacement vane pump with increased flow capacity. As with the Gen-III/Gen-IV engines, the oil pump is driven by the crankshaft. Variable displacement enables the pump to efficiently deliver oil pump flow as demanded.

All Gen-V engines feature oil-spray piston cooling, in which oil-spraying jets in the engine block drench the underside of each piston and the surrounding cylinder wall with an extra layer of cooling, friction-reducing oil.

#### CAMSHAFT DESIGN AND CAMSHAFT PHASING

All Gen V engines feature a hydraulic roller-lifter camshaft. Compared to the Gen IV, it is located in the same position relative to the crank-shaft and is used with a new rear cam bearing. The camshaft also features an all-new "tri-lobe" to drive the engine-mounted, high-pressure fuel pump for the direct-injection combustion system.

Camshaft phasing (variable valve timing), which works with Active Fuel Management to enhance fuel economy, optimizes engine performance for given demands and conditions. A vane-type phaser is installed on the front of the camshaft to change its angular orientation relative to the sprocket, thereby adjusting the timing of valve operation on the fly. It is a cam phasing system that adjusts camshaft timing at the same rate for both intake and exhaust valves. The system allows linear delivery of torque, with near-peak levels over a broad rpm range, and high specific output (horsepower per liter of displacement) without sacrificing overall engine response, or driveability. It also provides another effective tool for controlling exhaust emissions. The vane phaser is actuated by hydraulic pressure and flow from engine oil, and managed by a solenoid that controls oil flow to the phaser.

#### **CYLINDER HEAD DESIGN**

The Gen V's all-new cylinder head design builds on the excellent, racing-proven airflow attributes of previous small-block heads and matches it with an all-new direct-injection combustion system. It supports tremendous airflow at higher rpm for a broad horsepower band, along with strong, low-rpm torque.

Compared to the Gen IV design, the Gen V head features smaller combustion chambers, which are designed to complement the volume of a dish on the top of each piston – a design feature driven by the direct injection fuel system. The smaller chamber size and dished pistons work together to produce a generally higher compression ratio, which supports greater power. The spark plug angle and depth have been modified to protrude farther into the chamber, placing the electrode closer to the center of the combustion to support the direct injection system.

In addition to the new combustion chamber design, the Gen V head features large, straight and rectangular intake ports that feature a slight twist to enhance mixture motion. This is complemented by a reversal of the intake and exhaust valve positions as compared to the Gen-Gen III/ IV design. The exhaust port shapes are optimized for the new valve locations, with new port opening locations at the manifold face.

The valves are held at new, 12.6-degree intake/12.1-degree exhaust angles in the 5.3L vs. 15-degree angle in most Gen IV engines. Additionally, the valves are splayed to reduce shrouding and enable greater airflow.

#### DIRECT INJECTION FUEL SYSTEM

Direct injection is featured on all Gen V engines. The technology moves the point where fuel feeds into an engine closer to the point where it ignites, enabling greater combustion efficiency. It fosters a more complete burn of the fuel in the air-fuel mixture, and it operates at a lower temperature than conventional port injection. That allows the mixture to be leaner (less fuel and more air), so less fuel is required to produce the equivalent horsepower of a conventional, port injection fuel system.

The pistons play an integral role in the direct injection system, as they feature dished heads designed to direct the fuel spray for a more complete combustion. Design of this advanced combustion system was optimized after thousands of hours of computational analysis, representing one of the most comprehensively engineered combustion systems ever developed by General Motors.

The direct injection system features very high fuel pressure, up to 2,175 psi (15 MPa) on most engines and as high as 2,900 psi (20 MPa) on the supercharged LT4 variant, requiring a high-pressure, enginedriven fuel pump in addition to a conventional, fuel-tank-mounted pump. On all Gen V engines, the pump is mounted in the "valley" between cylinder heads – beneath the intake manifold. It is driven by the camshaft at the rear of the engine.

#### LV3 4.3L

The 4.3L V-6 is the smallest Gen 5 engine and is based on the V-8 versions, but with two fewer cylinders – a design lineage that dates back to the previous 4.3L V-6, which was itself a Gen-II small block with a pair of cylinders removed. The bore and stroke dimensions are 3.92-inch (99.6 mm) bore x 3.62-inch (92 mm) stroke, for a displacement of 262 cubic inches. It is used in the Chevrolet Silverado 1500 and GMC Sierra 1500, where it is rated at 285 horsepower and 305 lb.-ft. of torque.

#### L83 5.3L

The L83 is the workhorse of GM's full-size trucks and SUVs, including the Chevrolet Silverado 1500, Tahoe and Suburban, as well as the GMC Sierra 1500 and Yukon lineups. It has a smaller bore -3.78 inches (96 mm) – than other Gen V engines, but the same 3.62-inch (92 mm) stroke shared by all of them. It is rated at 355 hp and 383 lb.-ft. of torque.

#### L86 6.2L

The L86 6.2L is the largest, most powerful Gen 5 engine offered in GM's trucks and SUVs, delivering 420 hp and 460 lb.-ft. of torque. A forged steel crank is unique among the truck engines, along with its larger 4.06 (103.25 mm) bore diameter. This engine is available in the Silverado 1500 and Sierra 1500, and is standard in the GMC Yukon and Cadillac Escalade.

#### **Gen V Small-Block Crate Engines**

#### LT1 6.2L

It's the standard engine in the C7 Corvette Stingray, where it is rated at up to 460 horsepower and 465 lb.-ft. of torque (with the optional exhaust system). It shares the same basic configuration and  $4.06 \times$ 3.92 bore/stroke dimensions as the L86, but features other unique components to generate its higher output.

#### LT4 6.2L SUPERCHARGED

The supercharged LT4 engine is the power behind the C7 Corvette Z06, delivering a stunning 650 hp and 650 lb.-ft. of torque. Each component of the rotating assembly, from the crankshaft to the piston rings, is unique to the LT4 to support the cylinder pressures the boosted engine is capable of generating, as well as the unique requirements for a lower compression ratio. The cylinder heads are unique, too, and it also uses a new, more compact and more efficient 1.7L Eaton TVS supercharger, which spins faster to make boost quicker.

RPO Code	Displacement (cu/in/Liters)	Compression Ratio	Horsepower	Torque (lbft.)
LV3	262 / 4.3	11.0:1	285 @ 5300 rpm	305 @ 3900 rpm
L83	325 / 5.3	11.0:1	355 @ 5600 rpm	383 @ 4100 rpm
L86	376 / 6.2	11.5:1	420 @ 5600 rpm	460 @ 4100 rpm
LT1	376 / 6.2	11.5:1	455 @ 6000 rpm	460 @ 4600 rpm
LT4	376 / 6.2	10.0:1	650 @ 6400 rpm	650 @ 3600 rpm



A Cathedral Intake Port and Bolt Pattern

B LS3 Intake Port and Bolt Pattern

#### **CYLINDER HEADS – INTAKE PORT DESIGN**

Cylinder head interchangeability enables great parts mixing to build custom LS engine combinations, but the heads must be matched with intake manifolds that have compatible intake port configurations. The port sizes and shapes include:

#### **Cathedral port**

Introduced on the LS1 engine and used also on the LS6 and LS2, cathedral-port heads are named for the unique shape of the top of the intake port. Intake manifolds for LS1, LS2, LS6 and Vortec engines with cathedral-port heads are mostly interchangeable. (Photo A)

#### Rectangular port – LS7-style

The second LS intake runner design debuted on the Corvette Z06's LS7 engine. This rectangular design supports the straight-through airflow design of the heads. They feature 270cc intake ports and the ports and combustion chambers are CNC-ported from the factory. Use only with the LS7 intake manifold. The LSX-LS7 head features the same port design, but with six-bolt clamping vs. the production four-bolt pattern. (Photo C)

#### Rectangular port – L92/LS3 style

Similar to the LS7 design, but the ports are a little taller and a little narrower. They flow more than cathedral-port heads, but not as much

as LS7 heads. In addition to the L92 6.2L engines, this port shape is also used on LS3 engines and some 6.0L truck engines, as well as the Corvette ZR1's LS9 and Cadillac CTS-V's LSA supercharged engines. Intake manifold bolt patterns are unique to this port design. (Photo B)

#### C5R heads

These heads pioneered the rectangular-port design, but because they are designed for professional finishing, their final shape and size depends on whoever is performing the porting. (not shown)

#### CYLINDER HEADS – VALVES AND RECOMMENDED APPLICATIONS

Each LS cylinder head has specific valve sizes, locations and valve angles. Here's an overview of them:

#### Cathedral-port heads

Designed for smaller-displacement engines, these heads have the smallest valves; 2.000-inch intake and 1.500-inch exhaust, and they're held at a 15-degree angle. They also have the closest valve spacing, which limits the maximum valve size. LS6 valves include lightweight hollow-stem intake and sodium-filled exhaust parts; all others in this family feature solid-stem construction. (Photo A)

#### LS Compatibility—Heads vs. Intakes

	IN	TAKES					HEADS			
Engine	Part Number	Manifold Type	Port Type	12559855 Std LS1	12564824 (discontinued) Std LS6/LS2	12562319 Std LQ9	88958622 (discontinued) CNC LS6	12629064 Std L76/L92	12629063 Std LS3	88958758 CNC LS3
LS1/LS6	88894339	EFI	Cathedral	Yes	Yes	Yes	Yes	No	No	No
LS2/LQ4	88958675	4-bbl	Cathedral	Yes	Yes	Yes	Yes	No	No	No
LS3	12638197	EFI	L92	No	No	No	No	Yes	Yes	Yes
L92/LS3	25534416	4-bbl w/inj	L92	No	No	No	No	Yes	Yes	Yes
L92/LS3	25534401	4-bbl	L92	No	No	No	No	Yes	Yes	Yes
L92/LS3	19244037	LSX 4-bbl	L92	No	No	No	No	Yes	Yes	Yes
L92/LS3	19244035	LSX 4-bbl	L92	No	No	No	No	Yes	Yes	Yes
LS7	12644568	EFI	LS7	No	No	No	No	No	No	No
LS7	25534413	4-bbl w/inj	LS7	No	No	No	No	No	No	No
LS7	25534394	4-bbl	LS7	No	No	No	No	No	No	No
LSX454	19244033	LSX 4-bbl	LS7	No	No	No	No	No	No	No
LSX-CT	19257854	LSX 4-bbl	LSX-CT	No	No	No	No	No	No	No
LSX454R	19257851	LSX 4-bbl	LSX-DR	No	No	No	No	No	No	No

No=not compatible Yes=direct compatibility



C LS7 Intake Port and Bolt Pattern

#### L92/LS3 heads

Similar in design to the LS7 head, the L92 heads don't flow quite as much and the valves are correspondingly smaller: 2.165-inch on the intake side and 1.590-inch on the exhaust side. They are held at a 15-degree angle and also require offset rocker arms. These heads/valves require at least a 4.00-inch bore, but work best on an engine with a 4.065-inch bore. Valve-to-piston clearance must be checked when using them on an engine originally equipped with cathedral-port heads. (Photo B)

#### LS7 heads

Using LS-Series' largest production valves – 2.200-inch on the intake side and 1.610-inch on the exhaust – the LS7 heads offer tremendous airflow, but they require an engine with no less than 4.100-inch bores. The intake valves are made of titanium and the exhaust valves are sodium-filled; they are held at a 12-degree angle. That and their large size require offset rocker arms on the intake side. Valve-to-piston clearance must be checked when using these heads with pistons not designed for the LS7 engine. (Photo C)

D LSX-CT and LSX-DR Ports

#### C5R

Designed for engines with at least 4.125-inch bores, these heads can accommodate 2.200-inch intake and 1.650-inch exhaust valves; they are held at an 11-degree angle and their spacing is unique. When using on an engine not originally designed for C5R pistons, valve-to-piston clearance must be checked. (not shown)

#### LSX-CT and LSX-DR

CT and DR are in-line heads, with a valve angle of 11 degrees. The CT head was designed specifically for 410 CID sprint car applications, with 2.200-inch intake and 1.610-inch exhaust valve sizes, with valve placement modified and optimized for 4.125-inch bores. DR heads were designed for 410-plus CID, high rpm drag racing applications. Valve placement was spread from the CT to allow up to 2.280-inch and 1.620-inch valves. Larger valve sizes require a 4.165-inch minimum bore. (Photo D)

LS Compatibility—Heads vs. Intakes (Continued)

	IN	TAKES					HEADS			
Engine	Part Number	Manifold Type	Port Type	19201807 LSX-L92 Small Bore	19201805 LSX-LS3	19213963 LSX-LS9	12578450 Std CNC LS7	19201806 LSX-LS7	19166981 LSX-CT	19166979 LSX-DR
LS1/LS6	88894339	EFI	Cathedral	No	No	No	No	No	No	No
LS2/LQ4	88958675	4-bbl	Cathedral	No	No	No	No	No	No	No
LS3	12638197	EFI	L92	Yes	Yes	Yes	No	No	No	No
L92/LS3	25534416	4-bbl w/inj	L92	Yes	Yes	Yes	No	No	No	No
L92/LS3	25534401	4-bbl	L92	Yes	Yes	Yes	No	No	No	No
L92/LS3	19244037	LSX 4-bbl	L92	Yes	Yes	Yes	No	No	No	No
L92/LS3	19244035	LSX 4-bbl	L92	Yes	Yes	Yes	No	No	No	No
LS7	12644568	EFI	LS7	No	No	No	Yes	Yes	No	No
LS7	25534413	4-bbl w/inj	LS7	No	No	No	Yes	Yes	No	No
LS7	25534394	4-bbl	LS7	No	No	No	Yes	Yes	No	No
LSX454	19244033	LSX 4-bbl	LS7	No	No	No	Yes	Yes	No	No
LSX-CT	19257854	LSX 4-bbl	LSX-CT	No	No	No	No	No	Yes	Yes
LSX454R	19257851	LSX 4-bbl	LSX-DR	No	No	No	No	No	Yes	Yes

No=not compatible Yes=direct compatibility



A LS6 Rockers

#### VALVETRAIN

LS-Series valvetrain systems are very universal. All production engines use investment-cast rockers with roller trunnions. They attach to a boltdown mounting bracket (except for LS7 and LSX applications that have machined pedestals) that makes installation fast and easy. All production engines feature 1.7-ratio rockers, except the LS7, which uses 1.8-ratio rockers. Rockers are specific to their cylinder head families. Here's a look at the various applications:

#### **Cathedral-port heads**

Use interchangeable rockers on the intake and exhaust sides  $\ensuremath{\text{P/N}}$  10214664. (Photo A)

LS Compatibility—Heads vs. Blocks



**B** LS3 Rockers

#### L92 heads

Use specific, offset intake rockers P/N 12569167 and non-offset exhaust rockers P/N 10214664. (Photo B)

#### LS7 heads

Use specific, offset intake rockers P/N 12579615 and non-offset exhaust rockers (P/N 12579617). (Photo C)

#### LSX-DR heads

LSX-DR heads require racing-style shaft mount rocker systems. Chevrolet Performance offers a 1.90:1-ratio rocker arm kit (P/N 19201808). (Photo D)

	BLOCKS					HEADS			
Engine	Part Number	Bore Size	12559855 Std LS1	12564824 (discontinued) Std LS6/LS2	12562319 Std LQ9	88958622 (discontinued) CNC LS6	12629064 Std L76/L92	12598594 Std LS3	88958758 CNC LS3
LS1/LS6	12561166	3.890"	Yes	Yes	Yes	Yes	No	No	No
LS2/L76	12602691	4.000"	Yes	Yes	Yes	Yes	Yes	Yes	Yes
L92/LS3	12623967	4.065"	Yes	Yes	Yes	Yes	Yes	Yes	Yes
LSA	12623968	4.065"	Yes	Yes	Yes	Yes	Yes	Yes	Yes
LS9	12621983	4.065"	Yes	Yes	Yes	Yes	Yes	Yes	Yes
LS7	19213580	4.125"	Yes	Yes	Yes	Yes	Yes	Yes	Yes
C5R	12480030	4.120" - 4.160"	Yes	Yes	Yes	Yes	Yes	Yes	Yes
LSX Std. Deck <sup>1</sup>	19260093	3.890"	Yes	Yes	Yes	Yes	*	*	*
LSX Tall Deck <sup>1</sup>	19260100	3.890" - 4.200"	*	*	*	*	*	*	*
LSX376	19260095	4.085"	Yes	Yes	Yes	Yes	Yes	Yes	Yes
LSX454	19260099	4.185"	Yes	Yes	Yes	Yes	Yes	Yes	Yes

No=not compatible Yes=direct compatibility \*4.00" minimum bore \*\*4.125" minimum bore 1LSX Semi-Finished - needs finish bore/hone and deck height machined



#### **BUILDER'S TIP**

#### ENSURING WINDAGE TRAY CLEARANCE ON LS ENGINES

When building a custom LS engine combination, care must be taken to make sure the connecting rods don't interfere with the windage tray. To do that, set the windage tray over the installed rotating assembly carefully and rotate the crankshaft. If any of the connecting rods touch the tray, you'll have to use a specially designed windage tray for longer-stroke cranks.





C LS7 Rockers

#### HEAD-TO-BLOCK COMPATIBILITY

Because of their comparatively small bores – 3.89 inches – LS1 and LS6 engines can only use LS1, LS6 and LS2 heads. Using heads designed for larger engines will cause valve-to-block interference. The larger, 4.00-inch bore of the LS2 enables it to use LS1/LS6 heads, as well as L92-style heads (including LS3, LS9 and LSA engines). The 6.2L engines (LS3, L92, etc.) can use any head, except for the LS7 and C5R, while the 7.0L LS7 and C5R blocks can use any LS-series head. LS7 blocks should be matched with heads designed for at least 4.10-inch bores; and 4.125-inch bores are preferred.

Most LS production cylinder blocks share the came cylinder head bolt pattern and the same size head bolts – four 11mm bolts per cylinder (20 in total) and five upper, 8mm bolts. Early LS1 and LS6 engines used different-length 11mm bolts, but engines from 2004 and later use same-length bolts. LS9 engines use stronger, 12mm head bolts.

#### LS Compatibility—Heads vs. Blocks (Continued)



D LSX-DR Rocker Stand Pads

Non-production blocks, such as Chevrolet Performance's LSX block and the C5R, offer the same head-bolt pattern as production blocks. All LS heads will bolt up to them, but care must be taken to select the most compatible heads based on the appropriate bore size. Because of their large bores, heads designed for at least 4.10-inch bores should be used and 4.125-inch bores are preferred, such as the L92/LS3 or LS7 heads.

Chevrolet Performance's LSX cylinder heads use 10 11mm and 13 8mm head bolts, or eight more than a regular-production LS head. That's more than 50 percent more head bolts than production heads, supplying superior clamping strength.

All cylinder heads used with the LSX tall-deck block require the appropriate intake mainfold designed for tall-deck applications because the higher deck of the block widens the dimension between the heads' manifold-mounting positions.

	BLOCKS					HEADS			
Engine	Part Number	Bore Size	12559855 Std LS1	12564824 (discontinued) Std LS6/LS2	12562319 Std LQ9	88958622 (discontinued) CNC LS6	12629064 Std L76/L92	12598594 Std LS3	88958758 CNC LS3
LS1/LS6	12561166	3.890"	Yes	No	No	No	No	No	No
LS2/L76	12602691	4.000"	Yes	Yes	Yes	No	No	No	No
L92/LS3	12623967	4.065"	Yes	Yes	Yes	No	No	No	No
LSA	12623968	4.065"	Yes	Yes	Yes	No	No	No	No
LS9	12621983	4.065"	Yes	Yes	Yes	No	No	No	No
LS7	19213580	4.125"	Yes	Yes	Yes	Yes	Yes	Yes	Yes
C5R	12480030	4.120" - 4.160"	Yes	Yes	Yes	Yes	Yes	Yes	Yes
LSX Std. Deck <sup>1</sup>	19260093	3.890"	**	**	**	**	**	**	**
LSX Tall Deck <sup>1</sup>	19260100	3.890" - 4.200"	**	**	**	**	**	**	**
LSX376	19260095	4.085"	Yes	Yes	Yes	No	No	No	No
LSX454	19260099	4.185"	Yes	Yes	Yes	Yes	Yes	Yes	Yes

No=not compatible Yes=direct compatibility \*4

\*4.00" minimum bore \*\*4.125" minimum bore



#### BUILDER'S TIP

#### **PRIMING THE LS ENGINE**

If you're used to building classic Small-Block and Big-Block engines, you've probably used an electric drill or similar tool in the distributor hole to drive the oil pump and prime the engine prior to start-up. LS engines don't use distributors, so engine priming must be performed in other ways. First of all, fill the oil pump pickup with oil when assembling the engine. That will ensure a quantity of oil is in the pump when the engine is started for the first time. Also, disconnect either the fuel supply or ignition system when it's time to start the engine and allow the engine to "roll over" for approximately 30 seconds. That allows oil to circulate through the engine without the engine running. Removing spark plugs will allow the engine to prime faster with less load on the bearings. Then, reconnect the fuel or ignition and fire up your LS engine!



# Affordable LS Power

Our LC9 5.3L crate engine makes a great, affordable alternative to a used LS engine for your project. It is based on the workhorse power plant used in hundreds of thousands of GM trucks, including the Chevrolet Silverado and Suburban. It's rated at 320 horsepower and tuned to deliver exceptional torque at low rpm.

The LC9 features a lightweight aluminum block and comes with the intake manifold, throttle body and fuel rail. It's a great choice for hot rod cruisers and off-roader projects, where torque and dependability is the priority over maximum horsepower.

We also offer the LC9 in E-ROD emissions-compliant kits for 2WD and 4WD applications (page 210), as well as Connect & Cruise crate powertrain systems for 2WD and 4WD applications (page 214). Connect & Cruise systems include a four-speed automatic transmission and all necessary controllers and wire harnesses.

#### LC9 5.3L TECH SPECS

Part Number:	19259918
Engine Type:	LS-Series Gen IV Small-Block V-8
Displacement (cu in):	327 (5.3L)
Bore x Stroke (in):	3.620 (96 x 92 mm)
Block (P/N 12623964):	Cast-aluminum with 6-bolt, cross-bolted main caps
Crankshaft (P/N 19244057):	Nodular iron
Connecting Rods (P/N 12568734):	Powdered metal steel
Pistons (P/N 12571545):	Hypereutectic aluminum
Camshaft Type (P/N 12561721):	Hydraulic roller
Camshaft Lift (in):	.467 intake / .479 exhaust
Camshaft Duration (@.050 in):	196° intake / 201° exhaust
Cylinder Heads (P/N 12639063):	Aluminum; cathedral port
Valve Size (in):	1.890 intake / 1.550 exhaust
Compression Ratio:	9.5:1
Rocker Arms (P/N 10214664):	Investment cast, roller trunnion
Rocker Arm Ratio:	1.7:1
Recommended Fuel:	87 octane
Maximum Recommended rpm:	6,000
Reluctor Wheel:	58x
Balanced:	Internal

#### **INSTALLATION NOTES**

- 14" automatic transmission flexplate included
- Components to complete FEAD are listed on page 262
- Check hood clearance for interference
- Chevrolet Performance muscle car oil pan kit P/N 19212593 may be required for installation on older vehicles
- Intended for pre-1976 street vehicles or off-road vehicles
- Not intended for marine applications
- Requires LC9 5.3L controller kit P/N 19259914 for engine operation (not included)



Chevrolet Performance Crate Engines include a 24-month or 50,000-mile/80,000-kilometer limited warranty.



Chevrolet Performance <u>does not</u> utilize any used or remanufactured parts in this crate engine, except for the starter, alternator and power steering pump.

Also available as an E-ROD system See page 210 for details



#### 19260380 SuperMatic™ 4L65-E Four-Speed Automatic Transmission

A durable, easy-cruising four-speed overdrive automatic transmission; electronically controlled for more precise, fuel-saving performance.

See page 346 for torque converter applications.



#### 19302405

**Transmission Controller** Required when using a GM electronically controlled automatic transmission. Includes wiring harness, software and connector for laptop computer.

See page 350 for details

#### See page 228 for our complete line of LS-Series components

19329620 LS/LT Bell Housing Page 351

1111 8888 5888 1111 1995



**19299802** SuperMatic™ Torque Converter Page 346

**AVAILABLE ENGINE RELATED PARTS & ACCESSORIES** 



**19258433 LC9 5.3L Accessory Drive System** *Page 262* 

**19329795 T56 Super Magnum Six-Speed Manual Transmission** *Page 351* 





**19301246** Air Inlet Kit for LS-Based Crate Engine Installation Page 267

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# A New Classic!

As the standard engine in the fifth-generation Camaro SS and C6 Corvette, the high-revving, deep-breathing LS3 6.2L is poised to go down in history as one of Chevrolet's best and most versatile engines. It's no surprise that enthusiasts and builders have made it one of the most popular LS swap engines.

The LS3 is filled with components designed for high performance and longevity. The aluminum block is filled with a sturdy reciprocating assembly that combines with L92-type rectangular-port heads to deliver a 10.7:1 compression ratio. A high-lift, hydraulic roller camshaft complements the LS3's tremendous airflow capability and enhances its broad torque curve.

Our LS3 crate engine comes complete from the SS-specific oil pan to the ignition system. It also includes the intake manifold assembly with injectors and throttle body, exhaust manifolds, water pump, balancer, 58x reluctor wheel and 14-inch automatic-transmission flexplate. The SS oil pan doesn't suit all applications. Use the vehicle-specific oil pan for original LS-powered vehicle or Chevrolet Performance's Muscle Car Oil Pan Kit P/N 19212593 for older vehicles.

#### LS3 6.2L TECH SPECS

Part Number:	19301326
Engine Type:	LS-Series Gen IV Small-Block V-8
Displacement (cu in):	376 cu in (6.2L)
Bore x Stroke (in):	4.065 x 3.622 (103.25 x 92mm)
Block (P/N 12623967):	Cast-aluminum with 6-bolt, cross-bolted main caps
Crankshaft (P/N 12597569):	Nodular iron
Connecting Rods (P/N 12649190):	Powdered metal
Pistons (P/N 19207287):	Hypereutectic aluminum
Camshaft Type (P/N 12623063):	Hydraulic roller
Valve Lift (in):	.551" intake / .522" exhaust
Camshaft Duration (@.050 in):	204° intake / 211° exhaust
Cylinder Heads (P/N 12629063):	Aluminum L92-style port; as cast with 68cc chambers
Valve Size (in):	2.165 intake / 1.590 exhaust
Compression Ratio:	10.7:1
Rocker Arms (P/N 12569167 int):	Investment-cast, roller trunnion
Rocker Arms (P/N 10214664 exh):	Investment-cast, roller trunnion
Rocker Arm Ratio:	1.7:1
Recommended Fuel:	92 octane
Maximum Recommended rpm:	6,600
Reluctor Wheel:	58x
Balanced:	Internal

#### **INSTALLATION NOTES**

- Assembly does not include any electronics
- Use LS3 Controller Kit, P/N 19258270 for engine operation. Kit includes electronic throttle pedal, which is required for throttle input to the ECU (see page 273)
- Includes Chevy SS wet sump oil pan
- Intended for pre-1976 street vehicles or any off-road vehicle
- Not intended for marine applications
- Front-end accessory drive kits are available in several configurations (see page 258 for application).



Chevrolet Performance Crate Engines include a 24-month or 50,000-mile/80,000-kilometer limited warranty.



Chevrolet Performance <u>does not</u> utilize any used or remanufactured parts in this crate engine, except for the starter, alternator and power steering pump.

Also available as an E-ROD system See page 210 for details



#### 19260380 SuperMatic<sup>™</sup> 4L65-E Four-Speed **Automatic Transmission**

A durable, easy-cruising four-speed overdrive automatic transmission; electronically controlled for more precise, fuel-saving performance.

See page 346 for torque converter applications.



#### 19302405

**Transmission Controller** Required when using a GM electronically controlled automatic transmission. Includes wiring harness, software and connector for laptop computer.

ROO

See page 350 for details

See page 228 for our complete line of LS-Series components





**AVAILABLE ENGINE RELATED PARTS & ACCESSORIES** 



19329795 T56 Super Magnum Six-Speed Manual Transmission Page 351







19299802 SuperMatic™ **Torque Converter** Page 346



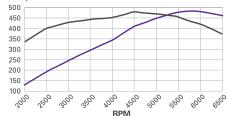
19155067 Corvette Accessory **Drive Kit** Page 259



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# The Hot Cam adds Heat to the LS3

Our engineers took a production LS3 6.2L (376 cubic inches) and swapped the stock camshaft for the racing-inspired LS Hot Cam (P/N 88958753), which delivered a stunning 480 horsepower and 475 lb-ft of torgue. That's nearly 12 percent more power and torque from a simple camshaft change!

We wasted no time in adding that terrific combination - dubbed LS376/480 - to our crate engine portfolio. The key to the power boost is the Hot Cam's 0.525-inch lift on both the intake and exhaust sides, along with 219-degree/228-degree duration specs. That's less lift on the intake side than the stock LS3 cam, but considerably more duration, allowing the valves to stay open longer to draw in more air from the rectangular-port L92-style heads.

The crate engine package includes the intake manifold, throttle body and fuel rail, along with the ignition system and exhaust manifolds. Use it with the LS376/480 with controller kit P/N 19258267, which includes a special pedal for use with the engine's electronically controlled throttle.

#### LS376/480 TECH SPECS

19301358
LS-Series Gen IV Small-Block V-8
376 cu in (6.2L)
4.065 x 3.622 (103.25 x 92mm)
Cast-aluminum with 6-bolt, cross-bolted main caps
Nodular iron
Powdered metal
Hypereutectic aluminum
Hydraulic roller
.525" intake / .525" exhaust
219° intake / 228° exhaust
Aluminum L92-style port; as cast with 68cc chambers
2.165 intake/ 1.590 exhaust
10.7:1
Investment-cast, roller trunnion
Investment-cast, roller trunnion
1.7:1
92 octane
6,600
58x
Internal

#### **INSTALLATION NOTES**

- Assembly does not include any electronics
- Use LS376/480 Controller Kit, P/N 19258267 for engine operation. Kit includes electronic throttle pedal, which is required for throttle input to the ECU (see page 273)
- Includes Chevy SS wet sump oil pan
- Intended for pre-1976 street vehicles or any off-road vehicle
- Not intended for marine applications
- Front-end accessory drive kits are available in two configurations (see page 260 for application).



Chevrolet Performance Crate Engines include a 24-month or 50,000-mile/80,000-kilometer limited warranty.



Chevrolet Performance does not utilize any used or remanufactured parts in this crate engine, except for the starter, alternator and power steering pump.





#### 19299055

#### SuperMatic<sup>™</sup> 4L70-E Four-Speed **Automatic Transmission**

A durable, easy-cruising four-speed overdrive automatic transmission; electronically controlled for more precise, fuel-saving performance.

See page 346 for torque converter applications.



#### 19302405

**Transmission Controller** Required when using a GM electronically controlled automatic transmission. Includes wiring harness, software and connector for laptop computer.

See page 350 for details

See page 228 for our complete line of LS-Series components



19258267 LS376/480 **Controller Kit** Page 273

**AVAILABLE ENGINE RELATED PARTS & ACCESSORIES** 







19212593 **Muscle Car Oil Pan Kit** Page 265



19299803 SuperMatic™ Torque Converter Page 346



19155067 Corvette Accessory **Drive Kit** Page 259

Page 267

19301246 Air Inlet Kit for **LS-Based Crate Engine Installation** 



# **Big Power for the Street or Track**

Using the LS3 engine as its foundation, the LS376/515 crate engine adds Chevrolet Performance's racing-derived ASA Hot Cam and a carbureted intake system to produce 515 horsepower at a high-revving 6,500 rpm and 469 lb.-ft. of torque at 5,000 rpm. It's a great engine for resto-mod classic and late-model muscle cars.

The assembly includes an SS oil pan and LS3 cylinder heads, with high-flow, rectangular-port intake passages, as well as our unique, spider-type carburetor intake manifold. At the heart of the engine is the ASA Hot cam, which extends the performance range of the LS3 with more duration. That means it holds open the valves longer, enabling greater airflow at higher rpm. Wind it out yourself and you'll see what we mean!

You'll need our LSX controller P/N 19171130 and Holley 770-cfm carburetor P/N 19170093 to get the engine running. And if you're installing it in an older vehicle, use our Muscle Car Oil Pan kit P/N 19212593.

#### LS376/515 TECH SPECS

Part Number:	19301359
Engine Type:	LS-Series Gen IV Small-Block V-8
Displacement (cu in):	376 cu in (6.2L)
Bore x Stroke (in):	4.065 x 3.622 (103.25 x 92mm)
Block (P/N 12623967):	Cast-aluminum with 6-bolt, cross-bolted main caps
Crankshaft (P/N 12597569):	Nodular iron
Connecting Rods (P/N 12649190):	Powdered metal
Pistons (P/N 19207287):	Hypereutectic aluminum
Camshaft Type (P/N 88958770):	Hydraulic roller
Valve Lift (in):	.525" intake / .525" exhaust
Camshaft Duration (@.050 in):	226° intake / 236° exhaust
Cylinder Heads (P/N 12629063):	Aluminum L92-style port; as cast with 68cc chambers
Valve Size (in):	2.165 int / 1.590 exhaust
Compression Ratio:	10.7:1
Rocker Arms (P/N 12569167 int):	Investment-cast, roller trunnion
Rocker Arms (P/N 10214664 exh):	Investment-cast, roller trunnion
Rocker Arm Ratio:	1.7:1
Recommended Fuel:	92 octane
Maximum Recommended rpm:	6,600
Reluctor Wheel:	58x
Balanced:	Internal

#### **INSTALLATION NOTES**

- Assembly does not include any electronics
- Use LSX ignition controller P/N 19171130 (includes harness) (page 274)
- Includes Chevy SS wet sump oil pan
- Intended for pre-1976 street vehicles or any off-road vehicle
- Not intended for marine applications
- 770-cfm carb P/N 19170093 recommended for daily street use
- Front-end accessory drive kits are available in two configurations (see page 258 for application).



Chevrolet Performance Crate Engines include a 24-month or 50,000-mile/80,000-kilometer limited warranty.



Chevrolet Performance <u>does not</u> utilize any used or remanufactured parts in this crate engine, except for the starter, alternator and power steering pump.





#### 19299055

#### SuperMatic<sup>™</sup> 4L70-E Four-Speed **Automatic Transmission**

A durable, easy-cruising four-speed overdrive automatic transmission; electronically controlled for more precise, fuel-saving performance.

See page 346 for torque converter applications.



### 19212657

**Transmission Controller** Required when using a GM electronically controlled automatic transmission. Includes wiring harness, software and connector for laptop computer.

See page 350 for details

\*\*\*\*\*\*\*\*\*

#### **AVAILABLE ENGINE RELATED PARTS & ACCESSORIES**



19170093 Carburetor, Holley 770-cfm Page 271



19171130 LSX Controller Page 274





See page 228 for our complete line of LS-Series components



19299803 SuperMatic™ Torque Converter Page 346



19155067 Corvette Accessory **Drive Kit** Page 259

19301246 Air Inlet Kit for **LS-Based Crate Engine Installation** 

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# **Our Most Powerful 6.2L!**

With Chevrolet Performance's aggressive ASA camshaft – developed for the high-rpm world of circle-track racing – installed in the LS3 6.2L engine, it comes alive with 525 uncompromising horsepower. That makes it the most powerful naturally aspirated 6.2L street engine in our portfolio – and one that has an edge to it. You'll notice it in the idle quality and you'll feel it when the revs quickly climb.

The ASA camshaft is a hydraulic roller with .525-inch lift on both sides, along with 226 degrees duration on the intake side and 236 degrees on the exhaust side. Coupled with a tight, 110-degree lobe separation angle, it helps the engine deliver excellent throttle response and breathe exceptionally well at high rpm. And for durability, we complement the cam with higher-rate valve springs.

You'll need tuning to make the most of the engine in a late-model GM vehicle. If you plan to use the LS376/525 in a vintage car, you'll need controller kit P/N 19259261, which includes the throttle pedal to match its electronically controlled throttle body.

#### LS376/525 TECH SPECS

Part Number:	19301360
Engine Type:	LS-Series Gen IV Small-Block V-8
Displacement (cu in):	376 cu in (6.2L)
Bore x Stroke (in):	4.065 x 3.622 (103.25 x 92mm)
Block (P/N 12623967):	Cast aluminum with 6-bolt, cross-bolted main caps
Crankshaft (P/N 12597569):	Nodular iron
Connecting Rods (P/N 12607475):	Powdered metal
Pistons (P/N 19207287):	Hypereutectic aluminum
Camshaft Type (P/N 88958770):	Hydraulic roller
Valve Lift (in):	0.525" intake / 0.525" exhaust
Camshaft Duration (@0.050 in):	226° intake / 236° exhaust
Cylinder Heads (P/N 12629063):	Aluminum L92-style port; as cast with 68cc chambers
Valve Size (in):	2.165 intake / 1.590 exhaust
Compression ratio:	10.7:1
Rocker Arms (P/N 12569167 int):	Investment cast, roll trunnion
Rocker Arms (P/N 10214664 exh):	Investment cast, roll trunnion
Rocker Arm Ratio:	1.7:1
Recommended Fuel:	92 octane
Maximum Recommended RPM:	6,600
Reluctor Wheel:	58x
Balanced:	Internal

#### **INSTALLATION NOTES**

- Assembly does not include any electronics
- Use LS376/525 Engine Controller Kit for engine operation P/N 19259261 (page 273)

\$700

- Includes Chevy SS wet sump oil pan
- Intended for pre-1976 street vehicles or any off-road vehicle
- Not intended for marine applications
- Front-end accessory drive kits are available in several configurations (see page 258 for application).



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Chevrolet Performance Crate Engines include a 24-month or 50,000-mile/80,000-kilometer limited warranty.



Chevrolet Performance <u>does not</u> utilize any used or remanufactured parts in this crate engine, except for the starter, alternator and power steering pump.





#### 19299055

#### SuperMatic<sup>™</sup> 4L70-E Four-Speed **Automatic Transmission**

A durable, easy-cruising four-speed overdrive automatic transmission; electronically controlled for more precise, fuel-saving performance.

See page 346 for torque converter applications.



#### 19302405

**Transmission Controller** Required when using a GM electronically controlled automatic transmission. Includes wiring harness, software and connector for laptop computer.

See page 350 for details

#### See page 228 for our complete line of LS-Series components



19259261 LS376/525 **Controller Kit** Page 273

AVAILABLE ENGINE RELATED PARTS & ACCESSORIES



19329795 T56 Super Magnum Six-Speed Manual Transmission Page 351



19212593 **Muscle Car Oil Pan Kit** Page 265

19301246

Air Inlet Kit for

**LS-Based Crate** 

Page 267

**Engine Installation** 



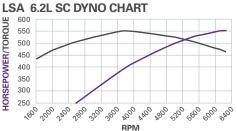
19299803 SuperMatic™ Torque Converter Page 346



19155067 Corvette Accessory **Drive Kit** Page 259

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#### 



# **Exciting Supercharged Performance**

The LSA 6.2L supercharged engine delivers 556 horsepower with refinement that is rare in the world of high performance. It is smooth, quiet and well-balanced, all while delivering the kind of immediate delivery of power that will take your breath away – and likely some of your car's tires!

A unique aluminum cylinder block casting houses a forged steel crankshaft and super-tough reciprocating parts, integrated piston-cooling oil jets and high-flow cylinder heads that support the airflow enabled by a 1.9L, sixth-generation supercharger with four-lobe, high-twist rotors. The advanced rotor design broadens the supercharger's effective range, enhancing low-rpm torque and high-rpm horsepower.

Our LSA crate engine package comes fully dressed, from the top of the charge-cooled supercharger assembly to the ignition system, water pump, balancer and more. It also comes with conventional wet-sump lubrication system. Its 8-bolt crankshaft flange may require an adapter for use with some transmissions.

#### LSA 6.2L SC TECH SPECS

Part Number:	19260164
Engine Type:	LS-Series Gen IV Small-Block V-8
Displacement (cu in):	376 cu in (6.2L)
Bore x Stroke (in):	4.065 x 3.622 (103.25 x 92mm)
Block (P/N 12623968):	Cast-aluminum with 6-bolt, cross-bolted main caps
Crankshaft (P/N 12603616):	Forged Steel with 8-bolt flange
Connecting Rods (P/N 12604857):	Powdered metal
Pistons (P/N 12625119):	Hypereutectic aluminum
Camshaft Type (P/N 12623064):	Hydraulic roller
Valve Lift (in):	.492" intake / .480" exhaust
Camshaft Duration (@.050 in):	198° intake / 216° exhaust
Cylinder Heads (P/N 12626958):	Aluminum L92-style port; as cast with 68cc chambers
Valve Size (in):	2.160 intake / 1.590 exhaust
Compression Ratio:	9.1:1
Rocker Arms (P/N 12569167 int):	Investment-cast, roller trunnion
Rocker Arms (P/N 10214664 exh):	Investment-cast, roller trunnion
Rocker Arm Ratio:	1.7:1
Recommended Fuel:	92 octane
Maximum Recommended rpm:	6,600
Reluctor Wheel:	58x
Balanced:	Internal

#### **INSTALLATION NOTES**

- Assembly does not include any electronics or accessory drive components
- Use LSA Controller Kit P/N 19259293, available for non-original applications. Kit includes ECM, wiring harness, O<sup>2</sup> sensors and throttle pedal for ETC operation.
- Coolant pump included P/N 22901367
- Intended for pre-1976 street vehicles or any off-road vehicle
- 8-bolt crank flange
- Not intended for marine applications
- Includes flexplate
- See page 260 for LSA Accessory Drive System



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Chevrolet Performance Crate Engines include a 24-month or 50,000-mile/80,000-kilometer limited warranty.



Chevrolet Performance <u>does not</u> utilize any used or remanufactured parts in this crate engine, except for the starter, alternator and power steering pump. Includes LSA/LS9 Intercooler Fluid Pump P/N 22901367



#### 19300175 SuperMatic™ 4L85-E Four-Speed Automatic Transmission

**AVAILABLE ENGINE RELATED PARTS & ACCESSORIES** 

Features five-pinion gearsets, heat-treated state shaft splines, induction-hardened turbine shaft, seven-plate clutch and specific valve-body calibration.

See page 346 for torque converter applications.



Also available as an E-ROD system See page 211 for details

#### 19302405

Transmission Controller

Required when using a GM electronically controlled automatic transmission. Includes wiring harness, software and connector for laptop computer.

See page 350 for details

#### See page 228 for our complete line of LS-Series components



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#### LS9 6.2L SC DYNO CHART LS9 6.2L SC 650 HORSEPOWER/TORQUE 600 550 500 450 400 638 hp 19260165 604 lb.-ft. 350 1250 4500 150,000 LAP LO LAP @ 6.500 rpm @ 3,800 rpm RPM

# The Last of a Legend!

When the C6 Corvette ZR1 went out of production, so did its unique LS9 6.2L supercharged engine. Chevrolet Performance acquired a finite number of them for use as crate engines and when they're gone, they're gone!

The LS9 is a technological marvel. High-rpm-validated lightweight reciprocating parts, including titanium intake valves, are used, along with high-flow cylinder heads that draw the charge forced on them by a sixth-generation supercharger. It has a high-helix (twist) design that helps the "blower" deliver greater power at the low end and sustains it longer through the rpm band for broad, on-demand power whether off-idle or at speed.

Our LS9 crate engine assembly includes the dry sump oil pan and provisions for the charge cooler's liquid cooling system. You'll need an external oil tank (not available from Chevrolet Performance), external coolant tank (for the charge cooler) and our LS9 controller kit, P/N 19299462, to get it running in your project vehicle. It also includes a 9-bolt crankshaft flange that may require an adapter for use with some transmissions.

#### LS9 6.2L SC TECH SPECS

19260165
LS-Series Gen IV Small-Block V-8
376 cu in (6.2L)
4.065 x 3.622 (103.25 x 92mm)
Cast-aluminum with 6-bolt, cross-bolted main caps
Forged Steel with 9-bolt flange
Forged titanium
Forged aluminum
Hydraulic roller
.562" intake / .558" exhaust
211° intake / 230° exhaust
Aluminum L92-style ports; as cast with 68cc chambers
2.160 titanium intake / 1.590 hollow, sodium-filled exhaust
9.1:1
Investment-cast, roller trunnion
Investment-cast, roller trunnion
1.7:1
92 octane
6,600
58x
Internal

#### **INSTALLATION NOTES**

- 14" manual transmission flywheel included
- Assembly does not include any electronics use LS9 Controller Kit P/N 19299462 to operate engine
- Forged pistons with oil-spray cooling
- Includes Corvette dry sump oil pan requires production or aftermarket oil lines and oil tank (not included)
- Intended for pre-1976 street vehicles or any off-road vehicle
- Not intended for marine applications
- Crankshaft has unique 9-bolt flywheel mounting pattern



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Chevrolet Performance Crate Engines include a 24-month or 50,000-mile/80,000-kilometer limited warranty.



Chevrolet Performance does not utilize any used or remanufactured parts in this crate engine, except for the starter, alternator and power steering pump Includes LSA/LS9 Intercooler Fluid Pump P/N 22901367



19329795 T56 Super Magnum Six-Speed Manual Transmission Designed for retro-fit installations, with 700 lb.-ft. capacity. Page 351



#### 19243524 LS9 Accessory Drive System w/AC Includes alternator, AC compressor and more to complete engine assembly

complete engine assembly. Page 261

**AVAILABLE ENGINE RELATED PARTS & ACCESSORIES** 

See page 228 for our complete line of LS-Series components



10465385 LS-Series Starter Page 270



**19299462** LS9 Controller Kit Page 273



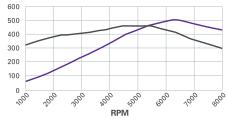
**19301246 Air Inlet Kit for LS-Based Crate Engine Installation** *Page 267* 





HORSEPOWER/TORQUE 400 300 200

LS7 7.0L DYNO CHART



# **A Future Classic**

The LS7 7.0L will go down in history as a benchmark in naturally aspirated power. It powered the world-beating C6 Corvette Z06 and has become a popular engine for enthusiasts who want its uncompromising performance in their project vehicle.

470 lb.-ft.

@ 4.800 rpm

Within its classic 427-cu-in displacement, it features a unique, big-bore cylinder block that is anchored with a forged crankshaft, featherweight titanium connecting rods and friction-coated pistons. But it's the airflow capability of the cavernous, CNC-ported heads that enables its tremendous power. Large-volume, straight-passage intake runners channel air directly through 2.20-inch titanium intake valves.

Chevrolet Performance's LS7 7.0L crate engine package includes a production-style engine with the dry sump oil pan. You'll need to supply the external oil supply and oil lines to the engine, but the rest of the assembly is fully dressed, including the manifold assembly with injectors and electronically controlled throttle body, and exhaust manifolds. Use our LS7 controller kit P/N 19258553 to get it running in your project vehicle.

#### LS7 7.0L TECH SPECS

Part Number:	19244098
Engine Type:	LS-Series Small-Block V-8
Displacement (cu in):	427 (7.0L)
Bore x Stroke (in):	4.125 x 4.000 (104.8 x 101.6mm)
Block (P/N 12602689):	Cast-aluminum with 6-bolt steel main bearing caps
Crankshaft (P/N 12641692):	Forged steel
Connecting Rods (P/N 12586258):	Forged titanium
Pistons:	Hypereutectic aluminum
Camshaft Type (P/N 12638426):	Hydraulic roller
Camshaft Lift (in):	.591 intake / .591 exhaust
Camshaft Duration (@.050 in):	211° intake / 230° exhaust
Cylinder Heads (P/N 12578449):	CNC ported LS7-style ports 70cc CNC combustion chambers
Valve size (in):	2.200" titanium intake, 1.610" sodium-filled exhaust
Compression Ratio:	11.0:1
Rocker Arms:	Investment-cast, roller trunnion
Rocker Arm Ratio:	1.8:1 (offset, intake only)
Recommended Fuel:	91 octane
Maximum rpm:	7,000
Reluctor Wheel:	58x
Balanced:	Internal

#### **INSTALLATION NOTES**

- Assembly does not include any electronics
- Use LS7 Controller Kit P/N 19258553 for engine operation. Kit includes electronic throttle pedal, which is required for throttle input to the ECU (see page 273)
- Comes assembled with 14" Corvette Z06 168-tooth manual transmission flywheel
- LS7 is the same size and mounts the same as other LS-Series engines
- Includes Corvette dry sump oil pan requires production or aftermarket oil lines and oil tank (not included)
- Use oil hose adapters P/N 25534412 to adapt to AN -12 fittings
- Intended for pre-1976 street vehicles or any off-road vehicle
- Not intended for marine applications
- See page 258 for front end accessory drive kit options

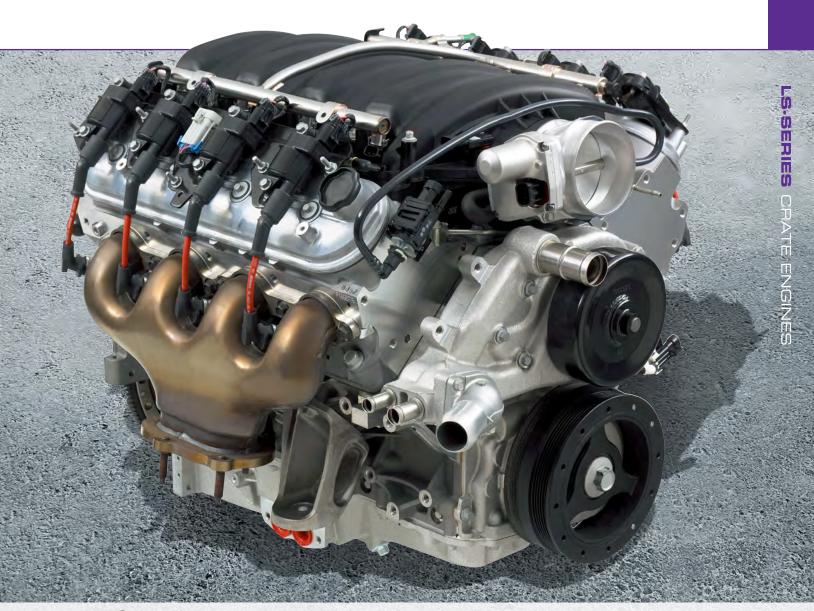


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Chevrolet Performance Crate Engines include a 24-month or 50,000-mile/80,000-kilometer limited warranty.



Chevrolet Performance does not utilize any used or remanufactured parts in this crate engine, except for the starter, alternator and power steering pump





#### 19299055

#### SuperMatic<sup>™</sup> 4L70-E Four-Speed **Automatic Transmission**

A durable, easy-cruising four-speed overdrive automatic transmission; electronically controlled for more precise, fuel-saving performance.

See page 346 for torque converter applications.



#### 19302405

**Transmission Controller** Required when using a GM electronically controlled automatic transmission. Includes wiring harness, software and connector for laptop computer.

See page 350 for details

#### **AVAILABLE ENGINE RELATED PARTS & ACCESSORIES**

19258553

Page 273

LS7 Controller Kit



**Drive Kit** 

Page 259

10465385 **LS-Series Starter** Page 270



19299803 SuperMatic™ **Torque Converter** Page 346



25534412 **Oil Hose Adapters** Page 270

19301246 Air Inlet Kit for **LS-Based Crate Engine Installation** Page 267

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*— PERFORMANCE* 

# III 6.2L 19328728\* Image: Solution of the state of the st

# The Next Generation is Here!

Chevrolet Performance is proud to offer the all-new LT1 crate engine. Introduced on the seventh-generation Corvette Stingray, the LT1 6.2L opened the next chapter in the long, historic legacy of the Small-Block engine – and gives your project vehicle a high-tech heart transplant with an unprecedented balance of performance and efficiency!

The LT1 is architecturally similar to the LS family of Small-Block engines, but with a unique block casting, cylinder head design, oiling system and more. It also combines advanced technologies including direct injection, Active Fuel Management (cylinder deactivation) and continuously variable valve timing to support an advanced combustion system.

Our LT1 crate engine is rated at 460 horsepower and 465 lb.-ft. of torque; and it is offered with a wet-sump or dry-sump oiling system. A controller specially designed for retro-fit application using an automatic transmission is available.

\*Expected availability January, 2015

#### LT1 6.2L TECH SPECS

Part Numbers:	19328728 (wet sump) 19329997 (dry sump)
Engine Type:	Direct Injection spark ignition Gen V Small-Block V-8
Displacement (cu in):	376 cu in 6.2L
Bore x Stroke (in):	4.065 x 3.622 (103.25 x 92mm)
Block (P/N 12619171):	Cast-aluminum with 6-bolt nodular iron main bearing caps
Crankshaft:	Forged Steel
Connecting Rods:	Forged powdered metal
Pistons (P/N 12662802):	Hypereutectic aluminum
Camshaft Type (P/N 12629512):	Billet steel roller
Valve Lift (in):	0.561" intake / 0.531" exhaust
Camshaft Duration (@0.050 in):	242° intake / 244° exhaust
Cylinder Heads (P/N 12620544):	Aluminum, rectangular port D/I
Valve Size (in):	2.165" intake / 1.590" exhaust
Compression ratio:	11.5:1
Rocker Arms (P/N 12619829 int):	Investment-cast, roller trunnion
Rocker Arms (P/N 12619829 exh):	Investment-cast, roller trunnion
Rocker Arm Ratio:	1.81:1
Recommended Fuel:	Premium recommended
Maximum Recommended RPM:	6600
Reluctor Wheel:	58x
Balanced:	Internal

#### **INSTALLATION NOTES**

- Engines shipped with high-pressure direct-injection fuel pump installed
- Dry Sump Engine, P/N 19329997, requires production or after-market oil lines and external oil tank (not included).
- Dry sump engine, P/N 19329997, comes with a Corvette oil pan. Use oil hose adaptors P/N 25534412 to adapt AN-12 fittings
- Assembly does not include electronics
- Use LT1 Controller Kit, P/N 19303137 for engine operation. Kit includes electronic throttle pedal, which is required for throttle input to the ECU.
- Intended for pre-1976 street vehicles, or any off-road vehicle
- Not intended for marine applications
- Front-End Accessory Drive Kit, P/N 19329990, can be ordered separately (See page 263)
- 8-bolt crankshaft flange
- Shipped with 14" flexplate



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Chevrolet Performance Crate Engines include a 24-month or 50,000-mile/80,000-kilometer limited warranty.



Chevrolet Performance <u>does not</u> utilize any used or remanufactured parts in this crate engine, except for the starter, alternator and power steering pump.





#### 19329795 **T56 Super Magnum Six-Speed Manual Transmission** Designed for retro-fit installations, with 700 lb-ft capacity. Page 351



# 19329990

LT1 Accessory Drive System Includes alternator, AC compressor and more to complete engine assembly. Page 263

#### **AVAILABLE ENGINE RELATED PARTS & ACCESSORIES**

19329620

LS/LT Manual

**Bell Housing** 

Page 351

# 19329635

**LS/LT Dual Disc Clutch** 

See page 228 for our complete line of LS-Series components



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1111 8888 1111 8888

19303137\* LT1 Engine Controller Page 273



25534412 **Oil Hose Adapters** Page 270

Page 352



10465385 **LT-Series Starter** 

Page 270

\*Expected availability January, 2015

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# **ITG 2.0L Turbocharged** 19328837\* © © / 272 hp © 5,500 rpm / 295 *Ib.-ft.* © 3,000 rpm

# **Turbocharged Excitement in a Small Package**

Used in many performance sedans throughout General Motors' global portfolio, the LTG 2.0L turbocharged four-cylinder is one of the most power-dense engines in the industry. And thanks to advanced technologies, such as direct injection, it is a surprisingly efficient performer. It's a great choice for custom tuner cars or to make a statement in your hot rod, with its compact – and lightweight – capabilities.

The LTG is rated at 272 horsepower at 5,500 rpm and 295 lb.-ft. of torque at 3,000 rpm. Its torque curve is broad and robust, delivering 90 percent (260 lb.-ft.) of its peak torque from 1,700 rpm to 5,500 rpm – for a great feeling of immediate power at all speeds. Peak torque is sustained from 3,000 to 4,600 rpm.

The turbocharger generates up to 20 pounds of boost and its twin-scroll design helps optimize the usable power from the engine, virtually eliminating turbo lag and helping deliver a broad power band. Electronically controlled supporting components, including the wastegate and bypass, help optimize performance and efficiency.

\*Expected availability January, 2015

#### Additional engine features include:

- Aluminum engine block with cast-in-place iron liners
- Forged steel crankshaft
- · Pistons with jet-spray cooling
- Modular balance shaft system in the oil pan
- Rotocast aluminum cylinder head with sodium-filled exhaust valves
- Dual overhead camshafts with continuously variable valve timing
- Direct injection with cam-driven high-pressure fuel pump
- Two-stage variable-displacement oil pump
- Assembly shipped with flywheel and clutch assembly (installed)
- · Engine is configured for rear-wheel-drive applications

**NOTE:** Use with Chevrolet Performance engine controller kit P/N 19328839 (see on page 273), for manualtransmission applications only. Fabrication is required to incorporate a charge cooler for the air-to-air intercooling system. A high-pressure fuel pump suitable for direct injection is also required.



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Chevrolet Performance Crate Engines include a 24-month or 50,000-mile/80,000-kilometer limited warranty.



Chevrolet Performance <u>does not</u> utilize any used or remanufactured parts in this crate engine, except for the starter, alternator and power steering pump.



See page 228 for our complete line of LS-Series components



**19328976** LTG 4-Cylinder 6-speed Manual Transmission Page 355

NEW



**19328839 LTG Engine Controller Kit** *Page 273* 



**19329020 LTG Accessory Drive System** Includes alternator, AC compressor and more to complete engine assembly.



# E-ROD Crate Engine Systems

LC9 5.3L - CARB EO# D-126-31

**LS3 6.2L -** CARB EO# D-126-32

LSA 6.2L - CARB EO# D-126-33

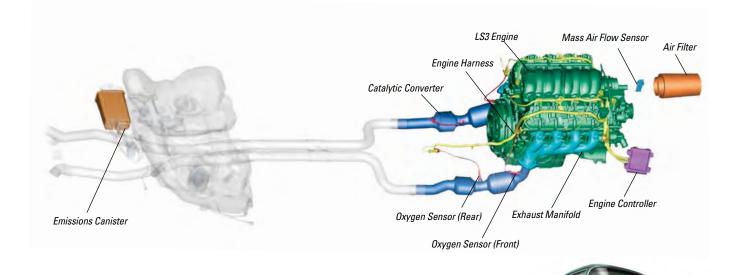
# **Emissions Compliance with No Sacrifice in Performance!**

Chevrolet Performance's industry-exclusive E-ROD crate engine packages deliver the performance you want for your project vehicle with hassle-free emissions compliance. In fact, they are the only OEM crate engine solutions that enable authorized, emissions-compliant high-performance engine replacements for approximately 20 million pre-1996 cars, trucks and SUVs in California, regardless of the make, model or original powertrain.

We offer three systems – the economical E-ROD LC9 5.3L, the 430-hp E-ROD LS3 and the supercharged E-ROD LSA rated at 556 hp – and each carries an official California Air Resources Board (CARB) E.O. number.

The E-ROD engines are also available as complete Connect & Cruise crate powertrain systems, which include an automatic transmission and all the necessary wire harnesses and controllers. See page 212 for complete Connect & Cruise details.

It's a new era for hot rodding and Chevrolet Performance is leading the way with E-ROD!



#### Chevrolet Performance's E-ROD '55 Chevy Delivers Big Power and Efficiency

Welcome to hot rodding in the 21st century! Chevrolet Performance's groundbreaking 1955 Chevy project vehicle introduced the E-ROD family of emissions-compliant crate engines and continues to shine as a real-world example of how classic cars can deliver modern drivability – including excellent efficiency.

We've driven the E-ROD '55 everywhere over the past few years – to countless events and even on the HOT ROD PowerTour – and its 430-horsepower LS3 engine has delivered an average of 23 miles per gallon on the highway. That's comparable to many new performance cars with six-speed transmissions — and this vintage Chevy is backed by a proven four-speed automatic.

With E-ROD, you can build the hot rod of your dreams without compromise. Look for our '55 Chevy at major automotive events and see for yourself how horsepower and efficiency go together like SS stripes on a Chevelle!



#### E-ROD Powers a New Generation of Hot Rods!

The E-ROD systems give builders everything they need to make eco-friendly power! Check out what you get:

- Chevrolet Performance crate engine
- Exhaust manifolds
- Mass airflow sensor and sensor boss
- Air filter
- Evaporative emissions canister

- Engine control module
- Catalytic converters
- Oxygen sensors and senor bosses
- Accelerator pedal (for use with the electric throttle body)
- Instruction manual



# E-Rod LC9 5.3L System

- CARB EO#: D-126-31
- Horsepower: 320 hp @ 5,400 rpm
- Torque: 335 lb.-ft. @ 4,000 rpm

With the same displacement as the classic 327 engines from the 1960s, the E-ROD LC9 5.3L is a great choice for building an emissions-compliant resto-mod Corvette or early Chevy II – and as our most affordable E-ROD package, it's a great value for any street rod, classic truck or muscle car. The LC9 5.3L was originally developed as a truck engine, so it delivers strong torque over a broad rpm range, giving you a great feeling of immediate power on demand. Match it with a 4L65-E transmission for the ultimate combination – which you can do with our Connect & Cruise E-ROD crate powertrain system.

Part Number	Description
19258004	w/40-Tooth Reluctor Wheel Transmission*
19258008	w/17-Tooth Reluctor Wheel Transmission*
CPSLC9EROD4L65E	w/Connect & Cruise Package - 2WD
CPSLC9EROD4L70E	w/Connect & Cruise Package - 4WD

See page 188 for complete engine details

# E-Rod LS3 6.2L System

- CARB EO#: D-126-32
- Horsepower: 430 @ 5,900 rpm
- Torque: 424 lb.-ft. @ 4,600 rpm

Rated at a strong 430 hp, the original E-ROD crate engine delivers big power with California emissions compliance for countless pre-1995 cars, trucks and SUVs. Along with great power, its aluminum block and heads, and composite intake manifold, make it a lightweight performer, too, meaning your project vehicle will likely enjoy weight balance – with less weight over the front axle. We recommend the 4L65-E transmission to match with the E-ROD LS3, which Chevrolet Performance also offers as an inclusive Connect & Cruise E-ROD crate powertrain system.

Part Number	Description
19257230	w/40-Tooth Reluctor Wheel Transmission*
19257234	w/17-Tooth Reluctor Wheel Transmission*
CPSLS3EROD4L65E	w/Connect & Cruise Package

See page 190 for complete engine details



# E-Rod LSA 6.2L SC System

- CARB EO#: D-126-33
- Horsepower: 556 @ 6,100 rpm
- Torque: 551 lb.-ft. @ 3,800 rpm

The Cadillac CTS-V's 6.2L supercharged LSA engine delivers 556 hp with refinement that is rare in the world of high performance. It is smooth, quiet and well-balanced – all while delivering breathtaking power. The engine features a unique aluminum cylinder block casting that houses a forged steel crankshaft and integrated piston-cooling oil jets, along with high-flow cylinder heads that support the airflow enabled by a 1.9L supercharger with four-lobe, hightwist rotors. The E-ROD LSA comes fully dressed, from the top of the charge-cooled supercharger assembly to the ignition system.

Part Number	Description
19257456	w/40-Tooth Reluctor Wheel Transmission*
19257460	w/17-Tooth Reluctor Wheel Transmission*
CPSLSAEROD4L85E	w/Connect & Cruise Package

See page 198 for complete engine details



#### About the E-ROD Engine Controller

The engine control module included with each E-ROD crate engine system is designed for true stand-alone performance in older vehicles. It does not engage a number of features associated with production-model systems, eliminating the possibility off "trouble codes" being set. It also includes a SES (service engine soon) LED indicator embedded in the fuse box.

All that's needed to get a vehicle running with the engine controller are power and ground sources, a high-pressure fuel pump and an electric cooling fan.

#### **BUILDER'S NOTE**

To facilitate a complete E-ROD installation, the builder will need to source additional components to complete the assembly and get the vehicle running, including:

- Fuel tank
- Fuel lines (re-circulating or returnless)
- Fuel pump 58 psi (400 kPa) for LC9 and LS3 or 65 psi (450 kPa) for LSA
- Fuel tank vent line from the tank to the evaporative emissions canister
- Purge line from the canister to the engine purge solenoid
- Air induction system that incorporates the mass airflow sensor
- Exhaust system behind the catalytic converters.

All E-ROD engines require a front-end accessory drive system suitable to the vehicle. The instruction manual included with each kit offers recommendations for the accessory drive kit, as well as the transmission, gear ratios and more. Chevrolet offers several configurations of accessory drive systems to suit different applications; and each allows the installer to easily delete air conditioning. See pages 258-263 for applications and part numbers.

Chevrolet Performance recommends the LS1 Engine Installation Guide P/N 88959384, which illustrates basic procedures and offers helpful tips on installing an LS engine into older vehicles.

E-ROD systems do not come with a transmission. Chevrolet Performance recommends the SuperMatic 4L70-E – P/N 19244043 – four-speed automatic overdrive transmissions, along with Chevrolet Performance's SuperMatic transmission controller P/N 19257634, for LC9 and LS3 systems. The LSA, with higher torque output, should use the SuperMatic 4L85-E, P/N 19300175, along with the SuperMatic transmission controller, P/N 19302405.

\*GM automatic transmissions are typically equipped with 40-tooth reluctor wheels for vehicle speed sensor output. GM late-model manual transmissions are typically equipped with a 17-tooth reluctor wheel. The Chevrolet Performance T56 Super Magnum six-speed manual (P/N 19329795) is equipped with a 40-tooth reluctor wheel. 41 65-F

# **Connect & Cruise** crate powertrain systems

LC9 5.3L 4L65-E

LS3 6.2L LSA 6.2L S/C LS376/480 6.2L

LS376/525 6.2L

LS7 7.0L 4L70-E

# The Complete Performance Package!

When it comes to factory-engineered performance and convenience, nothing beats Chevrolet Performance's industry-exclusive Connect & Cruise crate powertrain systems. With one package you get the engine, automatic or manual transmission, electronic controllers and all the necessary wire harnesses. Even better, we deliver it for less than the cost of buying the components separately.

Our engineers matched the engines and transmissions for optimal performance and durability, so you can wring out every horsepower from them with total confidence! The specially calibrated controllers are designed for retrofit installations in older vehicles, for easier and guicker installation - and more importantly - operation without the need for third-party tuning.

The Connect & Cruise lineup even includes emissions-compliant E-ROD LC9, LS3 and LSA systems. (See page 208 for details about E-ROD kit contents.)

Our engineers did all the hard work of designing and calibrating perfectly matched powertrain systems - and we've covered them with a 24-month/50,000-mile limited warranty (see chevrolet.com/performance or your Chevrolet Performance retailer for complete details).

Chevrolet Performance pioneered the performance crate engine, so when it comes to performance innovations that save time, money and guesswork, we once again lead the way!

**NOTE:** All components, engine, transmission, torque converter and controllers are ordered and delivered separately.





# **Connect & Cruise Builders Guide**

Each Chevrolet Performance Connect & Cruise crate powertrain system includes:

- Brand-new, fully assembled crate engine
- Brand-new, automatic or manual transmission
- SuperMatic<sup>™</sup> transmission control module and harness
- Calibrated engine control module
- Two oxygen sensors and mounting bosses (for installation in the exhaust system)

- Mass airflow meter and mounting boss (for installation in the air intake system)
- Throttle pedal assembly (for use with the electronically operated throttle)
- Assembled wiring harness with fuse box and necessary cam sensor and MAP sensor jumpers
- Oil pressure sensor that is compatible with the harness
- Instruction sheet

To facilitate a complete installation, the builder will need to source additional components to complete the engine assembly and get the vehicle running, including:

- Fuel tank and fuel lines (re-circulating or returnless)
- Fuel pump 58 psi (400 kPa) for all engines except LSA / 65 psi (450 kPa) for LSA
- Air induction system that incorporates the mass airflow sensor.

Additionally, all engines require a front-end accessory drive system. The instruction manual included with each kit offers recommendations and Chevrolet Performance offers several configurations to suit different applications. Each allows the installer to easily delete air conditioning. See pages 258-263 for applications and part numbers.

Chevrolet Performance recommends the LS1 Engine Installation Guide P/N 88959384, which illustrates basic procedures and offers helpful tips on installing an LS engine into older vehicles.

## LC9 5.3L Connect and Cruise Powertrain System – 2WD & 4WD

The LC9 5.3L engine shares the same displacement as the original 327-cubic-inch Small-Block of the 1960s, making it a great choice for those who want a 21st-century edition of the classic engine. And because the LC9 was originally engineered for truck applications, it offers a broad, flat torque curve that's ideal for giving older trucks and full-size hot rods an excellent feeling of low-end performance. It is paired with the 4L65-E four-speed transmission in 2WD applications and the 4L70-E in 4WD applications, for a great balance of performance and highway-cruising efficiency. This combination is also available as an E-ROD system, for all the builders in California.

#### **Engine Specs:**

- LC9 5.3L (327 cu in)
- 320 hp @ 5400 rpm
- 335 lb.-ft. @ 4400 rpm
- 9.5:1 compression ratio

#### Trans Specs 2WD:

- 4L65-E four-speed automatic
- Five-pinion gearsets
- 3.06 first gear ratio, 0.70 overdrive ratio
- 30.75 inches long (approx.)

#### Trans Specs 4WD:

- 4L70-E four-speed automatic
- Five-pinion gearsets
- 3.06 first gear ratio, 0.70 overdrive ratio

#### Trans Specs Manual:

- -T56 Super Magnum six-speed manual
- Slip-voke design, 40-tooth reluctor ring
- 2.66 first gear ratio, 0.63 overdrive ratio
- 33.6 inches long (approx.)

Available as an E-ROD system



#### LC9 5.3L Connect & Cruise Systems w/Automatic Transmission

System Components	Part Numbers			
	CPSLC94L65E - 2WD	CPSLC94L70E - 4WD	CPSLC9EROD4L65E 2WD E-ROD*	CPSLC9EROD4L70E 4WD E-ROD*
Engine	19259918	19259918	19258004	19258004
Engine Control System	19259914	19259914	(included)	(included)
Automatic Transmission	19260380	19260961	19260380	19260961
Torque Converter	17803807 or 19299802	17803807 or 19299802	17803807 or 19299802	17803807 or 19299802
Transmission Control System	19302405	19302405	19302405	19302405
**Flywheel Kit	N/A	N/A	N/A	N/A
Transmission Installation Kit	19259117	19259117	19259117	19259117

#### LC9 5.3L Connect & Cruise System w/Manual Transmission NEW!

System Components	Part Numbers		
	CPSLC96LMAN - 2WD	CPSLC96LMANEROD - 2WD E-ROD	
Engine	19259918	19258004	
Engine Control System	19259914	(included)	
Manual Transmission	19329795	19329795	
Transmission Installation Kit	19301625	19301625	

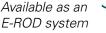
## LS3 6.2L Connect and Cruise Powertrain System

The deep-breathing, high-revving LS3 is rated at 430 hp in our Connect & Cruise kit, offering the lightweight advantage of an aluminum cylinder block, aluminum heads and a composite intake manifold, which can reduce the curb weight and improve the weight balance of your older vehicle. It's backed by the 4L65-E four-speed overdrive automatic, which enables great highway cruising performance and fuel economy with the durability of hardened internal parts and five-pinion gearsets. It is also available as an E-ROD system.

Engine Specs: – LS3 6.2L (376 cu in)	LS3 6.2L Connect & Cruise System w/Automatic Transmission		
– L33 0.22 (378 cu m) – 430 hp @ 5900 rpm	System Components	Part Numbers	
– 430 np @ 5900 npm – 424 lbft. @ 4600 rpm		CPSLS34L65E - 2WD	CPSLS3EROD4L65E - E-ROD*
– 10.7:1 compression ratio	Engine	19301326	19257230
	Engine Control System	19258270	(included)
Trans Specs 2WD:	Automatic Transmission	19260380	19260380
<ul> <li>– 4L65-E four-speed automatic</li> </ul>	Torque Converter	17803808 or 19299802	17803808 or 19299802
<ul> <li>– Five-pinion gearsets</li> </ul>	Transmission Control System	19302405	19302405
<ul> <li>– 3.06 first gear ratio, 0.70 overdrive ratio</li> <li>– 30.75 inches long (approx.).</li> </ul>	**Flywheel Kit	N/A	N/A
	Transmission Installation Kit	19259117	19259117

#### Trans Specs Manual:

- -T56 Super Magnum six-speed manual
- Slip-yoke design, 40-tooth reluctor ring
- 2.66 first gear ratio, 0.63 overdrive ratio
- 33.6 inches long (approx.)





	CPSLS34L65E - 2WD	CPSLS3EROD4L65E - E-ROD*	
Engine	19301326	19257230	
Engine Control System	19258270	(included)	
Automatic Transmission	19260380	19260380	
Torque Converter	17803808 or 19299802	17803808 or 19299802	
Transmission Control System	19302405	19302405	
**Flywheel Kit	N/A	N/A	
Transmission Installation Kit	19259117	19259117	

#### LS3 6.2L Connect & Cruise System w/Manual Transmission NEW!

System Components	Part Numbers		
	CPSLS36LMAN - 2WD	CPSLS36LMANEROD - E-ROD*	
Engine	19301326	19257230	
Engine Control System	19258270	(included)	
Manual Transmission	19329795	19329795	
Transmission Installation Kit	19301625	19301625	

\*All E-ROD systems include complete emissions equipment, including catalytic converters and a fuel tank evaporative emissions canister, along with an engine control module calibrated for a balance of performance and efficiency.

\*\* Torque Converter 24217235 requires the purchase of a flywheel kit.



# SA 6 2L Conne

## LSA 6.2L Connect and Cruise Powertrain System

Powering the Cadillac CTS-V Series and the new Chevy Camaro ZL1, the LSA is supercharged powerhouse that's good for 556 horsepower. It uses a high-helix, high-efficiency Twin Vortices supercharger to expand the effective boost range from low to high rpm. The 4L85-E four-speed overdrive transmission channels the LSA's torque to the axle with exceptional strength and precision. It's a supercharged combo for all hot rods! It's also available as an E-ROD system.

#### Engine Specs:

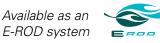
- LSA 6.2L (376 cu in) supercharged
- 556 hp @ 6100 rpm
- 551 lb.-ft. @ 3800 rpm
- 9.1:1 compression ratio

#### Trans Specs 2WD:

- 4L85-E four-speed automatic
- High-performance valve body and clutches
- 2.48 first gear ratio,0.75 overdrive ratio
- 32.6875 inches long (approx.)

#### Trans Specs Manual:

- -T56 Super Magnum six-speed manual
- Slip-yoke design, 40-tooth reluctor ring
- 2.66 first gear ratio, 0.63 overdrive ratio
- 33.6 inches long (approx.)



#### LSA 6.2L Connect & Cruise System w/Automatic Transmission

System Components	Part Numbers	
	CPSLSA4L85E - 2WD	CPSLSAEROD4L85E - E-ROD*
Engine	19260164	19257456
Engine Control System	19259293	(included)
Automatic Transmission	19300175	19300175
Torque Converter	**24217235 or 19299806	**24217235 or 19299806
Transmission Control System	19302410	19302410
**Flywheel Kit	**19125597	**19125597
Transmission Installation Kit	19259119	19259119

#### LSA 6.2L Connect & Cruise System w/Manual Transmission NEW!

System Components

-,		
	CPSLSA6LMAN - 2WD	CPSLSA6LMANEROD - E-ROD*
Engine	19260164	19257456
Engine Control System	19259293	(included)
Manual Transmission	19329795	19329795
Transmission Installation Kit	19329912	19329912

Part Numbers

\*All E-ROD systems include complete emissions equipment, including catalytic converters and a fuel tank evaporative emissions canister, along with an engine control module calibrated for a balance of performance and efficiency.

\*\* Torque Converter 24217235 requires the purchase of a flywheel kit.



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## LS376/480 Connect and Cruise Powertrain System

Mixing the capable LS "Hot Cam" with the powerful LS3 6.2L takes affordable performance to a great level - 480 horsepower and 475 lb.-ft. that will wake up your resto-mod muscle car, street rod or classic truck. The 4L70-E four-speed overdrive transmission backs the LS376-480 with strength and durability. Put this combo to work in your classic cruiser and enjoy a great balance of performance and efficiency!

#### **Engine Specs:**

- LS376 / 480 (376 cu in)
- 480 hp @ 5750 rpm
- 475 lb.-ft. @ 4500 rpm
- 10.7:1 compression ratio

#### Trans Specs 2WD:

- 4L70-E four-speed automatic
- Five-pinion gearsets
- 3.06 first gear ratio, 0.70 overdrive ratio
- 30.75 inches long (approx.)

#### **Trans Specs Manual:**

- -T56 Super Magnum six-speed manual
- Slip-yoke design, 40-tooth reluctor ring
- 2.66 first gear ratio, 0.63 overdrive ratio
- 33.6 inches long (approx.)

## LS376/525 Connect and Cruise Powertrain System

We've matched the aggressive ASA camshaft - developed for the high-rpm world of circle-track racing - with the great-breathing LS3 to create the LS376-525. This high-revving powerhouse is one of our most powerful production-based crate engines and it's backed by the tough, smoothshifting 4L70-E automotive overdrive transmission for a great balance of power on demand and highway efficiency.

#### **Engine Specs:**

- LS376 / 525 (376 cu in)
- 525 hp @ 6300 rpm
- 489 lb.-ft. @ 4400 rpm
- 10.7:1 compression ratio

#### Trans Specs 2WD:

- 4L70-E four-speed automatic
- Five-pinion gearsets
- 3.06 first gear ratio, 0.70 overdrive ratio
- 30.75 inches long (approx.)

#### Trans Specs Manual:

- -T56 Super Magnum six-speed manual
- Slip-yoke design, 40-tooth reluctor ring
- 2.66 first gear ratio, 0.63 overdrive ratio
- 33.6 inches long (approx.)

## LS7 7.0L Connect and Cruise Powertrain System

The legendary 7.0L LS7 made the C6 Corvette Z06 an icon and delivers 427 cubic inches of high-rpm horsepower that makes the ultimate resto-mod statement in a classic Corvette, Chevelle or Camaro. We match it with the strong 4L70-E four-speed automatic to ensure all 470 lb.-ft. are transmitted to the Tarmac with dependability.

#### **Engine Specs:**

- LS7 (427 cu in)
- 505 hp @ 6300 rpm | 470 lb.-ft. @ 4800 rpm
- 11.0:1 compression ratio

#### Trans Specs 2WD:

- 4L70-E four-speed automatic
- Five-pinion gearsets
- 3.06 first gear ratio, 0.70 overdrive ratio
- 30.75 inches long (approx.)

#### Trans Specs Manual:

- -T56 Super Magnum six-speed manual
- Slip-yoke design, 40-tooth reluctor ring
- 2.66 first gear ratio, 0.63 overdrive ratio
- 33.6 inches long (approx.)

#### \*\* Torgue Converter 24217235 requires the purchase of a flywheel kit.

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#### LS376/480 Connect & Cruise Systems

System Components	Part Numbers	
	CPSLS3764804L70E - Automatic	CPSLS3764806LMAN - Manual NEW!
Engine	19301358	19301358
Engine Control System	19258267	19258267
Transmission	19299055	19329795
Torque Converter	19299803	N/A
Transmission Control System	19302405	N/A
**Flywheel Kit	N/A	N/A
Transmission Installation Kit	1925117	19301625

#### LS376/525 Connect & Cruise Systems

System Components	Part Numbers	
	CPSLS3765254L70E - Automatic	CPSLS3765256LMAN - Manual NEW!
Engine	19301360	19301360
Engine Control System	19259261	19259261
Transmission	19299055	19329795
Torque Converter	19299803	N/A
Transmission Control System	19302405	N/A
**Flywheel Kit	N/A	N/A
Transmission Installation Kit	1925117	19301625

#### LS7 Connect & Cruise Systems

System Components	Part Numbers	
	CPSLS74L70E - Automatic	CPSLS76LMAN- Manual NEW!
Engine	19244098	19244098
Engine Control System	19258553	19258553
Transmission	19299055	19329795
Torque Converter	19299802 or 19299803	N/A
Transmission Control System	19302405	N/A
**Flywheel Kit	N/A	N/A
Transmission Installation Kit	1925117	19301625



# About Chevrolet Performance Engine and Transmission Controllers

The Connect & Cruise engine controller and SuperMatic<sup>™</sup> transmission controller are designed for true stand-alone performance in older vehicles. All that's needed to get a vehicle running with the engine controller are power and ground sources, a high-pressure fuel pump and an electric cooling fan. For all engines except the LSA, Chevrolet Performance recommends a 58-psi (400 kPa) fuel pump. The LSA requires a 65-psi (450 kPa) pump.

Chevrolet Performance's specially calibrated engine controller does not utilize a number of features associated with production-model systems, eliminating the possibility of "trouble codes" being set. It also includes a SES (service engine soon) LED indicator embedded in the fuse box.

The SuperMatic<sup>™</sup> transmission controller is the most fully integrated and user-friendly transmission control system on the market. Only a few connections are required to get the transmission ready for operation in your vehicle – and it is designed for tuning-free compatibility for the Connect & Cruise systems' engine control modules.

**NOTE:** Installing an electronically controlled automatic transmission in an older vehicle with a mechanical speedometer requires an aftermarket signal converter.

PERFORMANCE

# ESTABLES Crate Engines

Engines Shown From Left: LSX454R , LSX376-B8, LSX454

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# Uncompromising Design and Unprecedented Power!

LSX crate engines are based on the high-performance LSX Bowtie block, which is designed to support extreme performance combinations, including supercharging, turbocharging and nitrous. That means these factory-engineered high-performance engines are ready for the street and the strip with great durability!

Our range of LSX crate engines includes the economical and boost-ready LSX376-B8 and the dual-purpose LSX454, while the ultimate LSX crate engine – LSX454R – is a 770-horsepower assault weapon designed strictly for winning drag races. It's also Chevrolet Performance's most powerful crate engine ever!

If your car can handle the power, LSX crate engines have what it takes to keep you in front of the competition.





## **Build Boost on a Budget**

Chevrolet Performance takes the economical LSX Bowtie standard-deck block, adds blower-friendly 9.0:1 forged pistons and combines them with the LS3's high-flow, rectangular-port heads to create an affordable foundation for supercharged and turbocharged combinations.

The LSX376-B8 is designed for lower-boost applications, up to about 8 pounds. That's suitable for most supercharger and turbo kits that are designed to be used with production-based applications. This engine is delivered without an intake manifold and other accessories to enable the installer to tailor the induction system to suit the blower or turbo system. Our horsepower and torque ratings are based on testing with the production-style, normally aspirated fuel injection system. Horsepower and torque will vary with a supercharger or turbo system.

If your forced induction system is projected to create more than 8 pounds of boost, Chevrolet Performance recommends the LSX376-B15 (P/N 19299306 – see page 222).

#### LSX376-B8 TECH SPECS

Part Number:	19260831
Engine Type:	LSX-Series Gen IV Small-Block V-8
Displacement (cu in):	376 cu in (6.2L)
Bore x Stroke (in):	4.065 x 3.622 (103.25 x 92 mm)
Block (P/N 19260832):	LSX cast-iron with 6-bolt, cross-bolted main caps
Crankshaft (P/N 12597569):	Nodular iron
Connecting Rods (P/N 12649190):	Powdered metal
Pistons (P/N 19244016):	Forged aluminum
Camshaft Type (P/N 12603063):	Hydraulic roller
Valve Lift (in):	0.551" intake / 0.522" exhaust
Camshaft Duration (@0.050 in):	204° intake / 211° exhaust
Cylinder Heads (P/N 12629063):	LS3 rectangular port; with "as cast" 68cc chambers
Valve Size (in):	2.160 intake / 1.590 exhaust
Compression ratio:	9.0:1
Rocker Arms (P/N 12569167 int):	Investment-cast, roll trunnion
Rocker Arms (P/N 10214664 exh):	Investment-cast, roll trunnion
Rocker Arm Ratio:	1.7:1
Recommended Fuel:	87 octane
Maximum Recommended RPM:	6,600
Reluctor Wheel:	58x
Balanced:	Internal

#### **INSTALLATION NOTES**

- Assembly does not include any electronics
- Intended for pre-1976 street vehicles or any off-road vehicle
- Not intended for marine applications
- Requires LSX Ignition Controller P/N 19171130 for carbureted applications
- Standard LS 6-bolt crank flange
- Assembly shipped without intake manifold or oil pan (dust shield installed for shipment)
- Recommended max boost 8 PSI

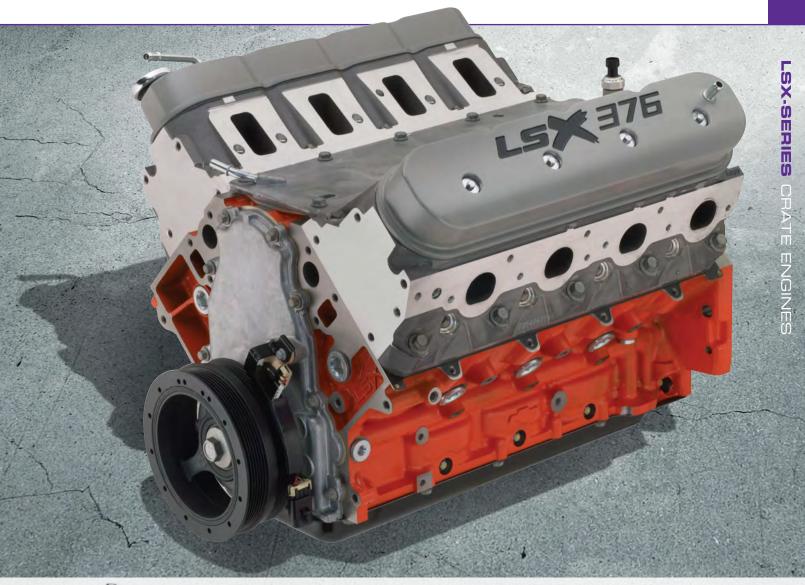


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Chevrolet Performance Crate Engines include a 24-month or 50,000-mile/80,000-kilometer limited warranty.



Chevrolet Performance <u>does not</u> utilize any used or remanufactured parts in this crate engine, except for the starter, alternator and power steering pump.





#### 19300175 SuperMatic<sup>™</sup> 4L85-E **4-Speed Transmission**

Features five-pinion gearsets, heat-treated stator shaft splines, induction-hardened turbine shaft, seven-plate clutch and specific valve-body calibration.

See page 346 for torque converter applications.



## 19212657

**Transmission Controller** Required when using a GM electronically controlled automatic transmission. Includes wiring harness, software and connector for laptop computer.

See page 350 for details

#### **AVAILABLE ENGINE RELATED PARTS & ACCESSORIES**



19244035 LSX-LS3 Single-Plane Standard Deck 4-bbl Manifold Page 268



19301246 Air Inlet Kit for **LS-Based Crate Engine Installation** Page 267

#### LSX376 Completion Components Electronic Fuel Injection LS3 intake manifold

12638197 19257878 lanition coil kit Engine controller kit 19258270 High flow / 60PSI (400kPa) fuel pump

(not available from Chevrolet Performance)

#### **Carburetor Fuel System**

Intake manifold (Single plane)	19244035
Intake manifold (Dual plane)	19244037
Carburetor	19170095
Air cleaner	12342071
Ignition controller	19171130
Ignition coil kit	19257878
Fuel pump	6472657



12638197 LS3 Intake Manifold Assembly Page 266



19212593 Muscle Car **Oil Pan Kit** Page 265



See page 228 for our complete line of LS-Series components



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## Forged Internals Support More Boost!

For builders who want to stretch the performance of a turbocharged or supercharged combination, Chevrolet Performance's LSX376-B15 is the foundation they need! Its durable, all-forged rotating assembly supports up to 15 pounds of boost.

Additionally, the engine is topped off with high-flow, LSX-LS3 6-bolt rectangular-port heads to create an affordable foundation for supercharged and turbocharged combinations. We deliver the LSX376-B15 without an intake manifold and other accessories, allowing you to tailor the induction system and other features to suit the forced-induction setup of your choice.

Our horsepower and torque ratings are based on testing with the production-style, normally aspirated fuel injection system. The power you make with a supercharger or turbo will vary.

#### LSX376-B15 TECH SPECS

Part Number:	19299306
Engine Type:	LSX-Series Gen IV Small-Block V-8
Displacement (cu in):	376 cu in (6.2L)
Bore x Stroke (in):	4.065 x 3.622 (103.25 x 92 mm)
Block (P/N 19260095):	LSX cast-iron with 6-bolt, cross- bolted main caps
Crankshaft (P/N 12603616):	Forged steel
Connecting Rods (P/N 12604857):	Forged powdered metal
Pistons (P/N 19259381):	Forged aluminum
Camshaft Type (P/N 12638426):	Hydraulic roller
Valve Lift (in):	0.560" intake / 0.555" exhaust
Camshaft Duration (@0.050 in):	210° intake / 230° exhaust
Cylinder Heads (P/N 19201805):	LSX-LS3 rectangular port; with "as cast" 68cc chambers and 6-bolt attachment
Valve Size (in):	2.160 intake / 1.550 exhaust
Compression ratio:	9.0:1
Rocker Arms (P/N 12569167 int):	Investment-cast, roll trunnion
Rocker Arms (P/N 10214664 exh):	Investment-cast, roll trunnion
Rocker Arm Ratio:	1.7:1
Recommended Fuel:	87 octane
Maximum Recommended RPM:	6,600
Reluctor Wheel:	58x
Balanced:	Internal

#### **INSTALLATION NOTES**

- Assembly does not include any electronics
- Intended for pre-1976 street vehicles or any off-road vehicle
- Not intended for marine applications
- Requires LSX Ignition Controller P/N 19171130 for carbureted applications
- LSX 8-bolt crank flange
- Assembly shipped without intake manifold or oil pan (dust shield installed for shipment)
- Recommended max boost 15 PSI

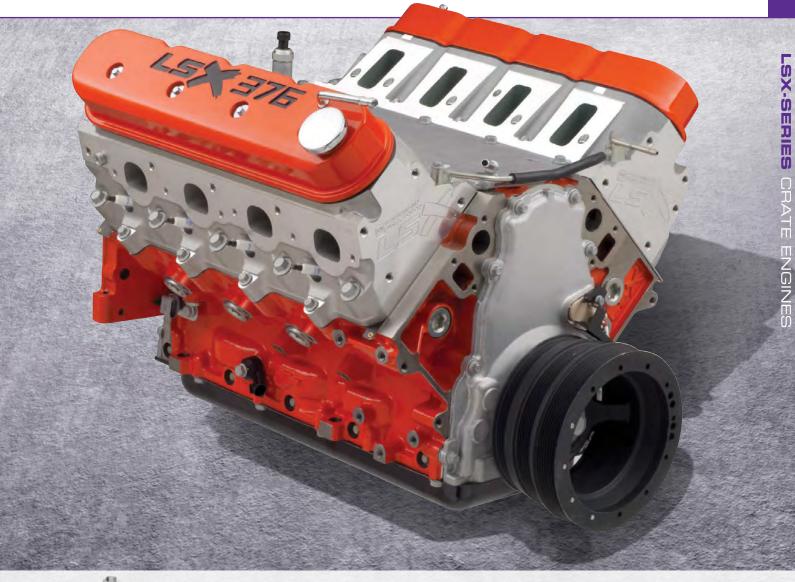


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Chevrolet Performance Crate Engines include a 24-month or 50,000-mile/80,000-kilometer limited warranty.



Chevrolet Performance <u>does not</u> utilize any used or remanufactured parts in this crate engine, except for the starter, alternator and power steering pump.





#### 19300175 SuperMatic™ 4L85-E 4-Speed Transmission

Features five-pinion gearsets, heat-treated stator shaft splines, induction-hardened turbine shaft, seven-plate clutch and specific valve-body calibration.

See page 346 for torque converter applications.



See page 228 for our complete line of LS-Series components

## 19212657

**Transmission Controller** Required when using a GM electronically controlled automatic transmission. Includes wiring harness, software and connector for laptop computer.

See page 350 for details

#### **AVAILABLE ENGINE RELATED PARTS & ACCESSORIES**



**19244035** LSX-LS3 Single-Plane Standard Deck 4-bbl Manifold Page 268



**19301246 Air Inlet Kit for LS-Based Crate Engine Installation** *Page 267* 



**22901367** LSA Intercooler Fluid Pump Page 267



**12638197** LS3 Intake Manifold Assembly Page 266



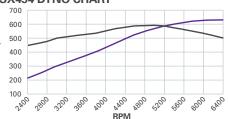
**19212593 Muscle Car Oil Pan Kit** *Page 265* 

**Transmission** Page 351

19329795

T56 Super Magnum Six-Speed Manual





## An LSX with Big-Block Power!

With the LSX Bowtie block, we've built a 21st century 454 with the latest technology. It's lighter and more compact than an original Big-Block 454 – while delivering Big-Block output of 620 hp and 590 lb-ft – but requires no more space under the hood than a production LS engine.

The LSX454 is filled with an all-forged, super-tough rotating assembly and features a pair of our deep-breathing LSX six-bolt cylinder heads. It also comes dressed with great-looking, orange powder-coated valve covers with engraved "LSX454" logos.

Chevrolet Performance delivers the LSX454 without an intake manifold and other accessories. Use LSX-LS7 singleplane carbureted intake manifold P/N 19244033. The LSX454 valve covers do not include provisions for mounting ignition coil brackets. Aftermarket or custom relocation brackets must be obtained. It also includes an 8-bolt crankshaft flange that may require an adapter for use with some transmissions.

#### LSX454 TECH SPECS

19260833
LSX-Series Gen IV Small-Block V-8
454 cu in (7.4L)
4.185 x 4.125 (106.3 x 104.8 mm)
LSX cast-iron with 6-bolt, cross-bolted main caps
4340 forged steel with 8-bolt flange
4340 forged steel
Forged aluminum
Hydraulic roller
0.648" intake / 0.648" exhaust
236° intake / 246° exhaust
Aluminum LSX-LS7 port; with "as cast" 70cc chambers
2.200 titanium intake/1.610 hollow, sodium-filled exhaust
11.0:1
Investment-cast, roll trunnion
Investment-cast, roll trunnion
1.8:1
92 octane
6,500
58x
Internal

#### **INSTALLATION NOTES**

- Assembly does not include any electronics
- Requires LS-7 pattern intake manifold
- Intended for pre-1976 street vehicles or any off-road vehicle
- Not intended for marine applications
- Requires LSX Ignition Controller P/N 19171130 when using a carburetor
- Requires the purchase and installation of an oil pan (see page 265) (dust shield installed for shipment)
- LSX 8-bolt crank flange
- Requires premium fuel

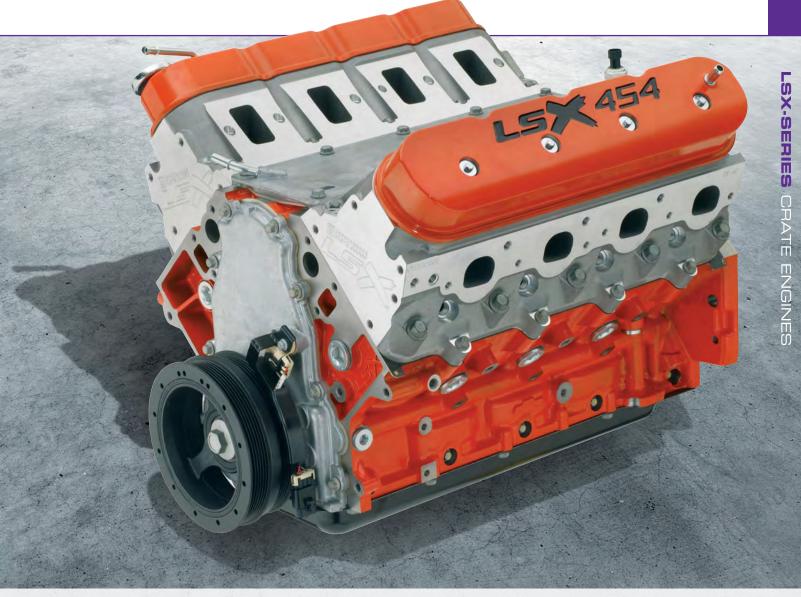


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Chevrolet Performance Crate Engines include a 24-month or 50,000-mile/80,000-kilometer limited warranty.



Chevrolet Performance <u>does not</u> utilize any used or remanufactured parts in this crate engine, except for the starter, alternator and power steering pump.





#### 19300175 SuperMatic™ 4L85-E 4-Speed Transmission

Features five-pinion gearsets, heat-treated stator shaft splines, induction-hardened turbine shaft, seven-plate clutch and specific valve-body calibration.

See page 346 for torque converter applications.



**19244481** Manual **19299840** Automatic **LSX454** Engine **Controller Kit** See page 273

#### See page 273

#### **AVAILABLE ENGINE RELATED PARTS & ACCESSORIES**



**12644568** LS7 Production Intake Manifold Assembly Page 266 //



**19301246** Air Inlet Kit for LS-Based Crate Engine Installation Page 267

**19244033** LSX-LS7 Standard Deck 4-bbl Manifold Page 268

See page 228 for our complete line of LS-Series components

#### LSX454 Completion components Electronic Fuel Injection

Electronic Fuel Injection	
LS7 intake manifold	12644568
Ignition coil kit	19257878
Engine controller kit	19244481
High flow / 60PSI (400kPa	) fuel pump
(not available from Chevrolet Performance)	

#### **Carburetor Fuel System**

Intake manifold (Single plane)	19244033
Carburetor	19170095
Air cleaner	12342071
Ignition controller	19171130
Ignition coil kit	19257878
Fuel pump	6472657



**19171130** LSX Controller Page 274







## **Our Most Powerful Engine Ever!**

Quite simply, the LSX454R drag racing engine is the most powerful crate engine ever from Chevrolet Performance – and it's designed to do one thing: help you win races with great durability.

For the record, this 13.1:1, naturally aspirated and single Dominator-fed big-inch LS engine is officially rated at 770 horsepower at a 7,000 rpm and 612 lb.-ft. of torque at 5,600 rpm. It breathes through our high-flow LSX DR six-bolt cylinder heads that have 313cc intake runners. More than power, this engine was built for durability. Its bottom end includes our tough LSX Bowtie cylinder block and it's filled with an all-forged rotating assembly.

During development, engineers simulated the equivalent of 600 back-to-back drag strip passes on the engine dyno, ensuring it would stand up to years of performance without the need for major maintenance. It's an engine you can depend on to go round after round, season after season!

#### LSX454R TECH SPECS

Part Number:	19260835
Engine Type:	LS-Series Small-Block V-8
Displacement (cu in):	454 cu in (7.4L)
Bore x Stroke (in):	4.185 x 4.125 (106.3 x 104.8 mm)
Block (P/N 19260099):	LSX cast iron with 6-bolt cylinder head attachment
Crankshaft (P/N 19244018):	4340 forged steel
Connecting Rods (P/N 19166964):	4340 forged steel
Pistons: (P/N 19166958):	4032 forged aluminum
Camshaft Type (P/N 19166975):	Mechanical roller
Camshaft Lift (in):	.738 intake / .738 exhaust
Camshaft Duration (@.050 in):	250° intake / 270° exhaust
Cylinder Heads (P/N 19166979):	Drag race cylinder heads 6-bolt LSX aluminum
Valve size (in):	2.250" x 6.370" intake 1.625" x 6.400" exhaust
Compression Ratio:	13.1:1
Rocker Arms (P/N 19201808):	Shaft mounted with needle bear- ing fulcrum and tip
Rocker Arm Ratio:	1.9:1
Recommended Fuel:	Race fuel (110 octane minimum)
Maximum rpm:	7,100
Reluctor Wheel:	58x
Balanced:	Internal

#### **INSTALLATION NOTES**

- Intended for off-road use only!
- Requires Race Fuel (110 Octane Minimum)
- Not intended for Marine Use
- Requires LSX Ignition Controller P/N 19171130
- Oil pan not included (see page 265) (Dust shield installed for shipment)
- LSX 8-bolt crank flange
- Uses 4500-series carburetor (included)



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Chevrolet Performance Racing Crate Engines are excluded from limited warranty.



Chevrolet Performance <u>does not</u> utilize any used or remanufactured parts in this crate engine, except for the starter, alternator and power steering pump.

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AVAILABLE ENGINE RELATED PARTS & ACCESSORIES

See page 228 for our complete line of LS-Series components

LSI

9



**19171130** LSX Controller Page 274



**19212593 Muscle Car Oil Pan Kit** Page 265









## Your Only Source for Factory-Engineered LS **Performance Parts**

The LS engine family is the performance platform for a new generation of engine builders and nobody offers more parts to build them than Chevrolet Performance.

From blocks to heads, rotating parts to manifolds, controllers, accessory drive systems, and validated, too, so you can be sure they're going to fit, perform and last like nothing else in the aftermarket.

For maximum LS performance on the street or track, rely on Chevrolet Performance's LSX series of components, including blocks and heads with six-bolt clamping strength and tough rotating parts that will help you build big power durably!



Blocks and Components Page 230



Pistons and Pistons Rings Page 255



Accessory Drive Systems



Valve Components Page 249

L.H. L.H. I.H. I.J

Valve Covers Page 250

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**Engine Control Modules** and Harnesses Page 272

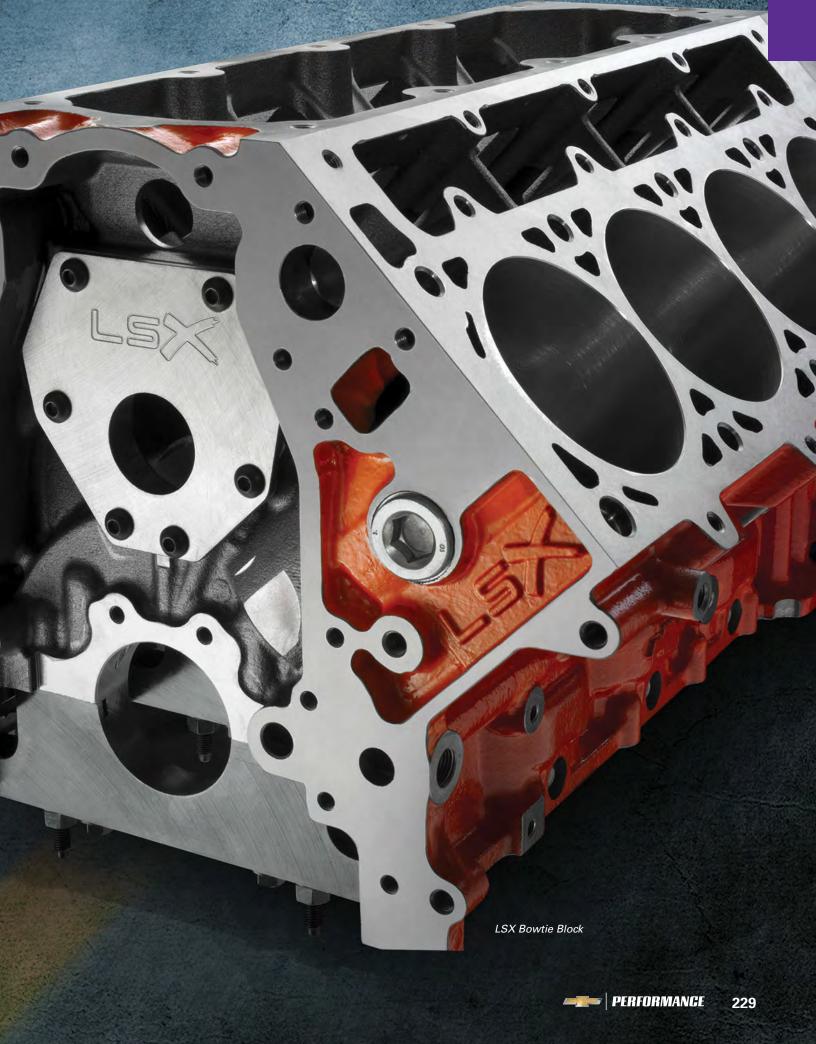
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Oil Pans, Oil Pumps, Gaskets and Components, Page 265

Intake Manifolds Page 266





# **Chevy LS-Series Blocks Quick Reference Chart**

#### **LS-Series Blocks**

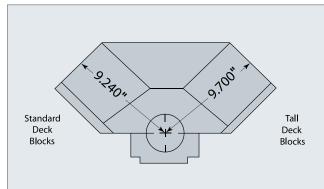
Origin	Part Number	Material	Deck Height	Bore	Main Bolt	Cap Material	Crank Jnl Dia.	Oiling	Rear Main Seal	Max Stroke	Max HP	Usage	Page Number
LS1/LS6	12561166	Alum	9.240"	3.898"	6	Iron	Std. LS (2.56")	Wet/Dry	1 pc	4.00"	450	Street	231
Gen IV 6.0L	12609999	Iron	9.240"	4.000"	6	Iron	Std. LS (2.56")	Wet/Dry	1 pc	4.00"	500	Street	231
LSA	12623968	Alum	9.240"	4.065"	6	Nodular Iron	Std. LS (2.56")	Wet/Dry	1 pc	4.50"	800	Street/Pro	232
LS9	12623969	Alum	9.240"	4.065"	6	1045 Steel	Std. LS (2.56")	Wet/Dry	1 pc	4.50"	900	Street/Pro	232
LS2	12602691	Alum	9.240"	4.000"	6	Iron	Std. LS (2.56")	Wet/Dry	1 pc	4.00"	450	Street	233
LS3/L92	12623967	Alum	9.240"	4.065"	6	Iron	Std. LS (2.56")	Wet/Dry	1 pc	4.00"	525	Street	233
LS7	19213580	Alum	9.240"	4.125"	6	Steel	Std. LS (2.56")	Wet/Dry	1 pc	4.10"	550	Street	234
LT1	19329617	Alum	9.240"	4.065"	6	Nodular Iron	Std. LS (2.56")	Wet/Dry	1 pc	4.125"	465	Street	234
C5R	12480030	Alum	9.240"	4.117"-4.160"	6	Steel	Std. LS (2.56")	Wet/Dry	1 pc	4.10"	900	Pro	235
LSX	19260093*	Iron	9.260"	3.880"	6	1045 Steel	Std. LS (2.56")	Wet/Dry	1 pc	4.25"	1500+	Street/Pro	237
LSX	19260100*	Iron	9.720"	3.880"	6	1045 Steel	Std. LS (2.56")	Wet/Dry	1 pc	4.50"	1500+	Street/Pro	237
LSX	19260095**	Iron	9.240"	4.065"	6	1045 Steel	Std. LS (2.56")	Wet/Dry	1 pc	4.25"	1500+	Street/Pro	237
LSX	19260099**	Iron	9.240"	4.185"	6	1045 Steel	Std. LS (2.56")	Wet/Dry	1 pc	4.25"	1500+	Street/Pro	237

\*Semi-finished block

\*\*Full machined block

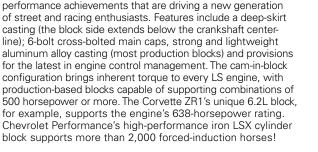
#### **Deck Height Diagram**

**PRODUCTION CYLINDER BLOCKS** 



The LS-Series cylinder block is the foundation for the serious

A LS1/LS6 5.7L Bare Block (top)



Whether you're building a mild street engine or an Outlaw racing engine, starting with a strong LS cylinder block brings the assurance that you'll make the power you need with a durable foundation.





A. LS1/LS6 5.7L iron main bearing cap



LS1/LS6 5.7L Bare Block (rear) A



LS1/LS6 5.7L Bare Block (bottom) A



LS1/LS6 5.7L block – aluminum block with 6-bolt main caps A

#### A. 12561166

#### LS1/LS6 5.7L Bare Block

- Direct replacement for 2001-2004 LS1 and LS6 Corvette 5.7L
- Production 319-T5 aluminum block with iron sleeves
- Production oiling system
- 6-bolt iron main bearing caps 9.240" deck height
- •
- Use LS1/LS6 cylinder heads only
- 3.898" finished bore (99.0mm) •
- No provision for Active Fuel Management Tested to over 400 horsepower! •

#### 12609999 NEW!

- Gen IV 6.0L Cast-Iron Block (not shown)
- Direct replacement for LY6 and L96 production engines
- Production cast-iron block
- Production oiling system •
- 6-bolt iron main bearing caps •
- 4.000" Bore
- 9.240" deck height •
- No provision for Active Fuel Management Supports 500+ horsepower!
- •

LS-Series Blocks Continued

#### 12623968

#### LSA 6.2L Bare Block (not shown)

- Direct replacement for 2009-2012 Cadillac CTS-V 6.2L supercharged engine and 2012 ZL -1 Camaro
- Production cast-aluminum block with iron sleeves
- Production oiling system
- 6-bolt iron main bearing caps
- 9.240" deck height
- Not for use with LS7 or LSX-LS7 heads
- 4.065" finished bore (103.25mm)
- Includes oil squirters (8) for piston cooling
- No provision for active fuel management
- Rated for more than 550 horsepower

#### A. 12623969

#### LS9 6.2L Bare Block

- Direct replacement for 2009-2012 Corvette ZR1 6.2L supercharged engine
- Production cast-aluminum block with iron sleeves
- Deck plate honed
- Production oiling system
- 6-bolt steel main bearing caps with dowel pins
- 9.240" deck height
- Not for use with LS7 or LSX-LS7 heads
- 4.065" finished bore (103.25mm)
- Includes oil squirters (8) for piston cooling
- No provision for active fuel management
- Rated for more than 635 horsepower



**\_**\_\_\_

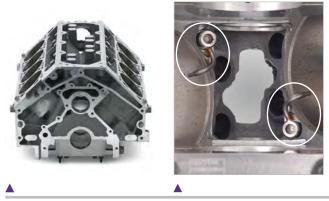
A LS9 6.2L Bare Block (rear)



A LS9 6.2L (bottom)



A LS9 6.2L (front



A LS9 6.2L (rear, top)

A LSA-LS9 6.2L Piston Oilers



LS3/L92 Aluminum 6.2L Bare Block (front) B



LS3/L92 Aluminum 6.2L Bare Block (bottom) B



LS3/L92 Aluminum 6.2L Bare Block (rear) B

LS3/L92 Aluminum 6.2L B

Bare Block (bottom)



LS3/L92 Aluminum 6.2L B Bare Block (bottom)

#### 12602691

#### LS2 Aluminum 6.0L Bare Block (not shown)

- Direct replacement for 2005-2008 LS2 Corvette, SSR, GTO 6.0L and TrailBlazer SS
- Production 319-T5 aluminum block with iron sleeves
- Production oiling system
- Forged powered metal 6-bolt main bearing caps
- 9.240" deck height
- Use only LS1, LS6, LS2, L92/LS3-style cylinder heads
- 4.000" finished bore (101.6mm)
- Provisions for Active Fuel Management
- Great for stroker cranks for even more cubes
- Tested to over 450 horsepower!

#### B. 12623967

#### LS3/L92 Aluminum 6.2L Bare Block

- Direct replacement for: 2009-2012 L9H 2010-2012 L94 2008-2013 LS3 2010-2013 L99 2007-2008 L92
  - Production aluminum block with iron sleeves
- Production oiling system
- Forged powered metal 6-bolt main bearing caps
- 9.240" deck height
- Use only LS1, LS6, LS2, L92/LS3-style cylinder heads
- 4.065" finished bore (103.25mm)
- Provisions for Active Fuel Management
- Great for stroker cranks for even more cubes
- Tested to over 500 horsepower!

## **LS-SERIES** COMPONENTS

LS-Series Blocks Continued

#### A. 19213580

- LS7 7.0L Corvette Bare Block
- Direct replacement for 2006-2014 7.0L LS7 engine • Production 319-T5 aluminum block with pressed-in
- iron sleeves
- Production oiling system
- 6-bolt dowel located steel main bearing caps
- 9.240" deck height
- For use with any LS or LSX series head
- 4.125" finished bore (104.78mm), deck plate honed
- Siamese cylinder bores for large bore size
- No provision for active fuel management
- Based on C5R block development Tested to over 500 horsepower!

#### Parts required to complete your LS7 Block:

Part Number	<b>Ω</b> ΤΥ	Description
12570471	1	Valley Cover
11588949	6	Plug
12589016	1	Camshaft Retainer
11611351	1	Plug
11610259	1	Plug, Cylinder Head
11515756	5	M8 x 1.25 Flanged Hex Head Bolt
12570326	4	Dowel, Cylinder Head Locating
12639250	1	Rear Cover Assembly
12573460	1	Oil Plug
12618422	1	Windage Tray
09427693	4	Plug
01453658	2	Dowel, Bell housing Locating
12561663	1	Plug
12616646	1	Oil Pressure Sensor
12585546	1	Crankshaft Position Sensor
12598293	1	Cover
12585673	1	Seal - Front Cover
12633904	1	Gasket - Front Cover
11515758	8	Bolt
12591720	1	Sensor
11588712	1	Bolt

#### 25534412

#### Oil Hose Adapters (shown on page 270)

- Kit adapts the production LS7 oil pan to aftermarket ANstyle hoses for aftermarket dry sump oil tanks
- Bolts directly to LS7 oil pan, and has AN male outlet for AN -12 fittings
- Includes 1 adapter, 2 fittings, 2 bolts, and 2 sealing gaskets

#### 19329617 NEW!

- LT1 Aluminum 6.2L Bare Block (not shown)
- Direct replacement for 2014-2015 Stingray LT1
- Production Aluminum block with iron sleeves •
- Production Oiling System •
- 9.240" deck height
- Nodular Iron 6-bolt Main Bearing Caps
- Use only with LT1 style cylinder heads
- 4.065" finished bore (103.25mm)
- Provisions for Active Fuel Management
- Provision for Direct Fuel Injection



A LS7 7.0L Corvette Bare Block (bottom, rear)



A LS7 7.0L Corvette Bare Block (bottom, front)



A LS7 7.0L Corvette Bare Block (rear)



Aluminum C5R Racing Block (bottom, rear) B



Aluminum C5R Racing Block (bottom, front) B



Aluminum C5R Racing Block (front) B

#### B. 12480030 Aluminum C5R Racing Block

# The ultimate GM aluminum LS block, the C5R was originally designed for Chevrolet's factory-backed Corvette racing program. It was developed to support more than 440 cubic inches and up

It was developed to support more than 440 cubic inches and up to 900 horsepower – and it proved itself by powering the Corvette team to wins at LeMans, Daytona and nearly every track they encountered. This is a non-production, purpose-built cylinder block manufactured with proprietary materials and machined to the highest tolerances – and using premium, racing-spec hardware. If you're looking for the ultimate aluminum cylinder block to support your horsepower desires, the race-proven C5R is it!

- Premium "hipped"\* and X-rayed 356-T6M aluminum-alloy block casting
- 9.240" deck height
- Production-style oiling system
- 6-bolt dowel-located steel main bearing caps
- 4340 premium map cap fasteners
  - For use with any LS or LSX series head
- Unique cylinder liner material for maximum durability
  - Siamesed cylinders to support larger bores
- 4.117" finished bore
- 4.160" maximum bore
- Fully blueprinted and squared
- Production camshaft location and cam bores
- Includes premium head studs
- Anodized aluminum O-ring core plugs
- No Active Fuel Management provisions
- Supports more than 900 horsepower

\*HIP is the acronym for Hot Isostatic Pressure. This process puts the blocks in a sealed vessel where a vacuum is first used to remove room air and any possible contaminants. The vessel is filled with high pressure nitrogen (up to 30,000-psi) and then heated to the required temperature and sustained for a determined amount of time. The cooling process is also a controlled procedure to ensure maximum strength and proper heat treat. This extreme high pressure and heat removes almost 100% of the internal porosities that are generated during the casting process. The material integrity, strength and fatigue life increases significantly.



#### LSX BOWTIE BLOCK

Delivering the seemingly impossible combination of professional racing-level strength and entry-level affordability, the LSX Bowtie Block is the next revolution in high-performance engine-building. This durable iron-block casting is based primarily on GM's production LS7 block, but designed with more material in key areas – including a thicker deck and bores – to support displacements of 454 cubic inches or more, and unique six-bolts-per-cylinder-head-clamping capability that enables forced-induction and nitrous combinations of greater than 2,000 horsepower.

Because the LSX Bowtie block is based on production LS blocks, all of the LS-Series Gen IV cylinder heads, crankshafts, oil pans, camshafts, and accessories bolt right up to it. There is also a tall-deck version for building even larger engines. Chevrolet Performance delivers the LSX Bowtie Block semi-finished, allowing you to finish it to your needs. Whether you're building a "tame" 500-horse street engine for your hot rod or a 1,700 horsepower turbo engine for an Utlaw drag racer, the LSX Bowtie Block is the foundation for an unbeatable combination – at an unbeatable price!

#### LSX Bowtie Block specs and features include:

- CNC-machined cast iron block
- True priority main oiling
- 6-head bolts per cylinder
- Standard 4.400" bore spacing
- Extra-thick siamese cylinder bores
- Semi-finished, machined thicker decks
- LS7-style, 6-bolt dowel-located billet main bearing caps
- Wet-sump and dry-sump oiling capability
- Production-style deep-skirt head bolt holes
  Production bolt hole and thread sizes
- Production bolt hole and thread sizes
- Maintains production exterior accessory mounting provisions
- Front motor plate mounting holes added
  Additional material cast around cam bearings for
- greater strength
- 8mm exterior/interior fifth- and sixth-head bolt holes
- Standard 0.842" lifter bores
- Accommodates all LS oil pumps and oil pans
- External oil pump feed (rear of block)
  Main web hav-to-bay breathing holes to supp.
- Main web bay-to-bay breathing holes to support greater horsepower
- Includes unique cam retainer, rear cover and lifter retainers

For the advanced LSX competition engine builder, you will fully enjoy the following features of the new LSX Bowtie Block:

- Front oil feed holes can be plugged/restricted for mechanical flat tappet or mechanical roller lifter applications
- Can be machined safely to 9.200" deck height
- Maximum 4.200" bore at .200" minimum wall thickness (naturally aspirated applications)
- Head bolt holes can be machined for 1/2" studs
- Cam bores can be machined to accept 60mm roller bearings
- Can be machined for larger diameter lifters and/or 1.060" bronze bushings
- Front oil feed lines can be plugged and external oil pump and/or aftermarket dry sump systems can be used via oil pump feed at rear of block – may be required with certain large stroke/aluminum rod combinations
- Belt cam drive systems can be accommodated some machining will be required
- Front motor plate can be used for racing chassis applications (sprint car, drag racing, truck pulling, etc.).
- Threaded water plugs can be used for external heaters or coolers
- Extra stock for main bearing align-honed
- 400 mPa Tensile strength iron



A LSX Bowtie Block (bottom, front)



A LSX Bowtie Block (top, rear)



A LSX Bowtie Block (front)

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LSX Bowtie Block (bottom, front) A





Lifter Boss Detail A

Bay-to-Bay Breathing A Pocket Detail



\_\_\_\_\_**\_**\_\_

Deck Detail A

#### Semi-finished Blocks

#### A. 19260093

- LSX Bowtie Block (Standard Deck)
- 3.880" finished siamese cylinder bores
- 9.260" semi-finished standard deck height (ready to be decked)
- 4.250" maximum stroke (professional engine builders only!)
- Capable of 364- to 482-cubic-inch displacements
- Orange powder-coated finish
- Accepts all LS and LSX Series heads, cranks, cams, etc.
- Approximate finished weight is 225 pounds

#### 19260100

- LSX Tall Deck Block (not shown)
- 3.880" finished siamese cylinder bores
- 9.720" semi-finished standard deck height (ready to be decked)
- 4.500" maximum stroke (small base circle camshafts required)
- Capable of 364- to 500-cubic-inch displacements or more!
- Orange powder-coated finish
- Accepts Gen IV LS and LSX Series heads, cranks, cams, etc.
- Approximate finished weight is 250 pounds

#### LSX Blocks include the following:

	-	
19244460	Cam Thrust Plate	
19166179	Rear Cover	
19166182	Tappet Guides	

#### Other service parts for your LSX Block:

19166178	Cam Thrust Plate, O-Ring, Gasket
19166180	Rear Cover, O-Ring
19166181	Rear Cover, O-Ring Seal
19211434	Main Cap Dowel (10-piece kit)

#### **Finished Blocks**

LSX finished blocks are completely machined and are ready for assembly. Save time and money.

#### 19260095

#### LSX376 Production Block (not shown)

- 4.065" bore
- Fully CNC machined
- Deck plate honed
- Align-honed main bearings
- Deck height 9.240" (production)
- Billet-steel main caps
- Includes all hardware
- Used in LSX 376 crate engine

#### 19260099

- LSX454 Production Block (not shown)
- 4.185" bore
- Fully CNC machined
- Deck plate honed
- Align-honed main bearings
- Deck height 9.240" (production)
- Billet-steel main caps
- Includes all hardware
- Used in LSX454 crate engine

#### CYLINDER BLOCK COMPONENTS

A. Gen III Bare Block Completion Components

Part Number	QTY	Description
12577927	1	Valley Cover
12561211	1	Cam Sensor
12561243	1	Front Cover (with seal)
1453658	2	Transmission Alignment Dowel
12589016	1	Cam Retainer Plate
11561455	4	Cam Retainer Bolts
12588670	1	Timing Chain Damper
12560228	1	Crankshaft Sensor
12570326	4	Head Locating Dowels
12551162	4	Lifter Guide
12639250	1	Rear Cover (with seal)
varies	-	Required Water and Oil Plugs
varies	-	Required Mounting Bolts

#### **B.** 19299099

#### LSX Block Completion Kit

 Complete your LSX or GEN IV production engine with production components

Part Number	QTY	Description	
12633906	1	Front Engine Cover	
12599296	1	Valley Cover	
12570326	4	Head Locator Dowels	
12585546	1	Crankshaft Sensor	
11515756	1	Crank Sensor Bolt	
12588670	1	Timing Chain Damper	

#### C. 25534412

**Oil Hose Adapters** 

- Kit adapts the production LT1 and LS7 Oil Pan to aftermarket AN-style hoses for aftermarket dry sump oil tanks
- Bolts directly to oil pan, and has AN male outlet for AN -12 fittings
- Includes 1 adapter, 2 fittings, 2 bolts, and 2 sealing gaskets

#### 89017877

#### Main Bearing (not shown)

- Positions 1,2,4,5
- Requires 4 per engine
- For LS7 and LS9 engines

#### 89017808

#### Main Bearing (not shown)

- Thrust bearing, position 3
- For LS7 and LS9 engines

#### 89017571

#### Main Bearing (not shown)

- Positions 1,2,4,5
- Requires 4 per engine
- For non-LS7 engines

#### 89017572

#### Main Bearing (not shown)

- Thrust bearing, position 3
- For non-LS7 engines



A Bare Block Completion Components, Gen III



B LSX Block Completion Kit



C Oil Hose Adapter



LS2, LS3 Front Timing Cover D



LS Front Distributor Drive Cover E



FRONT COVERS

#### 12561243

- LS1, LS6 Front Timing Cover (not shown)
- For LS1 and LS6 engines
- No cam sensor

#### D. 12633906

- LS2, LS3 Front Timing Cover
- Includes seals and bolts
- For LS2 and LS3 engines
- Gen IV cam sensor included

#### 12594939

#### L92 Front Timing Cover (not shown)

- Includes seals and bolts
- For engines with VVT such as L92
- Gen IV cam sensor included

#### 12598293

#### LS7 Front Timing Cover (not shown)

- Includes seals and bolts
- Also fits LS9 engines
- Required for 2-stage oil pump clearance
- Gen IV cam sensor included

#### E. 88958679

•

#### LS Front Distributor Drive Cover

- Assembly is manufactured for applications where a 4-bbl carburetor and distributor are required
- For all LS-Series engines except LS7 and LS9

**NOTE:** Distributor and mechanical fuel pump not included. Uses Small-Block Ford-style distributor and mechanical fuel pump. Special water pump, accessory drive and damper required.

#### 12633904

#### Front Cover Gasket (not shown)

• For all LS-Series engines

#### 12585673

- Front Crank Seal (not shown)
- For all LS-Series engines

#### 11515758

#### Front Cover Bolt (not shown)

- Requires 8 per engine
- For all LS-Series engines

#### **REAR COVERS**

#### F. 12639250

- Rear Block Cover
  - Includes seals and bolts
  - For all production LS engine blocks (will not work on LSX blocks)

#### 19166179

#### LSX Rear Block Cover (not shown)

- Does not include bolts or seals
- For use on LSX blocks only

#### 89060436

#### Rear Crank Seal (not shown)

For all LS-Series engines

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#### **LS-Series Cylinder Heads**

12629049         Bare LS2 & LS6         Aluminum         210         15 deg         64.5         2.000         1.550         Cathedral         Std LS         Bolt-down         Bare LS2/LS6           12629051         Bare L92         Aluminum         260         15 deg         70         2.165         1.590         L92         Std LS         Bolt-down         Bare L92           12629064         Stock L92         Aluminum         260         15 deg         70         2.165         1.590         L92         Std LS         Bolt-down         Bare L92           12629063         Stock LS3         Aluminum         260         15 deg         68.4         2.165         1.590         L92         Std LS         Bolt-down         Hollow/solid           12629051         Bare LS3         Aluminum         260         15 deg         70         2.165         1.590         L92         Std LS         Bolt-down         Bare LS3           12629051         Bare LS3         Aluminum         260         15 deg         68.5         2.165         1.590         L92         Std LS         Bolt-down         Bare LS3           12629051         Bare LS7         Aluminum         270         12 deg         70         2.200	Page Number
12629064         Stock L92         Aluminum         260         15 deg         70         2.165         1.590         L92         Std LS         Bolt-down         Solid stem valves           12629063         Stock LS3         Aluminum         260         15 deg         68.4         2.165         1.590         L92         Std LS         Bolt-down         Hollow/solid           12629063         Stock LS3         Aluminum         260         15 deg         68.4         2.165         1.590         L92         Std LS         Bolt-down         Hollow/solid           12629051         Bare LS3         Aluminum         260         15 deg         70         2.165         1.590         L92         Std LS         Bolt-down         Bare LS3           88958758         CNC LS3         Aluminum         276         15 deg         68.5         2.165         1.590         L92         Std LS         Bolt-down         Hollow/solid           12578450         Bare LS7         Aluminum         270         12 deg         70         2.200         1.610         LS7         Std LS         Bolt-down         Bare LS7           12578449         Stock LS7         Aluminum         270         12 deg         70         2.200	N/S
12629063         Stock LS3         Aluminum         260         15 deg         68.4         2.165         1.590         L92         Std LS         Bolt-down         Hollow/solid           12629051         Bare LS3         Aluminum         260         15 deg         70         2.165         1.590         L92         Std LS         Bolt-down         Bare LS3           88958758         CNC LS3         Aluminum         276         15 deg         68.5         2.165         1.590         L92         Std LS         Bolt-down         Hollow/solid           12578450         Bare LS7         Aluminum         270         12 deg         70         2.200         1.610         LS7         Std LS         Bolt-down         Bare LS7           12578449         Stock LS7         Aluminum         270         12 deg         70         2.200         1.610         LS7         Std LS         Bolt-down         Bare LS7           12578449         Stock LS7         Aluminum         270         12 deg         70         2.200         1.610         LS7         Std LS         Bolt-down         Titanium/sodium-filled value filled	N/S
12629051         Bare LS3         Aluminum         260         15 deg         70         2.165         1.590         L92         Std LS         Bolt-down         Bare LS3           88958758         CNC LS3         Aluminum         276         15 deg         68.5         2.165         1.590         L92         Std LS         Bolt-down         Hollow/solid           12578450         Bare LS7         Aluminum         270         12 deg         70         2.200         1.610         LS7         Std LS         Bolt-down         Bare LS7           12578449         Stock LS7         Aluminum         270         12 deg         70         2.200         1.610         LS7         Std LS         Bolt-down         Bare LS7           12578449         Stock LS7         Aluminum         270         12 deg         70         2.200         1.610         LS7         Std LS         Bolt-down         Bare LS7           1328743         LS9 CNC         Aluminum         276         15 deg         68.4         2.165         1.590         L92         Std LS         Bolt-down         Titanium/sodium-filled value	241
88958758         CNC LS3         Aluminum         276         15 deg         68.5         2.165         1.590         L92         Std LS         Bolt-down         Hollow/solid           12578450         Bare LS7         Aluminum         270         12 deg         70         2.200         1.610         LS7         Std LS         Bolt-down         Bare LS7           12578449         Stock LS7         Aluminum         270         12 deg         70         2.200         1.610         LS7         Std LS         Bolt-down         Bare LS7           12578449         Stock LS7         Aluminum         270         12 deg         70         2.200         1.610         LS7         Std LS         Bolt-down         Titanium/sodium-filled value           19328743         LS9 CNC         Aluminum         276         15 deg         68.4         2.165         1.590         L92         Std LS         Bolt-down         Titanium/sodium-filled value	241
12578450         Bare LS7         Aluminum         270         12 deg         70         2.200         1.610         LS7         Std LS         Bolt-down         Bare LS7           12578449         Stock LS7         Aluminum         270         12 deg         70         2.200         1.610         LS7         Std LS         Bolt-down         Bare LS7           19328743         LS9 CNC         Aluminum         276         15 deg         68.4         2.165         1.590         L92         Std LS         Bolt-down         Titanium/sodium-filled value	N/S
12578449         Stock LS7         Aluminum         270         12 deg         70         2.200         1.610         LS7         Std LS         Bolt-down         Titanium/sodium-filled va           19328743         LS9 CNC         Aluminum         276         15 deg         68.4         2.165         1.590         L92         Std LS         Bolt-down         Titanium/sodium-filled va	241
<b>19328743</b> LS9 CNC Aluminum 276 15 deg 68.4 2.165 1.590 L92 Std LS Bolt-down Titanium/sodium-filled va	N/S
	ves 242
12626958 LSA Cylinder Head Aluminum 260 15 deg 68.4 2.185 1.590 L92 Std LS Bolt-down CTS-V and Z-28 Assembly	ves 241
	242
25534393 C5R Aluminum 210 11 deg 38 2.180 1.630 C5R Std LS Shaft As-cast, no seats/guides	243
19201807         LSX-L92 Small Bore         Aluminum         260         15 deg         70         2.000         1.550         L92         Std LS         Bolt-down         Solid/solid valves	244
19201805         LSX-LS3         Aluminum         260         15 deg         70         2.160         1.590         L92         Std LS         Bolt-down         Hollow/solid valves	244
19201806         LSX-LS7         Aluminum         270         12 deg         70         2.200         1.610         LS7         Std LS         Bolt-down         Titanium/sodium-filled va	ves 245
19166977 LSX-LS7 Bare Aluminum N/A 12 deg 70 2.200 1.610 LS7 LS7 LS7 N/A, As-cast	245
19257879         LSX-LS7         Aluminum         270         12 deg         70         2.200         1.610         LS7         Std LS         Bolt-down         Fully CNC-machined	244
19202986 LSX-DR Cylinder Head Aluminum N/A 11 deg N/A – – – – Shaft N/A, As-cast	246
19257881 LSX-LS7 Assembly Aluminum 270 12 deg 70 2.200 1.610 LS7 Std LS Bolt-down Fully CNC-machined barr	head 245
19166981 LSX-CT Aluminum 302 11 deg 45 2.200 1.610 LSX-CT LSX-CT/DR Shaft Fully CNC-machined bard	head 247
<b>19202985</b> LSX-CT Cylinder Head Aluminum N/A 11 deg – – – – – Shaft As-cast, not machined	247
19166979 LSX-DR Aluminum 313 11 deg 50 2.250-2.280 1.600-1.650 LSX-DR LSX-CT/DR Shaft Fully CNC-machined bard	head 245
<b>19202986</b> LSX-DR Cylinder Head Aluminum N/A 11 deg Shaft As-cast, not machined	246

#### THE LS FAMILY PRODUCTION AND C5R ALUMINUM HEADS

Great cylinder-head airflow has been a key enabler of the LS-Series' exceptional performance. Chevrolet Performance delivers those power-building attributes to you with a range of production-style aluminum heads – from the LS6 heads for smaller-displacement engines to LS7 style heads for 427-inch-and-larger combinations, our aluminum heads benefit from Chevrolet Performance's extensive research and development program, ensuring maximum airflow without compromises. In fact, many professional builders use our heads as straight bolt-ons, with no further machining. Many of our assembled heads use premium machining and materials, including CNC finishing and porting, along with lightweight, hollow-stem valves, sodium-filled exhaust valves and – on some heads – lightweight titanium intake valves.

**NOTE:** Chevrolet Performance heads will not fit 4.8L and 5.3L engines, due to their smaller bore sizes.

#### Aluminum LS Family Head Technical Notes:

- Manufactured from 319-T5 aluminum alloy
- High-efficiency combustion chambers
- Symmetrical intake and exhaust ports
- Angled spark plugs (14mm; 5/8" hex; 3/4" reach; taper-seat plugs)
- 15° valve angle (except C5R and LS7)
- Bolt-down-type rocker arms (except LSX-DR, LSX-CT)
- Center-bolt valve cover hold-downs
- Fits Gen III and Gen IV Small-Blocks only

## **--**C

## BUILDER'S TIP

#### TIERED PERFORMANCE CYLINDER HEAD STRATEGY DELIVERS OPTIONS

Cylinder head selection is one of the most important contributors to an engine's performance, because it ultimately determines how much air the engine can process to generate horsepower. The heads for regular-production LS-family engines are renowned for exceptional airflow attributes and offer significant power-building capability with traditional machining that enhances the volume of the intake ports and/or reduces restriction within the ports.

Chevrolet Performance's tiered strategy for LS cylinder head performance offers builders choices to fit a variety of performance goals and budgets. The first tier is our production-based heads, such as the LS3 head (P/N 12629063), which offer good out-of-box performance and are an excellent upgrade for earlier LS engines (as long as they have at least a 4.000" bore). The next tier is ported production heads, such as the LS3 CNC-ported head (P/N 88958758), which deliver significantly greater intake-port airflow at a value-driven cost.

For production-based engines using forced induction – supercharging or turbocharging – the LS9 CNC-ported heads are the ultimate solution, delivering greater strength and heat management properties through a unique production process with the A356T6 alloy.

The top tier of Chevrolet Performance's cylinder head ladder is the maximum-performance LSX heads, which are based on the design of production heads but include strength-enhancing features such as thicker decks, to support high-horsepower street and racing combinations. They also have a six-bolts-per-cylinder design vs. the four-bolt design of production LS heads, for exceptional clamping strength with supercharging, turbocharging and nitrous oxide. The six-bolt heads must be used with Chevrolet Performance LSX Bowtie cylinder block.

With Chevrolet Performance cylinder heads, there a choice for every horsepower aspiration and budget.



LS3 CNC-Ported Cylinder Head Assembly (exhaust) A



LS3 CNC-Ported Cylinder Head Assembly (intake) A



LS3 CNC-Ported Cylinder Head Assembly (combustion chamber) A





LS3 CNC-Ported Cylinder Head A Assembly (exhaust detail)

LS3 CNC-Ported Cylinder Head A Assembly (intake detail)

## 12629064 🕕

#### L92 Cylinder Head Assembly (not shown)

- Aluminum performance head
- Fits any LS family engine with 4.000" bore or larger
- 2.165" solid stem intake, and 1.590" solid stem exhaust valves
- .510" max valve lift
- As-cast L92 style intake ports
- D-shaped exhaust ports
- As-cast combustion chambers

#### Head P/N 12629064 assembled with the following:

12627970	Intake Valves	10166344	Valve Spring Retainers
12582719	Exhaust Valves	12482063	Intake Valve Stem Seals
12589774	Valve Springs	12482062	Exhaust Valve Stem Seals
10166345	Valve Locks		

#### L92 Head Flow Data (4.000" Bore):

Lift	0.200"	0.300"	0.400"	0.500"	0.600"
Intake	151	208	256	294	316
Exhaust	111	152	174	183	189

#### 12629063

#### LS3 Cylinder Head Assembly (not shown)

- Aluminum performance head
- Fits any LS family engine with 4.000" bore or larger
- 2.165" hollow stem intake, and 1.590" solid stem exhaust valves
- .550" max valve lift
- As-cast L92 style intake ports
- D-shaped exhaust ports
- As-cast combustion chambers
- Uses bare head P/N 12629051

#### A. 88958758

#### LS3 CNC-Ported Cylinder Head Assembly

- CNC-ported version of the LS3 cylinder head Flows about 10-percent more than the production head -
- more than 350 cfm (intake side) at .600" lift
- 276cc intake runners and 92cc exhaust ports
- Fits all LS engines with 4.000" bore or larger
- 2.165" hollow stem intake, and 1.590" solid stem exhaust valves
- .550" max valve lift
- ٠ D-shaped exhaust ports

#### Heads 12629063 and 88958758 assembled with the following:

				-
12569427	Intake Valves	10166344	Valve Spring Retainers	
12582719	Exhaust Valves	12482063	Intake Valve Stem Seals	
12625033	Valve Springs	12482062	Exhaust Valve Stem Seals	
10166345	Valve Locks			

#### 19328743 **NEW**!

#### LS9 CNC-Ported Head Assembly (not shown)

- Special A356T6 aluminum Roto-cast head casting for greater strength. The mold is rotated during production to create a more solid casting that virtually eliminates porosity
- Reinforced webbing and thicker deck (for minimal distortion) makes it an excellent choice for supercharged and turbocharged engine combinations
- CNC-ported for approximately 10 percent greater airflow (intake side) than the regular-production cylinder head (similar to LS3 CNC-ported head P/N 88958758)
- As-cast 66.5cc combustion chamber volume
- Fully assembled with production LS9 2.165" (55mm) titanium intake valves and sodium-filled 1.590" (40mm) exhaust valves; and beehive-type valve springs
- Valve springs rated for .570-inch" max lift
- Can be used on LS engines with at least a 4.000" bore using standard 11mm head bolts in place of the LS9's 12mm head bolts

#### Head P/N 19328743 assembled with the following:

12605524	Titanium Intake Valve (2.165")	12596508	Valve Spring Caps
12605525	Sodium Filled Exhaust Valve (1.590")	10166345	Valve Stem Keys
1265033	LS9 Beehive Valve Spring	12582717	Valve Seal-Intake (Integral Seal & Spring Seat)
12582718	Valve Seal-Exhaust (Integral Seal & Spring Seat)	12596509	Rocker Arm Wear Pads (Intake valve only)



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LS-Series Cylinder Heads Continued

#### A. 12578449 🛈

#### LS7 CNC-Ported Cylinder Head Assembly

- 356-T6 aluminum head
- Fully CNC'd ports and chambers
- LS7 rectangle port design
- Assembled with 2.200" titanium intake and 1.610" sodium-filled exhaust valves
- 12° valve angle
- Minimum 4.100" bore
- 270cc CNC'd intake ports, 85cc CNC'd exhaust ports
- 70cc CNC'd combustion chambers
- Capable of over 600 horsepower
- Bare head P/N 12578450 available separately

#### Head P/N 12578449 assembled with the following:

12591644	Intake Valves	12596508	Valve Spring Retainers
12578455	Exhaust Valves	12482063	Intake Valve Stem Seals
12621428	Valve Springs	12482062	Exhaust Valve Stem Seals
10166345	Valve Locks	12596509	Intake Valve Lash Cap

#### LS7 Head Flow Data:

Lift	0.100"	0.200"	0.300"	0.400"	0.500"	0.550"	0.600"	0.700"
Intake	71	145	222	271	315	332	348	352
Exhaust	60	120	159	192	207	214	219	221

#### 12626958 🕕

#### LSA Cylinder Head Assembly (not shown)

- CTS-V and ZL1 6.2L production cylinder head assembly
- High-strength aluminum casting for supercharged application
- Premium steel intake and exhaust valves
- Completely Assembled

NOTE: Uses ten 8mm & twenty 11mm head bolts

#### 12620544 🕕 NEW!

#### LT1 Cylinder Head Assembly (not shown)

- Replacement for production cylinder head assembly
- Fully assembled



A LS7 CNC-Ported Cylinder Head Assembly (exhaust)



A LS7 CNC-Ported Cylinder Head Assembly (intake)



A LS7 CNC-Ported Cylinder Head Assembly (combustion chamber)



Bare C5R Racing Cylinder Head (exhaust) B



Bare C5R Racing Cylinder Head (intake) B



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Bare C5R Racing Cylinder Head (combustion chamber) B

#### LS-Series Cylinder Heads: Additional Required Components

Part Number	Gaskets (Quantity)	Bolts (Quantity)	Spark Plug	Engine Application
88958622	12589226 (2) OR 19170418	11562524 (20), 12558840 (10)	12571164	CNC LS6
12629064	12610046 (2) OR 19170419	11562524 (20), 12558840 (10)	12571164	L9H
12629063	12610046 (2) OR 19170419	11562524 (20), 12558840 (10)	12571164	LS3
88958758	12610046 (2) OR 19170419	11562524 (20), 12558840 (10)	12571164	CNC LS3
12578449	12582179 (2) OR 19170419	11562524 (20), 12558840 (10)	12571165	MY06/07 LS7
12626958	12610046 (2) OR 19170419	11562524 (20), 12558840 (10)	12571164	LSA
19328743	12610046 (2) OR 19170419	11562524 (20), 12558840 (10)	12571164	LS9
25534393	12582179 (2) OR 19170419	11562524 (20), 12558840 (10)	12571164	C5R



#### Bare C5R Racing Cubed Cylinder Head

- The images (C) to the left represent a machined version of ٠ the P/N 25534393 cubed (unmachined) product. Chevrolet Performance does not supply a fully machined version of the C5R head. Image is for reference only.
- 355-T7 "as-cast" Aluminum racing head
- Professional porting and machining of combustion chambers required
- No seats or guide machining •
- C5R rectangle-port design requires aftermarket rectangle-port intake manifolds
- Designed for big bore (4.100" min) LS7/C5R/LSX blocks
- 210cc "as-cast" intake ports •
- 70cc "as-cast" exhaust ports, same as production LS6 30cc "as-cast" combustion chambers •
- •
- All fasteners are metric
- Capable of over 800 horsepower!
- Standard LS exhaust port design



#### LSX CYLINDER HEADS

Extending the performance range of the LSX platform are Chevrolet Performance's new, 6-bolt LSX cylinder heads. Many are capable of flowing more than 400 cfm and their 6-bolts-per-cylinder clamping design gives them bomb-proof strength. Your horsepower-building potential is nearly unlimited with LSX heads.

These aluminum masterpieces of performance feature port and chamber designs based on popular and performance-proven production-style heads, such as the LS3/L92 and LS7 heads. They are easily identified by the engraved LSX logo on the ends.

All LSX heads are made of 356-T6 aluminum and feature a 5/8" thick deck that allows plenty of room for builder-specified combinations. Additional features include:

- Uses 11mm (10) and 8mm (13) head bolts (not included, see drawing on page 247)
- Accommodates production valvetrain components (except for Drag Race and Circle Track heads)
- Includes premium beehive-type valve springs (except for Drag Race and Circle Track heads)
- Extra material cast in the port areas to accommodate professional porting
- Valve guides for 8mm valve stems, except DR & CT

Racing-specific LSX-DR (Drag Racing) and LSX-CT (Circle-Track) heads feature raised runner designs and other unique features designed to maximize performance at the track.

#### LSX Street Heads

Four LSX street head configurations are offered: The LSX-LS7 head, the LSX-LS3 head, the LSX-LS9 head and the LSX-L92 Small Bore head. The LSX-L92 head features smaller combustion chambers that are compatible with smaller-bore LS1 and LS6 engines. The street heads accommodate valve springs with up to 1.37" diameter bases, but can be machined for larger springs.

#### 19201807

#### LSX-L92 Small Bore Cylinder Head (not shown)

- LS3/L92 Port Configuration
- "As cast" runners and combustion chamber
- 15° valve angle
- Assembled with 2.00" intake and 1.55" exhaust valves
- 250cc intake port and 80cc exhaust port
- 70cc combustion chamber
- Intake flow 280 cfm@ .600" lift / Exhaust flow 180 cfm@ .700" lift
- Beehive valve springs
- Uses LS3/L92 style rocker arms (offset)
- 3.890" minimum bore size
- Uses LS3/L92 style intake manifold

#### 19201805

#### LSX-LS3 Cylinder Head (not shown)

- L92 style rectangle port design
- Assembled with 2.165" hollow stem intake and 1.590" solid stem exhaust valves
- 15° valve angle
- Minimum 4.000" bore
- 260cc "as-cast" intake ports, 80cc "as-cast" exhaust ports
- 70cc "as-cast" combustion chambers
- Uses LS3 rocker arms/LS7 bolts

#### 19257879

#### LSX-LS7 CNC-Ported Bare Cylinder Head (not shown)

- Fully CNC Ported
- 6-bolt per cylinder bolt pattern
- LS7 style rectangle port design
- 12° valve angle
- Minimum 4.100" bore
- 70cc "as-cast" combustion chambers
- Uses LS7 rocker arms/LS7 bolts
- 397 cfm@0.700" intake, 230 cfm@0.700" exhaust



A LSX-LS7 Cylinder Head Assembly (exhaust)



**\_** 

A LSX-LS7 Cylinder Head Assembly (intake)



A LSX-LS7 Cylinder Head Assembly (combustion chamber)



LSX-DR CNC-Ported Cylinder Head (exhaust) B



.

LSX-DR CNC-Ported Cylinder Head (intake) B



LSX-DR CNC-Ported Cylinder Head (combustion chamber) B

#### 19257881

#### LSX-LS7 CNC-Ported Cylinder Head Assembly (not shown)

- Fully CNC Ported
- 6-bolt per cylinder bolt pattern
- LS7 style rectangle port design
- Assembled with 2.200" titanium intake and 1.610" sodium-filled exhaust valves
- 12° valve angle. Minimum 4.100" bore
- 70cc "as-cast" combustion chambers
- Handles .650" lift with premium springs
- Uses LS7 rocker arms/LS7 bolts
- Uses P/N 19257879 bare head (shown)
   397 cfm@0.700" intake, 230 cfm@0.700" exhaust
- 397 ctm@0.700" intake, 230 ctm@0.700" exhaust

#### A. 19201806 (as cast)

- LSX-LS7 Cylinder Head Assembly
- 6-bolt per cylinder bolt pattern
- LS7 style rectangle port design
- Assembled with 2.200" titanium intake and 1.610" sodium-filled exhaust valves
- 12° valve angle. Minimum 4.100" bore
- 270cc "as-cast" intake ports, 85cc "as-cast" exhaust ports
- 70cc "as-cast" combustion chambers
- Handles .650" list with premium springs
- Uses LS7 rocker arms/LS7 bolts

## 19166977 (as cast)

- LSX-LS7 Bare Cylinder Head (not shown)
- Used in P/N 19201806

#### **19213963 (assembly)** LSX-LS9 Cylinder Head (not shown)

- L92 style rectangle port design
- Assembled with 2.165" titanium intake and 1.590" sodium-filled exhaust valves
- 15° valve angle. Minimum 4.000" bore
- 260cc "as-cast" intake ports, 80cc "as-cast" exhaust ports
- 70cc "as-cast" combustion chambers
- Uses LS3 rocker arms/LS7 bolts

#### LSX-DR and LSX-CT Heads

The LSX-CT (Circle-Track) and LSX-DR (Drag Racing) cylinder heads feature raised-runner designs for improved airflow. Intake port configuration is similar to the competition-derived C5R head, but the ports are raised an amazing 10mm and the intake manifold bolt pattern is spread to accommodate additional port configurations. Additional features include:

- 11° valve angle (same as C5R head)
- Accommodates up to 1.660" diameter valve springs
- Raised rocker rails
- Requires shaft-mount rockers
- May require special valve covers to clear shaft-mount rockers
- Provisions for down-nozzle machining
- 9° intake manifold angle requires new LSX DR or LSX CT intake manifolds
- Unique LSX-CT/DR exhaust bolt pattern

#### B. 19166979

- LSX-DR CNC-Ported Cylinder Head
- Fully CNC ported
- 356-T6 aluminum racing head. 5/8" thick deck
- LSX-DR rectangle intake port design requires LSX-DR intake manifold
- LSX-CT/DR spread port exhaust port pattern
- Cast-in down-nozzle bosses (not machined)
- Designed for up to 2.280" intake and 1.620" exhaust valves (4.165" minimum bore)
- Machined for 1.660" valve springs; 11° valve angle
- Minimum 4.125" bore
- 313cc CNC'd intake ports. 116cc CNC'd exhaust ports
- 50cc CNC'd combustion chambers
- Requires 19201808 shaft-mount Rocker Kit
  - Capable of over 900 naturally aspirated horsepower!
  - Installed on LSX454R engine assembly

### **LS-SERIES** COMPONENTS

LSX Cylinder Heads Continued

#### A. 19202986

#### LSX-DR Cylinder Head

- Rough machined seats and guides for cylinder head porters to work their magic!
- 356-T6 aluminum racing head. 5/8" thick deck
- LSX-DR rectangle intake port design requires LSX-DR intake manifold
- LSX-CT/DR spread port exhaust port pattern
- Cast-in down-nozzle bosses (not machined)
- Designed for up to 2.280" intake and 1.620" exhaust valves (4.165" minimum bore)
- Machined for 1.660" valve springs. 11° valve angle
- Minimum 4.125" bore
- Requires 19201808 shaft-mount Rocker Kit
- Capable of over 900 naturally aspirated horsepower!
- Installed on LSX454R engine assembly



A LSX-DR Cylinder Head (exhaust)



A LSX-DR Cylinder Head (intake)





A LSX-DR Cylinder Head (combustion chamber)

0A

ОВ

o C



LSX-CT CNC-Ported Cylinder Head (exhaust) B



LSX-CT CNC-Ported Cylinder Head (intake) В



#### B. 19166981

- LSX-CT CNC-Ported Cylinder Head
- Fully CNC-ported ٠
- 356-T6 aluminum racing head
- 5/8" thick deck
- LSX-CT rectangle-intake port design requires LSX-CT intake manifold
  - LSX-CT/DR spread-port exhaust port pattern
  - Cast-in down-nozzle bosses (not machined)
- Designed for 2.200" intake and 1.610" exhaust valves
- Machined for 1.625" valve springs
- 11° valve angle
- Minimum 4.125" bore
- 302cc CNC'd intake ports 109cc CNC'd exhaust ports
- 45cc CNC'd combustion chambers
- Capable of over 850 naturally aspirated horsepower!

#### 19202985

#### LSX-CT Cylinder Head (not shown)

- Rough machined seats and guides
- Ready for custom porting



#### OA OA OA OA **°C** oc oc ОВ ОВ ОВ ОВ

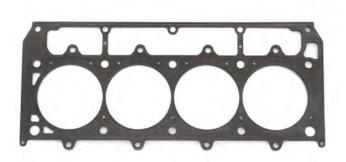
LS/LSX HEAD-BOLT PATTERNS

ОВ		в	ОВ		ОВ	ОВ
	<b>0</b> C	<u> </u>	:	<b>°C</b>	<u> </u>	: )
A	Stand	lard LS	8mm		Bolt/Stud	
В	Stand	lard LS	11mm		Bolt/Stud	
С	LSX		8mm		Bolt/Stud	

## **BUILDER'S TIP**

#### **BUILDING A CARBURETED LS ENGINE**

For some vintage cars, a carbureted induction system is more aesthetically appropriate, while some racecars depend on a carburetor, based on class rules or other reasons. Building a carbureted LS engine is just as easy as assembling a production-style fuel injected version. You'll still need all the sensors of an injected engine, but you simply replace the injection manifold with one of the Chevrolet Performance carbureted intakes - they're available for LS1/LS2/LS6-style cathedral-port heads, L92/LS3-style heads and LS7 heads. Then, add your favorite four-barrel and plug it all into one of our pre-programmed controllers. Add a 12-volt power source and your carbureted LS engine will deliver a balanced combination of vintage looks and modern engine management dependability!



LSX 4.100" Bore MLS Head Gasket Kit



LS1 Cylinder Head Installation Kit (F-Car)

### 

## CYLINDER HEAD GASKET AND BOLT KITS

Part Number	Description	Technical Notes
12498543	Cylinder Head Gasket Kit (not shown)	2 head gaskets for 1997-2001 LS1 Camaro/Firebird and Corvette engines. Also fits 2001 LS6 Corvette engine.
12498544	Cylinder Head Gasket Kit (not shown)	2 head gaskets for 2002-2004 LS1Camaro/Firebird and Corvette engines.
19170418	LSX 4.100 Bore MLS Head Gasket Kit	Multi-layer steel gaskets for naturally aspirated and forced induction applications. 0.051" thick. Includes 1 LH and 1 RH gasket. For standard LS and LSX 6-bolt pattern blocks and heads. For bores up to 4.100"
19170419	LSX 4.200 Bore MLS Head Gasket Kit (not shown)	Multi-layer steel gaskets for naturally aspirated and forced induction applications. 0.051" thick. Includes 1 LH and 1 RH gasket. For standard LS and LSX 6-bolt pattern blocks and heads. For bores up to 4.200"
19170420	LSX 4.250 Bore MLS Head Gasket Kit (not shown)	Multi-layer steel gaskets for naturally aspirated applications. 0.051" thick. Includes 1 LH and 1 RH gasket. For standard LS and LSX 6-bolt pattern blocks and heads. For bores up to 4.250"
12498545	Cylinder Head Bolt Kit (1997-2003, not shown)	Kit of 15 head bolts for 1998-2003 LS1 Camaro/Firebird and 1997-2003 Corvette; and 2001-2003 LS6 Corvette. 1 kit per cylinder head; order 2 per engine. Head bolts cannot be reused on these engines. <b>NOTE:</b> IMPORTANT!! LS-Series engines produced from January 2004 forward have a new "short-style" head bolt design. Earlier head bolts will not fit. Order P/N 17800568 for engines produced from January 2004 and later.
17800568	Cylinder Head Bolt Kit, Gen III and Gen IV (not shown)	Kit of 15 bolts for LS-Series engines produced from January 2004 and later. Bolts are 5mm shorter than previous design. Services single engine head only
19257453	Cylinder Head Bolt Kit - Std. Deck LSX Block (not shown)	Contains additional bolts for standard-deck LSX 6-bolt heads. Contains bolts for 2 heads (1-engine). <b>NOTE:</b> Engine set requires 2 - 17800568 bolt sets for conventional GEN III & GEN IV engines. For complete LSX set, order: 2 - 17800568 - GEN III & GEN IV bolt kits, 1 - 19257453 - LSX Standard Deck Bolt Kit.
19257452	Cylinder Head Bolt Kit - Tall Deck LSX Block (not shown)	Contains additional bolts for tall-deck LSX 6-bolt heads. Contains bolts for 2 heads (1-engine). <b>NOTE:</b> Engine set requires 2 - 17800568 bolt sets for conventional GEN III & GEN IV engines. For complete LSX set, order: 2 - 17800568 - GEN III & GEN IV bolt kits, 1 - 19257452 - LSX Tall Deck Bolt Kit.
12499217	LS1 Cylinder Head Installation Kit (F-Car)	Comprehensive cylinder head installation kit for 2002 Camaro and Firebird models equipped with the LS1 engine. Kit includes 2 head gaskets, 2 valve cover gaskets, 8 intake manifold gaskets, 2 exhaust manifold gaskets, 2 intake manifold-to-block seals, 20 long-head bolts and 10 short-head bolts.
12589226	LS1/LS6 Head Gasket (not shown)	Single gasket, 2 required. For naturally aspirated LS1 and LS6 5.7L engines. 0.051" thick. 3.920" max bore. Standard LS bolt pattern.
12589227	LS2, L76 Head Gasket (not shown)	Single gasket, 2 required. For naturally aspirated LS2 and L76 6.0L engines. 0.051" thick. 4.020" max bore. Standard LS bolt pattern.
12610046	LS3, L92 Head Gasket (not shown)	Single gasket, 2 required. For naturally aspirated LS3/L92 6.2L engines. 0.051" thick. 4.080" max bore. Standard LS bolt pattern.
12582179	LS7 Head Gasket (not shown)	Single gasket, 2 required. For naturally aspirated LS7 7.0L engines. 0.051" thick. 4.140" max bore. Standard LS bolt pattern.



LSX454R Rocker Arm Kit

#### **ROCKER ARMS AND ROCKER ARM BOLTS**

Part Number	Description	Technical Notes
10214664	Rocker Arm (not shown)	For LS1, LS2 and LS6 intake and exhaust valves. For L92, LS9 and LS3 exhaust valves Straight design, no offset. 1.7:1 ratio.
12569167	Rocker Arm (not shown)	Intake rockers for L92, LS9 and LS3 style heads only. Offset design. 1.7:1 ratio
12579615	Rocker Arm (not shown)	Intake rockers for LS7 style heads only. Offset design. 1.8:1 ratio
12579617	Rocker Arm (not shown)	Exhaust rockers for LS7 style heads only. Straight design, no offset. 1.8:1 ratio
12560961	Rocker Arm Bolts (not shown)	For cathedral port and L92 style heads. 16 required per engine
11588791	Rocker Arm Bolts (not shown)	For LS7 & LSX style heads. 16 required per engine
12552203	Rocker Arm Stand (not shown)	For LS1, LS2 and LS6 style heads only. Sold individually. Requires 1 per cylinder head.
12600936	Rocker Arm Stand (not shown)	For L92, LS9 and LS3 style heads only. Sold individually. Requires 1 per cylinder head
19201808	LSX454R Rocker Arm Kit	1.9:1 ratio. Fits DR head only. Full-roller bearing tips. Full-roller bearing trunnion. Set is for two heads. Requires special valve cover for clearance

#### **LS-SERIES PUSH RODS**

Part Number	Material	Diameter	Length	Usage	Description
12593344	1010 steel	3/8"	7.750	LS7	Production pushrod, individually packed
10238852	1010 steel	5/16"	7.325	LS1, LS2, LS3, LS6, L92	Production pushrod, individually packed

#### **LS-SERIES INTAKE VALVES**

Part Number	Valve Size	Stem Size	Description
12617533	2.165"	8mm	Stock replacement valve used in L92 engines
12605223	2.165"	8mm	Stock replacement solid-stem valve used in LSA engines
12569427	2.165"	8mm	Stock replacement hollow-stem valve used in LS3 engines
12605524	2.165"	8mm	Stock replacement titanium valve used in LS9 engines
12591644	2.200"	8mm	Stock replacement titanium valve used in LS7 engines

#### LS-SERIES EXHAUST VALVES

Part Number	Valve Size	Stem Size	Description
12565312	1.500"	8mm	Stock replacement sodium-filled stem valve used in LS6 engines
12563064	1.500"	8mm	Stock replacement solid-stem valve used in LS2 engines
12582719	1.590"	8mm	Stock replacement solid-stem valve used in L92 and LS3 engines
12605525	1.590"	8mm	Stock replacement sodium-filled stem valve used in LS9 engines
12618110	1.610"	8mm	Stock replacement sodium-filled stem valve used in LS7 engines

#### VALVE SPRINGS AND SPRING KITS

Part Number	Description	Technical Notes
12499224	LS Valve Spring Kit (not shown)	Beehive style springs. Used on LS3, LS2/LS6 cylinder heads. Installed height - 1.800" @ 90 lbs. pressure. Max lift .550". 1.250" @ 295 lbs. pressure. Includes 16 of P/N 12625033
12625033	Valve Springs (not shown)	Beehive style springs. Standard LS6/LS3 springs. Use cap P/N 10166344. 1.250" @ 295 lbs. pressure. Installed height - 1.800" @ 90 lbs. pressure. Max lift550"
12589774	Valve Springs (not shown)	Beehive style springs. Standard L76/L92 springs. Installed height - 1.800" @ 90 lbs. pressure. Max lift520". 1.300" @ 264 lbs. pressure
12621428	Valve Springs (not shown)	Beehive style springs. Used on LS7 cylinder heads. Installed height - 1.960" @ 101 lbs. pressure. 1.368" @ 310 lbs. pressure. Max lift600"

#### LS VALVE COVERS

Nothing finishes off your engine like a great-looking set of valve covers straight from GM. Our new collection of LS valve covers allows you to personalize your LS-powered project with a custom look. Choose from 8 great styles, available in natural, powder-coated, polished and chrome finishes, with callouts for your favorite nameplate, vehicle and more. These valve covers are designed and built to production specs and include a production-type O-ring gasket for a leak-free fit. No matter if you're driving a new Corvette or a Pro-Touring-style, LS3-powered '61 Chevy, we've got the perfect set of valve covers for it.

**NOTE:** The valve covers feature the standard bolt pattern, but DO NOT have provisions for production-style coil mounts. Aftermarket or custom coil relocation brackets must be used. Additional features include:

- PVC system (except 25534398 and 25534399)
- Sold in pairs (except 25534398 and 25534399)
- Integrated oil fill
- Accommodates tall-style rockers
- Includes hardware and O-ring gasket

#### A. 19156433

#### Valve Cover Kit – CHEVROLET, Chrome

• Chrome finish with Black CHEVROLET lettering

#### B. 19156430

#### Valve Cover Kit - CAMARO, Natural

• Silver finish with Black CAMARO lettering

#### 19156428

- Valve Cover Kit CORVETTE, Polished (not shown)
- Polished finish with Black CORVETTE lettering

#### C. 19156429

- Valve Cover Kit CORVETTE, Polished
- Polished finish with Red CORVETTE lettering

#### D. 19171269

- Valve Cover Kit PONTIAC, Natural
- Silver finish with Black PONTIAC logo



A Valve Cover Kit – Chevrolet, Chrome



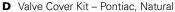
B Valve Cover Kit – Camaro, Natural



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**C** Valve Cover Kit – Corvette, Polished







Valve Cover Kit - GMPP/LSX, Polished E





Valve Cover Kit – LSX376, Orange/Black F



Valve Cover Kit – Polished G



LS Center-Bolt Competition Valve Cover (with breather hole) H



LS Center-Bolt Competition Valve Cover

#### E. 19171500

#### Valve Cover Kit – GM Performance Parts/LSX, Polished

Polished finish with Black GM Performance Parts and LSX logos

#### 19171270

#### LSX376 (not shown)

#### Grey/Black

F. 19299328

LSX376

Orange/Black

#### 19171272

# LSX454 (not shown)Orange/Black

- 19171497
- LSX454 (not shown)
- Black/Red

#### 19259058

- LSX454R (not shown)
- Orange/Black

#### G. 19171502

- Valve Cover Kit Polished
- Polished finish with no logos

#### H. 25534398

- LS Center-Bolt Competition Valve Cover (with breather hole)
- Lightweight aluminum valve cover designed for production center-bolt LS-Series cylinder heads
- Includes bolts and seal
- Sold individually
- Natural finish

#### I. 25534399

#### LS Center-Bolt Competition Valve Cover

- Lightweight aluminum valve cover designed for production center-bolt LS-Series cylinder heads
  - Includes bolts and seal
- Sold individually
- Natural finish

#### HARDWARE AND BREATHERS

Part Number	Description	Technical Notes
12341993	Push-In Oil Filler Cap	Round oil filler cap with Bowtie logo for valve covers with 1.220" diameter hole
12573338	Oil Fill Cap	Production / For LS1 engines
12573337	Oil Fill Cap	Production / For L92 engines
12643759	Oil Fill Cap	Production / For LS3 engines
12577215	Valve Cover Bolt	Requires 4 per valve cover / For L92 engines
12560961	Valve Cover Bolt	Requires 4 per valve cover / For LS1, LS2 and LS6 engines
11588791	Valve Cover Bolt	Requires 4 per valve cover / For LS7 engines
12637683	Valve Cover Gasket	Requires 1 per valve cover For LS1, LS2, LS6, LS7 and L92 engines

#### VALVE LIFTERS AND COMPONENTS

#### 12499225

- LS-Series Camshaft Lifter Kit (not shown)
- Set of 16 lifters for LS-Series engines
- Same lifter used in LS2 and LS7 P/N 17122490 (single lifter)

#### 12595365

#### Lifter Guide (not shown)

Works in Gen III and IV applications (except with AFM)

Valve Lifters and Components Continued



# **88958689** Racing Hydraulic Roller Lifter Kit

If your Gen III or Gen IV application calls for sustained high-rpm's, this Racing Hydraulic Roller Lifter Kit is a must. It features reduced mass internal componentry for higher limiting speeds and to accommodate aggressive camshaft designs. Improved valvetrain dynamics and stability deliver more horsepower and better high rpm performance – tested to 8,000 rpm! Set includes 16 lifters.



# 19257324 LS9 Valvetrain Kit

A convenient way to get all the high-quality, lightweight components you need for your LS9 Cylinder Head build (P/N 12621773)! This kit can be used with other LS Rectangular Port Heads, as well, except for the LS7 and small-bore LSX. Note that two kits are required to assemble a pair of heads.

#### This Kit Includes:

Part Number	Description	QTY
12605524	Titanium Intake Valve (2.165")	4
12605525	Sodium Filled Exhaust Valve (1.590")	4
1265033	LS9 Beehive Valve Spring	8
12582718	Valve Seal-Exhaust (Integral Seal & Spring Seat)	8

NOTE: Components are used in the NEW LS9 CNC-ported Cylinder Head Assembly (P/N 19328743).

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#### ▲ 19166972 LSX454 Camshaft

The range of high-performance camshafts for LS engines expands to include our new LSX454 cam. It was developed by Chevrolet Performance's LSX performance engineers, who designed it to deliver great high-rpm performance with excellent street manners.

The LSX454 cam is a high-lift, hydraulic roller that was originally developed for our LSX454 crate engine. It maximizes the potential of bigdisplacement engines at high rpm. Maximum lift is 0.612/0.612" with 1.7-ratio rockers and 0.648/0.648" with 1.8-ratio rockers. Duration is 236 degrees on the intake side and 246 degrees on the exhaust side, with a 110-degree separation angle. Three-bolt design with good mid-range and top-end.

NOTE: Not compatible with production-style variable-valve timing configurations or production valve springs.

#### LS-SERIES CAMSHAFTS

All LS camshafts are compatible with production-style LSX and C5R blocks, as well as all of our cylinder heads – although piston-to-valve clearance must be checked on some applications. We offer a broad range of production and racing-style camshafts that are factory-engineered to deliver maximum performance when paired with our high-flow cylinder heads. Save yourself the time and expense of going to an aftermarket camshaft supplier and build your LS engine with a genuine GM cam. We've also got the valvetrain components you need to finish the engine, including lightweight components designed for high-rpm performance.

Part Number	Description	Duration @ .050" Lift (deg)	Maximum Lift (in) w/1.5 rocker	Lobe Centerline (deg)	Technical Notes
12565308	2002-2004 LS6 Cam	I: 204 / E: 218	l: .550 / E: .550	117.5	Cam requires valve spring P/N 12586484
88958770	ASA Cam	I: 226 / E: 236	I: .525 / E: .525	110	Cam requires valve spring P/N 12586484; "ASA" cam for off-highway use
12480033	Hot Cam Kit	l: 219 / E: 228	l: .525 / E: .525	112	Kit includes 16 LS6 valve springs retainers
88958753	LS Hot Cam	l: 219 / E: 228	I: .525 / E: .525	112	Same cam as in kit P/N 12480033
19166972	LSX454 Cam	I: 236 / E: 246	I: .612 / E: .612	110	Max lift with 1.8 rockers .648/.648
88958766	Showroom Stock Cam	l: 239 / E: 251	l: .570 / E: .570	106.5	Showroom Stock racing design; requires hollow-stem intake valves P/N 12565311, hollow-stem exhaust valves P/N 12565312, valve springs P/N 12586484, and aftermarket notched pistons OR machine stock pistons
12638426	LS7	l: 211 / E: 230	l: .558 / E: .558	121	Stock LS7 camshaft, will not work on Gen III engines. Max lift with 1.8 rockers .593/.588
12561721	LQ9: 2002-2006 LS1: 2001-2004	I: 196 / E: 201	I: .467 / E: .479	116	Stock cam for 2002-2006 LQ9 and 2001-2004 LS1 engines
88958772	LS Stage 2 Cam	I: 227 / E: 239	l: .551 / E: .551	108	Max lift with 1.8 rockers .583/.583
88958773	LS Stage 3 Cam	I: 233 / E: 276	l: .595 / E: .595	107	Max lift with 1.8 rockers .630/.630
12623064	LSA cam	l: 198 / E: 216	I: .480 / E: .480	122.5	Stock LSA cam
12638427	LS9 cam	I: 211 / E: 230	I: .562 / E: .562	122.5	Stock LS9 cam

#### LSX CONNECTING RODS

Like our new crankshafts, the new LSX connecting rods from Chevrolet Performance are made of high-strength, 4340 forged steel to deliver worry-free performance for your high-horsepower, high-revving LS engine. Additional strength comes in the rod's I-beam design and its chamfered big end fits great with filleted cranks, like our LSX crankshafts.

#### A. 19166964

#### LSX Connecting Rod Kit, 6.000"

- 2.100" journals (big end)
- 0.866" bushed small ends
- MUST be used with LSX forged pistons not compatible ٠ with production pistons
- Includes 7/16" 12-point, SAE 8740 rod bolts
- Caps are dowel located
- Weight-matched, sold in sets of 8

#### LS CONNECTING RODS AND COMPONENTS

#### B. 12568734

#### 1997-2004 Connecting Rod

- Connecting rod for use on all 1997-2004 production
- Corvettes and 1998-2002 Camaro/Firebird with LS1/LS6 Press fit design
- 6.098" C-C length
- Sold individually

#### 12649190

#### Connecting Rod (not shown)

- Connecting rod used in 2005-2007 LS2 and 2008-2012 LS3 engines has bronze bushing
- 6.098" C-C length
- Sold individually

#### 11610158

## LS6 Rod Bolts (not shown)

- Recommended for use in performance Gen III engines •
- Bolts have greater strength than pre-2000 rod bolts
- 1 bolt per package; order 2 per connecting rod

## 89017573

#### Rod Bearing (not shown)

- 1 required per connecting rod
- For all LS-Series engines, except LS7 and LS9

#### 89017811

#### LS7 Rod Bearing (not shown)

- 1 required per connecting rod
- For LS7 and LS9 engines only

#### C. 19259254

## LSX454 Rotating Assembly

Build your own "LSX Stroker" with this rotating assembly used in our powerful LSX454 crate engine. Order LSX fully-machined block P/N 19244057 to build your own engine.

#### Kit Includes:

## Part Number QTY Description

- Crankshaft, 4340 Forged Steel with 8-bolt flange (4.125" stroke) 19244018 1 19166964
  - Connecting Rods, 4340 Forged Steel 8
- 19166958 Pistons, Forged Aluminum with coated skirts (4.185" bore) 8

NOTE: Also includes performance piston rings, rod and main bearings (not shown)



A LSX Connecting Rod Kit, 6.000"



B 1997-2004 Connecting Rod



C LSX454 Rotating Assembly



LSX376 Piston (dished), 4.065" bore



LSX454 Piston, 4.185" bore

# LSX PISTONS

Complete your all-LSX rotating assembly with LSX forged aluminum pistons from Chevrolet Performance. They're lightweight and tough, enabling higher revs and dependable performance, even with high-boost and nitrous-assisted applications. They're made of 4032 forged aluminum and available in 4.065" and 4.185" bores. Additional details include:

- Flat-top or dished designs with valve relief cut-outs
- High-tech skirt coating
- Forced pin oiling
- Pistons come with wrist pins and rings

Part Number	Description	Technical Notes
19244016	LSX376 Piston, 4.065" bore	14cc dish that lowers compression to approx. 9:1 (with most standard LS cylinder heads). Optimized for supercharged and turbocharged combinations. Use with stock-type connecting rods only
19166958	LSX454 Piston, 4.185" bore	Forged dished piston with valve reliefs. Must be used with LSX rods. Lightweight, includes rings and wrist pins. 4.185" bore, .866" wrist pin size. 1.2mm compression ring lands and a 2.0mm oil control ring land. <b>NOTE</b> : Not compatible with production-style LS connecting rods. Must be used only with new LSX connecting rods with 0.866" wrist pin bores.

## LS-SERIES PISTONS AND PISTON RINGS

Premium-quality hypereutectic aluminum alloy pistons are used on most production LS engines (the LS9 supercharged uses forged aluminum). They are lightweight, durable and promote quieter operation. Chevrolet Performance offers production and oversized pistons for many applications. They're sold individually, unless otherwise specified. Check the accompanying chart for part numbers, specs, sizes and applications.

#### **LS-Series Pistons**

Part Number	Engine Size	Bore Size	Oversize	Rod Length	Pin Type	Comp Ratio	With Chamber	Description
88984245	5.7L	3.898"	_	Standard	Pressed	—	65	Hypereutectic LS1 and LS6 replacement
88984246	5.7L	3.898"	+.010"	Standard	Pressed	—	65	Hypereutectic LS1 and LS6 replacement
19178305	6.0L	4.000"	—	Standard	Floated	10.9	65	Hypereutectic LS2 and LQ9 replacement
89017479	6.0L	4.000"	+.020"	6.098"	Floated	10.9	65	Hypereutectic LS2 and LQ9 replacement
12661678	7.0L	4.125"	Standard	6.067"	Floated	11.0	70	Hypereutectic LS7 replacement

#### **LS-Series Rings**

Part Number	Bore Size	Oversize	Ring Thickness	Description
89017484	4.000"	—	1.2, 1.5, 2.5mm	Production ring pack for '05-'06 LS2, '06 L76
88894243	4.000"	—	1.5, 1.5, 3.0mm	Production ring pack for '05-'06 LΩ9
89017776	4.125"	_	1.2, 1.2, 2.0mm	Production ring pack for '06 LS7
89017777	4.125"	+.020"	1.2, 1.2, 2.0mm	Oversize LS7 ring pack





Crankshaft Assembly 1997-2004

Reluctor Wheel, 24x

## LS CRANKSHAFTS AND COMPONENTS

Our LS crankshafts are strong, precision-machined components that will support your high-horsepower aspirations. Choose from our nodular cranks up to 3.622-inch-stroke and our premium, forged-steel 4.125-inch-stroke crankshafts for larger-displacement combinations – and don't forget the proper reluctor wheel!

Part Number	Description	Technical Notes
89017522	Crankshaft Assembly 1997-2004	Nodular cast 3.622" stroke crankshaft assembly has 24x reluctor wheel installed. Used on 1998-2002 F-cars and 1997-2005 Corvettes. Balanced for 3.898" bore engines
12588612	LS2 Crankshaft Assembly (not shown)	Nodular cast 3.622" stroke crankshaft assembly has 58x reluctor wheel installed. Used on 2006-2007 Corvettes. Balanced for 4.000" bore engines
89060436	Rear Crank Seal (not shown)	Requires 1 per engine. For all LS-Series engines
12557583	Roller Pilot Bearing (not shown)	Used in high-performance manual transmission applications. Use when input shaft protrudes 3-6mm (.079112") beyond bell housing
14061685	Roller Pilot Bearing (not shown)	Used in high-performance manual transmission applications. Use when input shaft protrudes 23-24mm (.906945") beyond bell housing
12611649	LS7 Forged Steel Crankshaft (not shown)	Forged 4" stroke crankshaft for LS7 engine. Includes 58x reluctor wheel. Rebalancing required if LS7 rods and pistons are not used. Machine .886" from snout for use in wet-sump applications
12559353	Reluctor Wheel, 24x	24-tooth crankshaft position sensor timing wheel for 1997-2005 engines
12586768	Reluctor Wheel, 58x (not shown)	58-tooth crankshaft position sensor timing wheel for 2006 and newer engine
12641691	LSA Crankshaft (not shown)	Forged 3.622-inch. 8-bolt flexplate/flywheel pattern



LSX Crankshaft, 4.125" stroke



LSX Windage Tray Kit, for 4.125" strokes

# LSX CRANKSHAFTS AND COMPONENTS

Chevrolet Performance LSX crankshafts are made from 4340 forged steel (most production LS cranks are cast) and have generous fillets. Our LSX forged crankshafts deliver exceptional strength and durability, whether you're building an engine for the street or track. Additional features include:

- 2.100" rod journals
- 8-bolt flexplate/flywheel pattern
- Comes with 58x reluctor wheel
- Reluctor wheel can be swapped for use with LS1/LS2/LS6 controller
- Designed for internal balancing (must be balanced prior to use in engine
- Requires the use of chamfered rods (see our LSX connecting rod selection

Part Number	Description	Technical Notes
19244018	LSX Crankshaft, 4.125" stroke	4340 premium steel. 4.125" stroke. Requires balancing. Includes 58x reluctor wheel. 8-bolt flexplate/flywheel required
19244049	LSX Windage Tray Kit (not shown)	For 4.000" strokes. Includes all matching hardware. Some notching may be required
19202609	LSX Windage Tray Kit	For 4.125" strokes. Includes all matching hardware. Some notching may be required depending on application



# **FLYWHEELS AND FLEXPLATES**

At the opposite end of the crankshaft from the balancer are flywheels and flexplates, which connect the engine to either manual (flywheels) or automatic (flexplates) transmissions. Chevrolet Performance offers both internally and externally balanced flywheels and flexplates. It is critical you use the correct design for your engine application.

**NOTE:** For Transmission Installation kits, see pages 349-355

#### LS Engine Flywheels

Part Number	Year of Engine	Outside Diameter	Crank Flange Bolt Pattern	Clutch Diameter	Starter Ring Gear Teeth	Technical Notes
12571611	1997 - up	14" (359mm)	6-bolt LS patter 3.110" (79mm)	11.5" Single Disc	168	Flywheel used for LS engines with 6-bolt crankshaft flange
24240678	2009 - up	14"	8-bolt	9.5" Dual Disc	168	LSA Production Dual Mass with 8-bolt crankshaft flange (also fits LSX454)
12598613	2009 - up	14"	9-bolt	10" Dual Disc	168	LS9 Production with 9-bolt crankshaft flange

#### **LS Engine Flexplates**

Part Number	Year of Engine	Outside Diameter	Crank Flange Bolt Pattern	Clutch Diameter	Starter Ring Gear Teeth	Technical Notes
12654640	1997 - up	14"	6-bolt LS pattern 3.110" (79mm)	11.062" (281mm)	168	Flexplate used for LS engines - fits stock LS-4L60 family t/conv
19260102	1997 - up	14"	6-bolt LS pattern 3.110" (79mm)	11.5" (292.1mm)	168	Flexplate only used together with Spacer 12563532 and Bolts 19257940 (4L80 family)
12636325	2009 - up	14"	8-Bolt	11.062" (281mm)	168	LSA Production Flexplate (also fits LSX-454)
19125691	2009 - up	14"	8-Bolt 11.062" (281mm)	11.5" (291.1mm),	168	Modified LSA 12636325 Flexplate (see above) for use in flywheel kit 19125597

# TIMING CHAINS AND SPROCKETS

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#### **BOLTS, DOWELS AND BEARINGS**

Part Number	Description	Technical Notes
11569956	Flywheel Bolt (not shown)	Requires 6 per engine. For LS1, LS2, LS3, LS6, LS7 and L92 engines. Use for both automatic flexplates and manual flywheels
11505820	Flywheel Dowel (not shown)	For all LS-Series engines. Locating dowel pin for pressure plate
12561465	Pressure Plate Bolts (not shown)	6 pieces. 6 needed per flywheel. Used on all GM LS engine manual flywheels
14061685	Pilot Bearing (not shown)	Use with manual transmissions if the input shaft extends beyond the bell housing more than 20mm
12557583	Pilot Bearing (not shown)	Use with manual transmissions if the input shaft extends beyond the bell housing 5mm or less (or recessed slightly)

#### ACCESSORY DRIVE SYSTEMS

The easiest and most convenient way to finish your LS engine and get it ready to run in your vehicle is with one of our serpentine accessory drive systems. They include the accessories, brackets, drive belts and hardware your engine needs, saving you the time of sourcing them individually. They're all-inclusive systems that bolt right onto the engine for a factory fit and appearance.

#### A. 19155066

# CTS-V Accessory Drive System, with A/C - Fixed Displacement Compressor

- Does not work on LS9 and LSA supercharged engines
- Most harmonic balancers do not line up correctly with the accessory drive system; damper P/N 12620556 is strongly recommended
- Air conditioning has separate belt; to delete air conditioning, do not install the belt, compressor or tensioner
- · Fits all LS type engines, except production iron block applications
- Direct bolt-on for LS3 and LS7 engines

NOTE: Will not work with a cam-phased engine. NOTE: Will not work on LS327 with cast iron block NOTE: Water pump P/N 89018052 NOT included with kit NOTE: Includes fixed displacement compressor NOTE: Use P/N 19299069 for A/C add-on if Variable Displacement Compressor is needed

#### The system includes:

Part Number	<b>Ω</b> ΤΥ	Description					
12578548	1	Bracket–Air Conditioning					
19130461	1	Compressor–Air Conditioning					
12595289	1	Tensioner–Air Conditioning Belt					
12578549	1	Belt–Air Conditioning Compressor					
12578551	1	Bracket–Power Steering Pump					
21997867	1	Pump–Power Steering					
12578552	1	Pulley–Power Steering Pump					
21997866	1	Reservoir–Power Steering Fluid					
21997868	1	Hose-Power Steering Fluid Reservoir With Clamps					
12578550	1	Bracket–Generator					
25766345	1	Generator					
12568996	1	Pulley–Belt Idler					
12569301	1	Tensioner–Drive Belt					
12578553	1	Belt–Water Pump/Generator/ Power Steering					
11515768	6	Bolt, Transaxle Br					
11516360	4	Bolt - 10 x 1.50 x 90mm					
11518637	3	Bolt - Hvy HX Acorn Flg Hd					
11518630	2	Bolt - Hvy HX Acorn Flg Hd					
11518075	3	Bolt - Hex Flg HD					
11518633	3	Bolt, Gen					
11515760	2	Bolt Hvy Hex Flg					

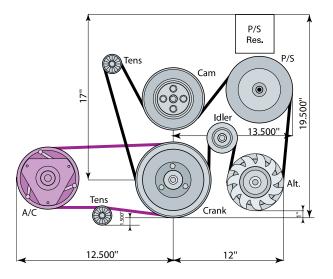
#### **B. 19299070**

- CTS-V Accessory Drive System, without A/C
- Does not work on LS9 and LSA supercharged engines
   Most harmonic balancers do not line up correctly with the accessory drive system; damper P/N 12620556 is strongly recommended
- Fits all LS type engines, except production iron block applications
- Direct bolt-on for LS3 and LS7 engines

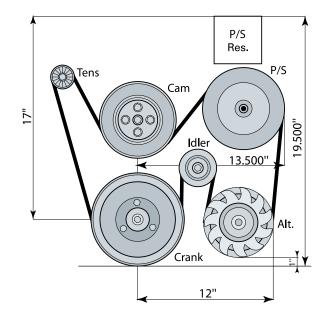
**NOTE:** Will not work with a cam-phased engine. **NOTE:** Will not work on LS327 with cast iron block **NOTE:** Water pump P/N 89018052 NOT Included with kit

#### The system includes:

Part Number	QTY	Description				
12578551	1	Bracket–Power Steering Pump				
21997867	1	Pump–Power Steering				
12578552	1	Pulley–Power Steering Pump				
21997866	1	Reservoir–Power Steering Fluid				
21997868	1	Hose–Power Steering Fluid Reservoir With Clamps				
12578550	1	Bracket–Generator				
25766345	1	Generator				
12568996	1	Pulley–Belt Idler				
12569301	1	Tensioner–Drive Belt				
12578553	1	Belt–Water Pump/Generator/ Power Steering				
11515768	2	Bolt, Transaxle Br				
11518637	3	Bolt - Hvy HX Acorn Flg Hd				
11518630	2	Bolt - Hvy HX Acorn Flg Hd				
11518075	3	Bolt - Hex Flg HD				
11518633	3	Bolt, Gen				
11515760	2	Bolt Hvy Hex Fla				

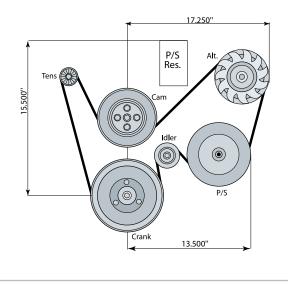


A CTS-V Accessory Drive System, with A/C - Fixed Displacement Compressor

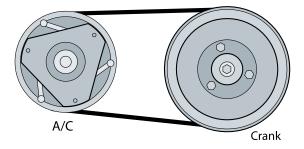


B CTS-V Accessory Drive System, without A/C

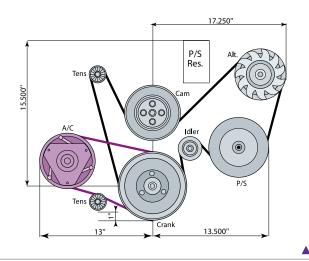
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Corvette Accessory Drive System without A/C C



Corvette Accessory Drive System A/C Add-on D



Corvette Accessory Drive System, with A/C E

#### C. 19257325

Corvette Accessory Drive System, without A/C

- Fits all Non-LSA and LS9 LS type engines
  Most harmonic balancers do not line up correctly with the accessory drive system; damper P/N 12620556 is strongly recommended
- Direct bolt-on for LS3 & LS7 engines

**NOTE:** Use on LS327 iron block engine requires harmonic balancer P/N 12601402

**NOTE:** Water pump P/N 89018052 NOT Included with kit **NOTE:** Will not work with cam-phased engine.

#### The system includes:

Part Number	QTY	Description					
12555222	1	Bracket–Power Steering Fluid Reservoir					
12578067	1	Bracket–Generator and Power Steering Pump					
25888970	1	Generator					
25960709	1	Pump–Power Steering					
12568997	1	Pulley–Power Steering Pump					
12555693	1	Brace–Power Steering Pump Front					
15907878	1	Hose–Power Steering Fluid Reservoir With Clamps					
26046502	1	Reservoir–Power Steering Fluid					
12569301	1	Tensioner–Drive Belt					
12568996	1	Pulley–Belt Idler					
12636226	1	Belt–Water Pump/Generator/Power Steering Pump					
11515768	2	Bolt-10x1.5x40MM- 15MM Drive					
11516714	1	Bolt-10x1.5x110MM- 15MM Drive					
12552922	1	Bolt-10x1.5x160MM- 15MM Drive					
11516357	3	Bolt-10x1.5x75MM- 15MM Drive					
11588745	1	Bolt-10x1.5x65MM- 15MM Drive					
24503609	2	Bolt-10x1.5x95MM- Drive					
11515758	2	Bolt-8x1.25x30MM- 12MM Drive					
10317982	1	Cap-Power Steering Fluid Reservoir					
11516697	2	Bolt-8x1.25x85MM- 13MM Drive					

#### D. 19299069

Corvette Accessory Drive System, A/C Add-on

- Components needed to add AC to your LS-equipped vehicle.
- Kit includes mounting bracket, bolts, belt, AC compressor and instruction sheet
- Intended to be used in conjunction with P/N 19257325
   GMPP kit for non-AC applications. Not verified to work with any non-GM FEAD kit
- Includes variable displacement compressor

#### The system includes:

Part Number	QTY	Description
12556447	1	Stud-10 x 1.5x127MM - 7MM Drive
12569286	1	Bracket-Air Conditioning Compressor
11515768	1	Bolt-10x1.5x40MM- 15MM Drive
89019337	1	Compressor-Air Conditioning
15709703	1	Nut- 10x1.5MM - 15MM Drive
11098341	1	Bolt-10x1.5x110MM- 15MM Drive
12552922	1	Bolt-10x1.5x160MM- 15MM Drive
11516360	1	Bolt-10x1.5x90MM- 15MM Drive
12595289	1	Tensioner-Air Conditioning Compressor Belt
12636225	1	Belt-Air Conditioning Compressor (1040MM - Long)

#### E. 19155067

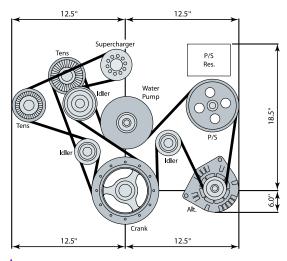
#### Corvette Accessory Drive System, with A/C

Includes all components in Kits #19257325 and #19299069.

- Fits all Non-LSA and LS9 LS type engines
- Most harmonic balancers do not line up correctly with the accessory drive system; damper P/N 12620556 is strongly recommended
- Air conditioning has separate belt; to delete air conditioning, do not install the belt, compressor or tensioner
- Direct bolt-on for LS3 & LS7 engines

**NOTE:** Use on LS327 iron block engine requires harmonic balancer P/N 12601402

**NOTE:** Water pump P/N 89018052 NOT Included with kit **NOTE:** Will not work with cam-phased engine.



#### A 19243525

#### LSA Accessory Drive System, w/o AC

The front engine assembly dress components used in the CTS-V, without AC for installations in other vehicles.

 Includes all brackets, bolts, tensioners, pulleys, belts, alternator, P/S pump and instruction sheet

#### The system includes:

Part Number	<b>Ω</b> ΤΥ	Description					
12578550	1	Bracket–Gen					
25925447	1	Generator Asm					
11518630	4	Bolt–Hvy Hx Acorn Flg Hd					
11518637	3	Bolt–Hvy Hx Acorn Flg Hd					
12611905	1	Bracket–P/S Pump					
11515760	2	Bolt–Rad Upr Mt					
12611906	1	Pulley–P/S Pump					
20806165	1	Pump Asm–P/S					
22768353	1	Reservoir Asm–P/S Fluid					
15224351	1	Hose Asm–P/S Fluid Rsvr Otlt					
11588747	3	Bolt–Gen					
11589311	4	Bolt–Hfh, M8x1.25x29, 19 Th					
12606501	1	Bracket–Belt Idler Pulley					
11610074	3	Bolt–Hvy Hx Acorn Flg Hd					
12606500	1	Bracket–Drv Belt Tensr					
11588749	2	Bolt–Hvy Hx Acorn Flg Hd					
11588742	1	Bolt–Hvy Hx Acorn Flg Hd					
12628025	1	Tensioner Asm–Drv Belt					
11571051	2	Bolt–Hex Washer Hd					
12606031	1	Pulley Asm–Spchg Belt Idler					
12606032	1	Pulley Asm–Belt Idler					
12622452	1	Tensioner Asm–Spchg Belt					
11588753	1	Bolt–Hvy Hx Acorn Flg Hd					
12568996	1	Pulley Asm–Belt Idler					
12628027	1	Belt–w/Pmp & Gen & P/S Pump					
12636227	1	Belt–Spchg					
19243527	1	Instruction–FEAD Kit					

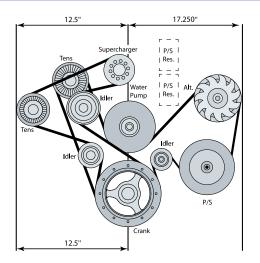
#### 19244106

LSA Accessory Drive System AC add-on kit (not shown)

Components needed to add AC to your LSA-equipped vehicle.

- Kit includes mounting bracket, bolts, belt, AC compressor and instruction sheet
- Intended to be used in conjunction with P/N 19243525 kit for non-AC applications. Not verified to work with any non-GM FEAD kit

Part Number	QTY	Description
11516360	4	Bolt–Hex Flg Hd
12612514	1	Bracket–AC Cmpr
11571051	4	Bolt–Hex Washer Hd
19130461	1	Compressor Asm–AC
12623615	1	Tool–AC Cmpr Belt
19180340	1	Belt–AC Cmpr
19243527	1	Instruction–FEAD Kit



# 19303242

#### Modified LSA Accessory Drive System, w/o AC

Similar to LSA Accessory Drive Kit P/N 19243525, but designed for retro-fit applications with a relocated alternator and power steering pump to provide chassis clearance in older vehicles

- Includes power steering pump and two remote-mount reservoirs; builder to use the reservoir that provides the best fit for the application
- Requires fabrication of reservoir mounting bracket
- Requires reservoir-to-pump hose
- Can be used with either LSA AC add-on or Corvette AC add-on kit

#### The system includes:

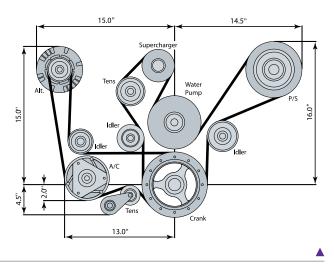
Part Number	QTY	Description					
12616673	1	Belt-w/pmp & Gen & P/S Pump					
12628025	1	Tensioner ASM-DRV Belt					
11571051	2	Bolt/Screw-DRV Belt Tensr					
12568996	1	Pulley ASM-Belt Idler					
12636227	1	Belt-SPCHG					
12622452	1	Tensioner ASM-SPCHG Belt					
11588753	1	Bolt/Screw-SPCHG Belt Tensr					
12606500	1	Bracket-SPCHG Belt Tensr					
11588742	1	Bolt/Screw-SPCHG Belt Tensr Brkt					
11588749	2	Bolt/Screw-SPCHG Belt Tensr Brkt					
12606031	1	Pulley ASM-SPCHG Belt Idler					
12606032	1	Pulley ASM-SPCHG Belt Idler					
11518630	2	Bolt/Screw Belt Idler Pul					
12606501	1	Bracket-SPCHG Belt Idler Pul					
11589311	1	Bolt/Screw-SPCHG Belt Idler Pul Brkt					
11610074	3	Bolt/Screw-SPCHG Belt Idler Pul Brkt					
12578067	1	Bracket-Gen/P/STG/ Pump					
11516357	3	Bolt/Screw-Gen Brkt					
12555693	1	Brace-P/S Pump					
11588745	1	Bolt/Screw					
24503609	2	Bolt/Screw					
11515758	2	Bolt/Screw					
11516697	2	Bolt/Screw					
12568997	1	Pulley-P/S Pump					
25960709	1	P/S Pump					
25888970	1	Generator					
22768353	1	P/S Pump Reservoir					
26046502	1	P/S Pump Reservoir					
10317982	1	Cap - P/S Reservoir					
12555222	1	P/S Pump Reservoir Bracket					
15306009	1	Connector					
19303244	1	Instruction Sheet					



LS9 Accessory Drive System with AC A



LS9 Accessory Drive System with AC A



LS9 Accessory Drive System with AC A

# A. 19243524

#### LS9 Accessory Drive System w/AC

The Chevrolet Performance FEAD kit for the powerful LS9 is complete, as used in the ZR-1 Corvette.

 It consists of all brackets, bolts, tensioners, pulleys, belts, alternator, P/S pump, idlers, and AC brackets, compressor and instruction sheets

#### The system includes:

	0.71/					
Part Number	ΩΤΥ	Description				
15857665	1	Pump Asm–P/S				
11588733	2	Bolt-Hvy Hx Acorn Flg Hd				
12625875	1	Bracket Asm–P/S Pump				
11518634	6	Bolt–Hvy Hx Acorn Flg Hd				
15285644	1	Reservoir Asm–P/S Fluid				
12598653	1	Pulley Asm–Belt Idler				
11588745	1	Bolt–Drv Belt Tensr				
12598654	1	Pulley Asm–Belt Idler				
11588743	1	Bolt–Hvy Hx Acorn Flg Hd				
12623061	1	Tensioner Asm–Drv Belt				
11515767	5	Bolt–Trans Br Brkt				
12602288	1	Bracket–AC Cmpr				
12556447	1	Stud–Special M10 X 1.5 X 127				
11571051	3	Bolt–Hex Washer Hd				
12623062	1	Tensioner Asm–AC Cmpr Belt				
12568996	1	Pulley Asm–Belt Idler				
89019339	1	Compressor Asm–AC				
11514597	1	Nut–Gen				
12552922	1	Bolt/Screw–AC Cmpr				
11518637	2	Bolt–Hvy Hx Acorn Flg Hd				
11588754	1	Bolt–Hvy Hex Acorn Flg Hd				
25888947	1	Generator Asm				
11518630	2	Bolt–Hvy Hx Acorn Flg Hd				
12602289	1	Bracket–Gen & Drv Belt Tensr				
12637321	1	Belt–Spchg & w/Pmp & P/S Pump				
12627522	1	Belt–AC Cmpr				
19243526	1	Instruction–FEAD Kit				

**NOTE:** This kit includes the generator bracket and bolts that are already attached to a Chevrolet Performance LS9 Crate Engine. This bracket must be bolted on the cylinder head prior to installing the water pump. If you do not have a Chevrolet Performance LS9 Crate Engine, you will also need to purchase separately the LS9 water pump kit (12622036), the LS9 lifter valley cover (12605719) and LS9 coolant air bleeds (12606242 and 1260 6243) to use this FEAD kit. If you have a Chevrolet Performance LS9 Crate Engine, you do not need any of these additional parts. Accessory Drive Systems Continued

#### A. 19258433

#### LC9 5.3L Accessory Drive System without A/C

The workhorse 5.3L LC9 engine assembly comes with an alternator bracket attached. To complete the installation of your engine, the parts listed below will complete the factory-installed FEAD assembly.

These components are engineered for heavy-duty work-truck use, and will provide years of reliable service in your performance vehicle.

#### The system includes:

Part Number	<b>Ω</b> ΤΥ	Description			
12626222	1	Drive Belt			
12580771	1	Idler Pulley w/Bolt			
22781131	1	Alternator			
11516360	2	Alternator Bolts			
20756714	1	P/S Pump			
12554032	1	P/S Brace			
11514597	2	P/S Brace Nuts			
11515764	1	P/S Brace Bolt			
12605677	1	P/S Pump Pulley			
11515767	3	Stg Pump Mtg Bolt			
19257882	1	Bolt 3/8" x 16			
09440957	1	Nut 3/8" x 16			
19258317	1	Washer			

Power Steering Pump Pulley Install Tool (included)

**NOTE:** This kit is designed to include the necessary parts to install the complete kit on a Chevrolet Performance 5.3L Crate Engine. If you do not have a Chevrolet Performance 5.3L Crate Engine, you may need some additional hardware. The following parts are included with the Chevrolet Performance 5.3L Crate Engine and are not part of this kit:

Part Number	QTY	Description				
11518633	2	Bolt, Tensioner				
12609719	1	Tensioner				
12554030	1	Bracket, Steering/Generator				
11516744	4	Bolt, Bracket				
19300488	1	Balancer				
12557840	1	Bolt, Balancer				
12600767	1	Kit, Water Pump (includes gaskets)				
12551926	6	Bolt, Water Pump				

#### B. 19260892

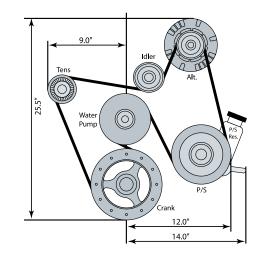
#### LC9 5.3L Accessory Drive System AC add-on kit

Components needed to add AC to your LC9-equipped vehicle.

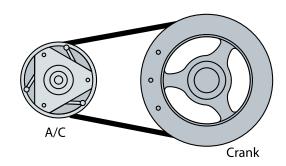
- Kit includes mounting bracket, bolts, belt, AC compressor and instruction sheet
- Intended to be used in conjunction with P/N 19258433 kit for non-AC applications. Not verified to work with any non-GM FEAD kit

#### The system includes:

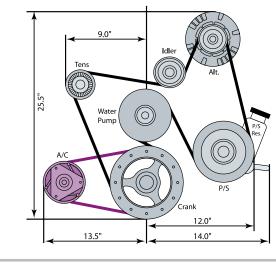
Part Number	QTY	Description
25891791	1	AC Compressor
12554026	1	Mtg Bracket
11515767	3	Bracket Bolts
11516109	3	Comp Bolts-Long
11516503	1	Comp Bolt–Short
19210691	1	Belt Kit (w/Tool) AC



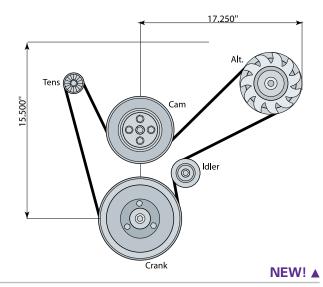
A LC9 5.3L Accessory Drive System



B LC9 5.3L AC Add-On Kit



LC9 5.3L Accessory Drive System, with A/C Add-on Kit



DR525 Accessory Drive System D



LT1 Accessory Drive System E

# **Rear FEAD Clearance Dimensions**

FEAD Part Number (Original Equipment Application)	Belt Track (front of block to	rear edge of main drive bolt)	Belt Track (front of block to rear edge of supercharger belt)	
19299070 (CTS-V Non-Supercharged)	3"	6 Groove	—	—
19155066 (CTS-V Non-Supercharged)	3"	6 Groove	—	—
19155067 (Corvette Non-Supercharged)	3"	6 Groove	—	—
19257325 (Corvette Non-Supercharged)	3"	6 Groove	—	—
19329418 (Corvette Non-Supercharged)	3"	6 Groove	_	_
19243525 (CTS-V LSA Supercharged)	3"	6 Groove	4.5"	8 Groove
19243524 (Corvette LS9 Supercharged)	1.75"	6 Groove	2.75"	11 Groove
19258433 (Truck)	4.5"	6 Groove	_	—
Gen IV Camaro/Firebird (LS1) (production)	4"	6 Groove	—	—
Gen V Camaro (LS3/L99) (production)	4.75"	6 Groove	—	—

#### **AC Compression for FEADS**

Part Number	Application	Style	Belt Track (front of	block to rear edge of belt)
19130461	CTS-V	Fixed Disp	1.5"	4 Groove
89019337	Corvette	Variable Disp	1.5"	4 Groove
89019339	Corvette	Variable Disp	1.75"	6 Groove
25891791	Truck	Fixed Disp	3.5"	4 Groove

#### D. 19329418 NEW! **DR525 Accessory Drive System**

- Fits all Non-LSA and LS9 LS type engines Most harmonic balancers do not line up correctly with the ٠
- accessory drive system; damper P/N 12620556 is strongly recommended
- Direct bolt-on for LS3 & LS7 engines

NOTE: Use on LS327 iron block engine requires harmonic balancer P/N 12601402

NOTE: Water pump P/N 89018052 NOT Included with kit NOTE: Will not work with cam-phased engine.

#### The system includes:

The system includes.		
Part Number	QTY	Description
12569301	1	Tensioner–Drive Belt
12568996	1	Pulley–Belt Idler
88984194	1	Belt–Water Pump/Generator
11515768	2	Bolt-10x1.5x40mm- 15mm Drive
11516714	1	Bolt-10x1.5x110mm- 15mm Drive
12552922	1	Bolt-10x1.5x160mm- 15mm Drive
11516357	3	Bolt-10x1.5x75mm- 15mm Drive
11588745	1	Bolt-10x1.5x65mm- 15mm Drive
24503609	2	Bolt-10x1.5x95mm- Drive
11515758	2	Bolt-8x1.25x30mm- 12mm Drive
11516697	2	Bolt-8x1.25x85mm- 13mm Drive

#### E. 19329990 NEW!

#### LT1 Accessory Drive System

This package includes production mounting brackets, hardware and drive belt to mount the alternator and A/C compressor in the same configuration as the LT1 equipped Stingray.

NOTE: Power steering is not included, as the production car has electric assist.

#### The system includes:

Part Number	QTY	Description
19329991	1	Instruction Sheet
22868687	1	Generator
11546413	3	Bolt - Gen (2), Tensioner (1)
12658273	1	Tensioner
11588730	3	Bolt - Tensioner (1) Compressor (2)
12639512	1	Bracket, A/C Compressor
12651112	1	Belt - Generator & A/C Compressor
11612159	1	Stud - A/C Compressor Bracket
11610091	1	Nut - M8x1.25
23105946	1	Compressor
11588694	1	Bolt - A/C Compressor to Bracket - Long bolt
11610074	1	Bolt - A/C Bracket
22942442	1	Emblem

#### BALANCERS

A smooth-running engine depends on an effective balancer or torsional damper. Our dampers not only help LS engines run smoothly, they can extend engine life. Pick the right damper for your project from the list below.

#### 19300488

#### Harmonic Balancer (not shown)

- Originally used on L92 engines
- For use in truck applications
- WILL NOT work with our Serpentine Accessory Drive Systems

#### A. 12553118

- Harmonic Balancer
- Originally used on LS1 and LS2 engines
- For use in F-Car and GTO applications

#### **B. 12599862**

- Harmonic Balancer
- Originally used on LS7 engines
- For use in Corvette applications
- Works with Chevrolet Performance Serpentine Accessory Drive System P/N 19155066 or P/N 19155067

#### 12635649

#### Harmonic Balancer (not shown)

- For LS3 engines
- Works with Chevrolet Performance Serpentine Accessory Drive System P/N 19155066 or P/N 19155067

#### **BALANCER BOLTS AND WASHERS**

#### 12557840

#### Balancer Bolt (not shown)

• For LS1, LS2, LS3, LS6 and L92 engines

#### 11570163

- Balancer Bolt (not shown)
- For LS7 engines

#### 12603843

#### Friction Washer (not shown)

• For LS2, LS3, L99, LS7 and L92 engines

#### WATER PUMPS AND COMPONENTS

#### 19208815 (not shown)

#### Water Pump

• '07 - '10 LS2 Trucks, Vans and SUVs

#### C. 89018052

- Water Pump
- '05 '07 LS2
  '08 LS3
- '08 LS3 '07 '08 LS7

#### 07 00 207

# D. 19180610

- Water Pump
- '09 '10 LSA (CTS-V)
- '09 '10 LS3 (Corvette)
  '09 L76 SRX
- '09 10 LS7 (Corvette)

#### 12630223

#### Water Pump Gasket (not shown)

#### Requires 2 per engine

For LS1, LS2, LS3, LS6, LS7 and L92 engines

#### 12551926

- Water Pump Bolt (not shown)
- Requires quantity of 6
- For LS1, LS2, LS3, LS6, LS7 and L92



- A Harmonic Balancer LS1 and LS2
- B Harmonic Balancer LS7



C Water Pump – LS2, LS3 and LS7 Engines





D Water Pump – 2009 LSA, LS3/LS7, L76 SRX Engines



Corvette Oil Pan - 2002-2004 LS6 E



F-car Oil Pan F



LS Circle Track Oil Pan G



Muscle Car Oil Pan Kit H

# **OIL PANS, OIL PUMPS, GASKETS AND COMPONENTS**

# E. 12561828

- Corvette Oil Pan (2002-2004 LS6)
- Used on 2002-2004 Corvettes with LS6

#### 12628771 E.

- F-Car Oil Pan
  - Used on 1998-2002 Camaro and Firebird LS1
- Uses PF48 oil filter

# G. 19243065

- LS Circle Track Oil Pan
- Used on CT525 P/N 19171821
- 6-quart capacity (8-quart with remote filter and adapter) Requires remote oil filter and adaptor
- Uses oil pan gasket P/N 12558760 (not included)
- •

## H. 19212593

- Muscle Car Oil Pan Kit
- Fits virtually all 1955-1995 GM front engine, RWD, V-8 cars 5-quart capacity
- Includes oil pan, dipstick and tube, gaskets, pickup tube,
- windage tray, and all mounting hardware
- Wet sump design
- Max stroke 3.620 w/windage tray

## 24241872

- Magnetic Drain Plug (not shown)
- Catches and holds small pieces of metal before they can • cause damage

#### 12612350

#### Oil Pan Gasket (not shown)

- Requires 1 per engine
- Fits all LS-Series engines except LS7 and LS9

#### 12612351

#### Oil Pan Gasket (not shown)

- Requires 1 per engine
- For LS7 and LS9 engines

#### 11515758

Oil Pan Bolt (not shown)

#### • M8 x 30mm long

- Requires 12 per engine (use 13 with LS7 and LS9 engines)
- For LS1, LS2, LS6, LS7 and L92 engines

## 12554990

## Oil Pan Bolt (not shown)

- M6 x 136mm long •
- Requires 2 per engine
- For all LS-Series engines

## 12612289

- Oil Pump (not shown)
- For L92 engines

## 17801830

## High Volume LS Oil Pump Kit (not shown)

- High volume pump assembly for LS-Series engines (except LS7 and LS9 applications)
- Pump pick-up seal included

## 12623097

#### Oil Pump (not shown)

- 2-stage pump for LS7 engines
- Will not work on standard LS crankshafts
- Must use crank sprocket (P/N 12581278), timing damper (P/N 12581276), LS7 pickup tube (P/N 12580855), LS7 oil pan (P/N 12596689), and LS7 timing cover (P/N 12598292)

# 11519133

- **Oil Pump Bolt (not shown)** 
  - Requires 4 per engine
  - For all LS-Series engines

#### LS INTAKE MANIFOLDS

#### A. 12644568

#### LS7 Production Intake Manifold Assembly

- Gen IV fuel injection nylon manifold used on the 2009 Corvette ٠ Z06 LS7 engine
  - Fully assembled with injectors, fuel rail, 90mm ETC throttle body and gaskets
- For use only with LS7 and LSX/LS7-style cylinder heads

NOTE: Must use Controller Kit P/N 19243066.

#### B. 12638197

#### LS3 Intake Manifold Assembly

- Gen IV fuel-injection nylon manifold used on the 2009 Corvette LS3
- Fully assembled with injectors, fuel rail, 90mm ETC throttle body and gaskets
- For use with LS3/L92 style cylinder heads

#### C. 19244103

#### LS9 Supercharger

- Original Equipment on ZR-1 Corvette
- Eaton twin-rotor 2.3L displacement
- Integrated dual-brick air to liquid intercooler
- Highly efficient 4-lobe rotor design
- Generates maximum boost pressure of 10.5 PSI
- · Assembly includes:
  - Supercharger intake system with injectors
  - Cast cover and intercooler
  - Front pulley
  - -Throttle body (not shown)
  - Gasket Set
  - Injector Harness (not shown)
  - Injectors (not shown)
  - Fuel Rails (not shown)



- - A LS7 Production Intake Manifold Assembly





B LS3 Intake Manifold Assembly







LS9/LSA Intercooler Fluid Pump D



LS2 4-bbl Intake Manifold F



LS7 4-bbl Intake Manifold G



LS3/L92 Style 4-bbl Intake Manifold H

# D. 22901367

- LS9/LSA Intercooler Fluid Pump
  - Includes pump assembly
  - Additional hoses and clamps required to connect pump inline with coolant circuit

#### E. 19301246

#### Air Inlet Kit for LS-Based Crate Engine Installation

- Designed for universal LS and LSX EFI crate engine • installations
- Kit contains intake tubes with provisions for mass airflow meter and vacuum line, along with a reusable, high-performance air filter and mounting hardware
- Straight and elbow tubes provide the optimal distance between throttle opening and mass airflow meter, including the minimum length of straight tubing required for accurate mass airflow meter operation
- Includes polished intake tubes, couplers, worm-style clamps and a vacuum hose.
- Mass airflow meter provision accepts all GM production meters, (must be purchased separately).

**NOTE:** This is a universal kit and may not fit every application. Additional fabrication may be required, but the length of the straight tube must be maintained for accurate mass airflow meter operation.

#### F. 88958675 😱 LS2 4-bbl Intake Manifold

- Allows you to install a 4-bbl carburetor on an LS-Series engine with cathedral ports (LS1, LS2, LS6)
- Cast aluminum open-plenum intake manifold accepts a 4150-style square-bore carburetor
- Bosses for EFI injectors for custom applications
- ٠ Bolts and instructions supplied

NOTE: LSX Ignition Controller P/N 19171130 is required for carbureted applications.

#### G. 25534394 🕕

#### LS7 4-bbl Intake Manifold

- Lightweight GM Racing design for use on LS7-style heads
- Reduced mass design, porting not recommended
- Includes mounting bolts and instructions
- Uses LS7 carb intake gasket set P/N 19172113 Machined for 4150-style carburetors and has 3/8" NPT
- vacuum boss Also available with injector bosses, P/N 25534413

NOTE: LSX Ignition Controller P/N 19171130 is required for carbureted applications.

# H. 25534401 😱

# LS3/L92 Style 4-bbl Intake Manifold

- Lightweight GM Racing design for use on LS3/L92-style cylinder heads
- Reduced mass design, porting not recommended
- Includes mounting bolts P/N 11609577 and instructions
- Uses L92 carb intake gasket set, P/N 19172114 Machined for 4150-style carburetors and has 3/8" NPT
- vacuum boss
- Also available with injector bosses P/N 25534416

NOTE: LSX Ignition Controller P/N 19171130 is required for carbureted applications.



#### LSX INTAKE MANIFOLDS

The best way to feed an LSX engine is with air channeled through one of our new LSX intake manifolds. They're designed to match the performance capability of our LSX heads and big-displacement rotating assemblies. LSX intake manifolds have a high-flow, spider-type design and are made of lightweight aluminum. They're cast with plenty of material for builder-specified port work; and the flanges are a minimum of 0.5"-thick to accommodate machining. Additional features include:

- Standard-deck and tall-deck versions
- Natural finish with LSX and GM logos
- Injector/nitrous bosses cast in place
- Comes with installation hardware

#### A. 19244037

#### LSX-LS3 Dual-Plane Standard Deck 4-bbl Manifold

- Dual plane for low- and mid-range torque
- L92 style ports
- Injector/nitrous bosses cast-in
- Extra thick for professional porting
- 4150-style carb. mounting provision
- Uses OEM O-ring gaskets and bolts (included)
- Tall-deck version available as P/N 19244036

#### B. 19244035

#### LSX-LS3 Single-Plane Standard Deck 4-bbl Manifold

- Single-plane design for mid-range and top-end power
- L92 style ports
- Injector/nitrous bosses cast-in
- Extra thick for professional porting
- 4150-style carb. mounting provision
- Uses OEM O-ring gaskets and bolts (included)
- Tall-deck version available as P/N 19244034

#### C. 19244033

#### LSX-LS7 Single-Plane Standard Deck 4-bbl Manifold

- Single-plane design for mid-range and top-end power
- LS7 style port
- Injector/nitrous bosses cast-in
- Extra thick for professional porting
- 4150-style carb. mounting provision
- Uses OEM O-ring gaskets and bolts (included)
- Tall deck version available as P/N 19244032

#### D. 19257854

#### LSX-CT Single-Plane Standard Deck 4-bbl Manifold

- No-holds-barred single plane design for large displacement or high-rpm applications
- LSX-CT/DR-style port; minor port matching required for optimal port match
- Two-sets of injector/nitrous bosses are cast-in for extreme power capability
- Extra thick for professional porting and/or boosted applications
- 1/2" raised 4150-style carb. mounting pad
- Tall deck version available as P/N 19257853



A LSX-LS3 Dual-Plane Standard Deck Manifold



B LSX-LS3 Single-Plane Standard Deck 4-bbl Manifold



C LSX-LS7 Standard Deck 4-bbl Manifold



D LSX-CT Standard Deck 4-bbl Manifold



LSX-DR Standard Deck 4-bbl Manifold E



LS Front Distributor Drive Cover F



- LS7 Carb Intake Gasket G
- L92/LS3 Carb Intake Gasket H



LS Header Flange

#### E. 19257851

#### LSX-DR Single-Plane Standard Deck 4-bbl Manifold

- The ultimate drag racing single plane for large displacement or high-rpm applications
- LSX-CT/DR style port; minor port matching required for optimal port match
- Two-sets of injector/nitrous bosses are cast-in for extreme power capability
- Extra thick for professional porting and/or boosted applications
- 1" raised 4500 style carb. mounting pad
- Tall-deck version available as P/N 19257852 •

# F. 88958679

- LS Front Distributor Drive Cover · Assembly is manufactured for applications where a four-bbl carburetor and distributor are required
- Can be combined with GM's Bowtie valve covers, P/N 25534398 and P/N 25534399, for a complete traditionallooking engine package
- For all LS-Series engines except LS7 and LS9

NOTE: Distributor and mechanical fuel pump not included. Uses Small-Block Ford-style distributor and mechanical fuel pump. Special water pump, accessory drive and damper required.

# INTAKE MANIFOLD GASKETS AND COMPONENTS

# G. 19172113

- LS7 Carb Intake Gasket
- For use with intake manifold P/N 25534394 or P/N 25534413 Includes 2 gaskets

## H. 19172114

- L92/LS3 Carb Intake Gasket
- For use with intake manifold P/N 25534401 or P/N 25534416
- ٠ Includes 2 gaskets

#### 19156564

- LS2 Carb Intake Gasket (not shown)
- For use with intake manifold P/N 88958675
- Includes 2 gaskets ٠

## **EXHAUST MANIFOLD/HEADER**

#### I. 12480130

#### LS Header Flange

- These 3/8" thick steel header flanges are a great way to start a fabricated set of LS-Series headers for a racecar or street rod
- For stock LS1, LS2, LS3, LS6, LS7 and L92 (may require clearancing) exhaust ports
- Sold individually

Intake Manifolds: Additional Required Components			
Part Number	Gaskets (Quantity)	Bolts (Quantity)	Engine Application
88894339	12533587 (1)	12552344 (10)	MY04/05 LS1 and LS6
25534394/25534413	19172113	Included with manifold	LS7 Carb Applications
25534401/25534416	19172114	Included with manifold	L76/L92 and LS3 Carb Applications
88958675	19156564	Included with manifold	LS2 Carb Applications

#### DRY SUMP COMPONENTS

#### A. 25534412

#### LS7 Oil Hose Adapters

- Kit adapts the production LT1 and LS7 oil pan to aftermarket AN-style hoses for aftermarket dry sump oil tanks
  - Bolts directly to oil pan, and has AN male outlet for AN -12 fittings
- Includes 1 adapter, 2 fittings, 2 bolts, and 2 sealing gaskets

#### 12603281

#### Oil Tank (not shown)

Fits Z06 Corvette

#### 15210122

- Oil Inlet Hose (not shown)
- Fits Z06 Corvette

#### 15210117

- Oil Outlet Hose (not shown)
- Fits Z06 Corvette

## STARTERS

#### B. 10465385 🕕

#### LS-Series Starter

• Works with all LS-Series and Gen IV V-8 engines, including the LS1, LS2, LS3, LS6, LQ9, LQ4 and LS7

#### 89017844

- Starter (reman, not shown)
- Requires 1 per engine
- For L92 engines

#### 10465547

#### Starter (reman, not shown)

- Requires 1 per engine
- For F-car applications

#### 89017664

#### Starter (reman, not shown)

- Requires 1 per engine
- For 2005 Corvette applications
- For LS2 engines

#### 89017847

#### Starter (reman, not shown)

- Requires 1 per engine
- For 2006-2007 Corvette applications
- For LS2, LS3 and LS7 engines

**NOTE:** All LS starters require one bolt P/N 11610787, and one bolt P/N 12561848.



**\_** 

#### A LS7 Oil Hose Adapters



B LS-Series Starter

#### Starters: Additional Required Components

Part Number 10465385

 $(\mathbf{I})$ 

#### Bolts (Quantity) 11610787 (1), 12561848 (1)

Engine Application LS-Series





Carburetor, Holley 670-cfm C



Carburetor, Holley 850-cfm D



Carburetor, Holley 870-cfm E



High-Performance Design

#### CARBURETORS AND AIR CLEANERS

Chevrolet Performance has the right carburetor or throttle body to complete your new crate engine, or give life to your rebuilt engine. Then, top off your engine with one of our great-looking air cleaners.

#### Carburetors

# C. 19170092

#### Carburetor, Holley 670-cfm

- Holley 4160-style 670-cfm 4-bbl carburetor
- Features show-car-quality polished finish
- Dual-feed center-hung fuel bowls
- Vacuum secondaries
- Electric choke
- Power valve blowout protection
- Quick-change adjustable vacuum secondary
- Bolts and gaskets included

#### 19170093

#### Carburetor, Holley 770-cfm (not shown)

- Holley 4160-style 770-cfm 4-bbl carburetor
- Features show-car-quality polished finish
- Dual feed, center-hung float bowls
- Vacuum secondaries
- Automatic electric choke
- Quick-change adjustable vacuum secondary
- Recommended for Small-Block and Big-Block engines, including street, competition, towing and off-road vehicles Bolts and gaskets included
- Replaces Holley 4160 750-cfm carburetor P/N 12485506 •

# D. 19170095

#### Carburetor, Holley 850-cfm

- Holley 4150-style 850-cfm 4-bbl carburetor
- Features show-car-quality polished finish
- Mechanical secondaries
- Electric choke
- Four-corner idle adjustment
- Power valve blowout protection
- Custom-calibrated for the ZZ572/620 crate engine
- Recommended for 502 crate engines and suitable for Big-Block engines, including street, competition, towing and off-road vehicles
- Bolts and gaskets included
- Replaces Holley 4160 850-cfm carburetor P/N 88961560

NOTE: Carburetor can only be recalibrated for use with other large-displacement engines.

#### E. 19170094

#### Carburetor, Holley 870-cfm

- Holley 4160-style 870-cfm 4-bbl carburetor
- Features show-car-quality polished finish
- Dual feed, center-hung float bowls
- Vacuum secondaries
- Automatic electric choke
- Quick-change adjustable vacuum secondary
- Recommended for 502 crate engines and suitable for Big-Block engines, including street, competition, towing and off-road vehicles
- Bolts and gaskets included
- Replaces 4150-style 850-cfm carburetor P/N 12366996

#### **Air Cleaners**

## 12342080

#### Air Cleaner, Chevrolet-Logo High-Performance Design

- 14" round high-performance-style air cleaner
- Chrome lid with embossed Chevrolet name
- Fits most 4-bbl and 2-bbl carburetors

NOTE: Check clearance between hood and top of air cleaner. Minimum clearance is 3.75" from top of carburetor gasket area to underside of hood.

#### G. 12342071

## Air Cleaner, Chevrolet-Logo Classic Design

- 14" round classic-style air cleaner Chrome lid with embossed Chevrolet name and Bowtie
- attaching nut Fits most 4-bbl and 2-bbl carburetors



# **Engine Control Modules and Harnesses**

A precisely calibrated engine control module is essential to making your fuel-injected LS engine perform in your older vehicle – and Chevrolet Performance is your source for controllers that are designed for easy, "plug-and-play" installation and, in most applications, no need for third-party tuning adjustments.

Unlike production controllers that may or may not come with a used engine, our controllers are calibrated for installation in older vehicles. That means many of the features required for late-model production vehicles are "turned off," because they're not required in older cars and trucks. That means features that may trigger a diagnostic trouble code and possibly affect performance – requiring additional tuning – are not enabled.

Our inclusive kits deliver all the components required to plug into the engine and get it running – from the controller itself and the accompanying wire harness to the mass airflow sensor, oxygen sensors and even a throttle pedal assembly for engines equipped with an electronic throttle body. The kits also include detailed instructions to help you do it right the first time, even if you have no experience.

#### Most Kits Include:

- Two oxygen sensors
- · Two oxygen sensor mounting bosses (for installation in the exhaust system)
- A mass airflow meter
- · A mass airflow meter mounting boss (for installation in the air intake system)
- A throttle pedal assembly (for use with the electronically operated throttle)
- · A specific oil pressure sensor that is compatible with the harness (when needed)
- A complete wiring harness with fuse box and necessary cam sensor and MAP sensor jumpers
- Fuel pump power module
- Fuel pressure sensor
- The programmed controller
- An instruction sheet

Each Chevrolet Performance controller kit is a true stand-alone system. All that's needed to get a vehicle running with it are power and ground sources, a high-pressure fuel pump and an electric cooling fan.

#### ENGINE CONTROLLER KITS AND COMPONENTS

Part Number Description

i uit ituiliboi	Decemption	
19256514	LC9 5.3L Engine Controller Kit	Specially programmed for retrofit applications, for quicker and easier adaptation of GM's popular 5.3L V-8 for countless hot rod projects. Works with 2007-2009 5.3L engines with the following engine codes: LC9 (2007-2009), LH8 (2008-2009), LY5 (2007-2009), LMF (2008-2009) and LMG (2007-2009) – non-cam-phased engines. Does not engage cylinder-deactivating Active Fuel Management and other features not required for retrofit installations. For individual engine controller, use P/N 19256515 (included in kit)
19259914	LC9 5.3L Engine Controller Kit	Specially programmed for late model 5.3L LC9 Cam Phased engines (2010 and newer). Does not engage cylinder-deactivating Active Fuel Management and other features not required for retrofit installations. For individual engine controller, use P/N 19259916 (included in kit). This is the optimum off road kit for the LC9 5.3L engine, P/N 19259918
19166568	LS2 Engine Controller Kit	Includes all the components required to run your LS2 crate engine. Max rpm 6,600. For individual engine controller, use P/N 19166570 (included in kit). Only works with 58X reluctor wheel engines.
19258270	LS3 Engine Controller Kit	Includes all the components required to run the LS3 crate engine. Max rpm 6,600. For individual engine controller, use P/N 19258271 (included in kit)
19258267	LS376/480 Engine Controller Kit	Includes all the components required to run your LS376/480 crate engine, P/N 19301358. Max rpm 6,600 For individual engine controller, use P/N 19258268 (included in kit)
19259261	LS376/525 Engine Controller Kit	Includes all the components required to run LS376/525 crate engine, P/N 19301360. Max rpm 6,600. For individual engine controller, use P/N 19259291 (included in kit)
19258553	LS7 Engine Controller Kit	Includes all the components required to run your 2006-2013 LS7 crate engine, P/N 19244098. For individual engine controller, use P/N 19258554 (included in kit). Will run all M/Y LS7s with MAP sensor 12615801. Max rpm 7,100
19259293	LSA Engine Controller Kit	Includes all the components required to run LSA crate engine, P/N 19260164. Max rpm 6,200. For individual engine controller, use P/N 19259294 (included in kit)
19299462	LS9 Engine Controller Kit	Includes all components required to run LS9 crate engine, P/N 19260165. Max rpm 6,600. For individual engine controller, us P/N 19299463 (included in kit)
19303137	NEW LT1 Engine Controller Kit	Includes all components needed to run LT1 crate engines, P/N 19329997 (dry sump); P/N 19328728 (wet sump). Includes E-92 controller, fuel pump power module and fuel pressure sensor for direct injection.
19328839	NEW LTG Engine Controller Kit	Includes all components needed to run LTG crate engine P/N 19328837. Includes E-92 controller, fuel pump power module and fuel pressure sensor for direct injection.
19329003	NEW DR525 Engine Controller Kit	Engine controller and harness kit for operating DR525 racing engines P/N 19329009 and P/N 19329008. Includes throttle pedal for electronic throttle body communication. Note: The engine controller in this kit is a "factory-sealed unit, incorporating a tamper-proof design" to comply with rules mandated by the NMCA.
19244481	LSX454 Engine Controller Kit for Manual Transmission	Includes all the components required to run LSX454 crate engine, P/N 19244611. Max rpm 7,100. For individual engine controller, use P/N 19244482 (included in kit)
19299840	LSX454 Engine Controller Kit for Automatic Transmission	Includes all the components required to run LSX454 crate engine, P/N 19244611. Max rpm 7,100. For individual engine controller, use P/N 19299841. NOTE: The controller will not function in a production vehicle unless all kit components are used. These controllers will not operate any of the production gauges. Aftermarket gauges are required.
12480112	ECU, LS1 V-8 (not shown)	Calibrated for the LS1 Camaro/Firebird engine and can be used in a street rod or other early-model vehicles <b>NOTE:</b> Use with Camaro/Firebird LS1 engine and wire harness P/N 12480113.
12480054	ECU, LS1/ASA Racing (not shown)	LS1 ECU is similar to P/N 16238212, but is calibrated for ASA racing only. Use with wire harness P/N 12480055
12480055	Wire Harness, LS1, ASA Racing (not shown)	Designed for ASA racing ECU P/N 12480054 only

Toobnical Notos



# **QUICK INSTALLATION TIPS**

Installing the ECM – The ECM is the brain of the controller. It is weather-resistant and can be mounted under the hood, but it should be placed to avoid extreme heat and away from potential splash. Chevrolet Performance does not recommend mounting it directly to the engine.

ACCELERATOR PEDAL – Chevrolet Performance's controller kits are designed for use with factory-type electronic throttles (no conventional throttle cable) that require a matched accelerator pedal. The pedal contains an electronic sensor that conveys to the controller when and how much to open the throttle. The pedal should be mounted at least 2.5 inches to the right of the brake pedal and 2 inches below it. There should be at least 0.75-inch clearance between the pedal and the transmission tunnel/center console. The pedal has a wire harness that connects to the controller, requiring it to be fed through the dash – possibly requiring a new hole. Use a grommet on the hole to prevent chafing of the harness.

*MAF* – The mass airflow meter that comes with some Chevrolet Performance controller kits must be mounted in a 4-inch-diameter tube that has at least a 6-inch-long straight section. The kit includes the mounting bosses onto which the meter is secured on the tube – the tube must be cut to allow the meter to hang inside of it. The meter sensor must be mounted at the center of the straight section, making sure that is at least 10 inches from the throttle body. Orienting the MAF is essential for proper operation. The meter's sensor should be mounted with the connector end pointed between horizontal to fully upright. Chevrolet Performance has a universal air induction kit, P/N 19301246, that will work for many installations.

**OXYGEN SENSORS** – The oxygen sensors (one for each side of the exhaust) must be inserted in the exhaust stream ahead of the catalytic converters (if used). Holes are simply drilled into the exhaust tubing and the mounting bosses welded to them. After that, the oxygen sensors simply screw onto the mounting bosses and are connected to the wire harness.

#### A. 19171130

#### LSX Ignition Controller

- Distributorless plug-in ignition system for carbureted LS engines with 58x reluctor wheel
- Several pre-programmed timing curves provided
- Supplied software allows you to create custom vacuum advance curves, timing curves, program low and high rpm rev limiter and step retard
- Plugs into stock sensors (not provided) MAP sensor provided
- · Compatible with all LS-Series ignition coils

#### SPARK PLUGS

#### 12571165

#### Spark Plug (not shown)

- Requires 8 per engine
- AC 41-101
- For LS7 engines

#### 12621258

#### Spark Plug (not shown)

- Requires 8 per engine
- AC 41-985 •
- For LS1, LS2, LS6 and L92 engines

#### 19329681

#### Spark Plug Wire Shield (not shown)

- Requires 8 per engine
- For all LS-Series engines •

#### SPARK PLUG WIRES

Chevrolet Performance spark plug wire kits are designed to fit your GM engine, eliminating the guesswork in selecting the correct length.

#### B. 12495519

#### Spark Plug Wire Set, LS-Series V-8

- · Direct-fit wire set with factory-style boots and terminals
- Designed for over valve cover installation

#### FUEL PUMPS AND COMPONENTS

#### C. 6472657

#### **Electric Fuel Pump**

- For use on all carbureted engines
- Flows 30-40 gph at 6-9 psi



A LSX Ignition Controller



B Spark Plug Wire Set, LS Series V-8 (90° boot shown)







Camaro ZL1 Fuel Pump Module D



Electric Fuel Pump, High Output E



# D. 19303293

#### Camaro ZL1 Fuel Pump Module

- Production fuel pump module for the 2012 Camaro ZL1 with supercharged LSA engine
- Supports approximately 600 horsepower
- Direct replacement for 2010+ Camaro SS fuel pump modules
- 250 liters per hour capacity at 65 psi
- Pulse-width modulated, eliminates need for conventional pressure regulator
- Kit includes fuel pump module/sender assembly tank seal and instruction sheet

**NOTE:** When combined with service part P/N 23193422 and P/N 22756514 fuel pickups, you can expand the amount of fuel available during road course usage on your Camaro.

## E. 25115899

- Electric Fuel Pump, High-Output
- Heavy-duty 12-volt electric rotary pump
- Flows 72 gph at 6-8 psi

# F. 854619

- Fuel Filter
- High-capacity in-line filter
- Suitable for all high-performance carbureted applications
- 5/16" inlet and outlet

# 19239926

LS Fuel Filter (not shown)

- 99-03 Corvette stock fuel filter
- Built-in fuel pressure regulator
- Mounts to frame
- Supplies constant 55-61 PSI of fuel to engine and returns excess to fuel tank

Fuel Filter F

# PERFORMANCE BIGBBLOCK Crate Engines

PERFORMANCE

DO NOT DRILLI

Engines Shown From Left: ZZ427/480, Ram Jet 502, ZZ572/620

AETT CHEVIROLEI

PERFORMANCE

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# We've Got Your Torque Right Here!

Nobody knows Big-Blocks like Chevrolet Performance! So when it comes to powering your street car, drag car or your trusty old towing rig, look to the company that's been designing and building them since day one.

CHEVROLET

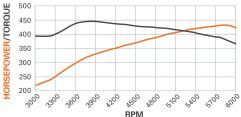
Chevrolet Performance is the only source for brand-new Big-Block crate engines built with brand-new parts – and each is built with the latest cylinder block casting, which is stronger in many key ways than previous production engines. They're all built to deliver the big torque you need to win races and pull trailers.

Save yourself the trouble of rebuilding and select from our wide range of affordable, durable and powerful Big-Block engines. Nobody knows them better!



# 





# **Evoking the Legendary ZL1!**

An instant legend was created in 1969 when a few enterprising dealers used Chevrolet's COPO special order system to get the factory to build a handful of Camaros with the all-aluminum ZL1 427 racing engine. Chevrolet Performance commemorates the historic engine with the Anniversary Edition 427. It's the perfect choice for a resto-mod ZL1 tribute!

Our special aluminum block casting is based on the original, and updated with screw-in galley plugs and additional features. An all-forged rotating assembly is used for strength and durability, while a hydraulic camshaft is used in place of the original ZL1's flat tappet cam for greater drivability. We also use aluminum oval-port cylinder heads with large 2.19/1.88-inch valves for great airflow characteristics.

Only 427 serialized examples of this unique engine were built. Each numbered crate engine includes a special owner's kit with an authenticity certificate, special 427 emblems and more.

**NOTE:** Supply limited. Check for availability.

# **ANNIVERSARY EDITION 427 TECH SPECS**

Part Number:	19166392
Engine Type:	Aluminum Chevy Big-Block V-8
Displacement (cu in):	427
Bore x Stroke (in):	4.250 x 3.750
Block (P/N 88958696):	Cast-aluminum with 4-bolt main caps
Crankshaft (P/N 19171620):	Forged steel
Connecting Rods: (P/N 19211226):	Forged steel
Pistons (P/N 19171618):	Forged aluminum
Camshaft Type (P/N 12366543):	Hydraulic roller
Valve Lift (in):	.527" intake / .544" exhaust
Camshaft Duration (@.050 in):	224° intake / 234° exhaust
Cylinder Heads: (P/N 19211799):	Aluminum oval port, 110cc chambers
Valve Size (in):	2.190 intake / 1.880 exhaust
Compression Ratio:	10.1:1
Rocker Arms (P/N 12361323):	Aluminum roller style
Rocker Arm Ratio:	1.7:1
Distributor (P/N 19212081):	HEI type
Carburetor (P/N 19170093):	770-cfm
Water Pump (P/N 19168602):	Aluminum short-style
Spark Plugs and Wires:	Included
Flexplate (P/N 12561217):	14"
Recommended Fuel:	92 octane
Ignition Timing:	Base 10° BTDC, 36° Total
Maximum Recommended rpm:	6,400
Balanced:	Internal

**NOTE:** Distributor with melonized steel gear MUST be used with long-blocks and Partial engines with steel camshafts, or engine damage will occur.

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Chevrolet Performance Crate Engines include a 24-month or 50,000-mile/80,000-kilometer limited warranty.



Chevrolet Performance <u>does not</u> utilize any used or remanufactured parts in this crate engine, except for the starter, alternator and power steering pump

**INSTALLATION NOTES** 

- Due to crate fitment, the carburetor is shipped in a separate box and needs to be installed by an engine installer
- Requires addition of starter and fuel pump (not included)
- Clutch linkage bosses are drilled and tapped. When using cast-iron exhaust manifolds, lower head bolts may need to be replaced with bolts with shorter heads for clearance
- Comes with an internally balanced 14" automatic transmission flexplate; use flywheel P/N 12582964 and 11.500" clutch assembly for manual transmission applications
- Designed for pre-1976 street vehicles or any off-road vehicle
- Not intended for marine applications

Limited Edition



# SuperMatic™ 4L85-E Four-Speed Transmission

19299805

Page 346

**Torque Converter** 

Direct bolt-on for Gen I Small-Block and all Big-Blocks. Improved valve body for firmer shifts. Includes additional clutch plates. Add up to 685 lb.-ft. torque.

See page 346 for torque converter applications.

# 19212657

7 GHEVROLE

**Transmission Controller** Required when using a GM electronically controlled automatic transmission. Includes wiring harness, software and connector for laptop computer.

Individually Serial Numbered

See page 350

See page 302 for our complete line of Big-Block components

# **AVAILABLE ENGINE RELATED PARTS & ACCESSORIES**



# 19172805

Serpentine Accessory Drive Belt System With Air Conditioning Page 332



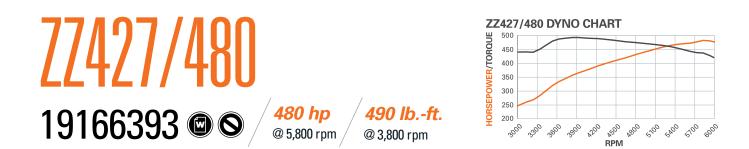
12342024 Chrome Water Neck Page 339



**12342071** Air Cleaner Page 342



**12363128 Chrome High Torque Mini Starter** *Page 340* 



# A Modern Take on the Classic L88

The L88 427 was the ultimate expression of Chevy's production Big-Block power, combining a rigid iron cylinder block with lightweight aluminum cylinder heads and a single four-barrel carburetor. Our engineers have recreated that classic, raspy rat engine in the ZZ427/480, but with updated components that enhance drivability – and performance!

Our engine assembly features the latest-generation block casting with four-bolt main caps, an all-forged rotating assembly for exceptional strength and durability, and a hydraulic roller camshaft instead of the original L88's flat-tappet cam, for greater drivability and a broader performance range. It also features aluminum oval-port cylinder heads with 2.19/1.88-inch valves and a pump-gas-friendly 10.0:1 compression ratio.

Whether you're building a '69 COPO Camaro resto-mod tribute, a modified mid-year Corvette or a street-tire class winner, the ZZ427/480 is the heritage-inspired crate engine that delivers the performance that built the Big-Block's legendary reputation.

#### ZZ427/480 TECH SPECS

• • • • • • • •	
Part Number:	19166393
Engine Type:	Chevy Big-Block V-8
Displacement (cu in):	427
Bore x Stroke (in):	4.250 x 3.750
Block (P/N 19170538):	Cast-iron with 4-bolt main caps
Crankshaft (P/N 19171620):	Forged steel
Connecting Rods: (P/N 19211226):	Forged steel
Pistons (P/N 19171618):	Forged aluminum
Camshaft Type (P/N 12366543):	Hydraulic roller
Valve Lift (in):	.527 intake / .544 exhaust
Camshaft Duration (@.050 in):	224° intake / 234° exhaust
Cylinder Heads: (P/N 19211799):	Aluminum oval port, 110cc chambers
Valve Size (in):	2.190 intake / 1.880 exhaust
Compression Ratio:	10.1:1
Rocker Arms (P/N 19210726):	Aluminum roller style
Rocker Arm Ratio:	1.7:1
Distributor (P/N 19212081):	HEI type
Carburetor (P/N 19170093):	770-cfm
Water Pump (P/N 19168602):	Aluminum short-style
Spark Plugs and Wires:	Included
Flexplate (P/N 12561217):	14"
Recommended Fuel:	92 octane
Ignition Timing:	Base 10° BTDC, 36° Total
Maximum Recommended rpm:	6,400
Balanced:	Internal

**NOTE:** Distributor with melonized steel gear MUST be used with long-blocks and Partial engines with steel camshafts, or engine damage will occur.



Chevrolet Performance Crate Engines include a 24-month or 50,000-mile/80,000-kilometer limited warranty.



Chevrolet Performance <u>does not</u> utilize any used or remanufactured parts in this crate engine, except for the starter, alternator and power steering pump.



- Due to crate fitment, the carburetor is shipped in a separate box and needs to be installed by an engine installer
- Requires addition of starter and fuel pump (not included)
- Clutch linkage bosses are drilled and tapped. When using cast-iron exhaust manifolds, lower head bolts may need to be replaced with bolts with shorter heads for clearance
- Comes with an internally balanced 14" automatic transmission flexplate. See page 331 for a listing of manual transmission flywheels offered by Chevrolet Performance. Requires flywheel designed for internally balanced engines.
- Designed for pre-1976 street vehicles or any off-road vehicle
- Not intended for marine applications

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# 19300175 SuperMatic<sup>™</sup> 4L85-E

**Four-Speed Transmission** 

Direct bolt-on for Gen I Small-Block and all Big-Blocks. Improved valve body for firmer shifts. Includes additional clutch plates. Add up to 685 lb.-ft. torque.

See page 346 for torque converter applications.



# 19212657

**Transmission Controller** Required when using a GM electronically controlled automatic transmission. Includes wiring harness, software and connector for laptop computer.

See page 350

See page 302 for our complete line of Big-Block components

# **AVAILABLE ENGINE RELATED PARTS & ACCESSORIES**



19299805 **Torque Converter** Page 346



12341999 **Fuel Pump Block-Off Plate** Page 313





12342024 Chrome Water Neck Page 339

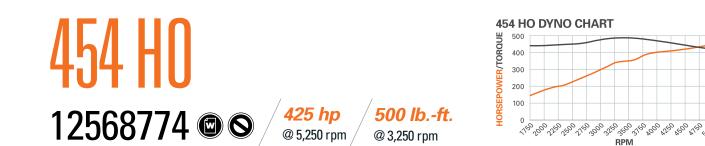


19172805 Serpentine Accessory **Drive Belt System** With Air Conditioning Page 332

12342071 **Air Cleaner** Page 342

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# **Big Torque on a Budget**

Chevrolet Performance's 454 HO crate engine is a Big-Block bargain – an affordable engine with performance specs that will make you think it's 1970 all over again, including 425 horsepower and 500 asphalt-wrinkling lb.-ft. of torque.

A brand-new, latest-generation block casting with four-bolt main caps is the 454 HO's foundation and features an all-forged rotating assembly for great strength and durability. It also uses a smooth hydraulic roller camshaft for excellent drivability and a broad performance range. Rectangular-port cylinder heads with large, 2.19/1.88-inch valves, round out the assembly.

The engine package includes a water pump, balancer, 14-inch flexplate and an aluminum intake manifold. Simply add a carburetor, ignition system and starter and the 454 HO will be ready to roar. All of the necessary parts are available from Chevrolet Performance. If you want the strength of the 454 HO, but want to add your own heads and induction system, use our 454 partial engine P/N 12498778.

## **454 HO TECH SPECS**

Part Number:	12568774
Engine Type:	Chevy Big-Block V-8
Displacement (cu in):	454
Bore x Stroke (in):	4.250 x 4.000
Block (P/N 19170538):	Cast-iron with 4-bolt main caps
Crankshaft (P/N 14096983):	Forged steel
Connecting Rods (P/N 19170198):	Forged steel
Pistons (P/N 10215228):	Forged aluminum
Camshaft Type (P/N 24502611):	Hydraulic roller
Camshaft Lift (in):	.510 intake / .540 exhaust
Camshaft Duration (@.050 in):	211° intake / 230° exhaust
Cylinder Heads (P/N 12562920):	lron rectangular port; 118cc chambers
Valve Size (in):	2.190 intake / 1.880 exhaust
Compression Ratio:	8.75:1
Rocker Arms (P/N 12523976):	Stamped steel
Rocker Arm Ratio:	1.7:1
Water Pump (P/N 19168606):	Cast-iron, long-style
Flexplate (P/N 10185034):	14"
Recommended Fuel:	92 octane
Ignition Timing:	Base 4° BTDC, 26° Total
Maximum Recommended rpm:	5,500
Balanced:	External

**NOTE:** Distributor with melonized steel gear MUST be used with long-blocks and Partial engines with steel camshafts, or engine damage will occur.

# **INSTALLATION NOTES**

- Requires addition of carburetor, starter, fuel pump, distributor and ignition system (not included)
- Clutch linkage bosses are now drilled and tapped. When using cast-iron exhaust manifolds, lower head bolts may need to be replaced with bolts with shorter heads for clearance
- Comes with an externally balanced 14" automatic transmission flexplate; use flywheel P/N 14096987 and 11" clutch assembly for manual transmission applications
- Designed for pre-1976 street vehicles or any off-road vehicle
- Not intended for marine applications



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Chevrolet Performance Crate Engines include a 24-month or 50,000-mile/80,000-kilometer limited warranty.



Chevrolet Performance <u>does not</u> utilize any used or remanufactured parts in this crate engine, except for the starter, alternator and power steering pump.





#### 12498778 (C) (S) 454 Partial Engine The sturdy foundation of the 454 HO is the starting point of

454 HO is the starting point of a custom engine build. Use externally balanced flywheel for manual transmission applications.



# 19300175 SuperMatic™ 4L85-E Four-Speed Transmission

See page 302 for our complete line of Big-Block components

Direct bolt-on for Gen I Small-Block and all Big-Blocks. Improved valve body for firmer shifts. Includes additional clutch plates. Add up to 685 lb.-ft. torque.

See page 346 for torque converter applications.

# **AVAILABLE ENGINE RELATED PARTS & ACCESSORIES**



**19299805 Torque Converter** *Page 346* 



**19170093** Carburetor, Holley 770-cfm Page 341







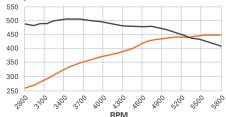
**93440806** HEI Distributor Page 335



12342093 Short Chrome Bowtie Valve Cover Page 324 19212657 Transmission Controller Page 350







# Aluminum Heads Add Big Power!

Our engineers took the tough 454 HO and matched it with a set of higher-flow, oval-port aluminum cylinder heads to pick up an additional 15 horses – while still delivering an awesome 500 lb.-ft. of torque. It's an affordable high-performance Big-Block for your project vehicle!

Aluminum oval-port cylinder heads with 2.19/1.88-inch valves process the airflow through this big-power Big-Block and save weight over iron heads. They're mounted on our latest-generation block casting with four-bolt main caps, which is filled with an all-forged rotating assembly for exceptional strength and durability. There's also a high-lift hydraulic roller camshaft for excellent drivability and a broad performance range.

The crate engine package includes the ZZ454/440 assembled with a water pump, balancer, aluminum intake manifold and a 14-inch flexplate. Your Chevrolet Performance dealer can hook you up with the carburetor, starter, ignition system and other accessories required to get this big-power Big-Block up and running.

## ZZ454/440 TECH SPECS

Part Number:	12498777
Engine Type:	Chevy Big-Block V-8
Displacement (cu in):	454
Bore x Stroke (in):	4.250 x 4.000
Block (P/N 19170538):	Cast-iron with 4-bolt main caps
Crankshaft (P/N 14096983):	Forged steel
Connecting Rods (P/N 19170198):	Forged steel
Pistons (P/N 10215228):	Forged aluminum
Camshaft Type (P/N 24502611):	Hydraulic roller
Camshaft Lift (in):	.510 intake / .540 exhaust
Camshaft Duration (@.050 in):	211° intake / 230° exhaust
Cylinder Heads (P/N 12363392):	Aluminum oval port; 110cc chambers
Valve Size (in):	2.190 intake / 1.880 exhaust
Compression Ratio:	9.6:1
Rocker Arms (P/N 12368082):	Stamped steel
Rocker Arm Ratio:	1.7:1
Water Pump (P/N 19168606):	Cast-iron, long-style
Flexplate (P/N 10185034):	14"
Recommended Fuel:	92 octane
Ignition Timing:	Base 4° BTDC, 26° Total
Maximum Recommended rpm:	5,500
Balanced:	External

**NOTE:** Distributor with melonized steel gear MUST be used with long-blocks and Partial engines with steel camshafts, or engine damage will occur.

# **INSTALLATION NOTES**

- Requires addition of carburetor, starter, distributor and ignition system (not included)
- Clutch linkage bosses are now drilled and tapped. When using cast-iron exhaust manifolds, lower head bolts may need to be replaced with bolts with shorter heads, for clearance
- Comes with an externally balanced 14" automatic transmission flexplate; use flywheel P/N 14096987 and 11" clutch assembly for manual transmission applications
- Designed for pre-1976 street vehicles or any off-road vehicle
- Not intended for marine applications



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Chevrolet Performance Crate Engines include a 24-month or 50,000-mile/80,000-kilometer limited warranty.



Chevrolet Performance <u>does not</u> utilize any used or remanufactured parts in this crate engine, except for the starter, alternator and power steering pump.



## 12498778 (C) (S) 454 Partial Engine The sturdy foundation of the 454 HO is the starting point of

454 HO is the starting point of a custom engine build. Use externally balanced flywheel for manual transmission applications.



# 19300175 SuperMatic<sup>™</sup> 4L85-E Four-Speed Transmission

See page 302 for our complete line of Big-Block components

Direct bolt-on for Gen I Small-Block and all Big-Blocks. Improved valve body for firmer shifts. Includes additional clutch plates. Add up to 685 lb.-ft. torque.

See page 346 for torque converter applications.

# **AVAILABLE ENGINE RELATED PARTS & ACCESSORIES**



**19299805 Torque Converter** *Page 346* 



**19170093 Carburetor, Holley 770-cfm** *Page 341* 



**19302919** Lightweight Starter Page 340



**12342071 Air Cleaner** *Page 342* 



88961867 Distributor, Aluminum Billet HEI Page 335



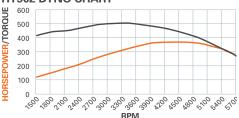


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# A Big-Inch Alternative to Rebuilding

Don't bother repowering your trusty Big-Block-powered truck with a rebuild or reconditioned used engine. Our HT502 crate engine is an affordable alternative with more power and greater durability, including a whopping 512 lb.-ft. of trailer-tugging torque. That's more than the factory ever offered and more than you'll get with a stock-type rebuild.

It is uniquely suited to pre-1978 trucks, but is adaptable to a variety of applications, and it's built with a brand-new, latest-generation block casting with four-bolt main caps. An all-forged rotating assembly delivers exceptional strength and durability, while a mild 8.75:1 compression ratio is suitable for regular gasoline at all altitudes and engine loads.

Our assembly comes with the heads and a balancer installed. An induction system, ignition, starter, water pump and other accessories are required to finish the engine. All necessary components are available from Chevrolet Performance.

## **HT502 TECH SPECS**

Part Number:	88890534
Engine Type	Chevy Big-Block V-8
Displacement (cu in):	502
Bore x Stroke (in):	4.47 x 4.00
Block (P/N 19170540):	Cast-iron with 4-bolt main caps
Crankshaft (P/N 10183723):	Forged steel
Connecting Rods (P/N 19170198):	Forged steel, shot peened
Pistons (P/N 12533507):	Forged aluminum
Camshaft Type (P/N 12552296):	Hydraulic roller
Camshaft Lift (in):	.480 intake / .483 exhaust
Camshaft Duration (@.050 in):	204° intake / 209° exhaust
Cylinder Heads (P/N 12562917):	Iron oval port; 118cc chambers
Valve Size (in):	2.07 intake / 1.73 exhaust
Compression Ratio:	8.75:1
Rocker Arms (P/N 12523976):	Stamped steel
Rocker Arm Ratio:	1.7:1
Flexplate (P/N 10185034):	14"
Recommended Fuel:	92 octane
Ignition Timing:	Base 4° BTDC, 26° Total
Maximum Recommended rpm:	5,500
Balanced:	External

**NOTE:** Distributor with melonized steel gear MUST be used with long-blocks and Partial engines with steel camshafts, or engine damage will occur.

## **INSTALLATION NOTES**

- Requires the addition of carburetor, intake manifold, water pump, starter, distributor and ignition system (not included)
- Clutch linkage bosses are now drilled and tapped. When using cast-iron exhaust manifolds, lower head bolts may need to be replaced with bolts with shorter heads for clearance
- 502 engines now have a mechanical fuel pump boss!
- Comes with an externally balanced 14" automatic transmission flexplate. Use externally balanced flywheel P/N 14096987 and 11" clutch assembly for manual transmission applications
- Designed for pre-1976 street vehicles or any off-road vehicle
- Not intended for marine applications



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Chevrolet Performance Crate Engines include a 24-month or 50,000-mile/80,000-kilometer limited warranty.



Chevrolet Performance <u>does not</u> utilize any used or remanufactured parts in this crate engine, except for the starter, alternator and power steering pump.





#### 12568782 🕲 🛇 502 Partial Engine

This brand-new Partial engine includes forged reciprocating components, as well as the balancer, oil pan and timing chain set.



#### 19300175 SuperMatic<sup>™</sup> 4L85-E Four-Speed Transmission

See page 302 for our complete line of Big-Block components

Direct bolt-on for Gen I Small-Block and all Big-Blocks. Improved valve body for firmer shifts. Includes additional clutch plates. Add up to 685 lb.-ft. torque.

See page 346 for torque converter applications.

#### **AVAILABLE ENGINE RELATED PARTS & ACCESSORIES**



**19299805 Torque Converter** *Page 346* 



**19170093** Carburetor, Holley 770-cfm Page 341



**19302919 Lightweight Starter** *Page 340* 



**12342071 Air Cleaner** *Page 342* 



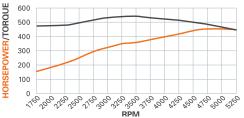
19168602 Aluminum Water Pump, Short-Style Page 332 19212657 Transmission Controller Page 350



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#### **502 HO DYNO CHART**



## An Affordable Powerhouse!

What will you do with 450 horsepower and 550 lb.-ft. of torque from Chevrolet Performance's value-driven 502 HO crate engine? Whether you use it on the street, strip or even pulling a trailer with your workhorse truck, its performance range offers unlimited possibilities. In fact, it makes nearly 500 lb.-ft. by only 1,500 rpm, meaning it has all the low-rpm grunt you can use!

To support all that torque, we build the 502 HO with a brand-new, latest-generation block casting with four-bolt main caps and complement it with an all-forged rotating assembly for exceptional strength and durability. A hydraulic roller camshaft is used for excellent drivability and a broad performance range; and an 8.75:1 compression ratio is suitable for regular gasoline at all altitudes and engine loads.

Our crate engine assembly includes an aluminum, dual-plane intake manifold, a water pump, 14-inch flexplate, balancer and more. You add the carburetor, starter and ignition system – all available from Chevrolet Performance.

#### **502 HO TECH SPECS**

Part Number:	12568778
Engine Type:	Chevy Big-Block V-8
Displacement (cu in):	502
Bore x Stroke (in):	4.470 x 4.000
Block (P/N 19170540):	Cast-iron with 4-bolt main caps
Crankshaft (P/N 10183723):	Forged steel
Connecting Rods (P/N 19170198):	Forged steel, shot peened
Pistons (P/N 12533507):	Forged aluminum
Camshaft Type (P/N 24502611):	Hydraulic roller
Camshaft Lift (in):	.510 intake / .540 exhaust
Camshaft Duration (@.050 in):	211° intake / 230° exhaust
Cylinder Heads (P/N 12562920):	lron rectangular port; 118cc chambers
Valve Size (in):	2.190 intake / 1.880 exhaust
Compression Ratio:	8.75:1
Rocker Arms (P/N 12523976):	Stamped steel
Rocker Arm Ratio:	1.7:1
Water Pump (P/N 19168606):	Cast-iron, long-style
Flexplate (P/N 10185034):	14"
Recommended Fuel:	92 octane
Ignition Timing:	Base 8° BTDC, 30° Total
Maximum Recommended rpm:	5,500
Balanced:	External

**NOTE:** Distributor with melonized steel gear MUST be used with long-blocks and Partial engines with steel camshafts, or engine damage will occur.

#### **INSTALLATION NOTES**

- Requires addition of carburetor, fuel pump, starter, distributor and ignition system (not included)
- Clutch linkage bosses are now drilled and tapped. When using cast-iron exhaust manifolds, lower head bolts may need to be replaced with bolts with shorter heads, for clearance
- 502 engines now have a mechanical fuel pump boss!
- Comes with an externally balanced 14" automatic transmission flexplate. Use flywheel P/N 14096987 and 11" clutch assembly for manual transmission applications
- Designed for pre-1976 street vehicles or any off-road vehicle
- Not intended for marine applications



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Chevrolet Performance Crate Engines include a 24-month or 50,000-mile/80,000-kilometer limited warranty.



Chevrolet Performance <u>does not</u> utilize any used or remanufactured parts in this crate engine, except for the starter, alternator and power steering pump



#### 12568782 **502 Partial Engine** This brand-new Partial engine

includes forged reciprocating components, as well as the balancer, oil pan and timing chain set.



#### 19300175 SuperMatic<sup>™</sup> 4L85-E **Four-Speed Transmission**

Direct bolt-on for Gen I Small-Block and all Big-Blocks. Improved valve body for firmer shifts. Includes additional clutch plates. Add up to 685 lb.-ft. torque.

See page 346 for torque converter applications.

#### See page 302 for our complete line of Big-Block components



19172805 **Serpentine Accessory Drive Belt System** With Air Conditioning Page 332

**AVAILABLE ENGINE RELATED PARTS & ACCESSORIES** 



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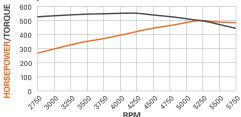


12368384 **Spark Plug Wire Set** Page 342

19212657 Transmission Controller Page 350

# **ZZ502/502 Deluxe** 19201332 (© (S) / 502 hp (25,200 rpm) / 567 lb.-ft (24,200 rpm) / 267 lb.-ft (24,200 rpm) / 267 lb.-ft

ZZ502/502 DYNO CHART



# **Our Most Popular Big-Block**

The ZZ502/502 is one of the industry's benchmark crate engines, offering excellent value with a proven combination of performance that is suitable for the street or strip. With more than 500 horsepower and 567 lb.-ft. of torque, it demands your full attention and a chassis that is strong enough to harness its frame-straining twisting power.

Thanks to a combination of high-flow aluminum oval-port cylinder heads with 2.25/1.88-inch valves and a hydraulic roller camshaft designed to support low-rpm torque production, this torque monster tops the 500 lb.-ft. mark by approximately 2,500 rpm and doesn't dip below it until about 5,000 rpm. It also features a brand-new, latest-generation block casting with four-bolt main caps and an all-forged rotating assembly for exceptional strength and durability.

Our ZZ502/502 Deluxe package comes complete from the oil pan to the carburetor, including an HEI distributor, plug wires, starter, water pump, balancer and an aluminum intake topped with a Holley 870-cfm four-barrel carburetor.

#### ZZ502/502 DELUXE TECH SPECS

•	
Part Number:	19201332
Displacement (cu in):	502
Bore x Stroke (in):	4.470 x 4.000
Block (P/N 19170540):	Cast-iron with 4-bolt main caps
Crankshaft (P/N 10183723):	Forged steel
Connecting Rods (P/N 19170198):	Forged steel, shot peened
Pistons (P/N 12533507):	Forged aluminum
Camshaft Type (P/N 12366543):	Hydraulic roller
Camshaft Lift (in):	.527 intake / .544 exhaust
Camshaft Duration (@.050 in):	224° intake / 234° exhaust
Cylinder Heads (P/N 12363390):	Aluminum oval port; 110cc chambers
Valve Size (in):	2.250 intake / 1.880 exhaust; stainless steel
Compression Ratio:	9.6:1
Rocker Arms (P/N 12368082):	Stamped steel
Rocker Arm Ratio:	1.7:1
Distributor (P/N 93440806):	HEI type
Carburetor (P/N 19170094):	870-cfm
Water Pump (P/N 19168602):	Aluminum, short-style
Spark Plugs and Wires:	Included
Starter (P/N 19302919):	Included
Flexplate (P/N 10185034):	14"
Recommended Fuel:	92 octane
Ignition Timing:	Base 8° BTDC, 30° Total
Maximum Recommended rpm:	5,800
Balanced:	External

**NOTE:** Distributor with melonized steel gear MUST be used with long-blocks and Partial engines with steel camshafts, or engine damage will occur.



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Chevrolet Performance Crate Engines include a 24-month or 50,000-mile/80,000-kilometer limited warranty.



Chevrolet Performance <u>does not</u> utilize any used or remanufactured parts in this crate engine, except for the starter, alternator and power steering pump

#### **INSTALLATION NOTES**

- Due to crate fitment, the carburetor is shipped in a separate box and needs to be installed by an engine installer
- Clutch linkage bosses are now drilled and tapped. When using cast-iron exhaust manifolds, lower head bolts may need to be replaced with bolts with shorter heads for clearance
- 502 engines now have a mechanical fuel pump boss!
- Comes with an externally balanced 14" automatic transmission flexplate. Use flywheel P/N 14096987 and 11" clutch assembly for manual transmission applications
- Designed for pre-1976 street vehicles or any off-road vehicle
- Not intended for marine applications



#### 12568782 **502 Partial Engine**

This brand-new Partial engine includes forged reciprocating components, as well as the balancer, oil pan and timing chain set.

#### **AVAILABLE ENGINE RELATED PARTS & ACCESSORIES**

#### See page 292 for ZZ502 Base Engine details

12371171 ZZ502 Deluxe Kit Chevrolet Performance offers the

CHEVROLET

ZZ502 Deluxe kit for those who want to build their own deluxe engine. Includes partial engine and components (not assembled).

See page 302 for our complete line of Big-Block components



19172805 **Serpentine Accessory Drive Belt System** With Air Conditioning Page 332



19300175 SuperMatic<sup>™</sup> 4L85-E **Four-Speed Transmission** Page 348





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Transmission



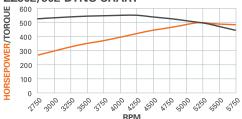
19299805 **Torque Converter** Page 346



12342024 Chrome Water Neck Page 339

# **ZZ502/502 Base** 12496963 © S<sup>502 hp</sup> / <sup>567 lb.-i @ 5,200 rpm</sup>





# A DIY Foundation for Big Torque!

We offer the ZZ502/502 Base crate engine for the builder who wants the super-strong bottom end and high-flow aluminum oval-port cylinder heads, but also wants to finish the engine his or her way. It's a great foundation and it's up to you to make the most of it!

Like our complete ZZ502/502 Deluxe crate engine, a set of high-flow aluminum oval-port cylinder heads and a hydraulic roller camshaft designed to support low-rpm torque production enable it to hit the 500 lb.-ft. mark by approximately 2,500 rpm and hold it above the mark until around 5,000 rpm. It also features a brand-new, latest-generation block casting with four-bolt main caps and an all-forged rotating assembly for exceptional strength and durability.

We rate the ZZ502/502 Base engine at 502 horsepower and 567 lb.-ft. of torque when it is finished with Chevrolet Performance aluminum intake manifold P/N 12363406 and Holley 870-cfm carburetor P/N 19170094. The other parts you need to complete the engine – including chrome dress-up parts – are available from Chevrolet Performance.

#### ZZ502/502 BASE TECH SPECS

Part Number:	12496963					
Engine Type:	Chevy Big-Block V-8					
Displacement (cu in):	502					
Bore x Stroke (in):	4.470 x 4.000					
Block (P/N 19170540):	Cast-iron with 4-bolt main caps					
Crankshaft (P/N 10183723):	Forged steel					
Connecting Rods (P/N 19170198):	Forged steel, shot peened					
Pistons (P/N 12533507):	Forged aluminum					
Camshaft Type (P/N 12366543):	Hydraulic roller					
Camshaft Lift (in):	.527 intake / .544 exhaust					
Camshaft Duration (@.050 in):	224° intake / 234° exhaust					
Cylinder Heads (P/N 12363390):	Aluminum oval port; 110cc chambers					
Valve Size (in):	2.250 intake / 1.880 exhaust; stainless steel					
Compression Ratio:	9.6:1					
Rocker Arms (P/N 12368082):	Stamped steel					
Rocker Arm Ratio:	1.7:1					
Recommended Fuel:	92 octane					
Ignition Timing:	Base 8° BTDC, 30° total					
Maximum Recommended rpm:	5,800					
Balanced:	External					

**NOTE:** Distributor with melonized steel gear MUST be used with long-blocks and Partial engines with steel camshafts, or engine damage will occur.

#### **INSTALLATION NOTES**

- Clutch linkage bosses are now drilled and tapped. When using cast-iron exhaust manifolds, lower head bolts may need to be replaced with bolts with shorter heads for clearance
- 502 engines now have a mechanical fuel pump boss!
- Comes with an externally balanced 14" automatic transmission flexplate. Use flywheel P/N 14096987 and 11" clutch assembly for manual transmission applications
- Designed for pre-1976 street vehicles or any off-road vehicle
- Not intended for marine applications



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Chevrolet Performance Crate Engines include a 24-month or 50,000-mile/80,000-kilometer limited warranty.



Chevrolet Performance <u>does not</u> utilize any used or remanufactured parts in this crate engine, except for the starter, alternator and power steering pump.





#### 12568782 🙆 🛇 502 Partial Engine

This brand-new Partial engine includes forged reciprocating components, as well as the balancer, oil pan and timing chain set.

#### **AVAILABLE ENGINE RELATED PARTS & ACCESSORIES**



#### 12371204 🕲 🛇 ZZ502 Base Kit

Nothing is quite as satisfying as building your own high-performance Big-Block. With the ZZ502 Base Kit, every part is engineered to work together to deliver 502 horses!

See page 302 for our complete line of Big-Block components



19172805 Serpentine Accessory Drive Belt System With Air Conditioning Page 332





**19168602** Aluminum Water Pump, Short-Style Page 332

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19300175

SuperMatic™ 4L85-E

**Four-Speed Transmission** 



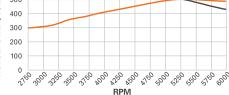












# Make a Statement Under the Hood!

The Ram Jet 502 blends the legendary torque and performance of the Big-Block with a modern port fuel injection system and tunnel ram-style high-rise intake manifold. It's a combination that offers uncompromising performance – including 502 hp and 565 lb.-ft. – in a visually stunning presentation.

The unique Ram Jet fuel injection system stands 11 inches tall at its highest point and consists of a two-piece manifold/plenum assembly, eight injectors, a throttle body, and an updated MEFI 4 controller. Setup instructions are included, making it a simple, "plug-and-play" installation.

Supporting the Ram Jet 502's style and performance is a robust bottom end featuring an all-forged rotating assembly installed in a strong, brand-new, latest-generation block casting with four-bolt main caps. It also has high-flow aluminum oval-port cylinder heads with 2.25/1.88-inch valves, and the engine package includes an aluminum short-style water pump and HEI distributor.

#### **RAM JET 502 TECH SPECS**

Part Number:	12499121					
Engine Type:	Chevy Big-Block V-8					
Displacement (cu in):	502					
Bore x Stroke (in):	4.470 x 4.000					
Block (P/N 19170540):	Cast-iron with 4-bolt main caps					
Crankshaft (P/N 10183723):	Forged steel					
Connecting Rods (P/N 19170198):	Forged steel, shot peened					
Pistons (P/N 12533507):	Forged aluminum					
Camshaft Type (P/N 12366543):	Hydraulic roller					
Camshaft Lift (in):	.527 intake / .544 exhaust					
Camshaft Duration (@.050 in):	224° intake / 234° exhaust					
Cylinder Heads (P/N 12363390):	Aluminum oval port; 110cc chambers					
Valve Size (in):	2.250 intake / 1.880 exhaust; stainless steel					
Compression Ratio:	9.6:1					
Rocker Arms (P/N 12368082):	Stamped steel					
Rocker Arm Ratio:	1.7:1					
Distributor (P/N 1104060):	HEI type					
Throttle Body (P/N 17113524):	Included					
Water Pump (P/N 19168602):	Aluminum, short-style					
Flexplate (P/N 10185034):	14"					
Recommended Fuel:	92 octane					
Ignition Timing:	Base 8° BTDC, 30° Total					
Maximum Recommended rpm:	5,800					
Balanced:	External					

**NOTE:** Distributor with melonized steel gear MUST be used with long-blocks and Partial engines with steel camshafts, or engine damage will occur.

#### **INSTALLATION NOTES**

- The Ram Jet 502 requires a 12-volt power source (and ground), coolant, exhaust system, fuel feed and fuel return line (to the fuel tank). An in-tank fuel pump is recommended
- Clutch linkage bosses are now drilled and tapped. When using cast-iron exhaust manifolds, lower head bolts may need to be replaced with bolts with shorter heads, for clearance
- Designed for pre-1976 street vehicles or any off-road vehicle
- Not intended for marine applications
- IMPORTANT! For a safe, proper and trouble-free engine breakin, the MEFI 4 computer has a "green" mode that controls rpm during the break-in period. During this period, engine speed is limited to 4,000 rpm in the first hour, 4,500 rpm in the second hour and 5,500 rpm in the third hour



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Chevrolet Performance Crate Engines include a 24-month or 50,000-mile/80,000-kilometer limited warranty.



Chevrolet Performance <u>does not</u> utilize any used or remanufactured parts in this crate engine, except for the starter, alternator and power steering pump.

7 



#### 19212657 **Transmission Controller**

Required when using a GM electronically controlled automatic transmission. Includes wiring harness, software and connector for laptop computer.

See page 350

#### **AVAILABLE ENGINE RELATED PARTS & ACCESSORIES**



25534374

Page 324

#### 19300175 SuperMatic<sup>™</sup> 4L85-E **Four-Speed Transmission**

DCHEVROLET

Direct bolt-on for Gen I Small-Block and all Big-Blocks. Improved valve body for firmer shifts. Includes additional clutch plates. Add up to 685 lb.-ft. torque.

See page 346 for torque converter applications.

See page 302 for our complete line of Big-Block components



19172805 **Serpentine Accessory Drive Belt System** With Air Conditioning Page 332



19299805 **Torque Converter** Page 346



25534323 **Black Powder-Coated** Valve Covers Page 324

**Orange Powder-Coated Valve Covers** 





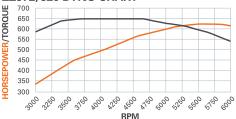


12342093 Short Chrome Bowtie Valve Cover Page 324

WWW.CHEVROLET.COM/PERFORMANCE

# **ZZ572/620 Deluxe** 19201333 (C) (Solution of the state of





# **Our Baddest Big-Block Street Engine**

Proving the adage there's no replacement for displacement, the ZZ572/620 is the ultimate expression of Chevrolet Performance's engineering capability, wrapped up in a soul-stirring combination of performance and attitude. We build the ZZ572/620 with huge 4.560-inch bores and a 4.375-inch stroke to help it deliver 620 hp and a stunning 650 lb.-ft. of grunt!

Strength comes from a brand-new, latest-generation block casting with four-bolt main caps and an all-forged rotating assembly, while high-flow aluminum rectangular-port cylinder heads with massive 310cc intake passages, 118cc raised exhaust ports and 118cc combustion chambers process tremendous airflow. A hydraulic roller camshaft with incredible 0.632/0.632-inch lift and 254/264-degree duration specifications optimizes the airflow volume enabled by the large-port heads.

Chevrolet Performance delivers the ZZ572/620 Deluxe with an 850-cfm carburetor, HEI distributor, aluminum water pump and distinctive orange powder-coated valve covers that proudly proclaim the 572 legend.

INSTALLATION NOTES

pump boss

• Due to crate fitment, the carburetor is shipped in a separate box and needs to be installed by an engine installer

 Clutch linkage boss is now drilled and tapped. When using cast-iron exhaust manifolds, lower head bolts may need to be

 Comes with a 14" automatic transmission flexplate. Requires internally balanced flywheel for manual transmission applications

Designed for pre-1976 street vehicles or any off-road vehicle

• You do have a strong transmission and rear axle, don't you?

replaced with bolts with shorter heads for clearanceRequires addition of starter and fuel pump (not included)

Gen VI tall-deck block has machined mechanical fuel

#### ZZ572/620 DELUXE TECH SPECS

Part Number:	19201333
Engine Type:	Chevy Tall Deck Big-Block V-8
Displacement (cu in):	572
Bore x Stroke (in):	4.560 x 4.375
Block (P/N 19212195):	Cast-iron with 4-bolt main caps
Crankshaft (P/N 88961554):	Forged steel
Connecting Rods (P/N 88962926):	Forged steel, shot peened
Pistons (P/N 88962925):	Forged aluminum
Camshaft Type (P/N 19210721):	Hydraulic roller
Camshaft Lift (in):	.632 intake / .632 exhaust
Camshaft Duration (@.050 in):	254° intake / 264° exhaust
Cylinder Heads (P/N 12499255):	Aluminum rectangular port, 118cc chambers
Valve Size (in):	2.250 intake / 1.88 exhaust; stainless steel
Compression Ratio:	9.6:1
Rocker Arms (P/N 19210726):	Aluminum roller style
Rocker Arm Ratio:	1.7:1
Distributor (P/N 88961867):	HEI
Carburetor (P/N 19170095):	850-cfm
Water Pump (P/N 19168602):	Aluminum, short-style
Spark Plugs and Wires:	Included
Flexplate (P/N 12561217):	14"
Recommended Fuel:	92 octane
Ignition Timing:	Base 8° BTDC, 36° Total
Maximum Recommended rpm:	6,000
Balanced:	Internal

**NOTE:** Distributor with melonized steel gear MUST be used with long-blocks and Partial engines with steel camshafts, or engine damage will occur.



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Chevrolet Performance Crate Engines include a 24-month or 50,000-mile/80,000-kilometer limited warranty.



Chevrolet Performance <u>does not</u> utilize any used or remanufactured parts in this crate engine, except for the starter, alternator and power steering pump.

Not intended for marine applications





#### 12498792 🖸 🛇 ZZ572/620 Base Engine

The ZZ572/620 features rectangular-port aluminum cylinder heads that deliver 9.6:1 compression ratio in a pump-gas-friendly package.



**Fuel Pump** 

Page 313

#### 19300175 SuperMatic<sup>™</sup> 4L85-E **Four-Speed Transmission**

Direct bolt-on for Gen I Small-Block and all Big-Blocks. Improved valve body for firmer shifts. Includes additional clutch plates. Add up to 685 lb.-ft. torque.

See page 346 for torque converter applications.

#### See page 302 for our complete line of Big-Block components



19172805 **Serpentine Accessory Drive Belt System** With Air Conditioning Page 332





12342024 Chrome Water Neck Page 339

12341999 **Block-Off Plate** 





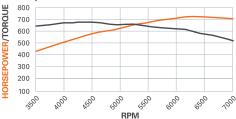
19212657 Transmission Controller Page 350

WWW.CHEVROLET.COM/PERFORMANCE

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# **ZZ572/720R Deluxe** 19201334 (C) (20 hp) (685 lb.-ft. (20 hp) (685 lb.-ft. (2 4,500 rpm) (685 lb.-ft. (2 4,500 rpm) (685 lb.-ft.





# An Assault Weapon for the Strip!

Don't wait weeks or months for a custom drag racing engine. The ZZ572/720R is the king of all Rat engines and is capable of pulling your bracket racer or heads-up challenger down the drag strip in the 9-second range. We deliver it fully assembled. You simply bolt on the included Dominator-style 1090-cfm carburetor, along with a starter and fuel pump (not included) and you're ready to go!

The engine assembly is all-business, starting with a brand-new, latest-generation block casting with four-bolt main caps and an all-forged rotating assembly for exceptional strength and durability. A unique mechanical roller camshaft with 0.714/0.714-inch lift and 278/282-degree duration specifications complements high-flow aluminum rectangular-port cylinder heads with massive 310cc intake passages, 118cc raised exhaust ports and 118cc combustion chambers, moving big air through the engine efficiently to make huge power!

If you're building the ultimate dual-purpose car, the ZZ572/720R is suitable for limited forays on the street. It has a 12.0:1 compression ratio, so make sure you've got access to 110-octane gasoline before hitting the local cruise night!

#### ZZ572/720R DELUXE TECH SPECS

Part Number:	19201334
Engine Type:	Chevy Tall Deck Big-Block V-8
Displacement (cu in):	572
Bore x Stroke (in):	4.560 x 4.375
Block (P/N 19212195):	Cast-iron with 4-bolt main caps
Crankshaft (P/N 88961554):	Forged steel
Connecting Rods (P/N 88962926):	Forged steel, shot peened
Pistons (P/N 88963227):	Forged aluminum
Camshaft Type (P/N 19210722):	Mechanical roller
Camshaft Lift (in):	.714 intake / .714 exhaust
Camshaft Duration (@.050 in):	278° intake / 282° exhaust
Cylinder Heads (P/N 88961160):	Aluminum rectangular port, 118cc chambers
Valve Size (in):	2.250 intake / 1.880 exhaust stainless steel
Compression Ratio:	12:1
Rocker Arms (P/N 19210726):	Aluminum roller style
Rocker Arm Ratio:	1.7:1
Distributor (P/N 10093387):	Electronic ignition
Carburetor (P/N 19170096):	1150-cfm Dominator
Water Pump (P/N 19168602):	Aluminum, short-style
Spark Plugs and Wires:	Included
Recommended Fuel:	110 octane race gas
Ignition Timing:	Base 8° BTDC, 36° Total
iyinnon miniy.	
Maximum Recommended rpm:	6,750

**NOTE:** Distributor with melonized steel gear MUST be used with long-blocks and Partial engines with steel camshafts, or engine damage will occur.



Chevrolet Performance Racing Crate Engines are excluded from limited warranty.



Chevrolet Performance <u>does not</u> utilize any used or remanufactured parts in this crate engine, except for the starter, alternator and power steering pump.

Not intended for marine applications

Big sticky slicks will help hook up this monster!

INSTALLATION NOTES

(not included)

• Due to crate fitment, the carburetor is shipped in a separate box and needs to be installed by an engine installer

• Clutch linkage boss is now drilled and tapped. When using cast-iron exhaust manifolds, lower head bolts may need to be

Gen VI tall-deck block has machined mechanical fuel pump boss
Comes with a 14" automatic transmission flexplate. Requires internally balanced flywheel for manual transmission applications

Designed for pre-1976 street vehicles or any off-road vehicle

replaced with bolts with shorter heads for clearanceRequires addition of starter, ignition coil, and fuel pump





## 19212657

**Transmission Controller** Required when using a GM electronically controlled automatic transmission. Includes wiring harness, software and connector for laptop computer.

See page 350

#### **AVAILABLE ENGINE RELATED PARTS & ACCESSORIES**



#### 19300175 SuperMatic<sup>™</sup> 4L85-E Four-Speed Transmission

Direct bolt-on for Gen I Small-Block and all Big-Blocks. Improved valve body for firmer shifts. Includes additional clutch plates. Add up to 685 lb.-ft. torque.

See page 346 for torque converter applications.

See page 302 for our complete line of Big-Block components



**12341999** Fuel Pump Block-Off Plate Page 313



**19172805** Serpentine Accessory Drive Belt System With Air Conditioning Page 332 /





12561217

14" Flexplate

Page 331



19299805 Torque Converter Page 346



12342024 Chrome Water Neck Page 339



# Vortec 8.0L 19256938 (a) (315 hp (2 4500 rpm (CNG)) (390 lb.-ft. (375 hp (2 3500 rpm (CNG)) (2 4200 rpm (GAS)) (3200 rpm (GAS)) (3200 rpm (GAS))



# Truck Power with Gas, CNG or LPG

When it comes to grunt work - like pulling your car hauler or offshore racing boat - Chevrolet Performance's heavy-duty 8.0L Big-Block does the job like no other gas engine. It's designed to accommodate gasoline, CNG or LPG fuels, and because it's a Big-Block, it delivers strong, low-rpm torque. In fact, it peaks at 475 lb.-ft. by only 3,200 rpm, allowing you to pull a trailer confidently on the steepest grades.

A tall-deck version (10.2-inch deck heigh) of the latest block casting, featuring full-length water jackets, thicker main bearing webs and four-bolt main caps, is the 8.0L's foundation and it's used with a forged steel crankshaft and forged connecting rods for great strength. A long, 4.250-inch stroke helps maximize torque. It also features a crank-triggered ignition system, with 4x camshaft and 58x crankshaft reluctor wheels.

Our assembly comes with heads and a balancer installed. An induction system, ignition, starter, water pump and other accessories are required to finish the engine. The engine requires an intake manifold designed for a tall-deck block, such as Chevrolet Performance manifold P/N 88961161. Conventional big block intake manifolds can be used with spacers (not included).

**NOTE:** The engine can support fuel injection and also has a provision for a mechanical fuel pump (the production 8.0L camshaft does not have a fuel pump lobe)

#### **VORTEC 8.0L TECH SPECS**

Part Number:	19256938
Engine Type:	Chevy Big-Block V-8
Displacement (Litre):	8.0L
Displacement (cu in):	488
Bore x Stroke (in):	4.270 x 4.250
Block (P/N 19256820):	Tall Deck (10.2")
Fuel Requirements:	LPG/CNG
Crankshaft (P/N 19300876):	Forged steel
Connecting Rods (P/N 19256831):	Forged steel
Firing Order:	1-8-7-2-6-5-4-3
Connecting Rod Ratio:	1.58:1
Pistons (19256829):	Hypereutictic w/anodized top ring land
Camshaft Type (P/N 12556291):	Hydraulic Roller
Cylinder Heads (P/N 19256827):	Fast Burn Iron
Damper (P/N 19256830)	Cast Iron
Valve Train:	Fully Adjustable
Compression Ratio:	9.9:1 nominal
Crankcase capacity:	8 qts
Maximum Recommended rpm:	4,500
Balanced:	Internal

**NOTE:** Distributor with melonized steel gear MUST be used with long-blocks and Partial engines with steel camshafts, or engine damage will occur.

#### **INSTALLATION NOTES**

- Designed for gasoline or CNG /LPG on-highway applications
- Tall deck block design (10.2" deck height)
- Full-length water jackets (non-siamesed cylinders)
- Thicker main bearing webs with four bolt main caps
- Forged steel crankshaft and connecting rods
- Double row roller timing chain
- Anodized pistons with full floating wrist pins offer CNG/LPG capability
- Hardened valve seats (intake and exhaust) for CNG/LPG durability
- Stainless steel intake and exhaust valves for CNG/LPG durability
- Adjustable valve train.
- "Fast Burn" cylinder heads for fuel efficiency and power
- 58x Crankshaft positioning sensor capability
- 4x Camshaft positioning sensor capability
- Flat-response knock sensor capability
- Coil-near-plug configuration



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Chevrolet Performance Crate Engines include a 24-month or 50,000-mile/80,000-kilometer limited warranty.



Chevrolet Performance does not utilize any used or remanufactured parts in this crate engine, except for the starter, alternator and power steering pump



**88961161** Intake Manifold-Tall Deck Page 337



See page 302 for our complete line of Big-Block components

**12368384** Spark Plug Wire Set Page 342

NOTE: Spark Plugs not included

**AVAILABLE ENGINE RELATED PARTS & ACCESSORIES** 



**93440806 HEI Distributor** *Page 335* 



**19172805** Serpentine Accessory Drive Belt System w/Air Conditioning *Page 332* 



**12495502** Wire Loom Kit, Big Block Page 342



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Bowtie Sportsman Block

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# BIG-BLOCK Engine Components

# Factory-Engineered Parts for Uncompromising Power and Durability

Building your Big-Block engine for maximum performance and durability is easier when you're using factory-engineered parts from Chevrolet Performance.

It all starts with a brand-new GM cylinder block that's stronger than previous production designs. It combines design elements of the Mark IV and Gen V designs, along with architecture improvements that give the block greater strength. We've even got an updated version of the legendary aluminum ZL1 block casting for your COPO tribute project!

We've also got the best-performing rotating parts and cylinder heads, including lightweight aluminum versions of the legendary rectangular-port and oval-port cylinder heads. Chevrolet Performance has designed, built and tuned Big-Blocks longer than anyone, so you can trust that our parts will deliver dependable, winning performance – on the street, the strip or when towing!

Blocks and Components
Page 304

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Pistons and Piston Rings **Page 328** 



Cylinder Heads **Page 314** 

Crankshafts **Page 330** 



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Page 321

Oil Pans, Oil Pumps, Gaskets and Components Page 333 Valve Covers Page 324 Camshafts Page 328



Intake Manifolds **Page 336** 







# A Better Big-Block

The classic Chevy Big-Block production engine was introduced in 1965. In the late 1980s, a new version arrived, designed for marine and fuel-injected applications. The early-style engines are known as Mark IV Big-Blocks, while the later style is referred to as the Gen V (and Gen VI) Big-Block. You can tell them at a glance by checking for a mechanical fuel pump mounting pad. If it has one, it's a Mark IV. If there's no fuel pump pad, it's a Gen V block.

Despite the fuel pump mounting pad difference in their castings, the cylinder blocks of the Mark IV and Gen V are based on the same design architecture. However, there are several other differences—particularly in the water jackets near the deck surfaces—that make some Mark IV and Gen V parts incompatible, including crucial components such as the cylinder head gaskets.

Within the last few years, Chevrolet Performance revised the basic Big-Block architecture to commonize the Mark IV and Gen V, creating an all-new cylinder block casting that combines the features of both generations. It also incorporates significant updates and strength-enhancing features that make the Big-Block a stronger engine foundation with provisions to support 21st-century performance.

Although the basic Big-Block architecture is revised, Chevrolet Performance continues to offer two versions, each differentiated by performance and displacement capability. The Bowtie block continues to be the block of maximum performance. All of our crate engines use the revised Big-Block design.

# Here is what distinguishes the latest Chevrolet Performance Big-Blocks from earlier castings:

- Water jackets are revised near the deck surfaces so that Mark IV or Gen V head gaskets can be used interchangeably
- Oil pressure feed holes are added to the oil filter boss and front bulkhead to support oil feeds for superchargers, turbochargers, etc.
- The oil hole next to the camshaft bore at the front of the block is repositioned to enable safe machining of the cam bore to accept a 50mm roller camshaft bearing
- A mechanical fuel pump mounting pad is included, similar to the Mark IV
- A boss next to the distributor hole in the valley supports hardware for digital ignition equipment
- The front bulkhead is thicker and stronger, with marked provisions for a 10-bolt timing cover (non-Bowtie blocks are delivered with drilled and tapped holes for 6-bolt covers; remaining holes must be drilled and tapped at the prescribed positions)
- Non-Bowtie blocks are machined for 4-bolt parallel main caps; Bowtie blocks are machined for 4-bolt splayed caps



- Revised rear-of-block allowed for the machining of 1- or 2-piece main seals (similar to Gen V design)
- A front clutch boss is included for older muscle car applications
- 454 blocks have a slightly beefier main web than previous blocks
- All blocks are made with the standard production roller camshaft and lifter machining
- 502 and Bowtie blocks share the same main web, which is strengthened considerably from the Mark IV and the first-generation Gen V Bowtie block
- Bowtie blocks feature a distinctive water jacket design to allow up to 4.600" bores. These blocks can be identified by a "B" suffix behind the casting number

Two additional core plugs are featured in the rear bulkhead. They enhance the manufacturing process at the foundry and help improve overall quality. Also, a "Bowtie" logo and other identifying marks are incorporated on the Bowtie block, distinguishing it from previous generations.

# **Chevy Big-Block Quick Reference Chart**

#### **Production Based Cast-Iron Blocks**

Part Number	Casting Number	Deck Height	F Pump Boss	Cyl Wall	Bore Range	Main Bolt	Main Blt Degree	Cap Material	Crank Jnl Dia.	Oiling	Seal Type	Max Stroke	Weight (lbs)	Max HP	Usage	Page Number
19170538	_	9.800"	Yes	Open	4.250"-4.310"	4	Straight	Cast-iron	2.750"	Wet	1 pc	4.250"	247	700	Street	306
19170540	_	9.800"	Yes	Siamese	4.470"-4.500"	4	Straight	Cast-iron	2.750"	Wet	1 pc	4.250"	269	700	Mod	306

#### **Bowtie Cast-Iron Big-Blocks**

Part Number	Casting Number	Deck Height	F Pump Boss	Cyl Wall	Bore Range	Main Bolt	Main Blt Degree	Cap Material	Crank Jnl Dia.	Oiling	Seal Type	Max Stroke	Weight (lbs)	Max HP	Usage	Page Number
19212191	24502504B	9.800"	Yes	Siamese	4.494"-4.600"	4	16°	Nodular	2.750"	Wet	2 pc	4.500"	258	800	Sport	307
19212192	24502504B	9.800"	Yes	Siamese	4.494"-4.600"	4	16°	Nodular	2.750"	Wet	1 pc	4.500"	258	800	Sport	307
19212193	24502506B	10.200"	Yes	Siamese	4.494"-4.600"	4	16°	Nodular	2.750"	Wet	1 pc	4.500"	263	800	Sport	308
19212194	24502506B	10.200"	Yes	Siamese	4.494"-4.600"	4	16°	Nodular	2.750"	Wet	2 pc	4.500"	263	800	Sport	308
19212195	24502506B	10.200"	Yes	Siamese	4.560"-4.600"	4	16°	Nodular	2.750"	Wet	1 pc	4.500"	263	800	Sport	308
19212196	24502504B	9.800"	Yes	Siamese	4.240"-4.600"	4	16°	Steel	2.750"	Wet	2 pc	4.500"	281	1200	Pro	310
19212197	24502506B	10.200"	Yes	Siamese	4.240"-4.600"	4	16°	Steel	2.750"	Wet	2 pc	4.500"	296	1200	Pro	310

#### **Aluminum ZL1 Block**

Part Number	Casting Number	Deck Height	F Pump Boss	Cyl Wall	Bore Range	Main Bolt	Main Blt Degree	Cap Material	Crank Jnl Dia.	Oiling	Seal Type	Max Stroke	Weight (Ibs)	Max HP	Usage	Page Number
12370850	3946053	9.800"	Yes	Siamese	4.240"-4.300"	4	16°	Steel	2.750"	Wet	2 pc	4.375"	110	650	Pro	309
88958696*	88958695	9.800"	Yes	Siamese	4.250"-4.300"	4	16°	Steel	2.750"	Wet	1 pc	4.375"	110	650	Pro	N/A
* llood in 1	1	107 0/01 10	166202	Nat availa	bla far aar i'a	~										

\*Used in Anniversary 427 P/N 19166392. Not available for service.

#### **DRCE Blocks**

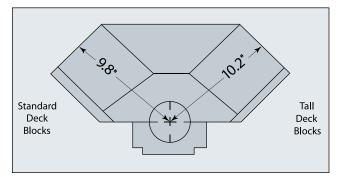
Part Number	Casting Number	Deck Height	F Pump Boss	Cyl Wall	Bore Range	Main Bolt	Main Blt Degree	Cap Material	Crank Jnl Dia.	Oiling	Seal Type	Max Stroke	Weight (lbs)	Max HP	Usage	Page Number
24502572	1A626	9.525"-9.000"	No	Siamese	4.500"-4.700"	4	16°	Steel	2.750"	Dry	2 pc	4.600"	255	1400+	Pro	311
25534406	CG	9.250"-9.000"	No	Siamese	4.590"-4.700"	4	22°	Steel	2.500"	Dry	2 pc	4.600"	N/A	1400+	Pro	311
25534400	CG	9.250"-9.000"	No	Siamese	4.590"-4.700"	4	22°	Steel	2.500"	Dry	2 pc	4.600"	N/A	1400+	Pro	311



#### THRUST BEARING ALIGNMENT

On Small-Block and Big-Block engines, the thrust bearing alignment on the important #5 bearing is performed by installing only the #5 main cap and tightening its fasteners. With cap in place, the crankshaft is tapped forward or backward with a rubber mallet. When this is done, crankshaft endplay can be measured. For Small-Blocks, you're looking for between 0.005- and 0.007-inch; for Big-Blocks, the spec is 0.0065-0.0075-inch.

#### **Deck Height Diagram**



#### **ENGINE BLOCKS**

#### 19170538

#### 427/454 Bare Block (not shown)

- New casting incorporating the best designs of Mark IV and Gen VI
- Production type cast-iron 4-bolt block
- 4.250" finished bore
- 4.310" max bore (non-siamese bore)
- Machined fuel pump pad
- New water jackets for use with Mark IV or Gen VI heads
- Revised oiling to allow for bigger cam bearings/cam lift
- Bolt boss (not machined) added near distributor hole like 8.1L
- Can be drilled for use with 10-bolt front timing cover
- Additional clearance added for roller timing chains
- Auxiliary oil pressure line added to front of block
- Racing style oil filter cast feature with added oil pressure port
  Additional boss for manual transmission clutch pivot
- (machined)
- Additional material added around lifter bosses

#### A. 19170540

#### 502 Mark IV/Gen VI Bare Block

- New casting incorporating the best designs of Mark IV and Gen VI
- Production-type cast-iron 4-bolt block
- Improved main bearing bulkheads–Bowtie block-style bulkhead
- Clearanced for bigger strokes
- 4.470" finished bore
- 4.600" max bore (siamese)
- Fuel pump pad has been added/machined
- New water jackets for use with Mark IV or Gen VI heads
- Revised oiling to allow for bigger cam bearings/cam lift
- Bolt boss (machined) added near distributor hole like 8.1L
- Can be drilled for use with 10-bolt front timing cover
- Additional clearance added for roller timing chains
- Auxiliary oil pressure line added to front of block
- Racing-style oil filter cast feature with added oil pressure port
- Two bosses added for manual transmission clutch pivot (machined)
- Additional material added around lifter bosses



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A 502 Mark IV/Gen VI Bare Block (front)



A 502 Mark IV/Gen VI Bare Block (bottom)



A 502 Mark IV/Gen VI Bare Block (rear)



Bowtie Sportsman Block (front) B



Bowtie Sportsman Block (rear) B

2-Piece Rear Main Seal C



Top: Splayed Main Cap C Bottom: Machined Bottom (close-up)

#### **BOWTIE SPORTSMAN BLOCKS**

Big-Blocks with big power are what you get when you select a Chevrolet Performance Bowtie Sportsman block for your drag racing or extreme street-performance application. These blocks comprise a full line of high-guality, precision-machined components based on performance-proven GM designs. The extensive lineup of blocks makes choosing the perfect block easy - and our quality and precision machining is second to none.

The blocks are CNC-machined, an automated process that guarantees precise tolerances. There are no approximations on these blocks - they're exactly right, which is critical to obtaining maximum performance. Chevrolet Performance offers more CNC-machined blocks than anyone.

The highest-quality materials are used to cast our Sportsman Bowtie blocks. They are also available as tall decks, allowing you to make more cubic inches with larger-stroke crankshafts. These blocks can easily be bored and stroked to 500-or-more cubic inches. They can be fitted with one-piece or two-piece crankshaft seals for a smaller chance of oil leaks (one-piece seals) or more aftermarket components attachments (two-piece seals).

The Bowtie Sportsman blocks are available with splayed main caps, which have additional material holding the crankshaft in place. The caps are splayed at 16 degrees. Chevrolet Performance uses splayed main caps throughout the entire line of performance-built Big-Blocks.

Chevrolet Performance Bowtie Sportsman Blocks are ideal for drag racers or street machines where the goal is 800 horsepower and long-lasting reliability.

#### Bowtie Sportsman Block Technical Notes:

- Available in short deck (9.800") or tall deck (10.200") configurations
- Blocks have clearance for 4.500" stroke crankshafts
- CNC-machined to +/- .001" tolerance
- Siamese cylinder bores
- Bore finishes are ready to hone to size
- Machined for mechanical fuel pump •
- Machined for hydraulic roller and flat tappets
- Nodular iron 4-bolt main caps splayed 16° on the three center mains
- Priority main oiling system
- Blocks with a 1-piece Rear Main Seal use the 6-bolt, Gen VI-style front cover (P/N 10230954) and Gen VI-style oil pan
- Blocks with a 2-piece Rear Main Seal use the 10-bolt, Mark IV-style front cover and Mark IV-style oil pan

See chart on page 305 for complete specifications.

#### **Standard Deck Sportsman Blocks**

#### B. 19212192

#### Standard Deck Bowtie Sportsman Block

- 1-piece rear main seal
- CNC-machined cast-iron 4-bolt block
- 4.494" finished bore
- 4.600" max bore
- Tested to 800 horsepower! •

#### C. 19212191

#### **Standard Deck Bowtie Sportsman Block**

- 2-piece rear main seal
- CNC-machined cast-iron 4-bolt block
- 4.494" finished bore
- 4.600" max bore
- Tested to 800 horsepower!



#### TALL DECK SPORTSMAN BLOCKS

#### A. 19212193

- **Tall Deck Bowtie Sportsman Bare Block**
- 1-piece rear main seal
- CNC-machined cast-iron 4-bolt block
- 4.494" finished bore
- 4.600" max bore
- Tested to 800 horsepower!

#### 19212194

#### Tall Deck Bowtie Sportsman Bare Block (not shown)

- 2-piece rear main seal
- CNC-machined cast-iron 4-bolt block
- 4.494" finished bore
- 4.600" max bore
- Tested to 800 horsepower!

#### 19212195

#### Tall Deck 572 Bowtie Sportsman Bare Block (not shown)

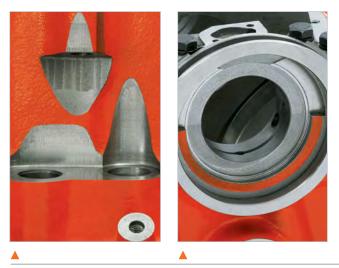
- 1-piece rear main seal
- Uses Mark IV style front cover and oil pan mounting
- CNC-machined cast-iron 4-bolt block
- 4.560" fully honed bore
- 4.600" max bore
- Powder coated Chevy orange
- 5 windage tray bolts installed
- Tested to 800 horsepower!
- This is the block used for our 572 engines



- - A Tall Deck Bowtie Sportsman Bare Block (front)



A Tall Deck Bowtie Sportsman Bare Block (rear)



A Machined Lifter Valley Detail

A 1-Piece Rear Main Seal



ZL1 Aluminum Big-Block (front) B



ZL1 Aluminum Big-Block (rear) B



ZL1 Aluminum Big-Block, **B** 4-Bolt Mains



ZL1 Aluminum Big-Block, **B** Lifter Valley

#### ZL1 ALUMINUM BIG-BLOCK

ZL1 was the legendary regular production option (RPO) code that struck fear into all competitors who came up against 1969 Camaros – and a couple of Corvettes – that were equipped with this fearsome 427-cubic-inch Big-Block from the factory. The price to own an original ZL1 has exceeded the value of many homes, but you can build your own ZL1-powered supercar thanks to Chevrolet Performance. By reintroducing this fabled aluminum Big-Block, Chevrolet Performance has made it possible for mere mortals to experience the raw horsepower and tremendous torque of the ZL1. The Chevrolet Performance ZL1 aluminum block is made from premium materials and is precision machined to blueprinted specifications.

See chart on page 305 for complete specifications.

#### ZL1 Aluminum Block Technical Notes:

- 356-T6M Aluminum block
- Standard deck height (9.800")
- 4.300" maximum bore
- 4.240" finished bore
- 4.375" maximum stroke
- Siamesed cylinder walls
- Centrifugally spun cast-iron cylinder sleeves
  Steel 4-bolt main caps splayed 16° on the three center mains (dowel located)
- Provision for hydraulic roller camshafts
- AN O-ring oil and water plugs
- Tested to 650 horsepower

#### **B.** 12370850

#### ZL1 Aluminum Big-Block

- 4.240" finished bore
- 4.300" max bore
- 4.375" max stroke
- Use sleeve P/N 12480035 (see page 300)
- 2-piece rear main seal
- Uses Mark IV front timing cover

#### **CAST-IRON BOWTIE RACE BLOCKS**

If you're looking to build a drag racing engine capable of producing 1,200 horses or more, a Chevrolet Performance cast-iron Bowtie Race Block is your starting point. It is designed for engine builders who want to custom-machine their blocks for specific racing applications. Toward that end, these premium castings have thick deck surfaces, improved oiling, improved coolant flow and splayed 4-bolt steel bearing caps. Everything is secured with premium fasteners. The combination of a Chevrolet Performance cast-iron Bowtie Race Block and your unique engine building skills will put you down the track ahead of the competition.

See chart on page 305 for complete specifications.

#### Cast-iron Bowtie Race Block Technical Notes:

- Precision CNC-machining means +/- 0.001" tolerances
- Blocks are available in short deck (9.800") or tall deck (10.200")
- A sonic bore check data sheet is provided with each block
- Siamese cylinder bores
- Improved cooling around number-1 cylinder
- Accepts Mark IV or Gen V, VI cylinder heads
- Use Gen V head gaskets with Mark IV and Gen V cylinder heads
- Use Gen VI head gaskets with Gen VI cylinder heads
- Requires Mark IV design 2-piece rear main seal oil pans •
- Requires Mark IV design crankshafts •
- Can use Mark IV and Gen V, VI camshafts, timing sets, lifters and timing cover (aftermarket belt drive timing covers may require clearancing)
- Blind-tapped head bolt holes; extra inner head bolt bosses provided
- 4-bolt SAE 8620 main caps splayed 16° on the three center mains
- Priority main oiling wet-sump system
- Provisions for dry-sump oil line provided
- Honed camshaft and crankshaft bores
- 0.842" lifter bores (maximum 1.06") may be relocated
- Distributor gear clearance at bottom of number-8 cylinder bore should be checked
- Machined mechanical fuel pump pad

#### 19212196

#### Standard Deck Bowtie Race Block (not shown)

- CNC-machined cast-iron 4-bolt block
- 4.240" finished bore
- 4.600" max bore (.250" min wall thickness)
- Standard deck height (9.800") •
- Lifter bosses are .300" taller than standard blocks
- Tested to 1,200 horsepower!

#### A. 19212197

#### **Tall Deck Bowtie Race Block**

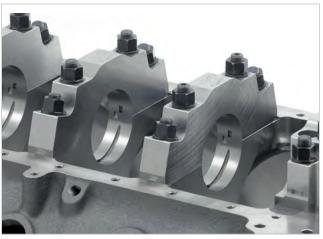
- CNC-machined cast-iron 4-bolt block
- 4.240" finished bore
- 4.600" max bore (.250 min wall thickness)
- Tall deck height (10.200")
- Lifter bosses are .300" taller than standard blocks
- Tested to 1,200 horsepower!



A Tall Deck Bowtie Race Bare Block (front)



Tall Deck Bowtie Race Bare Block (rear)



A Bowtie Sportsman Bare Block, Nodular 4-Bolt Splayed Caps



DRCE 2 Bare Block (front) B



DRCE 2 Bare Block (rear) B

DRCE 2 Main Caps B



DRCE 2 Lifter Valley B

#### **BIG-BLOCK DRCE BLOCKS**

Chevrolet Performance Big-Block DRCE (Drag Racing Competition Engine) blocks are the foundation of many of the most powerful Pro Stock drag racing engines. The DRCE family of engine blocks was specifically designed with 500-cubic-inch Pro Stock engines in mind. They are the latest evolution of Pro Stock engine design. In order to build optimum performance, the DRCE blocks have bore spacing that allows for the preferable big bore/short-stroke crankshaft combination. The camshaft has been raised and the distributor moved.

The big-bore design un-shrouds the heads, which means bigger valves can be used. The result is maximized air/fuel mixtures. All DRCE blocks are sold solid, without lifter holes or head bolt holes, so any GM Big-Block cylinder heads may be used. The DRCE blocks are available in either gray iron or compacted graphite (an extremely high-strength material that helps the block combat bore distortion and crank deflection under stress).

See chart on page 305 for complete specifications.

#### DRCE Block Technical Notes:

- CNC-machined to +/- 0.001" tolerance
- Siamese cylinder bores with 4.900" spacing
- No lifter bosses, solid bar can be drilled as required
- No head bolt holes
- Numbers two and four main bearing bulkheads moved 0.060"
- Bellhousing bolt pattern accommodates Chevy and Pontiac/Olds transmissions
- Uses Big-Block Chevrolet crank, camshaft, balancer, flywheel and water pump
- Requires camshaft with distributor gear behind rear bearing
- Priority main oiling dry-sump system
- Dual starter mounting locations
- Front-engine mounts only
- Each block is supplied with sonic test data sheet

#### **B. 24502572**

#### DRCE 2 Bare Block, Gray Iron

- CNC-machined iron 4-bolt block
- 9.525" deck height, may be machined to 9.000"
- Camshaft raised to 5.750"
- Cam tunnel accommodates 55mm cam bearings
- 4.500" semi-finished bore
- 4.700" max bore
- 4-bolt steel main caps, 16° splayed-on center three mains
- Oil pan rails spread .400" per side for additional stroke clearance
- Tested to 1,400-plus horsepower!

### 25534406

- DRCE 3 Bare Block, Compacted Graphite\* (not shown)
- CNC-machined compacted graphite material 4-bolt block
- 9.250" deck height, can be machined to 9.000"
- Camshaft raised to 7.067"
- Cam tunnel accommodates (9) 60mm cam bearings
- Cam tunnel is closed (no oil drain to rotating assembly)
- 4.590" semi-finished bore
- 4.700" max bore
- 2.500" crankshaft main journal
- 4-bolt steel doweled-after-assembly main caps, 22° splayed-on center three mains
- Highest-available quality main studs
- Oil pan rails spread to 12
- Oil and water plugs are AN O-ring-style
- Tested to 1,400-plus horsepower!

### 25534400 - Discontinued

- DRCE 3 Bare Block, Compacted Graphite\* (not shown) Same as P/N 25534406
- Cam tunnel accommodates (9) 70mm cam bearings
- Available until current inventory is depleted

\*Compacted graphite is an extremely high strength material that helps the block combat bore distortion and crank deflection under heavy loads - like making 1,400-plus horsepower at 10,000 rpm!



#### CYLINDER BLOCK COMPONENTS

#### A. 6264902

#### O-Ring Seal (sold individually)

 Use under the rear main bearing cap on all 1991-and-newer Gen V and Gen VI 454 and 502 engines

#### 3859927

#### Outer Main Cap Bolt, Mark IV (not shown)

- Used with Mark IV (1965-1990) cast-iron Big-Blocks with 4-bolt mains
- Sold individually; order 10 per engine

#### B. 10106461

#### Inner Main Cap Bolt, Gen V and Gen VI

- Used with Gen V and Gen VI (1991-and-newer) Big-Blocks with 4-bolt mains
- Sold individually; order 10 per engine

#### 3909834

#### Inner Main Cap Bolt, Mark IV (not shown)

- Used with Mark IV (1965–1990) cast-iron Big-Blocks with 4-bolt mains
- Sold individually; order 10 per engine

#### C. 88962212

#### Main Bearings, 572 Engine

• Complete main bearing kit for 572 block with standard-size mains

#### FREEZE PLUGS AND OIL PLUGS

Part Number	Description	Quantity
03999200	Plug, Camshaft Bearing Hole	1
00444776	Plug	8
14090911	Plug, Water Outlet	1
00444613	Plug, Automotive Hex Head Pipe	1
12558081	Pin, Cylinder Head Locationing	4
1453658	Pin, Transmission	2
14090911	Plug, Water Outlet	1

#### D. 88891749

#### Freeze Plug, Brass (Gen V and Gen VI)

- Brass freeze plug for Gen V and Gen VI (1991-and-newer) engines
- Suitable for marine applications

#### 12480035

#### Cylinder Sleeve (standard, not shown)

- Steel cylinder sleeve for aluminum block P/N 12370850 and P/N 88958696
- Sleeve has 4.240" bore and finish-bores to 4.250"

#### 3902885

#### Windage Tray Stud (not shown)

Used for mounting splash shield P/N 3967854

#### 10224104

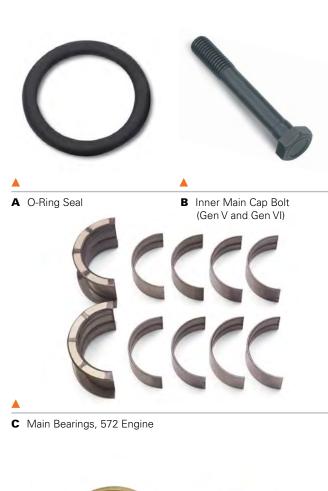
#### Windage Tray Stud, Gen V 454 and 502 (not shown)

• Used with Gen V 454 and 502 engines

#### E. 88958656

#### Windage Tray Bolt, 572

• Used with 572 engines





**D** Freeze Plug, Brass (Gen V and Gen VI)







Big-Block Crank Trigger Ignition Conversion Kit H

#### FRONT COVERS, PLUGS AND BLOCK-OFF PLATES

#### F. 10230954 🛈

#### Timing Chain Cover, Gen V and VI

- Aluminum cover with timing indicator fits all 1996-and-newer Gen V and Gen VI engines
- Used on all Chevrolet Performance Big-Block crate engines

#### 11609914

#### Front Oil Galley Plug (not shown)

Fits front oil galley (cam tunnel) holes .030" oil squirter hole for cooling and lubricating the timing chain

#### G. 12341999

#### **Big-Block Fuel Pump Block-Off Plate**

- Plate has stamped Bowtie logo
- Special non-asbestos gasket included •

#### H. 19260247

- **Big-Block Crank Trigger Ignition Conversion Kit**
- Enables the use of the latest aftermarket electronic ٠ control systems
- 58x reluctor ring for installation on the front of the crankshaft timing gear
- 4x camshaft gear
- New front cover with camshaft position and crankshaft position sensors
- Double-row timing chain for greater durability, stability and timing accuracy
- Requires aftermarket ignition controller capable of 58x signal (not included)
- Coil packs are not included

NOTE: Minor machining of the cylinder block and the damper is required.

	Timing C	overs: Addit	ional Require	ed Components
Part Number	Bolts (Quantity)	Seals (Quantity)	Gasket (Quantity)	Engine Application
10230954	10243771 (6)	10191640 (1)	10198910 (1)	12498793, 12498777, 12498778, 12371054, 12498827, 12498792, 12498826, 24502620, 12568779, 12568778, 12499121, 19201332, 12371054, 88890534, 24502618, 12568774, 12371204, 12568782, 12497323, 12496963, 12371171, 19166392, 19166393



#### VALVE-TO-PISTON CLEARANCE CONSIDERATIONS

A custom engine combination should always raise the concern of valve-to-piston clearance. And while camshaft lift is commonly thought of as the primary culprit of valve/piston interference, the overlap period - when the piston nears top-dead center and the intake valve is starting to open and the exhaust valve is closing - brings the valves and piston closest together. So, don't assume the gross lift specs are all you have to worry about; duration and lobe separation are equally important, making a careful clearance inspection all the more important.



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#### **Big-Block Cylinder Heads**

•	-														
Part Number	Description	Casting Number	Material	Port Size	Port Type	Valve Angle	Chbr (cc)	Int Vlv (in)	Exh Vlv (in)	Ex Port	Plug Type	Heat Riser	Rocker Stud	Notes	Page Number
12562920	Gen V, VI BBC	12562934	Iron	325	Rect	BBC	118	2.180	1.880	Square	Std	yes	Screw-in	Ass'd 2925's	314
12562925	Gen V, VI BBC	12562934	Iron	325	Rect	BBC	118	2.180	1.880	Square	Std	yes	Screw-in	7/16 accy holes	314
12562926	Gen V, VI BBC	12562934	Iron	325	Rect	BBC	118	2.180	1.880	Square	Std	yes	Screw-in	3/8 accy holes	314
12562917	Gen V, VI BBC	12562932	Iron	—	Round	BBC	118	2.070	1.720	Square	Std	yes	Screw-in	HT 502 head	N/S
12363390	Oval alum	12363391	Alum	290	Oval	BBC	110	2.250	1.880	Square	Std	no	Screw-in	Semi-open, oval port	315
12363392	Oval alum	12363391	Alum	290	Oval	BBC	110	2.190	1.880	Square	Std	no	Screw-in	Semi-open, oval port	315
12363399	Oval alum	12363391	Alum	290	Oval	BBC	110	2.190	1.880	Square	Std	no	Screw-in	Bare 3392	315
12363408	NHRA L88	12363401	Alum	315	Rect	BBC	118	2.190	1.880	Square	Std	no	Screw-in	Bare, NHRA legal	316
12363400	Rect alum	12363401	Alum	300	Rect	BBC	118	2.250	1.880	Square	Std	no	Screw-in	Assembled	316
12363410	Rect alum	12363401	Alum	300	Rect	BBC	118	2.250	1.880	Square	Std	no	Screw-in	Bare 3400	316
12363425	BBC Bowtie	14044861	Alum	380	Rect	BBC	115	2.190	1.880	Square	Std	no	Screw-in	Bare, raised int/exh	317
12499255	572/620	—	Alum	310	Rect	BBC	118	2.250	1.880	Square	Std	no	Screw-in	ZZ572/620	317
88961160	572/720	—	Alum	310	Rect	BBC	118	2.250	1.880	Square	Std	no	Screw-in	ZZ572/720R	317
24502585	DRCE 2	—	Alum	—	Peanut	DRCE 2	_	—	—	DRCE	—	no	Shaft	Pro Stock–raw	318
25534404	DRCE 3	_	Alum	—	Peanut	DRCE 3	_	—	_	DRCE	—	no	Shaft	Pro Stock–raw	319

#### SERVICE REPLACEMENT HEADS

Chevrolet Performance service replacement cylinder heads are direct replacements on most 1990-and-later GM Big-Block 454-cubic-inch and 502-cubic-inch engines. These brand-new cylinder heads meet GM's stringent quality standards and provide excellent service and durability not found in used cylinder heads. The cylinder heads have rectangular intake ports.\*

#### Service Replacement Head Technical Notes:

- Cast-iron
- Rectangular intake ports
- Machined for 2.180"/1.880" (3/8" stems) valves
- Non-adjustable rocker arm design
- Heads have heat risers
- Will not work on production Mark IV cylinder blocks

#### A. 12562925 🕕

#### Bare Cast-iron Gen V and Gen VI Cylinder Head

- Bare cast-iron head
- 118cc combustion chambers
- 7/16" accessory bolt holes

#### 12562926

#### Bare Cast-iron Gen V and Gen VI Cylinder Head (not shown)

- Bare cast-iron head
- Machined for 2.180"/1.880" 3/8" stem valves
- 118cc combustion chambers
- 3/8" accessory bolt holes (otherwise identical to P/N 12562920)

#### 12562920 🕕

# Cast-iron Gen V and Gen VI Cylinder Head Assembly (not shown)

- Cast-iron head
- Completely assembled with 2.180"/1.880" valves
- 118cc combustion chambers
- Uses P/N 12562925 bare casting

#### This head is assembled with the following components:

14097045	Intake Valves	12360874	Valve Spring Retainer & Seal Kit	
14097049	Exhaust Valves	3947880	Valve Locks	
14097002	Valve Springs	3875916	Valve Spring Shims	
NOTE: Will not work on L29 engines.				

\*Rectangular intake ports are larger in volume and designed to enhance high-rpm horsepower. They are an ideal street head for those Big-Block enthusiasts who want more power from a street car that sees a lot of drag-strip action.



A Bare Cast-Iron Gen V and Gen VI Cylinder Head (exhaust)



A Bare Cast-Iron Gen V and Gen VI Cylinder Head (intake)



Bare Cast-Iron Gen V and Gen VI Cylinder Head (combustion chamber) A



Bowtie Oval Port Aluminum Cylinder Head (intake) B



Bowtie Oval Port Aluminum Cylinder Head (exhaust) B



#### **ALUMINUM BOWTIE STREET CYLINDER HEADS**

Chevrolet Performance Bowtie high-performance street cylinder heads are an ideal combination of street drivability and drag-strip performance. They provide a broad power range with ample low-end torque, excellent throttle response, good mid-range torque and enough top-end power to beat your competitors to the finish line. Chevrolet Performance Bowtie street cylinder heads are designed for high-performance applications, with thick deck surfaces and high-velocity airflow passages. The heads are manufactured to precise machining tolerances.

Chevrolet Performance Bowtie street cylinder heads are available in either rectangular or oval intake port configurations. Rectangular intake ports are larger in volume and are designed to enhance high-rpm horsepower. These heads are best for vehicles that see frequent drag-strip action. Cylinder heads with oval intake ports are smaller in volume and are designed for greater low-rpm torque. Oval port heads are best for street applications where lots of bottom end, off-the-line power is desired.

#### Bowtie Street Cylinder Head Technical Notes:

- Made from 356-T6 aluminum
- Available in rectangular- or oval-port designs
- Will work on Mark IV and Gen V, VI blocks
- 9/16"-thick decks
- As-cast intake and exhaust ports
- No heat risers
- 1.55" valve spring seat diameter
- Heli-coiled 7/16" screw-in rocker stud holes
- Designed for use with 3/8" pushrods
- Use intake gasket P/N 12366985 and bolt kit P/N 12367959 Use head gasket P/N 12363414 for bores to 4.370" and
- P/N 12363413 for bores 4.470" to 4.540" (Mark IV)
- Use head gasket P/N 12363412 for bores to 4.370" and P/N 12363411 for bores 4.470" to 4.540" (Gen V, VI)
- Use head bolt kit P/N 12367779

#### **Oval Port Heads**

#### 12363399

#### Bowtie Oval Port Aluminum Cylinder Head, Bare (not shown) Fully machined

- Semi-finished for 2.190"/1.880" valves
- Bronze guides can be finished to 11/32" or 3/8"
- 290cc high-velocity oval intake ports
- 110cc exhaust ports
- 110cc semi-open combustion chambers •

#### B. 12363392 🕕

#### Bowtie Oval Port Aluminum Cylinder Head Assembly

- Completely assembled with 2.190"/1.880" 11/32" stem valves
- 290cc oval intake ports
- 110cc exhaust ports
- 110cc combustion chambers

#### This head is assembled with the following components:

12366986	2.190" Intake Valves	12366990	Valve Spring Retainers
12366988	1.880" Exhaust Valves	12366992	Valve Locks
12462970	Valve Springs	12495690	Valve Seals
3875916	Valve Spring Shims	3921912	Rocker Arm Studs
3860038	Pushrod Guideplates		

## 12363390

#### Bowtie Oval Port Aluminum Cylinder Head Assembly (not shown)

- Completely assembled with 2.250"/1.880" 11/32" stem valves
- 290cc oval intake ports
- 110cc exhaust ports
- 110cc combustion chambers

#### This head is assembled with the following components:

12366986	2.190" Intake Valves	12366990	Valve Spring Retainers
12366988	1.880" Exhaust Valves	12366992	Valve Locks
12462970	Valve Springs	12495690	Valve Seals
3875916	Valve Spring Shims	3921912	Rocker Arm Studs
3860038	Pushrod Guideplates		



Bowtie Street Heads Continued

#### 12363408

#### **Bowtie Rectangular Port Aluminum Bare Cylinder Head** (not shown)

This NHRA-legal aluminum cylinder head is a replacement for the L88 Big-Block cylinder heads used on 1968-1971 Corvettes and 1969 Camaros.

- Aluminum performance cylinder head
- 315cc rectangular intake ports
- Replacement head for P/N 14011076 •
- Machined for 2.250"/1.880" 11/32" valve stems •
- 110cc exhaust ports •
- 118cc combustion chambers

### 12363410

#### **Bowtie Rectangular Port Aluminum Bare Cylinder Head** (not shown)

- Bare aluminum performance head
- Machined for 2.250"/1.880" valves •
- 300cc rectangular intake port •
- 110cc exhaust port
- 118cc combustion chamber

#### A. 12363400

#### **Bowtie Rectangular Port Aluminum Cylinder Head Assembly**

- Aluminum performance head
- Completely assembled with 2.250"/1.880" 11/32" stem valves ٠
- ٠ 300cc rectangular intake port
- 110cc exhaust port ٠
- 118cc combustion chamber
- Uses bare head P/N 12363410

#### This head is assembled with the following components:

12366987	2.250" Intake Valves	12366990	Valve Spring Retainer Lock
12366988	1.880" Exhaust Valves	12366992	Valve Spring Retainer
12462970	Valve Springs	12495690	Valve Seals
3875916	Valve Spring Shims	3921912	Rocker Arm Studs
3860038	Pushrod Guideplates		



A Bowtie Rectangular Port Aluminum Cylinder Head Assembly (intake)



A Bowtie Rectangular Port Aluminum Cylinder Head Assembly (exhaust)



A Bowtie Rectangular Port Aluminum Cylinder Head Assembly (combustion chamber)







Bowtie 572/620 Cylinder Head Assembly (exhaust) B



#### B. 12499255 🕕

#### Bowtie 572/620 Cylinder Head Assembly

- Aluminum head assembly
- Used in the 572/620 Chevrolet Performance crate engine
- Completely assembled with 2.250"/1.880" 11/32" stem valves
- Valve springs for hydraulic roller cams for up to .632" lift
- 310cc rectangular intake port
- 118cc exhaust port raised 5/8" •
- 118cc combustion chamber
- Not recommended for engines smaller than 572 cid •

#### This head is assembled with the following components:

12366987	2.250" Intake Valves	12366990	Valve Spring Retainer Lock
88963128	1.880" Exhaust Valves	12366992	Valve Spring Retainer
88963934	Valve Springs	88963936	Valve Seals
88963937	Valve Spring Shims	3921912	Rocker Arm Studs
88963935	Valve Spring Locators	3860038	Pushrod Guideplates

#### 88961160

#### Bowtie 572/720R Cylinder Head Assembly (not shown)

- Aluminum racing head assembly •
- Used in the 572/720R Chevrolet Performance crate engine
- Completely assembled with 2.250"/1.880" 11/32" stem valves
- Mechanical roller valve springs not for use with hydraulic roller cams
- Good to .720" valve lift
- 310cc rectangular intake port
- 118cc exhaust port raised 5/8"
- 118cc combustion chamber
- ٠ Not recommended for engines smaller than 572 cid

#### This head is assembled with the following components:

12366987	2.250" Intake Valves	12366990	Valve Spring Retainer Lock
88963128	1.880" Exhaust Valves	12366992	Valve Spring Retainer
88963933	Valve Springs	88963936	Valve Seals
88963937	Valve Spring Shims	3921912	Rocker Arm Studs
88963935	Valve Spring Locators	3860038	Pushrod Guideplates

#### **BOWTIE RACE CYLINDER HEADS**

Monster-cubic-inch stroker Big-Blocks need lots of air to maximize their performance potential and Chevrolet Performance Bowtie race cylinder heads are designed for that task. They are made of 356-T6 aluminum with huge, raised intake ports, larger valves, smaller combustion chambers and two additional head bolts for increased clamping force. The runners are purposely left smaller, so there is ample room for custom porting by the engine builder.

#### Bowtie Race Head Technical Notes:

- 356-T6 Aluminum
- 9/16" thick decks
- No heat risers
- Will work on Mark IV cylinder block
- Heli-coiled 7/16" screw-in rocker stud holes
- As-cast intake and exhaust ports ٠

#### 12363425

#### Bowtie Racing Cylinder Head (not shown)

- Aluminum racing head
- Machined for 2.190"/1.880" valves (+.400" long required)
- 380cc rectangular intake ports raised .100"
- 110cc exhaust port raised .750", vanes in port floor ("W" port)
- 115cc "open chamber" combustion chamber
- Rocker cover rails raised .250"
- Two additional head bolt holes in valley
- Pushrod guide plates P/N 3860038 must be ground for clearance



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#### DRCE PRO STOCK CYLINDER HEADS

Chevrolet Performance DRCE (Drag Racing Competition Engine) Pro Stock cylinder heads are the choice of NHRA Pro Stock champions, so you know these are the best heads available. When races are won by thousandths of a second there's no room for second-best parts. The Chevrolet Performance DRCE aluminum cylinder heads were specifically designed for the DRCE 2 engine block P/N 24502572 and intended for NHRA Drag Racing Pro Stock competition applications.

Special features of these heads include high-capacity water jackets, symmetrical-port layout, ample wall material for custom porting, thick deck surfaces (7/8") to facilitate angle milling and reduced weight casting to minimize CNC-machining time. A typical CNC-prepped cylinder head without valves or valvetrain weighs approximately 40 pounds.

#### DRCE Pro Stock Race Cylinder Head Technical Notes:

- T355-T7M aluminum construction
- Complies with NHRA Pro Stock 500-cid, 4.900" bore spacing rules
- Symmetrical intake port layout
- Intake and exhaust ports are extremely small "peanut ports"
- 7/8" thick decks allow for angle milling or heavy flat milling
- Requires professional porting and machining
- High-capacity self-purging water jackets
- Custom aftermarket rocker arm assemblies required

#### A. 24502585

#### **DRCE 2 Raw Aluminum Cylinder Head**

- Raw aluminum casting, not machined
- Accommodates 10°–14° x 5° intake and 5°–9° x 2.5° exhaust valve angles
- Designed to work on DRCE 2 block P/N 24502572



A DRCE 2 Raw Aluminum Cylinder Head (exhaust)



**A** 

A DRCE 2 Raw Aluminum Cylinder Head (intake)



A DRCE 2 Raw Aluminum Cylinder Head (combustion chamber)



DRCE 3 Aluminum Cylinder Head Casting (exhaust) B



DRCE 3 Aluminum Cylinder Head Casting (intake) B



DRCE 3 Aluminum Cylinder Head Casting (combustion chamber) B

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#### Cylinder Heads: Additional Required Components

Part Number	Gaskets (Quantity)	Bolts (Quantity)	Spark Plug	Engine Application
12562920	14097001 (2) OR 12555728 (2)	10141204 (24), 10141205 (8)	19157985	24502620, 12568778, 24502618, 12568774
12562926	14097001 (2) OR 12555728 (2)	10141204 (24), 10141205 (8)	19157985	24502620, 12568778, 24502618, 12568774
12562925	14097001 (2) OR 12555728 (2)	10141204 (24), 10141205 (8)	19157985	24502620, 12568778, 24502618, 12568774
12363390	12363411 (2)	12367779 (1 Kit)	19307141	12499121, 19201332, 12371204, 12497323, 12496963, 12371171
12363392	12555728 (2)	88960333 (16), 88960334 (8)	19307141	12498777
12363399	12555728 (2)	88960333 (16), 88960334 (8)	19307141	12498777
88961160	88961561 (2)	88960333 (16), 88960334 (8)	5613100	12498827, 12498826
12499255	88961561 (2)	88960333 (16), 88960334 (8)	5613878	12498792

#### **B.** 25534404

- DRCE 3 Aluminum Cylinder Head Casting
- Raw aluminum casting, not machined
  Newest design DRCE rocker arm mounting pads and
- valve spring seat pads allow greater flexibility with valve angles and locations than DRCE 2
- Designed to work on DRCE 3 block and DRCE 2
   P/N 24502572

#### 25534387

#### DRCE 3 Water Jacket Plug (not shown)

- For ends of DRCE 3 cylinder head casting P/N 25534404
- Aluminum AN -16 with internal hex for Allen wrench
- Includes O-ring
- Sold individually; use 2 per head

#### 25534388

#### DRCE 3 Water Jacket Plug (not shown)

- For water jacket access holes of DRCE 3 cylinder head casting P/N 25534404
- Aluminum AN -08 with internal hex for Allen wrench
- Includes O-ring
- Sold individually; use 8 per head

#### **CYLINDER HEAD GASKETS**

Secure sealing between the cylinder heads and the block is a critical component of making reliable horsepower, so Chevrolet Performance puts the same engineering excellence and manufacturing precision into their gaskets, head bolts, and cylinder head studs as the blocks and heads they secure. Big-Block cylinder head gaskets are available in a variety of materials and thicknesses. Piston-to-head clearances should be considered when selecting gaskets. Use Gen V for 1991-1992 applications. Gasket packages contain one gasket unless otherwise specified.

#### A. 12363414

#### Composition Head Gasket (1965-1990)

- With pre-flattened copper wire ring and permatorque/blue stripe coating for engines with aluminum heads
- Bore sizes between 4.250" and 4.370"
- Use with Mark IV (1965-1990) engines only
- Compressed thickness is 0.039"

#### 12363413

#### Composition Head Gasket (1965-1990)(not shown)

- With pre-flattened copper wire ring and permatorque/blue stripe coating for engines with aluminum heads and bore sizes 4.375" to 4.540"
- Use with Mark IV (1965-1990) engines only
- Compressed thickness is 0.041"

#### 12363412

#### Composition Head Gasket (1991-newer)(not shown)

- For 1991-and-newer Gen V and Gen VI Big-Blocks with aluminum heads and 4.250" to 4.370" bore size
- Has pre-flattened wire ring and stainless core which makes it ideal for saltwater marine use
- Compressed thickness is 0.039"

#### 12555728

#### Head Gasket, 454 Engine (not shown)

Head gasket for 1991–2000 Gen V 454 Big-Blocks

#### B. 12366984

#### Head Gasket Kit, 502 Engine

- For all Gen V and Gen VI 502 Big-Blocks with cast-iron heads
- Has additional water hole for improved cooling of siamesed cylinder walls
- Includes 2 gaskets (right and left) per package
- Compressed thickness is 0.041"

#### 12363411

#### Composition Head Gasket (1991-newer)(not shown)

- For Gen V and Gen VI Big-Blocks with aluminum heads and 4.375" to 4.540" bore size
- Has pre-flattened wire ring and stainless core which makes it ideal for saltwater marine use
- Compressed thickness is 0.039"

#### C. 88961561

#### Head Gasket, 572 Engine

- With pre-flattened wire ring for all 572 Big-Blocks with either cast-iron or aluminum heads
- Compressed thickness is 0.030"

#### **HEAD BOLTS AND STUDS**

#### 12367779

#### Cylinder Head Bolt Kit (not shown)

- Universal kit for cast-iron and aluminum Big-Block heads Includes (8) 7/16-14 x 2.08" bolts P/N 88960334, (24) 7/16-
- 14 x 4.060" bolts P/N 88960333, (8) 7/16-14 x 5.06" bolts P/N 12367329, and (40) hardened washers P/N 14011040
- Use part numbers above for replacement parts
- Use thread sealant on all Big-Blocks except 502, due to blind bolt holes



A Composition Head Gasket (1965–1990)



B Head Gasket Kit, 502 Engine



C Head Gasket, 572 Engine





Exhaust Valve, 1.880" E



#### Big-Block Dual Valve Spring, 1.540" F

#### **BIG-BLOCK VALVES**

#### **Intake Valves**

#### 12556317 (not shown)

- Valve Size: 2.190" / Stem Size: 3/8"
- Stock replacement valve for Gen V and Gen VI 454 and 502 HO engines.

#### 12366986 (not shown)

- Valve Size: 2.190" / Stem Size: 11/32" Stainless-steel valve with undercut chrome-plated stems,
- single-groove design, hardened tips
- Used on ZZ454, ZZ427 and the Anniversary Edition 427 crate engines.

#### D. 12366987

- Valve Size: 2.250"/ Stem Size: 11/32"
- Stainless-steel valve with undercut chrome-plated stems, single-groove design, hardened tips
- Used on ZZ502 and ZZ572

#### **Exhaust Valves**

- 14097049 (not shown)
- Valve Size: 1.880" / Stem Size: 3/8"
- Stock replacement valve for Gen V and Gen VI 454 and 502 HO engines.

#### 12366988 (not shown)

- Valve Size: 1.880" / Stem Size: 11/32"
- Stainless-steel valve with undercut chrome-plated stems, single-groove design, hardened tips
- Used on ZZ454, ZZ427 and the Anniversary Edition 427 crate engines.

#### E. 88963128

- Valve Size: 1.880"/ Stem Size: 11/32"
- Stainless-steel valve with undercut chrome-plated stems, single-groove design, hardened tips
- Used on ZZ502 and ZZ572

#### **BIG-BLOCK VALVE SPRINGS**

#### F. 88963934

- **Dual Spring**
- Outside Diameter: 1.540" •
- Pressure Installed at Height: 197# @1.800"
- Retainer P/N 12366990
- Valve Seal Kit P/N 88963936
- Used with 572/620 HP engines ٠

#### 19172596 (not shown) **Dual Spring**

- Outside Diameter: 1.567"
- Pressure Installed at Height: 230# @2.000"
- Retainer P/N 12366990
- Valve Seal Kit P/N 88963936
- Used with 572/720 HP engines



Valve Spring Retainer

#### VALVE SPRING COMPONENTS

Part Number	Description	Technical Notes
12550421	Valve Spring Retainer	For 1991-and-newer Gen V and Gen VI engines
3947880	Valve Spring Key	Hardened steel split locks for production and racing engines. Color-coded purple. Sold individually, order 32 per engine
12550422	Valve Stem Seal (not shown)	Seal for 1991-and-newer Gen V and Gen VI engines. Use with valve spring P/N 12550421. The valve guide boss must be machined slightly for seal to retain clearance when using high-lift cams
88963936	Valve Spring Seal (not shown)	Use with all 572 engines
3875916	Spring Shim (not shown)	55/64" I.D. x 1 31/64" O.D. x 0.015" thick
88963937	Spring Shim (not shown)	Shim for all 572 engines
88963935	Valve Spring Locator (not shown)	Valve spring locator for setting the valve spring in the right location on all 572 engines

Roller Rocker Arm Set, 1.7:1 Ratio

# **ROCKER ARMS**

Steel Rocker Arms - Steel rocker arms are designed for long-term durability. Chevrolet Performance steel rocker arms are intended for 454- and 502-cubic-inch Big-Blocks. Rocker arm kits include one rocker arm and ball.

Aluminum Roller Big-Block Rocker Arm for 7/16" Studs - Chevrolet Performance aluminum roller rocker arms have bearings and fulcrums with an extra-wide design for improved load distribution. The rockers are lubricated with pressurized oil. The rockers have a 1.7:1 ratio for 7/16" studs. The roller-tip axle is made from 4130 steel and the roller tip is machined and ground from 8620 steel.

NOTE: Not for use with production-height valve covers.

Part Number	Description	Technical Notes
12523976	Steel Rocker Arm Assembly (not shown)	Designed for use on Gen V and Gen VI design 454- and 502-cubic-inch HO engines. The rocker arms have long slots for high-lift camshafts. <b>NOTE:</b> <i>Kit includes rocker arm and ball. One rocker assembly per package; order 16 per engine.</i>
12368082	Steel Long Slot Rocker Arm, 1.7:1 Ratio (not shown)	These 1.7:1 ratio hardened steel rocker arms have elongated slots to provide extra clearance for high-lift (.600" and greater) camshafts. Use with all 396-502 Big-Block heads with adjustable rockers. Each assembly includes rocker arm P/N 12368082 as well as the ball P/N 12556299 and nut P/N 3896648. <b>NOTE</b> : Can be used on any Gen V or Gen VI by using rocker stud P/N 12368941.
12368085	Steel Long Slot Rocker Arm Kit (not shown)	Set of 16 rocker arms (P/N 12368082) with the balls and nuts. <b>NOTE:</b> These long slot rocker arms are stamped "H".
19210726	Aluminum Roller Rocker Arm Set, 1.7:1 Ratio	Set includes 16 roller rocker arms and nuts for 7/16" studs. Used on 572-cubic-inch Big-Block engines. Use P/N 19244484 for single replacement part





Valve Spring Key



Intake Pushrod, Roller Lifter Style

#### A PUSHRODS

Chevrolet Performance offers a complete line of premium-quality, heavy-duty pushrods for most GM Big-Block engines. Pushrods are that critical link between the camshaft and the rocker arms. These seemingly innocuous parts play a very important role in the combustion process. Two materials are used: 1010 mild steel for high-performance street cars, power boats, and limited competition applications, and 4130 chrome-moly steel for maximum-performance racing engines. Chevrolet Performance pushrods are case-hardened for use with pushrod guideplates. Pushrods are available in standard and extended lengths. Check the usage chart below to verify proper applications.

Part Number	Material	Diameter	Length	Usage	Port	Description
10227762	1010 steel	3/8"	7.592"	Hyd. roller	Intake	(1) heavy-duty heat-treated .060" for use in Gen VI 454 and 502 engines with hydraulic roller lifters
10227763	1010 steel	3/8"	8.569"	Hyd. roller	Exhaust	(1) heavy-duty heat-treated .060" for use in Gen VI 454 and 502 engines with hydraulic roller lifters
12368081	1010 steel	3/8"	7.592"-8.569"	Hyd. roller	_	Kit of (8) P/N 10227762 and (8) P/N 10227763
88961559	4130 steel	3/8"	7.900"	Hyd. roller	Intake	Chrome-moly 1-piece for 572/620 (Tall Deck Block)
88961558	4130 steel	3/8"	8.900"	Hyd. roller	Exhaust	Chrome-moly 1-piece for 572/620 (Tall Deck Block)
88962284	4130 steel	3/8"	8.550"	Mech. roller	Intake	Chrome-moly 1-piece for 572/720 (Tall Deck Block) for engines built May 2010 or prior
88962283	4130 steel	3/8"	9.525"	Mech. roller	Exhaust	Chrome-moly 1-piece for 572/720 (Tall Deck Block) for engines built May 2010 or prior
19330131	4130 steel	3/8″	9.750"	Mech. roller	Exhaust	Chrome-moly 1-piece for 572/720 (Tall Deck Block) built after May 2010
19330132	4130 steel	3/8″	8.750"	Mech. roller	Intake	Chrome-moly 1-piece for 572/720 (Tall Deck Block) built after May 2010

-C BUILDER'S TIP

## SHIMMING THE WAY TO CORRECT VALVE SPRING HEIGHT

The correct valve spring height is important to prevent coil bind and ensure uniform spring pressure among all the valves. Don't assume the installed height (with the valve closed) is correct out of the box. Each spring's height should be carefully measured and recorded. Shims – typically sold in 0.015" heights – can be used to bring the springs to the manufacturer's specifications. The important thing about installing them is to be sure that they go beneath the spring seat. Don't simply slip them on over the top of the spring seat. With 16 valve springs to measure, it's a long, tedious process, but an important one for performance and engine longevity.

### VALVE COVERS

Top off your high-performance Big-Block with a pair of handsome Chevrolet Performance valve covers. These stylish, precision-fit valve covers come in a variety of finishes and colors. They're made out of die-cast aluminum or heavy-gauge stamped steel. Quality construction methods provide better sealing and less chance of leakage from deflection caused by over-tightened fasteners. Competition valve covers are designed to clear taller valvetrains.

NOTE: Valve covers are sold in pairs unless otherwise specified.

## A. 12342093 🕕

## Short Chrome Bowtie Valve Covers

- Show-quality covers embossed with the famous Bowtie logo and Chevrolet name
- Standard height, for use with 1965-1994 engines
- May not clear brake booster on some Corvette models

## B. 12495488 🕕

## **Custom Aluminum Valve Covers**

- Die-cast aluminum valve covers are black with a brushed aluminum finish on top revealing the Chevrolet name and Bowtie logo
- Can be finished with a custom engine designation badge (see page 326) not included
- For use on 1965-1994 engines
- Includes 2 covers, 1 grommet P/N 10198941, 1 grommet P/N 10198949, oil cap P/N 15681150 and 14 retaining bolts

## C. 12371244 🕕

## **Aluminum Competition Design Valve Covers**

- Display the Chevrolet name and Bowtie logo in natural aluminum finish, or paint to match engine or vehicle color
- No holes for PCV or oil fill, but bosses for drilling them
- Can be used on most Big-Block Chevrolet cylinder heads
- Use P/N 12370836 for single replacement part

NOTE: Use with valve cover gasket P/N 14085759.

## D. 25534323 🕕

#### Aluminum Competition Design Valve Covers, Black Powder-Coat

- Display the Chevrolet name and Bowtie logo in black powder-coated covers
- No holes for PCV or oil fill, but bosses for drilling them
- Can be used on most Big-Block Chevrolet cylinder heads

NOTE: Use with valve cover gasket P/N 14085759.

## E. 25534374 🕕

#### Aluminum Competition Design Valve Covers, Orange Powder-Coat

- Display the Chevrolet name and Bowtie logo in orange powder-coated covers
- One hole each cover for PCV or oil fill
- Can be used on most Big-Block Chevrolet cylinder heads

NOTE: Use with valve cover gasket P/N 14085759.



- A Short Chrome Bowtie Valve Covers



B Custom Aluminum Valve Covers



**\_**\_\_\_

C Aluminum Competition Design Valve Covers



D Aluminum Competition Design Valve Covers, Black Powder-Coat



E Aluminum Competition Design Valve Covers, Orange Powder-Coat



Valve Covers, "572 Chevrolet" F



Valve Covers, "427 Chevrolet", Natural Appearance G



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Valve Covers, "427 Chevrolet", Black Powder-Coat H

## F. 12499200 🕕

## Valve Covers, "572 Chevrolet"

- Used on all 572-cubic-inch crate engines and can be used on most Big-Blocks
- Cast aluminum with "572 Chevrolet" as part of the casting One cover has oil fill and breather holes and the second
- cover has the breather hole only

NOTE: Requires push on oil cap P/N 12341993, breather P/N 25534355 and breather tube P/N 88962074 that incorporates a baffle in the tube.

## G. 19202588 **(**

Valve Covers, "427 Chevrolet", Natural Appearance

#### Natural finish

- Used on the Anniversary Edition 427 crate engine
- Can be used on any Big-Block engine

## H. 19202589 🕕

#### Valve Covers, "427 Chevrolet", Black Powder-Coat

- Used on the ZZ427/480 crate engine
- Can be used on any Big-Block engine

Part Number	Gaskets (Qty)	Bolts (Qty)	Grommets (Qty)	Oil Fillers (Qty)	Engine Application
12342093	14085759 (2)	88961871 (4)	12341988 (1)	12341993 (1)	12499121, 19201332, 12371204, 12497323, 12496963, 12371171, Mark IV, V, VI BB
12495488	14085759 (2), OR Mark IV, V, VI (2)	25520079	10198941 OR 3989350	15681150	12499121, 19201332, 12371204, 12497323, 12496963, 12371171, Mark IV, V, VI BB
12371244	14085759 (2)	88961871 (4)	N/A	12341993 (1)	12498793, 12498827, 12498792, 12498826
25534323	14085759 (2)	88961871 (4)	N/A	12341993 (1)	12498793, 12498827, 12498792, 12498826
25534374	14085759 (2)	88961871 (4)	N/A	12341993 (1)	12498793, 12498827, 12498792, 12498826
12499200	14085759 (2)	88961871 (4)	12341988 (1)	12341993 (1)	12498793, 12498827, 12498792, 12498826
19202588	14085759 (2)	88961871 (4)	12341988 (1)	12341993 (1)	12498793, 12498827, 12498792, 12498826
19202589	14085759 (2)	88961871 (4)	12341988 (1)	12341993 (1)	12498793, 12498827, 12498792, 12498826



## HARDWARE AND BREATHERS

## 88962074

#### **Oil Baffle Tube (not shown)**

- · Pushes easily into most valve covers that have an oil baffle
- Requires breather P/N 25534355, used on ZZ572 engines

## A. 25534355

- ZZ572 Breather
- Special breathers for the ZZ572 valve covers
- Chrome breathers are 1-3/8", hose-clamp-style with the Bowtie logo on top
- Use with oil baffle tube P/N 88962074
- Includes 2 breathers

## B. 12341993

## Push-In Oil Filler Cap

For valve covers with 1.220" hole

## 19131218

#### Chrome Push-In Breather (not shown)

- 2-3/4" O.D. x 1-1/2" tall with 3/4" nipple
- Use with rubber grommet P/N 3894337

#### 3894337

#### Rubber Grommet, Bowtie Valve Covers (not shown)

- Has 15/16" I.D. x 17/32" O.D.
- Can be used to plug the oil filler hole in Bowtie valve covers or to mount a push-in breather

## 14085759

#### Valve Cover Gasket (not shown)

- Steel-reinforced gasket fits all Big-Block Chevy valve covers
- Order 2 per engine

## VALVE COVER BADGES

Designed to fit mounting area on valve covers P/N 12495488 (see page 312), these good-looking badges will fit some other Big-Block valve covers.

NOTE: 1 badge per package. Order 2 per engine.

#### C. 12363951

Valve Cover Badge, "427 Cubic Inches"

#### 12366995

Valve Cover Badge, "454 GM Performance Parts"

#### 12366994

Valve Cover Badge, "502 GM Performance Parts"

## **ROCKER ARM STUDS AND ACCESSORIES**

#### D. 3896648

#### **Rocker Adjusting Nut**

• Positive locking 7/16"-20 nut for all Big-Block V-8s



A ZZ572 Breather



B Push-In Oil Filler Cap



GM



C Valve Cover Badges



**D** Rocker Adjusting Nut



Pushrod Guide Plate (3/8") E



Hydraulic Lifter Kit F



Hydraulic Roller Lifter Kit G



Mechanical Roller Lifter, ZZ572/720 H

## **BIG BLOCK GUIDE PLATES**

## E. 3860038

#### Pushrod Guide Plate (3/8")

- Designed for all 1965-1990 iron and aluminum cylinder heads with 3/8" diameter pushrods
- Slotted style with hardened steel construction, aligns rocker arms with valve stem tips on Big-Block's splayed-valve head 8 required for each engine

NOTE: Use with screw-in rocker stud P/N 3921912.

#### 3879620

#### Pushrod Guide Plate (7/16")(not shown)

Similar to guide plate described above, but for use with heavy-duty 7/16" diameter pushrods

#### 12562369

### Pushrod Guide Plate (Gen V 454/502 style)(not shown)

Used on all Gen V 454 and 502 engines with 3/8" diameter pushrods

#### VALVE LIFTERS AND COMPONENTS

## F. 12371044

- Hydraulic Lifter Kit (set of 16)
- For use on all 396, 427, 454, and 502 engines that use hydraulic flat tappet lifters
- For single-service replacement use P/N 5232720

#### 17120060

#### Hydraulic Roller Lifter, ZZ572/620 (not shown)

- Roller valve lifters used on the ZZ572/620 engines
- Use with camshaft P/N 19210721, intake pushrod P/N 88961559, exhaust pushrod P/N 88961558 and rocker arm P/N 19210726

#### G. 12371056

#### Hydraulic Roller Lifter Installation Kit

- Hydraulic roller lifter retainer kit can be used on all Gen VI 454 and 502 engines that are machined for hydraulic roller lifters
- Includes 16 roller lifters P/N 17120061, 8 lifter guides, 1 lifter guide retainer and 4 retainer bolts
- For single service replacement lifter, use P/N 17120061

NOTE: These lifters allow more oil to the rocker arms than the late-model truck roller lifters.

## H. 19210719

## Mechanical Roller Lifter, ZZ572/720

- Mechanical roller valve lifters used on the ZZ572/720 horsepower engines
- Use with camshaft P/N 19210722, intake pushrod P/N 88962284, exhaust pushrod P/N 88962283 and rocker arm P/N 19210726
- Kit of 16 lifters

## 12551397

#### Roller Tappet Guides (not shown)

- Roller tappet guides used with all 502 engines and 454 HO engines
  - Used with roller camshaft engines
  - Sold individually; order 8 per engine

#### 12551399

## **Roller Tappet Guide Retainer (not shown)**

- Roller tappet guide retainer used with all 502 engines and 454 HO engines
- Used with roller camshaft engines
- Order only 1 per engine





## BIG-BLOCK CAMSHAFTS

The camshaft is one of the most important factors in determining an engine's overall performance profile and capability. The wide array of precision-engineered, extensively tested camshafts from Chevrolet Performance allows you to choose the best cam for your application. In order to avoid possible engine damage, a distributor with a melonized steel gear must be used with steel camshafts.

Part Number	Description	Duration @ .050" Lift (deg)	Maximum Lift (in)	Lobe Centerline (deg)	Technical Notes
12366543	Steel hydraulic roller	I: 224 / E: 234	I: .527 / E: .544	110	For 502/502 special engine. Must use distributor gear P/N 10456413.
24502611	Steel hydraulic roller	l: 211 / E: 230	I: .510 / E: .540	112	For 454 and 502 HO engines. Must use distributor gear P/N 10456413.
19210721	Steel hydraulic roller	I: 254 / E: 264	I: .632 / E: .632	112	For ZZ572/620 engine
19210722	Steel hydraulic roller	I: 278 / E: 282	I: .714 / E: .714	112	For ZZ572/720 engine



## **PISTONS AND PISTON RINGS**

Pistons and rings operate in a very explosive environment, so they have to be extremely tough. Chevrolet Performance pistons and rings are designed to withstand the rigors of high-performance engines. The pistons are factory-tested for quality assurance. Chevrolet Performance pistons are sold in a variety of sizes and compression ratios. There are pistons for GM Big-Block engines ranging in displacement from 427 cubic inches to 572 cubic inches. Pistons are sold individually and are fitted with wrist pins.

NOTE: Part numbers are for one piston; order eight per engine.

## **Big-Block Pistons**

Part Number	Engine Size	Bore Size	Oversize	Rod Length	Pin Type	Compression Ratio	Chamber Size	Ring Size	Description
12533507	502	4.470"	—	6.135"	Pressed	8.75:1	118cc	5/64", 1/16", 3/16"	Forged Gen V and Gen VI 502 replacement
88962925	572	4.560"	—	6.535"	Floating	9.6:1	118cc	1/16", 1/16", 3/16"	Forged 572/620
88963227	572	4.560"	_	6.535"	Floating	12.0:1	118cc	1/16", 1/16", 3/16"	Forged 572/720R

## **Big-Block Piston Rings**

Part Number	Bore Size	Oversize	<b>Ring Thickness</b>	Description
12523921	4.250"	Standard	5/64", 5/64", 3/16"	Standard-size ring pack for Gen V 454 HO
12523923	4.250"	+.030"	5/64", 5/64", 3/16"	Oversize ring pack for Gen V 454 HO
12524293	4.470"	Standard	5/64", 1/16", 3/16"	Standard-size low-tension ring pack for all 502 engines
12524294	4.470"	+.030"	5/64", 1/16", 3/16"	Oversize low-tension ring pack for all 502 engines
12499212	4.560"	Standard	1/16", 1/16", 3/16"	Standard-size ring pack for 572 engines





Forged Steel Connecting Rod B

Camshaft Bearings, 572 Engine A



572 Connecting Rod C



<sup>572</sup> Connecting Rod Bearing Kit D

## **CAMSHAFT COMPONENTS**

## A. 12499434

- Camshaft Bearings, 572 Engine
- Five standard-size premium camshaft bearings for the ZZ572 engine

## CONNECTING RODS AND COMPONENTS

## **B.** 19170198

- Forged Steel Connecting Rod
- Magnafluxed 4340 steel with heavy-duty 7/16" bolts
- Machined for pressed piston pins and color-coded white
- Used in Gen V 454 and 502 engines
- 6.135" c-c length

## 19211226

- 427 Forged Connecting Rod (not shown)
- 4340 Steel with 7/16" heavy duty bolts
- Machined for pressed piston pins
- Used in 427 Anniversary and ZZ427 engines
- Big end chamfered for large crank pin radius
- 6.135" c-c length

## C. 88962926

#### 572 Connecting Rod

- Forged 4340 steel H-beam for all 572 engines
- 6.535" c-c length
- Use rod bearing P/N 88961556

#### D. 88961556

- 572 Connecting Rod Bearing Kit
- Standard-size, premium connecting rod bearings
- Includes all 8 rod bearings



Crankshaft, Forged Steel (Gen V and Gen VI 502)

# CRANKSHAFTS

Crankshafts are a critical, central component of any engine. Strength and durability are important traits of a great crankshaft. Chevrolet Performance crankshafts are precision-engineered to be both strong and durable. Chevrolet Performance understands how catastrophic crankshaft failure can be, so that's why its crankshafts are manufactured to such exacting specifications and tested to withstand the forces of high-performance engines. These crankshafts are the same tough parts used in Chevrolet Performance crate engines.

Part Number	Description	Technical Notes
3963524	Crankshaft, Forged Steel (454 and Mark IV 502-cubic-inches) (not shown)	Premium quality. Externally balanced. Nitride-treated 5140 forged steel with 4.000" stroke, cross-drilled 2.750" diameter main journals, and 2.200" diameter rod bearing journals. Used on 1965-1990 454 and 502 with 2-piece rear seal. <i>NOTE: Must be used with counterweighted torsional damper and flywheel or flexplate.</i>
14096983	Crankshaft, Forged Steel (Gen V and Gen VI 454) (not shown)	Externally balanced. Forged 1053 steel crankshaft with 1-piece rear main seal
10183723	Crankshaft, Forged Steel (Gen V and Gen VI 502)	Externally balanced. Cross-drilled. Nitride-treated forged 1053 steel crankshaft with 1-piece rear main seal. Forging P/N 14097044
19171620	Crankshaft, Forged Steel (Gen V and Gen VI 427)(not shown)	Steel crankshaft with 3.750" stroke for 1991-and-later. 427-cubic-inch engines. 1-piece rear main seal. Requires chamfered connecting rods (P/N 19211226 or 88962926) and rod. bearings P/N 88961556. Used in ZZ427 and Anniversary Edition 427 engines. Internally balanced
14061685	Roller Pilot Bearing (not shown)	Used in high-performance manual transmission applications

#### BALANCERS

Balancers are relatively small parts that play a big role in helping engines run smoothly. Balancers are also known as torsional dampers or harmonic balancers, which is indicative of how they help control unwanted crankshaft vibrations. By controlling vibrations, Chevrolet Performance balancers help engines run smoothly, which also extends engine life.

## 10216339

# 454 and 502 with 4.000" stroke crank, 1970 to present (not shown)

- 8" Outisde Diameter
- Counterweighted for externally balanced engines
- Use chrome timing pointer P/N 3991436

#### A. 88962814 572 Balancer

- 8" Outisde Diameter
- This internal balance damper is designed with inner and outer shells
- Utilizes matched O-rings to control destructive crankshaft vibrations
- Black zinc chromate finish
- Laser engraved 360° timing marks



A 572 Balancer, P/N 88962814



12561217 Flexplate (see chart below)

# FLYWHEELS AND FLEXPLATES

14096987 Flvwheel

(see chart below)

Chevrolet Performance offers both internally and externally balanced flywheels and flexplates. It is critical that you use the correct design for your specific engine application. Engines with one-piece crankshaft seals require externally balanced flywheels or flexplates (except for ZZ427, ZZ572/620, ZZ572/720R and the Anniversary Edition 427). Check the accompanying charts to find the correct parts for specific engine applications.

### **Big-Block Flywheels**

Part Number	Year of Engine	Outside Diameter	Crank Flange Bolt Pattern	Clutch Diameter	Starter Ring Gear Teeth	Technical Notes
14085720	1965-present	12.750"	3.580"	10.4"	153	Lightweight nodular iron; weighs approximately 15 lbs; for internally balanced engines
3991469	1965-present	14"	3.580"	11"	168	Use with internally balanced engines
3993827	1970-1990	14"	3.580"	11"	168	Counterweighted for externally balanced 454 Mark IV 2-piece rear seal engines; use with balancer P/N 10216339
14096987	1991-present	14"	3.580"	11"	168	Lightweight nodular iron. For external balanced engines
12582964	1965-present	14"	3.580"	11.500"	168	Used with 427 or 572 crate engine. Internally balanced.

## **Big-Block Flexplates**

Part Number	Year of Engine	Outside Diameter	Crank Flange Bolt Pattern	Converter Bolt Pattern	Starter Ring Gear Teeth	Technical Notes
10185034	1991-up	14"	3.580"	10.750" and 11.500"	168	Use with forged steel crank. Has dual-converter bolt pattern. (502 & 454 1-piece rear main seal)
12561217	1991-up	14"	3.580"	11.500"	168	427 ci crate engine production internally balanced .100" thick
471598	1965-present	14"	3.580"	10.750" and 11.500"	168	For internally balanced engines. Use with 572/620 crate engine. Has dual-converter pattern120" thick
14001992	1970-1990	14"	3.580"	11.500"	168	For externally balanced 454 Mark IV 2-piece rear main seal engines

## **Bolts and Dowels**

Part Number	Description	Technical Notes
12337973	Flywheel Bolt (not shown)	Fits all Chevy Small-Block V-8, Big-Block V-8 and 90° V-6 engines. Sold individually; 6 required per engine
10046031	Flywheel Dowel (Big-Block, not shown)	Highly recommended for all high-performance and competition Big-Block engines
1453658	Bell housing Dowel, Clutch Housing/Transmission Dowel (Big-Block) (not shown)	Use with Big-Block engine. Sold individually; 2 required per engine
3727207	Flexplate Bolt (not shown)	Fits all Chevy Small-Block V-8, Big-Block V-8 and 90° V-6 engines. Sold individually; 6 required per engine



Timing Chain Kit, 502 (second design Gen VI) B





Camshaft Bolt D

Timing Chain, 502 **C** (second design Gen VI)

## TIMING CHAINS AND SPROCKETS

Chevrolet Performance's strong, accurate timing chains and sprockets provide top performance and dependable service.

## B. 12371053

#### Timing Chain Kit, 502 (second design Gen VI)

- Heavy-duty timing chain kit for all second-design 502 Gen VI roller-lifter engines with aluminum front timing cover
- Kit includes chain P/N 10114177, crankshaft sprocket P/N 12550039, camshaft sprocket P/N 12551401, camshaft retainer and bolts
- Also used in 572

## C. 10114177

## Timing Chain, 502 (second design Gen VI)

Single-roller design for all second-design 502 Gen VI engines
 Use with crankshaft sprocket P/N 12550039 and camshaft sprocket P/N 12551401

## 12554553

## Camshaft Dowel Pin (not shown)

- D. 9424877
  - Camshaft Bolt
  - 5/16"-18 x 0.75" bolt

## WATER PUMPS AND ACCESSORY DRIVE SYSTEMS

## A. 19168602

## Aluminum Water Pump, Short-Style

- Lightweight standard-rotation pump has reinforced snout and large-diameter hub with dual bolt patterns for early-and late-model pulleys
- Has short mounting legs
- Use with early-design V-belt drive rotation

## **B. 19168606**

## Cast-iron Water Pump, Long-Style

- Same standard-rotation pump used on all Chevrolet Performance 454 and 502 crate engines
- Not for use with a serpentine belt system

## C. 19172805

# Serpentine Accessory Drive Belt System With Air Conditioning

- Deluxe kit includes all the components and hardware necessary to install on a 9.800" deck or 10.200" tall deck engine (including bolts, nuts and spacer)
- Belt included

#### The system includes:

19152476	Alternator Assembly (cs130, reman)					
88985115	Power Steering Pump (reman)					
19168601	Water Pump Kit					
88964862	A/C Compressor, R134a					
10187612	A/C Compressor Bracket					
10187613	A/C Compressor Bracket					
10108470	Water Outlet					
19245468	Crankshaft Pulley					
88986828	Belt (water pump, A/C, alternator)					
88986813	Belt (fan, water pump, A/C)					
12552359	Tensioner					
12552361	Idler Pulley					
10085760	Fan and Water Pump Pulley					
6272959	Thermal Bypass Hose Connector					
1470030	Clamp					
1485552	Heater Hose					
12604004	Power Steering Pump Pulley					
88961892	Power Steering Bracket (tall deck)					
10187611	Alternator Bracket					
10187610	Alternator/Power Steering Bracket					

## 19172806

# Serpentine Accessory Drive Belt System Without Air Conditioning (not shown)

- Deluxe kit includes all the components and hardware necessary to install on a 9.800" deck or 10.200" tall deck engine
- Kit includes hardware and belt

## The system includes:

10463415	Alternator Assembly (cs130, reman)
88985115	Power Steering Pump (reman)
12456326	Water Pump Kit
10108470	Water Outlet
10085753	Crankshaft Pulley
88986828	Belt (water pump, A/C, alternator)
88986813	Belt (fan, water pump, A/C)
12552359	Tensioner
12552361	Idler Pulley
10085760	Fan and Water Pump Pulley
6272959	Thermal Bypass Hose Connector
1470030	Clamp
1485552	Heater Hose
12604004	Power Steering Pump Pulley
88961892	Power Steering Bracket (tall deck)
10187611	Alternator Bracket
10187610	Alternator/Power Steering Bracket
10055890	Idler Pulley
10187611	Alternator Bracket
10187610	Alternator/Power Steering Bracket
10055890	Idler Pulley



A Aluminum Water Pump, Short-Style

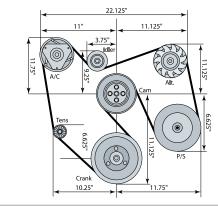


B Cast-iron Water Pump, Long-Style



4

C Serpentine Accessory Drive Belt System, with Air Conditioning



**\_**\_\_\_

C Serpentine Accessory Drive Belt System, with Air Conditioning (Diagram)

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Corvette Oil Pan (1965-1974) D



6-Quart Oil Pan 🛽 E



6-Quart Oil Pan, Gen V and Gen VI F



#### **OIL PANS, OIL PUMPS, GASKETS AND COMPONENTS**

Oil is an engine's lifeblood and a high quality Chevrolet Performance oil pan is what keeps it where it belongs. Properly designed and manufactured oil pans fit right, and when used with matching Chevrolet Performance gaskets, prevent leaks. We have oil pans for street and competition applications. Oil pans are sold without dipsticks or other hardware unless otherwise noted.

## D. 14091356

## Corvette Oil Pan (1965-1974)

- 5-quart pan has a trap door baffle that controls oil slosh during cornering and heavy braking
- Windage tray is included and requires four mounting studs, P/N 3902885
- Used on LS7 engine assembly P/N 3965774

#### E. 14103141

- 6-Quart Oil Pan
  - 6-quart pan fits all 1965-1990 engines

## F. 10240721

## 6-Quart Oil Pan, Gen V and Gen VI

 Six-quart pan fits all 1991-and-newer Gen V and Gen VI, 427, 454, 502 and 572 engines

## G. 12495360

- 4-Quart Oil Pan Kit, Gen V and Gen VI
  - Fits 1991-and-newer Gen V and Gen VI 427, 454 and 502 engines
- Fits many early-model Chevelles and Camaros
- Includes a 4-quart oil pan, 4 main cap-bolts, oil pump screen, oil level tube, oil level gauge, and oil pan gasket
- Pan is not available separately

#### 12557083

- Dipstick, 6-Quart (not shown)
- For use with production 6-quart oil pan P/N 10240721 or P/N 14103141
- Use oil dipstick tube P/N 12550533 and seal P/N 274244

#### H. 12550533

#### Dipstick Tube, 6-Quart

- For use with production 6-quart oil pan P/N 10240721 or P/N 14103141
- Use oil dipstick P/N 12557083 and seal P/N 274244

## 274244

#### Oil Dipstick Tube Seal, 6-Quart (not shown)

- For use with the production 6-quart oil pan P/N 10240721 or P/N 14103141
- Use oil dipstick tube P/N 12550533 and dipstick P/N 12557083

## 3989391

## Dipstick, 4-Quart (not shown)

- For use with 4-quart oil pan kit P/N 12495360 for all Gen V and Gen VI engines
- Use dipstick tube P/N 329231

#### l. 329231

- Dipstick Tube, 4-Quart
- For use with 4-quart oil pan kit P/N 12495360
- Use oil dipstick P/N 3989391

Dipstick Tube, 4-Quart

## **BIG-BLOCK** COMPONENTS

Oil Pans, Oil Pumps, Gaskets and Accessories Continued

## A. 14097040

## Windage Tray

• Use with the Gen V and Gen VI 454 and 502 engines

## **B.** 3967854

## Windage Tray

- Separates the oil from the spinning crank assembly to reduce aeration of the oil, aids in oil control and minimizes oil slosh under hard braking
- Use with oil pan P/N 14091356
- Requires four mounting studs P/N 3902885

## C. 88962187

## Windage Tray, 572 Engine

- Used on all 572-cubic-inch engines
- Use with oil pan P/N 14091356
- Requires four mounting studs P/N 88958656

## 3969870

## Oil Pump and Pick-Up (not shown)

- Heavy-duty pump
- 1.300" wide gears for increased volume; suitable for all Mark IV engines
- Distance from the pump mounting surface to the bottom of the pick-up tube screen is 4.940"
- Pick-up tube is tack-welded to the pump body
- Use with Corvette-style oil pan P/N 14091356

## D. 19131250

## Oil Pump and Pick-Up, 572 Engine

- For use with all 572-cubic-inch engines
- Use with oil pan P/N 10240721, oil pan gasket P/N 19213986 and windage tray P/N 88962187

## E. 3865886

- Oil Pump Shaft
- Heavy-duty all-metal
- Intermediate shaft fits all Big-Block engines

## 19210599

#### Oil Pump and Pick-Up, Gen V and Gen VI (not shown)

- For use with the Gen V and Gen VI 454 and 502 engines with 1-piece rear main seal
- Pump has 1.300" gears and will fit Mark IV engines
- Distance from the mounting surface to the bottom of the screen is 5.870"

**NOTE:** Tack-welding pick-up tube to pump is recommended.

## 3955281

## Oil Pump Pick-Up (not shown)

 Distance from pump mounting surface to lowest point of screen is 4.880"

**NOTE:** Weld or braze the pick-up tube to the pump cover for off-highway applications.

## F. 19299222

## Oil Filter Adapter (fits Mark IV Blocks only)

- Mounts a spin-on cartridge oil filter
- Contains a filter bypass valve used on all V-8 engines

## G. 25013759

## **Oil Cooler Bypass Valve**

- For high-performance and Bowtie Big-Blocks with 4-bolt main bearing caps
- Must be installed in the rear hole behind the oil filter adapter bolt to route oil through the cooler

## 24241872

## Magnetic Drain Plug (not shown)

• Catches and holds small pieces of metal before they can cause engine damage







B Windage Tray



**C** Windage Tray, 572 Engine



D Oil Pump and Pick-Up, 572 Engine



E Oil Pump Shaft





F Oil Filter Adapter

G Oil Cooler Bypass Valve

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Distributor, Billet HEI



Distributor, Ram Jet 350 & Ram Jet 502 J



Distributor, Adjustable Slip Collar K

## DISTRIBUTORS AND COMPONENTS

The high-quality distributors in this group are interchangeable with Small-Block Chevrolet V-8 components. Chevrolet Performance distributors cannot be used with Tall-Deck Bowtie blocks, except adjustable distributor P/N 10093387.

#### H. 93440806

## Distributor, HEI

- Cast aluminum
- High-performance mechanical advance curve
- Vacuum advance canister included
  Use connector P/N 12167658 to attach tachometer and
- 12-volt power supply wire to distributorIncludes module P/N 19180771, cap P/N 19110931 and
- rotor P/N 19110934

## l. 88961867

#### Distributor, Billet HEI

- Chevrolet Performance's most powerful and durable distributor
- For strength and high rpm stability the oversized shaft is guided by a sealed ball bearing and long sintered bushing
- Treated coating on the shaft provides low friction
   Advance appendix features of provides low friction
- Advance assembly features chrome-moly weights that slide on nylon pads for smooth timing advancement through the entire rpm range
- Vacuum advance canister and billet aluminum housing is CNC-machined for greater accuracy
- Has melonized cam drive gear P/N 10456413 for steel roller camshafts
- · High-quality cap with brass terminals

## J. 1104060

- Distributor, Ram Jet 350 and Ram Jet 502
- Used on the fuel-injected Ram Jet 350 and Ram Jet 502
- Includes ignition module P/N 10482830, cap P/N 19166099 and rotor P/N 10477219

#### 1103952

#### Distributor, Late-Model EFI (not shown)

- Used on late-model V-8 engines with fuel injection and computer controls
- Kit includes ignition module, cap and rotor

#### K. 10093387

## **Distributor, Competition Adjustable Slip Collar**

- Designed primarily for competition useBillet-aluminum housing, ball-bearing guide and adjustable
- Magnetic pickup provides accurate trigger signals to Chevrolet
- Performance Heavy Duty Ignition P/N 10037378 (not included) Uses a standard Chevrolet V-8 cap and rotor
- Uses a standard Cnevrolet v-8 cap an
  Will clear most induction systems
- Slip collar that can be adjusted to make up for block or head machining, or a tall-deck Bowtie block

## 19052845

#### Distributor Gear (not shown)

- Melonized iron gear is required on all crate engines and steel roller camshafts
- Assembly without using this gear may affect the warranty

## NOTE: This gear is part of distributor assembly P/N 93440806.

#### 10456413

## Distributor Gear (not shown)

- Melonized iron gear is required on all Chevrolet Performance crate engines
- Failure to use this gear will affect the engine warranty **NOTE:** Supplied on distributor P/N 93440806.

#### 12167658

## Connector, HEI Distributor Power and Tachometer (not shown)

• Used to attach the power and tachometer wires to the cap of the HEI distributor

## 12498335

- Coil, HEI (not shown)
  - Production HEI coil

## INTAKE MANIFOLDS, GASKETS AND COMPONENTS

The wide range of Chevrolet Performance intake manifolds are cast-iron and aluminum for carbureted and fuel injected applications. These intake manifolds were designed specifically for GM engines so you know they will deliver optimum performance. Due to the profile of some Chevrolet Performance high-rise intake manifolds, hood clearance should be carefully checked before ordering an intake manifold.

## A. 14097092

## Intake Manifold, Oval Port (iron) (spread bore)

- Economical iron 4-bbl intake manifold
- · Fits all 396–502 engines with large oval port heads

## B. 19131359 **(**)

#### High-Rise Intake Manifold, Rectangular Port (square bore) (Holley Carburetors)

- Aluminum, dual-plane manifold can be used with highperformance cast-iron or aluminum rectangular port heads
- Same as used on 454 HO and 502 HO engine assemblies

NOTE: Ports do not match Bowtie cylinder heads P/N 14044861 and P/N 12363425.

## C. 12363420 🕕

## High-Rise Intake Manifold, Oval Port

- Designed for all 396-502 engines with GM aluminum heads (1975 and earlier) and large oval port iron heads
- · Has a dual-plane design with spread bore flange and a dual-bolt pattern
- Has no provisions for a hot-air choke, but will accept a divorced choke or electric choke
- Accepts air conditioning and alternator brackets
- Use intake manifold gasket P/N 12366985 and bolt kit P/N 12367959

NOTE: May not fit on many Corvette models. Manifold height is 6" at the rear and 4.5" in front. Check for hood clearance before ordering.

#### 12363421

#### High-Rise CNC-Port-Matched Intake Manifold, Oval Port (spread bore) (not shown)

Similar manifold design as P/N 12363420 (see above), but it is "CNC" port-matched to Chevrolet Performance oval port aluminum cylinder heads

## D. 12363406

#### Intake Manifold, Oval Port (square bore) (Holley Carburetors)

- Same as manifold P/N 12363420 (see above), but designed for use with a Holley carburetor
- Dual-plane design requires bolt kit P/N 12367959, which includes 16 bolts (8740 chrome-moly 3/8-16 x 1.5" with 3/8" hex head and 16 5/8" O.D. washers), and manifold gasket kit P/N 12366985
- ٠ Accepts air conditioning and alternator brackets and a latemodel water neck

NOTE: Will not fit production Corvettes, and may not fit Chevelles. Manifold carb flange height is 4.450"



A Intake Manifold, Oval Port (iron)



B High-Rise Intake Manifold, Rectangular Port



C High-Rise Intake Manifold, Oval Port



**D** Intake Manifold, Oval Port (Holley Carburetors)



CNC-Port-Matched Intake Manifold, Oval Port (Holley Carburetors) E



Intake Manifold, ZZ572/620 Engine F



Intake Manifold, ZZ572/720R Engine G

## E. 12363407 🕕

## **CNC-Port-Matched Intake Manifold, Oval Port** (square bore) (Holley Carburetors)

• Same as P/N 12363406 (see previous page), except it has been CNC-port-matched for GM aluminum oval port heads with large oval port heads (1975-and-older), and all aluminum heads with oval ports

#### F. 88961161

#### Intake Manifold, ZZ572/620 Engine (square bore) (Holley **Carburetors**)

- Aluminum single-plane intake manifold is used on the • ZZ572/620 engine
- The carburetor flange is for a 4150-style carburetor
- Use intake gasket P/N 88962213 •
- ٠ For tall-deck blocks

## G. 88962218 🕕

- Intake Manifold, ZZ572/720R Engine
- Aluminum single plane intake manifold is used on the • ZZ572/720R engine
- The carburetor flange is for a 4500 Dominator-style carburetor Use intake gasket P/N 88962213
- For tall-deck blocks •

Intake I	Manifolds: Additional Requi	ired Components	
Part Number	Gaskets (Qty)	Bolts (Qty)	Engine Application
12464484	12366985 (1)	12497460 (1)	12499121
12464482	12366985 (1)	12367959 (1)	12499121
88961161	88962213 (1)	12367959 (1)	19201333
12363420	12366985 (1)	12367959 (1)	12498777, BB Oval Port High Rise
12363407	12366985 (1)	12367959 (1)	19201332, 12371171, CNC version of 12363406
19131359	12506106 (2)	10198997 (14), 9349918 (2)	12568774, BB Dual Plane
88962218	88962213 (1)	12367959 (1)	19201334





## **RAMJET 502 COMPONENTS**



## Ram Jet Fuel Injection Kit, with MEFI-4 Electronics

- Retro-fit fuel injection kit is calibrated for a 502/502 Chevrolet Performance engine and is the same as used on the Ram Jet 502 P/N 12499121
- May be used on other Big-Block applications by replacing the ECU unit with an aftermarket unit with the proper calibration
- Includes brackets, sensors, bolts, nuts, gaskets and other small parts, including:

Part Number	Description	Quantity
88962744	Instruction Manual	1
12489400	Diagnostic Trouble Code Tool	1
12555320	Intake Manifold Oil Shield	1
12366985	Gasket Package	1
12367959	Bolt/Screw Package	1
12489372	Upper Intake Manifold Gasket	1
12487372	Fuel Feed Hose	1
10216948	Tube Assembly–Fuel Press Regulator	1
88961968	Engine Harness Assembly	1
10456208	Knock Sensor	1
12489595	Bracket Assembly, Transmission Cable	1
12489596	Bracket Assembly, Transmission, Throttle Cable	1
12489597	Rod, Throttle Control	1
1104060	Distributor	2
1115491	Ignition Coil	1
12464482	Lower Intake Manifold	1
12464484	Upper Intake Manifold	1
17113524	Body Assembly Throttle	1
12490257	Air Filter Kit	1
12569240	MAP Sensor	1
25036751	Intake Air Temperature Sensor	1
17090919	Injector Assembly	8
17113222	Fuel Injector Retainer Kit	1
17120039	Rail Assembly, Multi-Port Fuel Injection	1
89060414	Fuel Pressure Regulator Assembly	1
88962718	Module Assembly Engine Cont.	1
15326386	Coolant Temperature Sensor	1
19178918	02 Sensor	1
12487373	Connector, Fuel Rtn. Line	1

# Electronic Control Units & Components 88962718

#### ECU, Ram Jet 502 (not shown)

- Replacement ECU for all Ram Jet 502 engines (MEFI 3 P/N 12497323 or MEFI 4 P/N 12499121)
- MEFI 4 Ram Jet engine is a closed-loop system that gives a much smoother idle and improved performance

**NOTE**: Replacing the ECU on MEFI 3 Ram Jet engine P/N 12497323 requires using new wire harness kit P/N 12499117, or jumper wire P/N 88963118 to use MEFI 4 ECU as an open-loop system.

## 12499117

## MEFI 4 ECU & Wire Harness Kit, Ram Jet 502 (not shown)

- Module/harness kit is used to convert a Ram Jet 502 from MEFI 3 to the newer MEFI 4 design, which offers improved idle and performance through a closed-loop system
- Includes module P/N 88962718, wire harness P/N 88961968, oxygen sensor P/N 19178918, intake air temp sensor P/N 25036751 and oxygen sensor fitting P/N 15156588

**NOTE:** The ECU is programmed with a "green mode" that controls the rpm for the break-in period. During this period, engine speed is limited to 4,000 rpm in the first hour, 4,500 rpm in the second hour and 5,500 rpm in the third hour.

#### 88963118

#### Jumper Harness, MEFI 3 to MEFI 4 (not shown)

- Allows an MEFI 4 module to be used with an MEFI 3 wiring system (to stay as an open-loop system)
- Fits both Big-Block and Small-Block engines

## 88961968

## MEFI 4 ECU Harness, Ram Jet 502 (not shown)

- Used in the MEFI 4 Ram Jet 502 P/N 12499121 with the MEFI 4 closed-loop oxygen sensor-equipped system
- Use with MEFI 4 ECU P/N 88962718



Lower Manifold, 502 Ram Jet A



Upper Manifold, 502 Ram Jet B



Oil Shield C

Water Neck F



Gasket, Aluminum Oval Port Heads D



Bolt Kit, Intake Manifold E

## A. 12464482

## Lower Manifold, 502 Ram Jet

- Aluminum lower portion of the intake manifold is used on Ram Jet 502 crate engine P/N 12499121
- Use with upper manifold P/N 12464484 (see below), upper manifold gasket P/N 12489372 and 8 bolts P/N 12490255

#### B. 12464484

#### Upper Manifold, 502 Ram Jet

- Aluminum upper portion of the intake manifold is used on ٠ Ram Jet 502 crate engine P/N 12499121
- Use with lower manifold P/N 12464482 (see above), upper manifold gasket P/N 12489372 and 8 bolts P/N 12490255

## MANIFOLD GASKETS AND COMPONENTS

## C. 12555320

#### **Oil Shield**

· Isolates hot engine oil from the air/fuel mixture

## D. 12366985

## **Gasket, Aluminum Oval Port Heads**

- Designed for Big-Block aluminum heads P/N 12363390, P/N 12363392 and P/N 12363399
- Use with manifold P/N 12363406, P/N 12363407, P/N 12363420 or P/N 12363421

## 88962213

#### Intake Manifold Gasket (not shown)

- Use on all Big-Block engines with rectangular intake port heads 396 through 572-cubic-inch
- Includes 2 gaskets

#### 12506106

#### Gasket, 454 and 502 Engines (not shown)

- Used on 454 and 502 engines; with restricted heat crossover passages
- 1 gasket per package; order 2 per engine.

## E. 12367959

٠

## Bolt Kit, Intake Manifold

- For any Big-Block Chevrolet engine
- Includes 16 bolts: 3/8"-16 x 1.5" with wide, underhead flange with a 7/16" hex head
- Rated at 170,000 psi and will give consistent torque load
- Includes 16 hardened flat washers

**NOTE:** Four of these washers are smaller in diameter for use around the front water passages.

## **CHROME WATER NECKS**

#### F. 12342024

## Water Neck

- Chrome water neck with neoprene O-ring and chrome bolts
- For 1966-1975 full-size Chevrolet, Camaro, and Chevelle V-8 engines

#### 10108470

#### Aluminum Water Outlet (not shown)





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#### **STARTERS**

Flywheels with two different diameters are used on Chevrolet Small-Block, Big-Block, and 90° V-6 engines. Large flywheels are 14" in diameter and have 168 teeth on the starter ring gear. Small-diameter flywheels are 12.750" in diameter, with 153 teeth on the ring gear.

This difference in flywheel diameters requires two distinct starter housings. Starter noses used with large-diameter flywheels have two offset bolt holes, while starters for small flywheels have two bolt holes that are parallel to the back of the block. Most Chevy blocks are drilled for both types of starters.

## A. 12361146

## **High-Torque Mini Starter**

- Gear reduction starter is designed for 1958-1996 V-8 and all 90° V-6 engines
- Compact design provides increased clearance
- Weighs only 10.5 pounds and has a gear reduction of 3.75:1 Equipped with a dual bolt pattern for 12.750" (153-tooth) and
- 14" (168-tooth) flywheels Housing can be rotated to clear exhaust systems •
- Includes starter, mounting bolts, shims, gaskets and electrical connectors

NOTE: Not recommended for competition use.

## B. 12363128 🕕

## **High-Torque Mini Starter, Chrome**

Same as starter P/N 12361146 (see above), but with a chrome housing

## C. 10465143

## Lightweight Starter (remanufactured)

- Lightweight high-performance starter was originally used on 1993-1997 Camaros and Firebirds with the LT1 engine
- Can be used on any Small-Block or Big-Block engine with a 12.750", 153-tooth flywheel

#### D. 19302919 🕕

#### Lightweight Starter, Big-Block and Small-Block

Gear reduction starter can be used on Big-Block and Small-Block engines with a 14", 168-tooth flywheel



A High-Torque Mini Starter



B High-Torque Mini Starter, Chrome





C Lightweight Starter 12.75" Flywheel (remanufactured)



D Lightweight Starter 14" Flywheel

	Starters: Additional Required Components	
Part Number	Bolts (Qty)	Engine Application
12361146	12338064 (2)	Big-Block
10465143	12338064 (2)	Big-Block
12606096	12338064 (2)	Big-Block and 12499121, 12496962, 12497323, 12371171
12363128	12338064 (2)	Big-Block



Carburetor, Holley 850-cfm E



Carburetor, Holley 870-cfm F



Carburetor, Holley Dominator 1150-cfm G

## CARBURETORS AND THROTTLE BODIES

Chevrolet Performance has the right carburetor or throttle body to complete your new crate engine, or give life to your rebuilt engine. Then, top off your engine with one of our great-looking air cleaners.

## Carburetors

#### 19170093

#### Carburetor, Holley 770-cfm (not shown)

- Holley 4160-style 770-cfm 4-bbl carburetor
- Features show-car-quality polished finish
- Dual feed, center-hung float bowls
- Vacuum secondaries
- Automatic electric chokeQuick-change adjustable vacuum secondary
- Recommended for Small-Block and Big-Block engines, including street, competition, towing and off-road vehicles
- Bolts and gaskets included
- Replaces Holley 4160 750-cfm carburetor P/N 12485506

#### E. 19170095

- Carburetor, Holley 850-cfm
- Holley 4150-style 850-cfm 4-bbl carburetor
- Features show-car-quality polished finish
- Mechanical secondaries
- Electric choke
- Four-corner idle adjustment
- Power valve blowout protection
- Custom-calibrated for the ZZ572/620 crate engine
- Recommended for 502 crate engines and suitable for Big-Block engines, including street, competition, towing and off-road vehicles
- Bolts and gaskets included
- Replaces Holley 4160 850-cfm carburetor P/N 88961560

**NOTE:** Carburetor can only be recalibrated for use with other large-displacement engines.

## F. 19170094

## Carburetor, Holley 870-cfm

- Holley 4160-style 870-cfm 4-bbl carburetor
- Features show-car-quality polished finish
- Dual feed, center-hung float bowls
- Vacuum secondaries
- Automatic electric choke
- Quick-change adjustable vacuum secondary
- Recommended for 502 crate engines and suitable for Big-Block engines, including street, competition, towing and off-road vehicles
- Bolts and gaskets included
- Replaces 4150-style 850-cfm carburetor P/N 12366996

#### G. 19170096

## Carburetor, Holley Dominator 1150-cfm

- Dominator-style 1150-cfm 4-bbl carburetor
- Features show-car-quality polished finish
- Mechanical secondaries
- Four-corner idle adjustment
- Power valve blowout protection
- Custom-calibrated for the ZZ572/720R crate engine
- Bolts and gaskets included
- Replaces 4500-style 1090-cfm carburetor P/N 88962217

## **Throttle Bodies**

## 17113524

#### Throttle Body, Ram Jet 502 (not shown)

- Used on the Ram Jet 502 crate engine
  - Use throttle body gasket P/N 10105379 and bolt
  - P/N 11516344 for installation
  - Dual 49.9mm blades

## **AIR CLEANERS**

## A. 12342080

- Air Cleaner, Chevrolet-Logo High-Performance Design
- 14" round high-performance style air cleaner has chrome lid with embossed Chevrolet name
- Fits most 4-bbl and 2-bbl carburetors
- Will not fit Dominator-style carburetors
- Bowtie nut not included

**NOTE:** Check clearance between hood and top of air cleaner. Minimum clearance is 3.750" from top of carburetor gasket area to underside of hood.

## B. 12342071

## Air Cleaner, Chevrolet-Logo Classic Design

- 14" round classic-style air cleaner has chrome lid with embossed Chevrolet name and Bowtie attaching nut
- Fits most 4-bbl and 2-bbl carburetors
- Will not fit Dominator-style carburetors

## 12490257

## Air Cleaner, Ram Jet 502 (not shown)

- Designed for use with throttle body on Ram Jet 502 crate engine
- Can be used on other applications

## SPARK PLUG WIRES

## C. 12368384

## **Chevrolet Bowtie Logo Wires**

Chevrolet Performance spark plug wire kits are designed to fit your GM engine, eliminating the guesswork in selecting the correct length. These performance 8mm spark plug wires exhibit only 600 ohms per foot of resistance, with high noise suppression capabilities. Features include red wires with white Chevrolet insignia and black boots. Manufactured with double-wall silicone construction.

- Kits include a 10" coil wire for engines, such as Ram Jet 350 and ZZ572 engines that have remote-coil HEI, plus four wire separators and HEI terminals and boots for the distributor cap.
- Custom-fit set designed to be used with black wire loom P/N 12495502 or chrome wire loom P/N 12342049.

## WIRE LOOM KIT

## D. 12495502

## Wire Loom Kit, Big Block

- Used on late-model Big-Block trucks
- Supplied with one left-hand support P/N 12553397, one right-hand support P/N 12553398, three four-wire retainers P/N 12132223, two three-wire retainers P/N 12047523, two two-wire retainers P/N 12132229, and two single-wire retainers P/N 12132228



A Air Cleaner, Chevrolet Logo, High Performance Design



B Air Cleaner, Chevrolet Logo, Classic Design



C Spark Plug Wires, Chevrolet Bowtie Logo



D Wire Loom Kit, Big-Block



Electric Fuel Pump E



Camaro ZL1 Fuel Pump Module **F** 



Electric Fuel Pump, High Output G



Fuel Filter H

## ELECTRIC FUEL PUMPS AND COMPONENTS

## E. 6472657

## **Electric Fuel Pump**

- For use on all carbureted engines
- Flows 30-40 gph at 6-9 psi

## F. 19260557

- Camaro ZL1 Fuel Pump Module
- Production fuel pump module for the 2012 Camaro ZL1 with supercharged LSA engine
- Supports approximately 600 horsepower
- Direct replacement for 2010+ Camaro SS fuel pump modules
  250 liters per hour capacity at 65 psi
- Pulse-width modulated, eliminates need for conventional pressure regulator
- Kit includes fuel pump module/sender assembly tank seal and instruction sheet

## G. 25115899

- Electric Fuel Pump, High-Output
  - Heavy-duty 12-volt electric rotary pump
- Flows 72 gph at 6-8 psi

#### 19245530

## Fuel Pressure Regulator Kit (not shown)

- Used on Ram Jet 502 crate engine
- Fits other fuel-injected engines

## H. 854619

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## Fuel Filter

- High-capacity inline filter
- Suitable for all high-performance carbureted applications
- 5/16" inlet and outlet

# Shift Gears with Confidence and Convenience

Chevrolet Performance's growing range of factoryengineered transmissions, installation kits and related components support high-performance engines with products matched to the torque output of your engine.

Our electronically controlled automatic transmissions are engineered to match your high-performance engine with smooth, crisp shifts and the durability you expect. SuperMatic<sup>™</sup> transmissions offer the ultimate in automatic transmission strength and torque capability – and every Chevrolet Performance automatic transmission is backed by a 12-month warranty.

We've also expanded our lineup of manual-transmission applications, with all-new installation kits that adapt our TREMEC T56 Magnum six-speed to Small-Block, Big-Block and LS engines. They enable the strength of the heavy-duty TR6060 transmission in a universal package designed for LS-engine installations in older vehicles. It's the perfect choice for mixing the classic four-speed look with modern performance in a vintage muscle car, classic truck or street rod.

All of Chevrolet Performance's transmissions are brandnew. They're not rebuilds and you purchase them outright, so there's no need to deal with shipping messy cores. Complement automatic transmissions with one of our transmission controller kits for plug-and-play operation – and we've improved our controllers this year, making it easier to use electronically controlled transmissions in older vehicles.

**IMPORTANT**! Chevrolet Performance does not include a torque converter with automatic transmissions. A variety of torque converters for 4L60 and 4L80-series transmissions tailored for the wide variety of our crate engines' performance specifications are available. Select the transmission that's just right for your project vehicle and select the torque converter to match its performance. See pages 346-347 for more details.

**NOTE:** An aftermarket signal converter is required when installing an electronically controlled automatic transmission in an older vehicle with a mechanical speedometer.

## HYDRA-MATIC TRANSMISSION FAMILY TREES

## 4L60-E Series

The Hydra-Matic 4L60/4L65/4L70 family of transmissions is differentiated primarily by gearset design. Each planetary gearset in the 4L60 has four pinion gears. There are five pinion gears in the 4L65 and 4L70, but the 4L70 has a higher torque rating. The external dimensions and mounting provisions are identical for each transmission in the 4L60 family. The maximum torque capacity for each includes:

4L60-E – 380 lb.-ft. 4L65-E – 430 lb.-ft.

4L70-E - 495 lb.-ft.

## 4L80-E Series

The production-based Hydra-Matic 4L80 and SuperMatic<sup>™</sup> 4L85 transmissions are differentiated by gearset design. Each planetary gearset in the 4L80 has four pinion gears, while the 4L85 has five pinion gears. The external dimensions and mounting provisions are identical for each. The maximum torque capacity for each includes:

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4L80-E - 440 lb.-ft.

4L85-E - 685 lb.-ft.

Parts shown clockwise from top: T56 Super Magnum Six-Speed Manual Transmission SuperMatic™ 4L85-E Transmission SuperMatic™ Torque Converter SuperMatic™ Transmission Control System NEW Clutch Kit, Small-Block NEW Gen V Aluminum Bell Housing

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**NOTE:** Must use 14" (168-tooth) Flexplate with SuperMatic<sup>™</sup> Torque Converters.

# Performance SuperMatic<sup>™</sup> Torque Converters

The SuperMatic<sup>™</sup> Torque Convertors from Chevrolet Performance are designed to provide long life when matched with a SuperMatic<sup>™</sup> Transmission. Each converter incorporates the following features:

- Steel billet front cover
- Custom stator
- Fully furnace brazed pump and turbine
- "Heavy-duty" lock-up clutch
- All internal components static balanced
- Fully vector balanced as an assembly
- Designed for Chevrolet Performance crate engines and automatic transmissions
- No external adapters needed to fit Chevrolet Performance crate engines.

Part Number	Stall Range	Application
19299800	2,400-2,800 RPM stall	4L60/65/70E (late "LS" V-8 transmission) mate to early Gen 1 SB/BB (dual bolt pattern – 10.75" and 11.5") Note: Will not fit 153-tooth flexplate
19299801	3,000-3,400 RPM stall	4L60/65/70E (late "LS" V-8 transmission) mate to early Gen 1 SB/BB (dual bolt pattern – 10.75" and 11.5") Note: Will not fit 153-tooth flexplate
19299802	2,400-2,800 RPM stall	4L60/65/70E (late "LS" V-8 transmission) mate to LS V-8 engine (single bolt pattern – 11.062")
19299803	3,000-3,400 RPM stall	4L60/65/70E (late "LS" V-8 transmission) mate to LS V-8 engine (single bolt pattern – 11.062")
19299804	2,400-2,800 RPM stall	4L80E/4L85E-mate to early Gen 1 SB/BB (dual bolt pattern $-$ 10.75" and 11.5")
19299805	3,000-3,400 RPM stall	4L80E/4L85E-mate to early Gen 1 SB/BB (dual bolt pattern $-$ 10.75" and 11.5")
19299806	2,400-2,800 RPM stall	4L80E/4L85E – mate to LS V-8 engine (extended pilot) (single bolt pattern – 11.062")
19299807	3,000-3,400 RPM stall	4L80E/4L85E – mate to LS V-8 engine (extended pilot) (single bolt pattern – 11.062")

Converters are a kit that includes converter-to-flexplate bolts and instructions.

# Torque Converter Quick Reference Chart

Automatic Transmission Torque Converter Match Listing

Engine P/N	Description	Displac.	hp	Torque	4L60 Family Fits SuperMatic 4L65-E and 4L70-E (LS bell)		<b>4L80 Family</b> Fits SuperMatic 4L85-E	
					Converter P/N	Stall Range	Converter P/N	Stall Range
Chevy Sm	all-Block V-8							
19244450	350/290 HP Deluxe	350 cu in	290	332	19299800	2,400-2,800	N/A	N/A
19210009	350 HO Turn-Key–with Iron Vortec Heads	350 cu in	330	380	19299800	2,400-2,800	N/A	N/A
12499120	Ram Jet 350–PFI with Iron Vortec Heads	350 cu in	350	400	19299800	2,400-2,800	19299804	2,400-2,800
19301294	ZZ5 Turn-Key–with Aluminum Vortec Heads	350 cu in	400	400	19299801	3,000-3,400	19299805	3,000-3,400
12499101	HT383 Base–Performance Engine	383 cu in	340	435	19299800	2,400-2,800	19299804	2,400-2,800
19301295	ZZ383–High-Performance Engine	383 cu in	450	450	19299801	3,000-3,400	19299805	3,000-3,400
Chevy LS	/LSX V-8							
19259918	LC9–5.3L	6.2L	326	350	19299802	2,400-2,800	19299806	2,400-2,800
19258004	LC9–E-Rod Kit Automatic	5.3L	326	350	19299802	2,400-2,800	19299806	2,400-2,800
19301326	LS3–Corvette Gen IV V-8	6.2L	430	424	19299802	2,400-2,800	19299806	2,400-2,800
19257230	LS3–E-Rod Kit Automatic	6.2L	430	424	19299802	2,400-2,800	19299806	2,400-2,800
19301358	LS376/480–LS3 Gen IV V-8	6.2L	480	475	19299803	3,000-3,400	19299807	3,000-3,400
19301359	LS376/515–Carbureted LS3 Gen IV V-8	6.2L	515	469	19299803	3,000-3,400	19299807	3,000-3,400
19301360	LS376/525–LS3 Gen IV ASA Camshaft	6.2L	525	489	19299803	3,000-3,400	19299807	3,000-3,400
19329009	DR525 (with muscle car oil pan)	6.2L	525	489	N/A	N/A	N/A	N/A
19329008	DR525 (with Gen IV F car oil pan)	6.2L	525	489	N/A	N/A	N/A	N/A
19260164	LSA–Supercharged Gen IV V-8	6.2L	556	551	N/A	N/A	19299806	2,400-2,800
19260165	LS9–Supercharged Gen IV V-8	6.2L	638	604	N/A	N/A	19299806	2,400-2,800
19244098	LS7–2006 Corvette Z06	7.0L	505	470	19299803	3,000-3,400	19299807	3,000-3,400
	Optional LS7 (depending on application)	7.0L	505	470	19299802	2,400-2,800	19299806	2,400-2,800
19260831	LSX376–B8	6.2L	450	444	19299802	2,400-2,800	19299806	2,400-2,800
19299306	LSX376–B15	6.2L	450	444	N/A	N/A	N/A	N/A
19260833	LSX454	7.4L	620	590	N/A	N/A	19299807	3,000-3,400
19260835	LSX454R	7.4L	750+	680+	N/A	N/A	N/A	N/A
19328728	LT1 (with wet sump)	6.2L	460	465	19299802	N/A	19299806	N/A
19329997	LT1 (with dry sump)	6.2L	460	465	19299802	N/A	19299806	N/A
Chevy Bio	J-Block V-8							
19166393	ZZ427/480	427 cu in	480	490	19299801	3,000-3,400	19299805	3,000-3,400
19166392	427–Anniversary Edition	427 cu in 427 cu in	430	444	19299801	3,000-3,400	19299805	3,000-3,400
12568774	454 HO–with Iron Heads and Roller Cam	454 cu in	425	500	19299800	2,400-2,800	19299804	2,400-2,800
12498777	ZZ454/440–440 Horsepower with Aluminum Heads	454 cu in	440	500	19299800	2,400-2,800	19299804	2,400-2,800
88890534	HT502–Truck Replacement Engine	502 cu in	377	512	19299800	2,400-2,800	19299804	2,400-2,800
12568778	502 HO-with Iron Heads and Roller Cam	502 cu in	450	550	19299800	2,400-2,800	19299804	2,400-2,800
12496963	ZZ502 Base Engine–with Aluminum Heads	502 cu in	502	567	19299801	3,000-3,400	19299805	3,000-3,400
19201332	ZZ502 Deluxe–(Deluxe/Assembled) with Aluminum Heads	502 cu in	502	567	19299801	3,000-3,400	19299805	3,000-3,400
12499121	Ram Jet 502–PFI with Aluminum Heads	502 cu in	502	565	19299801	3,000-3,400	19299805	3,000-3,400
19201333	ZZ572/620 Deluxe	572 cu in	620	650	N/A	N/A	19299805	3,000-3,400
19201334	ZZ572/720R Deluxe	572 cu in	720	685	N/A	N/A	19299805	3,000-3,400

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## **AUTOMATIC TRANSMISSIONS & COMPONENTS**

## 19260380 >

# Hydra-Matic 4L65-E Four-Speed Automatic Transmission (LS-Series V-8)

- Similar in design to the 4L60-E
- Electronically controlled four-speed overdrive transmission
- Features five-pinion gearsets, heat-treated stator shaft splines, induction-hardened turbine shaft, seven-plate 3.4 clutch
- Gear ratios: 1st: 3.06, 2nd: 1.62, 3rd: 1.00, 4th: 0.70
- Use SuperMatic<sup>™</sup> converter for direct bolt up to Gen I and Gen II engines
- Add up to 430 lb.-ft. torque
- Does not include torque converter. See pages 346-347 for options.

**NOTE:** Use with electronic controller P/N 19212657 for carbureted and Ram Jet applications. Use with electronic controller P/N 19302405 with Chevrolet Performance LS fuel injected applications.



## 19299055 Two-Wheel Drive (not shown) 19329645 Two-Wheel Drive, 2014-15 LT1 (not shown) NEW! 19260961 Four-Wheel Drive ►

## SuperMatic<sup>™</sup> 4L70-E Four-Speed Automatic Transmission

- Based on the 4L60-E/4L65-E
- Increased horsepower and torque capacity
- Features five-pinion gearsets, heat-treated stator shaft splines, induction-hardened turbine shaft, seven-plate clutch and specific valve-body calibration
- Gear ratios: 1st: 3.06, 2nd: 1.62, 3rd: 1.00, 4th: 0.70
- Torque converter not included
- Add up to 495 lb.-ft. torque

**NOTE:** Use with electronic controller P/N 19212657 for carbureted and Ram Jet applications. Use with electronic controller P/N 19302405 with Chevrolet Performance LS fuel injected applications.



## **19300175** ► SuperMatic™ 4L85-E Four-Speed Transmission

- Improved valve body for firmer shifts
- Direct bolt-on for Gen I Small-Block and all Big-Blocks
- Does not include torque converter. See pages 346-347 for options.
- Includes additional clutch plates
- Gear ratios: 1st: 2.48, 2nd: 1.48, 3rd: 1.00, 4th: 0.75
- Add up to 685 lb.-ft. torque

**NOTE:** Use with electronic controller P/N 19212657 for carbureted and Ram Jet applications. Use with electronic controller P/N 19302410 with Chevrolet Performance LS fuel injected applications. Torque converter not included. See automatic transmission torque converter match listing chart on page 347.





## NEW!

Gen V 4LXXE Bell Housing A



Transmission Installation Kit - 4L60 Series B



A. 19125817 NEW! Bell Housing Kit – LT Engine

- Unique bell housing kit enables 1996-later 4L60, 4L65 and 4L70 four-speed automatic transmissions to be matched with the Gen V LT1 engine.
- Use with 8-bolt flexplate kit P/N 19329416

## Automatic Transmission Installation Kits – LS Engines

Whether you select one of Chevrolet Performance's electronically controlled automatic transmissions or the high-capacity T-56 Super Magnum 6-speed manual, we've got the parts you need to complete the installation with an LS engine. Select your transmission then match it with one of the installation kits below for a quicker, easier and hassle-free installation.

## **B.** 19259117

- Transmission Installation Kit 4L60/4L70 Series
  Use with 4L60, 4L65 and 4L70 transmissions on LS engines with 6-bolt crankshaft flange
- Includes flexplate, flexplate covers, fasteners and instruction sheet
- Does not fit LSA, LSX454, LS9 or LT1 engines

## 19329416 - Fits LT1 (not shown) NEW! Transmission Installation Kit – 4L60/4L70 Series

- Use with 4L60, 4L65 and 4L70 transmissions on LS engines with 8-bolt crankshaft flange
- Includes flexplate, flexplate covers, fasteners and instruction sheet
- Fits LSA, LSX454, LT1

## C. 19259119

- Transmission Installation Kit 4L80 Series
- Use with all LS engines to mate transmission fully with the engine
- Includes flywheel cover, hardware and fastener torque specs
- Does not include flexplate
  Use flexplate 12654640 for 6-bolt crankshaft engines
- and SuperMatic<sup>™</sup> converters • Use flexplate 12636325 for 8-bolt crankshaft engines and SuperMatic<sup>™</sup> converters
- All production converters must use crankshaft adapters (see kits on page 350)

Automatic Transmission Installation Kits Continued

## A. 19125597

#### 8-Bolt Crankshaft Adapter Kit – LSA/LSX454

- Use with LSA, LSX454 and LSX454R crate engines with ٠ 8-bolt crankshaft flange
- Includes flexplate, adapter hub and hardware
- Provides the correct converter pilot support for production 4L80/85 style torque converters
- Conventional 6-bolt flexplates do not bolt up to LSA and LSX454 engines

#### B. 6-Bolt Crankshaft Adapter – LS Engine

- For use with Gen I style (Turbo 350/400, 700R4, 4L60, 4L60-E and 4L85-E) transmission on Gen III- and Gen IV-engines
- Flexplate 19260102 has only 11.5" (4L80 style) torque converter bolt pattern. Other applications may need to modify flexplate to use

## For 6-Bolt Crankshaft Adapter, order the following parts:

	unikonunt /	aupter, order the for	
Part Number	QTY	Part	
12563532	1	Crankshaft Spacer	
19260102	1	Flexplate	
19257940	6	Mounting Bolts	
		-	

NOTE: For individual flywheel and flexplate components see pages 161, 257 and 331.

## Transmission Control Systems

## C. SuperMatic<sup>™</sup> Transmission Control System

- Pre-programmed provides full function transmission operation after completing connections
- No laptop programming required
- Only compatible with E-67 based Chevrolet Performance electronic LS engine control systems
- Optional features for personal preferences
- Gearshift timing
- Multiple shift patterns
- Manual shift mode
- Supports most "Tap Shifters" or wheel-mounted paddles - On-Board data logging
- Connect and cruise simple connections with no additional wiring required. Connect the clearly marked leads to the engine control harness, and you're ready to cruise!

#### 19302405

- 1996-2008 4L60-E family transmissions
- Compatible with P/N 19260380, 19299055 and 19260961 Chevrolet Performance SuperMatic™
- Revised, more compact design for easier installation in smaller areas
- Enhanced shift pressure performance for improved shift control
- Compatible with OBD-II code readers •

#### 19302410

- 1993-Up 4L80-E family transmissions
- Compatible with P/N 19300175 Chevrolet Performance SuperMatic™
- Revised, more compact design for easier installation in smaller areas
- Enhanced shift pressure performance for improved shift control
- Compatible with OBD-II code readers •

#### D. 19212657

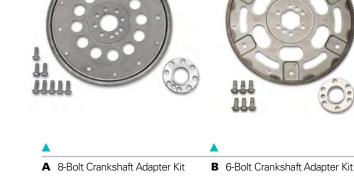
#### Transmission Controller, 4L60-E, 4L65-E, 4L70-E, 4L80-E and 4L85-E Automatic

- Required when using a GM electronically controlled automatic transmission (see page 348)
- Includes wiring harness, software and connector for laptop computer
- Controller allows full programming of shifting, as well as
- part-throttle, wide-open throttle and shift firmness control
- Recommended for carburetor or Ram Jet applications

#### E. 19154766

#### **Transmission Adapter Kit**

- Allows installation of Gen III/IV style 4L60-E/4L65-E transmission onto Gen I and II engine using production style torque converter
- Includes spacer ring, shims, dowels, bolts and flexplate Works on one-piece rear main seal engines only (e.g., Ram Jet 350)





C SuperMatic<sup>™</sup> Transmission Control System

Automatic Transmission D Controller - 4L60-E, 4L65-E, 4L70-E, 4L80-E and 4L85-E



E Transmission Adapter Kit

PERFORMANCE

350



T56 Super Magnum 6-Speed Manual Transmission F



## NEW!

Small-Block, Big-Block T56 Bell Housing G

## MANUAL TRANSMISSIONS AND COMPONENTS

## F. 19329795

## T56 Super Magnum Six-Speed Manual Transmission

- High-torque capacity TREMEC six-speed manual designed for custom, retro-fit installations with Chevrolet Performance crate engines
- 700 lb.-ft. maximum torque capacity
- Exterior case similar to fourth-generation F-body transmission with the stronger, high-capacity gear sets, input shaft and output shaft used in the TREMEC TR6060
- 26-spline input shaft31-spline output shaft
- Gear ratios: 2.66 (1), 1.78 (2), 1.30 (3), 1.00 (4), 0.80 (5), 0.63 (6)
- Slip-yoke design
- 40-tooth reluctor ring that's necessary for use with electronic vehicle speed sensors used with Chevrolet Performance controllers
- Two-position shifter plate included, with third position built into the transmission
- Kit includes shifter handle and Chevrolet Performance-logo ball-type shift knob (See page 353)
- Approximately 33.6 inches long with bell housing attached (bell housing included in separate installation kits)

## G. 19329025 NEW!\*

## Bell Housing Kit – Small-Block and Big-Block Engines

- Allows T56 Super Magnum transmission P/N 19329795 to bolt up to a Gen I Small-Block and all Big-Block engines
- SFI steel bell housing
- Includes Block-Saver Plate and attaching hardware
  5.950" deep
- Clutch kit not included. Use clutch kit P/N 19329633 for Small-Block and P/N 19329634 for Big-Block
- Designed for hydraulic concentric slave cylinder release bearing P/N 24264182 (See page 353

## H. 19329620 NEW!\*

## Bell Housing Kit – LS and LT Engines

- Allows T56 Super Magnum transmission P/N 19329795 to bolt up to any Gen III/Gen IV LS engine or Gen V LT engine
   SFI steel bell housing
- Includes Block-Saver Plate and attaching hardware
- 5.555" deep
- Clutch kit not included. Use clutch kit P/N 19339635 for engines with 8-bolt flange, including LT engines
- Designed for hydraulic concentric slave cylinder release bearing P/N 24264182 (See page 353)



LS, LTT56 Bell Housing H

\*Expected availability 1st Quarter, 2015

Manual Transmissions and Components Continued

## A. 19301625

# Transmission Installation Kit – TREMECT56 Super Magnum for LS engines with 6-bolt flange

- Use with T56 Super Magnum transmission P/N 19329795 and
- LS engines except LSA, LSX376-B15, LSX454 and LSX454R
- LS7-style flywheel with 6-bolt flange
- LS7-style high-strength clutch and pressure plate
   Fourth constraint E hady type hall beyoing and a
- Fourth-generation F-body-type bell housing and clutch release bearing included
- Kit includes dust covers, hardware and instructions

## B. 19329633 NEW!\*

## Clutch Kit – Small-Block Engines

- High-performance single-disc clutch that fits production
   Small-Block flywheels
- Rated for 450 lb.-ft. of torque
- Fits 168-tooth flywheel, P/N 14088648
- Kit includes pressure plate and additional hardware

## C. 19329634 NEW!\*

## Clutch Kit – Big-Block Engines

- High-performance single-disc clutch that fits production Big-Block flywheels
- Rated for 650 lb.-ft. of torque
- Fits 168-tooth flywheel:
   P/N 14096987 454 & 502 crate engines (externally balanced)
   P/N 12582964 427 & 572 crate engines (internally balanced)
- Kit includes pressure plate and additional hardware

## D. 19329635 NEW!\*

## Clutch Kit – LS/LT Engines (8-Bolt Crank)

- High-performance dual-disc clutch and flywheel package for LS and LT engines with an 8-bolt flywheel flange
- Will not fit LS engines with 6-bolt flange
- Rated for 800 lb.-ft. of torque
- Kit includes pressure plate and additional hardware



A T56 Super Magnum Installtion Kit



▲ NEW!

B Clutch Kit - Small-Block



## ▲ NEW!

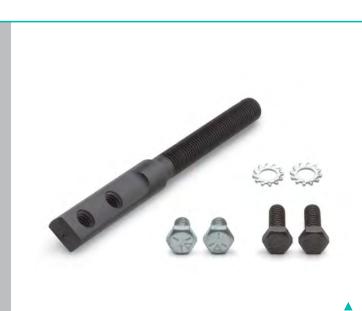
Clutch Kit - Big-Block



▲ NEW!

D Clutch Kit, Dual-Disc - LS/LT (8-bolt Crank)

\*Expected availability 1st Quarter, 2015



Chevrolet Performance Shifter Handle Kit E



Chevrolet Performance-Logo Shifter Ball Kit F



Hydraulic Concentric Slave Cylinder Release Bearing G

E. 19301622

Chevrolet Performance Shifter Handle Kit
Includes a black shifter handle and installation hardware.

## F. 19301623

## Chevrolet Performance-Logo Shift Ball Kit

- Give your Tremec® T56 or T56 Super Magnum six-speedequipped project a distinctive, heritage-inspired look with a classic ball-style shift knob emblazoned with the Chevrolet Performance logo.
- Includes the Chevrolet Performance-logo ball-style shift knob and installation hardware.

## 19329900 NEW!\*

Transmission Installation Kit – TREMECT56 Super Magnum for Small-Block (not shown)

- Use with T56 Super Magnum transmission P/N 19329795
   Small-Block engines with one-piece rear main seal
- Not for use with 350/290 HP (P/N 12499529) and 350/290 HP Deluxe (P/N 19244450) crate engines, which use a two-piece main seal
- Use transmission installation kit P/N 19329902 for 350/290 HP engines with two-piece main seal
- Super Magnum bell housing
- 1986-later flywheel
- High-strength clutch and pressure plate
- Kit includes dust covers, pilot bearing, hardware and instructions

#### 19329901 NEW!\*

#### Transmission Installation Kit – TREMECT56 Super Magnum for 454 and 502 Big-Block (not shown)

- Use with T56 Super Magnum transmission P/N 19329795 and 454/502 crate engines (externally balanced)
- Not for use with 427/572 engines that are internally balanced
- Super Magnum bell housing
- Externally balanced flywheel
- High-strength clutch and pressure plate
- Kit includes dust covers, pilot bearing, hardware and instructions

#### 19329902 NEW!\*

# Transmission Installation Kit – TREMECT56 Super Magnum for 427 and 572 Big Block (not shown)

- Use with T56 Super Magnum transmission P/N 19329795 and 427/572 crate engines (internally balanced)
- Use also with 350/290 HP crate engines with two-piece main seal
- Not for use with 454/502 engines that are externally balanced
- Super Magnum bell housing
- Internally balanced flywheel
- · High-strength clutch and pressure plate
- Kit includes dust covers, pilot bearing, hardware and instructions

#### 19329912 NEW!\*

# Transmission Installation Kit – TREMECT56 Super Magnum for LS/LT engines with 8-bolt flange (not shown)

- Use with T56 Super Magnum transmission P/N 19329795 and LSA, LSX376-B15, LSX454 and LSX454R engines
- Use with T56 Magnum transmission P/N 19329795 and new LT1 crate engines P/Ns 12657236 (wet sump) and 12657248 (dry sump)
- Super Magnum bell housing
- · High-strength clutch and pressure plate
- Kit includes dust covers, pilot bearing, hardware and instructions
- G. 24264182 Hydraulic Concentric Slave Cylinder Release Bearing

\*Expected availability 1st Quarter, 2015

## A. 92246731

#### TR6060 Six-Speed Manual Transmission

- A direct replacement transmission for your Camaro SS
- Rated to handle 420 lb.-ft. of torque
- Works with any Chevrolet Performance LS crate engines except LSA and LSX454
- Equipped with 26-spline input shaft and a fixed-yoke production style output shaft
- Includes release bearing
- Use with installation kit P/N 19259271
- Requires body mounted shifter (not included)

## 24264047

- TR6060 Six-Speed Manual Transmission (not shown)
- High-torque-capacity transmission used in the Cadillac CTS-V Series with the 556-hp/551-lb.-ft. LSA supercharged 6.2L engine
- Direct fit with LSA and LSX454 crate engines with 8-bolt crankshaft flange
- Equipped with 26-spline input shaft and a fixed-yoke production style output shaft
- Includes release bearing
- Use with installation kit P/N 19259270
- Requires body mounted shifter (not included)

## **B. 19259270**

#### Transmission Installation Kit – TREMEC TR6060 (MG9) – 8-Bolt Flange

- Use with TR6060 6-speed transmission P/N 24258817 only with LSA, LSX454 and LSX454R engines
- Includes flywheel with 8-bolt flange, high-strength clutch and pressure plate, dust covers, hardware and instruction sheet
- Clutch release bearing is included with the transmission assembly

## C. 19259271

- Transmission Installation Kit TREMEC TR6060 (M10) – 6-Bolt Flange
- Use with TR6060 6-speed transmission P/N 92246731 on all LS engines except LSA, LS9, LSX454 and LSX454R
- Includes flywheel with 6-bolt flange, high-strength clutch and pressure plate, dust covers, hardware and instruction sheet
- Clutch release bearing is included with the transmission assembly



A TR6060 Six-Speed Manual Transmission



B Transmission Installation Kit - TREMECTR6060 (MG9) - 8-Bolt Flange







LSX/LS7 Clutch Kit D



## NEW!

LTG Transmission **E** 



## D. 24255748

- LSX/LS7 Clutch Kit
- 11.5" clutch single disc
- Fits 26-spline shaft
- Pressure plate and clutch disc

## 24260226

- LS9 Clutch Kit (not shown)
- 10.5" clutch dual disc
- Fits 26-spline shaft
- Dual-mass clutch and pressure plate for LS9 Corvette ZR1

## 12570806

## LS2 Clutch Kit (not shown)

- 11.5" clutch single disc
- Fits 26-spline shaft
- Flywheel, clutch and pressure plate kit for LS2 GTO engines

## 12581650

#### LS1 Clutch Kit (not shown)

- 11.5" clutch single disc
- Fits 26-spline shaft
- Flywheel with pressure plate and disc for LS1 Camaro engines

## 19210297\*

- Release Bearing (actuator) (not shown)
- \* Included with Transmission Kit P/N 92246731

## 24502513

## 4L60/700R4 Transmission Swap Kit (not shown)

- Adapts the 4L60 or 700R4 automatic transmission (nonelectronic version) for use in early-model vehicles, with or without an engine management computer
- Includes instruction sheet, throttle valve spring for carbureted engines, a normally closed fourth-gear clutch switch and wiring connector for the torque converter

**NOTE:** For individual flywheel and flexplate components see pages 161, 257 and 331.

## **4-CYLINDER TRANSMISSIONS & COMPONENTS**

#### E. 19328976 NEW!\*

- LTG Transmission
  - Production 6-speed Manual Transmission
  - RWD configuration

#### F. 24251131 NEW!\* LTG Clutch Package

Production 6-speed Manual Clutch (included with LTG engine package)

## 19328978 NEW!\*

- LTG Manual Transmission Installation Kit (not shown)
- Includes all hardware and fasteners needed to make the transmission operational



NEW!

LTG Clutch Package F



# **New Life for Your Baby!**

As part of General Motors, Chevrolet Performance is able to offer a wide and diverse range of crate engines and partial engines beyond our high-performance Small-Block, Big-Block and LS engines. They are based on regular-production engines and make great swap choices for replacing a tired engine, while also enabling creative engine builders to start with an economical production engine and add their preferred power-building accessories.

The engines are generally delivered fully assembled (minus the induction, ignition and starting systems) and each is backed by a 36-month or 100,000-mile/160,000-km warranty when installed in a recommended application.

See your GM dealer for more details and ordering information.

NOTE: Engines depicted in photographs are representative of several part numbers and may not show all items included.

# 8.1L L18

The largest regular-production Big-Block engine is the 8.1L L18 engine used in a variety of heavy-duty GM trucks. This workhorse uses durable cast-iron cylinder block and cylinder head castings and features later-style front camshaft sensing. Depending on the application, the L18 engine produces 225-330 horsepower and up to 450 lb.-ft. of tow-anything torque. Our 8.1L engine assemblies are remanufactured and all are certified for CNG and LPG use.

**NOTE:** Engine assembly is shipped with intake manifold installed (not shown).



GM Parts Crate Engines include a 36-month or 100,000-mile/160,000-kilometer limited warranty when installed in a recommended application.



# 2.2L L61/2.4L LE5

The 2.2L L61 and the 2.4L LE5 engine are used in thousands of GM small cars, such as the Cavalier, Cobalt, HHR, Sunfire, G5 and more. They come fully assembled and ready to install – or build it up to higher performance standards and turn your compact commuter car into a compact performer!



Introduced in 2004 in the Chevy Malibu, the 3500 3.5L V-6 is the standard engine in the Pontiac G6 V-6 and GT models, as well as GM's crossover sport vans: Chevrolet Uplander, Pontiac Montana SV6, Buick Terraza, and Saturn Relay. Rated at 200 hp (149 kw) and 220 lb.-ft. of torque (278 Nm), the engine has broad power bands that produce stirring performance for low-rpm acceleration and high-rpm responsiveness.



# 2.8L I-4/3.5L I-5

Striking a balance between four-cylinder economy and V-6 power, the Vortec 2800 four-cylinder (I-4) and Vortec 3500 five-cylinder (I-5) engines benefit from the broad, inherent torque and balance of an inline engine design. The I-4 is standard in the Chevrolet Colorado and GMC Canyon midsize pickups; the I-5 is available in both vehicles, as well as the H3 Hummer.



# 3.8L V-6

With its reputation for power and reliability, the 3800 Series III V-6 and 3800 Series III V-6 Supercharged are the "Small-Block Chevy" engines of the V-6 world.

357



# 4.2L I-6 LL8

Introduced in GM's midsize SUVs, including the Chevy TrailBlazer and GMC Envoy, the unique 4.2L inline-six engine delivers exceptional torque (275 lb.-ft.) and responsive horsepower (275).



# 4.8L LR4/LY2/L20

This economical 4.8L LS-series engine serves as the entry-level V-8 in many GM full-size trucks, where it also is known as the Vortec 4800. It delivers all of the strength, durability and performance attributes of its larger-displacement cousins. It uses the same iron cylinder block as the 5.3L LS, but has a smaller stroke. It is rated at 275 horsepower. Available in new and remanufactured options for 2001-2014 applications.





# 4.3L LU3

Based on the architecture of the original Small-Block V-8, but minus two cylinders, the 4.3L V-6 – also known as the Vortec 4300 – is a popular and powerful motivator in thousands of GM trucks. Engine assemblies are available in new or economical remanufactured options, all built to the exacting standards of regular-production engines.

# 5.3L LM7/L59/LC9/LH8

Used in thousands of GM trucks, SUVs and vans since 1999, the 5.3L V-8 that's also known as the Vortec 5300, is respected for its great performance and efficiency. Horsepower is rated starting at 285, with torque at approximately 330 lb.-ft. GM Parts offers the 5.3L in new and economical remanufactured packages for 2001-2011 applications.



## 5.7L Gen 0 - P/N 10067353

All new - not remanufactured! The classic 350 is offered here in our most economical Small-Block engine assembly. Designed to replace production engines used from 1973-1985, it features a durable, yet value-driven, short-block assembly and iron cylinder heads with early-style perimeter hold-downs. Better still, it includes a stronger four-bolt main block and smooth flat tappet hydraulic camshaft.

## 6.0L LQ4/LQ9

Used in a variety of 2001-07 GM trucks and SUVs, our iron-block 6.0L LS-series engine offers big power and exceptional torque (up to 325 horsepower and 370 lb.-ft. of torque, depending on the application). Our affordable 6.0L engine assembly is delivered without induction or ignition systems.



## 5.7L Gen 1 - P/N 12568758

All new – not remanufactured! This basic 5.7L/350-cubic-inch is designed for 1987-1995, 8,500lb and under, light-duty truck applications, as it uses the later-style one-piece rear main seal and cylinder heads with center-style valve cover hold-downs. But it is adaptable to almost unlimited Small-Block applications. The bottom end is durable, with two-bolt mains. Additional details include a geardriven oil pump assembly and a machined fuel pump pad, but no hole for the fuel pump pushrod. (210HP@4,000 and 300 lb.-ft.@2,800.)



## 7.4L L19/L29

Our 7.4L engine assembly delivers the big torque you need for pulling a trailer and other heavy loads. A four-bolt main block enhances strength, and a later-style one-piece rear main seal reduces the chance of an oil leak. Designed for trucks, SUVs and vans built from 1980-2000; offered in new and remanufactured packages. CNG and LPG compatible variations are available.

#### **CRUZE PERFORMANCE**

#### A. Cruze Exhaust Systems NEW!

This low-restriction system and included dealer-installed calibration will provide 10 more HP (up to 148 HP) and 10% increase in torque (+15 ft.-lbs.). Kit includes exhaust system, calibration, premium fuel label and new 50 state legal emission certification label.

Part Number	Model Year	Detail
23494247	2012-2015	Exhaust Kit (1.4L turbo - Base, shown)
23233811	2012-2015	Exhaust Kit (1.4L turbo - RS )

#### 19303797 NEW!

#### **Cruze Performance Clutch Kit (not shown)**

This increased torque capacity system includes a larger-thanstock flywheel, clutch disk and pressure plate, along with new attaching bolts.

Update for 2012-2014 MY (Production for 2015 MY)

NOTE: Must be used on 2012-2014 Cruze's that have installed P/N's 23494247, 23233811 Stage Kits. (See above).

#### COBALT APPEARANCE AND PERFORMANCE

Enhance the appearance and performance of your Cobalt with Genuine GM products from Chevrolet Performance.

#### B. 17802112

#### Performance Exhaust Tips

Add high-performance appearance to the Cat-Back Exhaust System on your Cobalt with one of these highly polished exhaust tips.

- ٠ Unique design
- Rolled lip
- Polished T-304 stainless steel •

Part Number	Model Year	Description
17802112	2005-08	Bowtie Logo, Angle Cut
17802113	2005-08	Bowtie Logo, Straight Cut

**NOTE:** Not for use on production exhaust systems.

#### C. 19301371

#### 16" Wheel

D. 19301370

#### 18" Wheel

Personalize your Cobalt with attractive wheels.

- Chromed
- Available with matching center cap and lugnuts
- Validated to GM specifications
- P/N is for single wheel

Part Number	Model Year	Description
17800578	2005-08	AZ577, 16" Cast Chrome
17800195	2005-08	AP194, 18" Forged Polished



#### ▲ NEW!

A Cruze Exhaust Kit - 1.4L Turbo - Base



B Performance Exhaust Tips



C 16" Wheel







Cobalt Wheel-Hop Kit E



Cobalt Clutch Upgrade Kit **F** 



2.4L Twin Cam Supercharger G



Under hard acceleration, wheel hop will slow you down and could lead to a broken or damaged transmission, axle, or other expensive parts. This kit is specially designed to eliminate wheel hop on your 2005-2007 Cobalt SS/SC or 2004-2007 ION Redline so that you can get all of your power to the ground.

#### F. 19212712 Cobalt Clutch Upgrade Kit

This kit utilizes stronger components to create a package that will be less susceptible to clutch failure in your 2005-2007 Cobalt SS/SC and 2004-2007 Ion Redline. This kit is capable of up to 300 horsepower and will give users better performance and more load capability because of increased surface area and extra clamping force.

#### SUPERCHARGER UPGRADE KITS

#### Superchargers

Turn your GM car into a true sport compact with the horsepower boost of a supercharger. By squeezing pressurized air into the engine, a supercharger dramatically increases the performance of your vehicle, while maintaining excellent drivability. Chevrolet Performance Roots-type supercharger systems are factory engineered and extensively tested to meet the same rigorous standards as GM's production vehicles and components.

#### G. 12498660

## 2.4L Twin Cam Supercharger (Cavalier, Sunfire, Grand Am, Alero)

- Add up to 50 horsepower and 40 lb.-ft. of torque!
   Designed for 2000-2002 GM vehicles equipped with the
- 2.4L Twin Cam engine (engine code RPO LD9)
- Includes all mounting brackets, air ducts, adapters, Gen II MAP sensor and spark plugs
- Can be installed with normal hand tools
- Includes new serpentine drive belt

**NOTE:** Recalibration of Vehicle Control Module is included, but must be performed by an authorized GM dealership.

#### H. 17801947

**Stage 1 Performance Upgrade Kit: Cobalt SS/ION Red Line** Increase the performance of your 2005-2007 Chevrolet Cobalt SS/SC or 2004-2007 Saturn ION Red Line with our Stage 1 Performance Upgrade Kit. This kit includes a recalibrated computer and high-flow injectors to meet the demands of more rpm and higher horsepower. The Stage 1 Kit takes the factory-blown 2.0L Ecotec from 205 horsepower up to 230 horsepower. Keep the fun rolling with a performance upgrade kit for your daily-driven supercar.

#### Kit Includes:

- High-flow injectors
- PCM reprogramming

NOTE: Premium (93-octane) fuel is required for Stage 1.



Supercharger Upgrade Kits Continued

#### A. 17803229

#### Stage 2 Performance Upgrade Kit

Make that 2005-2007 Cobalt SS/SC sit up and beg with our Stage 2 Performance Kit. Building on the success of our Stage 1 Kit, our Chevrolet Performance engineers wanted to push the over-achieving four-banger just a little bit more. Stage 2 takes your Cobalt SS or ION Red Line from a stock rating of 205 horsepower all the way up to 241 horsepower.

The key to making that power is increasing the boost on the factory supercharger by swapping out the stock blower pulley. Increased boost means more air getting pumped into the high-revving Ecotec, and the increased airflow requires more fuel. That's why GM high-flow injectors are included in the kit. Together, this Performance Kit will keep your Cobalt/ION Red Line boosted ahead of the competition.

#### Kit Includes:

- High-flow injectors
- Supercharger pulley
- Supercharger belt (P/N 12597993)
- PCM reprogramming

**NOTE:** Premium (93-octane) fuel is required for Stage 2.

#### B. Stage 3 Kit for Cobalt SS/ION Red Line

Take your Cobalt SS or ION Red Line to the next level with our Stage 3 Off-Road Kit! The Stage 3 kit consists of the following:

- Smaller, 76mm supercharger pulley
- 2-pass intercooler end plate
- Unique PCM, which includes a calibration for the smaller pulley, an adjustable rev limiter, a 100-octane mode, and a nitrous control algorithm

Our Stage 3 Kit will take your supercharged Ecotec 2.0L engine to a whole new level of performance. Stage 3 takes horsepower output to 248 horsepower on 93 octane fuel and to 260 horsepower on 100 octane fuel. In addition to the power increase, you'll also get an adjustable rev limiter and calibration for a 50-shot of nitrous (nitrous kit not included). For best power, we recommend also installing a high-flow exhaust.

This PCM is equipped with a user-adjustable rev limit from 6,750 to 8,000 rpm. The rev limit is adjusted by pressing on the throttle pedal with the ignition on and engine off. At about 50 percent throttle, the tachometer will show the current rev limit. Pressing the throttle further will adjust the rev limit in 250 rpm increments. This PCM is also equipped with a control scheme for the equivalent of a 50-horsepower shot of nitrous. The PCM will automatically provide the proper spark and fuel for nitrous up to 500 rpm below the current selected rev limit when the trigger is activated.

**NOTE:** The Stage 3 Kit is for off-road use only. The Stage 3 upgrades are meant for off-road use only and are not certified to be emissions-legal. The vehicle's air conditioning is disabled by the Stage 3 PCM.

**NOTE:** This kit is an upgrade to Stage 2. It requires the following parts from the Stage 2 Kit: high-flow fuel injectors, pulley adapter hub and serpentine belt.

#### C. 19212670

## Performance Turbocharger Upgrade Kit for Cobalt, Solstice, Sky and HHR

- For 2007-2009 Pontiac Solstice GXP, 2007-2009 Saturn Sky Redline, 2009-2010 HHR SS, 2008-2010 Cobalt SS
- Increases horsepower up to 290 @ 5,200 rpm and torque up to 340 lb.-ft.
- Includes new calibration (flashed by your local dealer) and two new MAP sensors
- Premium fuel required



A Stage 2 Performance Upgrade Kit, Cobalt SS/SC



#### Kit:

88958718	Stage 3 Kit, 2005 Cobalt SS Supercharged
88958719	Stage 3 Kit, 2006-2007 Cobalt SS Supercharged (shown above)
88958715	Stage 3 Kit, 2004 ION Red Line
88958716	Stage 3 Kit, 2005 ION Red Line
88958717	Stage 3 Kit, 2006-2007 ION Red Line
Parts List:	
88958721	Intercooler Endplate, 2 Pass Style
12610641	PCM, Stage 3, 2004 ION Red Line
12610642	PCM, Stage 3, 2005 ION Red Line
12610643	PCM, Stage 3, 2006-2007 ION Red Line
12610644	PCM, Stage 3, 2005 Cobalt SS Supercharged
12610645	PCM, Stage 3, 2006-2007 Cobalt SS Supercharged

B Stage 3 Kit for Cobalt SS/ION Red Line



C Performance Calibration

#### V-6 90° Cylinder Head Quick Reference Chart

Part Number	Description	Casting Number	Material	Port Size	Port Type	Valve Spring	Chamber CC's	Int Viv	Exh Vlv	Plug Type	Heat Riser	Rocker Stud	Notes
10134359	18° V-6	12480009	Aluminum	215	Raised	18°	43	2.150"	1.620"	Angled	No	Shaft	No seats/guides
12480009	18° V-6	12480009	Aluminum	215	Raised	18°	43	2.150"	1.620"	Angled	No	Shaft	As cast ports



18° Aluminum Cylinder Head (exhaust) D



18° Aluminum Cylinder Head (top/intake) D



18° Aluminum Cylinder Head (combustion chamber) D

#### V-6 90° CYLINDER HEADS

#### D. 10134359

#### 18° Aluminum Cylinder Head

- Low-port 18° aluminum cylinder head for maximum-effort competition engines
- Offers significant improvements over conventional head designs with 18° valve angles (vs. older 23° angles) and 43cc combustion chambers
- Spark plug holes are centrally located and valve centerlines are relocated
- Exhaust ports are high-flow
- Head face has an extra 0.080" of material for 9.1:1 compression, and up to 2.200" intake valves can be used
- Shallow wedge-shaped combustion chambers allow builders to achieve high compression ratios with small piston domes
- Heads do not include valve seats or guides
  Aftermarket shaft-mounted rocker arm assemblies and pushrods are required
- Piston domes and valve pockets must be matched to the revised combustion chamber design

#### 12480009

#### 18° Aluminum Cylinder Head (not shown)

- Low-port 18° aluminum cylinder head for competition engines
- Identical to P/N 10134359 (see above), except that it has a
- new-design intake port for the Daytona Dash Racing Series

#### ECOTEC

#### A. 88958632

#### Exhaust Header Flange

• Use this 0.375" thick steel flange as the starting point for your custom header system

#### Camshafts

#### 88958648

#### Ecotec Performance Camshaft Set (not shown)

- For increased power in naturally aspirated and turbocharged engines
- Duration @ 0.050" lift is 247° on the intake and 249° on the exhaust
- Maximum lift is 0.499" for the intake and 0.499" on the exhaust
- Lobe centerline is 116°

#### B. 88958611

#### Ecotec Intake Camshaft Blank

 Heat-treated camshaft blank for grinding custom-profile intake cam

#### C. 88958612

#### Ecotec Exhaust Camshaft Blank

Heat-treated camshaft blank for grinding custom-profile
 exhaust cam

#### D. 88958613

#### Ecotec Adjustable Cam Gear Set

- Includes intake and exhaust
- Allows valve timing to be advanced or retarded up to 16° of crankshaft rotation

#### E. 88958615

#### Ecotec Neutral Balance Shaft Set

 High-performance neutral balance shaft set (two shafts) used to replace stock balance shafts

#### Crankshafts

#### 88958631

#### Ecotec Crankshaft Pulley (not shown)

• Billet pulley has a reduced diameter to minimize the horsepower-robbing drag of the alternator and air conditioning compressor

#### Intake Manifolds, Gaskets and Components 88958633

#### Ecotec Intake Manifold Flange Set (not shown)

 0.555"-thick aluminum flanges can be used to fabricate your own custom intake manifold



A Exhaust Header Flange



B Ecotec Intake Camshaft Blank



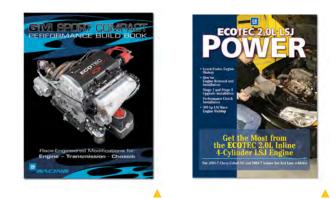
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**C** Ecotec Exhaust Camshaft Blank



**D** Ecotec Adjustable Cam Gear Set





- Sport Compact Build Book F Ecotec 2.0L LSJ Power Book G

5-Spoke Wheel Kit, 16 ZQ8-Style H



Front Rotors



#### **Build Books**

#### F. 88958728

#### Sport Compact Build Book

- Describes all the parts and procedures needed to transform your stock Ecotec engine into a high-performance racing engine for drag racing or drifting competition
- Also includes race modifications for a 4T65-E automatic transmission

#### G. 88958686

#### **Ecotec 2.0L LSJ Power Book**

Step-by-step guide to boosting the horsepower and torque in this versatile four-cylinder powerplant.

- Detailed instructions on engine removal/reinstallation
  Special instructions on Installing Stage 1 and Stage 2 upgrade kits
- Build a 300-plus horsepower Ecotec!

#### WHEELS AND ACCESSORIES

Perhaps nothing gives your vehicle a more distinct look than its wheels. Chevrolet Performance wheels are factory engineered and give your vehicle an integrated, production appearance. And best of all, they look great!

#### ZQ8 Wheels

#### H. 12498299

#### 5-Spoke Wheel Kit, 16" ZQ8-Style

- Originally designed for S-trucks with the ZQ8 suspension
- 16" x 8" aluminum wheels have a -6.4mm rim offset and look great on 1987-and-older A-body and G-body cars; 1992-and-older F-body cars; and other vehicles that have the GM-style 5" x 4.750" five-lug bolt pattern
- Includes four wheels, Bowtie logo center caps, valve stems, wheel nuts and wheel nut caps

**NOTE:** If GMC logo center caps are desired, order cap P/N 9593761 (sold individually; order four per vehicle).

#### Wheel Hardware and Accessories

#### 12363989

#### Valve Stem Assembly, Rubber (not shown)

- Rubber valve stem has chrome metal sleeve and metal
- hex head
- 4 per part number

#### CHASSIS, SUSPENSION AND BRAKES

#### I. 88964607

- Front Rotors
- Cross-drilled rotors for 2004-07 Cadillac CTS-V
  Sold as a pair

#### \_\_\_\_\_

#### J. 88964608

- Rear Rotors
- Cross-drilled rotors for 2004-07 Cadillac CTS-V
- Sold as a pair

#### Chassis, Suspension and Brakes Continued

#### **Cobalt SS, Saturn ION Red Line**

#### A. 88958710

- Heavy-Duty Front Steering Knuckle for Chevrolet Cobalt SS, Saturn ION Red Line, Left-hand
- Designed to provide enhanced load capacity for off-road use
- Designed to use the existing interfaces to the bearing, brake caliper, strut and control arm
- Installation requires caliper mounting bolts P/N 11570091, lower ball joint bolt P/N 11589341 and nut P/N 11517996 included with the kit
- Bearing spacer plate needs modification for installation
- Specific suspension point geometry may induce increased tire wear during street duty

#### B. 88958711

## Heavy-Duty Front Steering Knuckle for Chevrolet Cobalt SS, Saturn ION Red Line, Right-hand

• See P/N 88958710 for description

#### W-Body: 2000-2005 Monte Carlo and Impala; 1997-2003 Grand Prix

#### C. 12498648

#### Strut Tower Braces

- Install these easy bolt-on braces on your car to reduce body flex for firmer feel when cornering
- · Includes hardware and installation instructions

#### D. 12498642

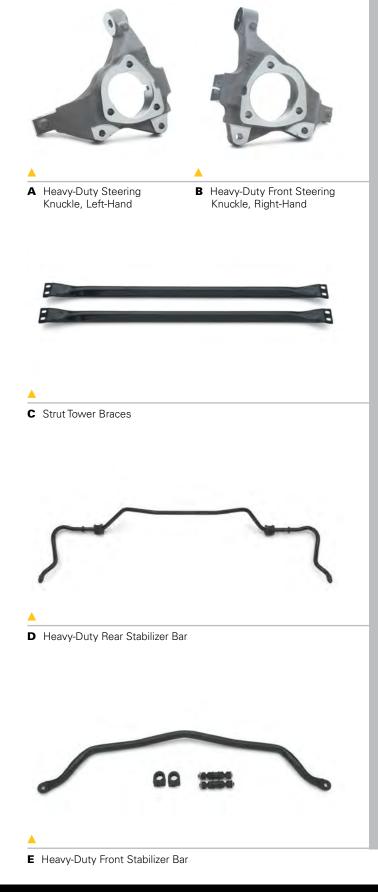
#### Heavy-Duty Rear Stabilizer Bar

- Fits Pontiac Grand-Prix 1997-2003 and Chevrolet Monte Carlo 2000-2005
- For reduced body roll, install this thick, 19mm rear bar
- Includes bushings

#### E. 12498643

#### Heavy-Duty Front Stabilizer Bar

- Fits Pontiac Grand-Prix 1997-2003 and Chevrolet Monte Carlo 2000-2005
- Get the look and feel of performance with this sturdy 34mm front bar
- Includes bushings and end links





High-Performance Front Brake Upgrade Kit F



Heavy-Duty Front Brake Caliper Brackets G

#### F. 12498644

#### High-Performance Front Brake Upgrade Kit

- Fits Pontiac Grand-Prix 1997-2003 and Chevrolet Monte Carlo 2000-2005
- Attain increased braking performance with 12" vented disc rotors and high-performance brake pads
- Includes rotors, caliper mounting brackets, pads and bushings

**NOTE:** Monte Carlo and Impala models already have this system installed as standard production. Will not fit stock Grand Prix "crosslace" wheels and spare tire may not fit. Heat generated by performance brake pads can cause rotor warping if not allowed to cool sufficiently between severe uses.

#### G. 12498646

#### Heavy-Duty Front Brake Caliper Brackets

- Fits Pontiac Grand-Prix 1997-2003 and Chevrolet Monte Carlo 2000-2005
- Same brackets used in brake kit P/N 12498644 (see above)
- Includes brackets, bushings and pins
- Rotors equivalent to P/N 12498647 must be used
- FACTORY ENGINEERED RACE PARTS F&Y CAR

#### Lightweight Racing Aluminum Driveshaft

Lose less power in the transfer from the transmission to the rear axle. These lightweight aluminum driveshafts are designed for F-cars equipped with the MM6 six-speed manual transmission:

#### 12564004

#### Aluminum Driveshaft (not shown)

• 1998-1999 LS1 with MM6 transmission

#### 12480094

- SACHS Shock Absorber, Front (not shown)
- Tuned for use with the T1 suspension package (see below)
- Sold individually; order 2 per vehicle

#### 12480095

#### SACHS Shock Absorber, Rear (not shown)

- Tuned for use with the T1 suspension package (see below)
- Sold individually; order 2 per vehicle

#### 12480093

#### Camber Spacer Kit (not shown)

• 2 kits required per wheel

#### Kit includes one of each of the following:

12480071	Camber Plate, Large	12480076	Camber Plate, Small
15688857	Bolt, Lower Control Arm	11516382	Nut, Lower Control Arm

#### 12480080

#### C5 Transmission Oil Cooler Kit (not shown)

- Intended for cars equipped with the six-speed manual transmission and has been updated for use on Z06 and export-model Corvettes
- Includes transmission pump, cooler assembly, wiring harness, plumbing kit, filter bracket, thermal switch, brackets and fasteners

#### 25534430

#### C6 Corvette T1 Suspension Kit for C6 Corvette (not shown)

- Approved by the SCCA for racing in the T1 class
- Similar to the championship winning C5 kit, but made to fit the C6

#### Kit includes one of each of the following:

			•
25534418	Spring–Front	25534419	Spring–Rear
12480065	Stabilizer Bar Front	25534433	Stabilizer Rear (4 required)
12480067	Link–Anti-Roll Bar (4 required)	12480068	Isolator–Front Anti-Roll Bar (2 required)
12480069	Isolator–Rear Anti-Roll (2 required)	25534436	Arm–Front Upper LH
25534437	Arm–Front Upper RH	25534438	Arm–Front Lower LH
25534439	Arm–Front Lower RH	25534442	Arm–Rear Lower LH
25534443	Arm–Rear Lower RH		

#### **BOOKS AND MANUALS**

Get the most from your vehicle and its Chevrolet Performance parts. These books and manuals provide insider information and technical tips from direct sources within General Motors. They are invaluable for building an engine for the street or race track.

#### A. 24502488

#### **Chevrolet Power**

- Seventh edition of the time-tested guide to building competition ٠ engines for oval track racing, drag racing, road racing and marine applications
- Includes information on Small-Block, Big-Block, 90° V-6 and 60° V-6
- Contains more than 600 photos, illustrations, blueprints and charts

#### B. 12486611

#### Service Manual, Ram Jet 350 (MEFI 3)

Covers the installation and service of the MEFI 3 Ram Jet 350 P/N 12495515

#### 88962723

#### Service Manual, Ram Jet 350 (MEFI 4) (not shown)

Covers the installation and service of the MEFI 4 Ram Jet 350 P/N 12499120

#### C. 12486610

#### Service Manual, Ram Jet 502 (MEFI 3)

Covers the installation and service of the MEFI 3 • Ram Jet 502 P/N 12497323

#### 88962724

#### Service Manual, Ram Jet 502 (MEFI 4, not shown)

Covers the installation and service of the MEFI 4 Ram Jet 502 P/N 12499121

#### D. 88959384

#### LS1 Engine Kit Installation Guide

- · Detailed instructions to help you install an LS1 engine in vour older vehicle
- Includes notes and technical explanations for necessary parts, along with part numbers you can order from your GM dealer to get the job done easily

#### E. 88958786

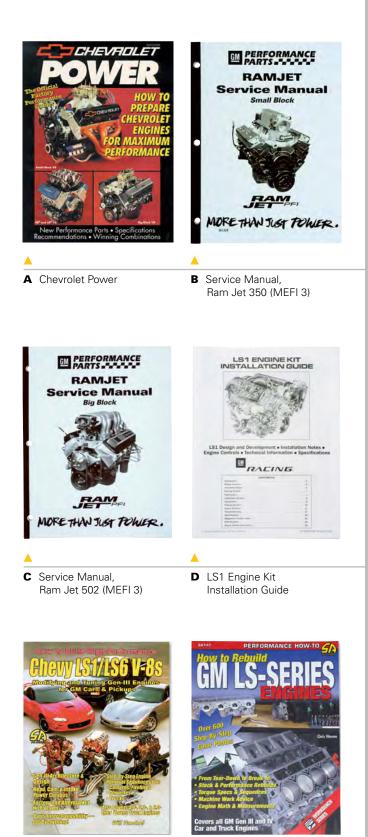
#### High-Performance Chevy LS1/LS6 V-8s

- 160 pages discuss the LS-Series engine architecture and design, parts interchangeability along with step-by-step engine removal sequences for many GM vehicles with LS-Series engines
- · Shows how to build, modify and tune LS engines

#### 88958764 E.

#### LS-Series "How to Rebuild" Book

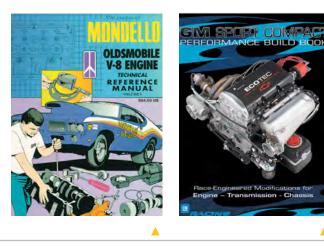
- A complete reference that shows how to rebuild an LS-Series engine
- Includes tips and modification procedures to improve power and economy
- More than 600 step-by-step color photos



**E** High-Performance Chevy LS1/LS6 V-8's

F LS-Series - How to **Rebuild Book** 





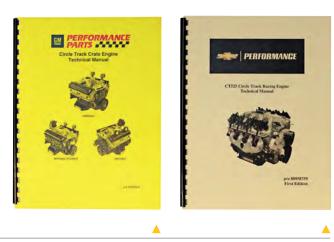
Oldsmobile High-Perf. Manual G

Sport Compact Build Book H



COPO Build Book

Solstice Performance J



#### G. 12480027

#### Oldsmobile High-Performance Manual

- Contains proven methods for building power in Olds V-8 engines
- Also contains a detailed list of casting numbers for most Oldsmobile V-8 engines

#### H. 88958728

#### Sport Compact Build Book

- Describes all the parts and procedures needed to transform your stock Ecotec engine into a high-performance racing engine for drag racing or drifting competition
- Also includes race modifications for a 4T65-E automatic transmission

#### I. 88958767

#### COPO Build Book

 The COPO Build Book provides all the information you need to build your own COPO Camaro including specs, part numbers and more. For the latest information, head to chevrolet.com/performance.

#### 24502570

#### Motorsports Aurora V-8 Engine Handbook (not shown)

Covers component selection and recommendations, as well as engine building procedures, for engines used in specific racing series

#### J. 88958697

#### **Solstice Performance**

- 132 pages show how to take advantage of the performance capabilities of the Pontiac Solstice
- Loaded with almost 900 images and detailed technical information to help everyone from the beginner to the expert
- Shows how a Sports Car Club of America (SCCA) road racing Solstice is created, along with the buildup of a 'drifting' Solstice and a brute-performance Solstice

#### K. 88958668

#### **Circle Track Techbook**

- Technical manual for GM Circle Track crate engines P/N 19258602, P/N 88958602, P/N 88958603 and P/N 88958604
- Covers all details regarding rebuilding specifications, including parts lists
- 47 pages with photos and details on valve machining, valve springs, camshafts and other factory specifications

#### L. 88958759

#### Circle Track Techbook (CT525)

- Technical manual for Chevrolet Performance CT525 Circle Track engine P/N 19271821
- Covers all engine specifications, component part numbers, installation tips and rebuilding specifications

# **GM Licensed Parts**

## LSX® EMBLEM VALVE COVERS NOW AVAILABLE!

## LS Slant-Edge Valve Covers

Still trying to find your LS engine amongst a congestion of wires, tubes, and ignition coils? Not Any More! Through innovative engineering, Specialty Auto Parts U.S.A., Inc., has developed a valve cover that will take your stock LS engine, and give it a totally personalized look. These new valve covers are taller than stock valve covers, and can accommodate a wide variety of large valvetrain applications. Seven choices, with raised or recessed Chevrolet and Bowtie emblems, LSX emblem, or no emblems at all for a self-customized look. Mounting studs, and oil-restricting baffles are included. Oil fill hole, and cap (passenger side cover), PCV (driver's side cover) included. Threaded mounting holes for the Integrated Ignition Coil Bracket included. Sold in Pairs. U.S. Pat. D657,798. Your style choices include:

#### LSX, Chevrolet and Bowtie Emblems

CHEVROLE

Fits GM LS engines (see FactoryPerformanceParts.com for dimensional information).

OLEI

CHEVROLET

Chrome, recessed red/black emblem .....141-265
 Polished, no logo .....141-266

## Integrated Ignition Coil Bracket

What to do with those pesky coils in such a confined space? In addition to new LS Slant-Edge valve covers, Specialty has designed an attractive way to lift your coils off your valve cover so you can see the Chevrolet emblem. A unique rail mounting system attaches to the threaded



holes on the valve cover, and the individual coils attach to the rail so they can be mounted in multiple positions. All necessary hardware included. See www.FactoryPerformanceParts.com for detailed coil information.

- Coil bracket for LS 1st Gen style coils ...... 69520

## Spark Plug Wires

CHEVROLET

If you decide to use Specialty's Integrated Ignition Coil Bracket to mount your coils, you will need slightly longer spark plug wires. 13"-15" wires are needed. See www.FactoryPerformanceParts.com for detailed spark plug wire information.

• MSD 8.5mm Wires, P/N 39849, are recommended

## **Coil Relocation Extension Cords**

If you're thinking of relocating your LS ignition coils somewhere out of sight, then you'll need at least one of these extension cords because you'll also have to relocate the wiring harness. The cords have Delphi connectors and are built and tested to withstand life in the engine compartment. Sold as individual cords.

- 18" Extension Cord ..... 69525
- 46" Extension Cord ..... 69526



#### NEW!

Slant-Edge Air Cleaner Kit, various styles to be released. Product image for illustration purposes only. Actual product may vary.



Black Crinkle Filtered Breather Caps (see page 376)

#### **GM LICENSED PARTS**

Your engine is a source of pride. Show it off with accessories designed to complement its style and support its performance!

These parts are manufactured under license for General Motors and Chevrolet Performance. They meet strict dimensional and quality standards, ensuring you the highest-quality, best-fitting, top-performing components.

Finish your project your way with dress-up accessories and other licensed components from Chevrolet Performance.

Parts without images in this catalog may be viewed online.



Use coupon code CHEVYPERF15 at checkout for 15% Off on your first FactoryPerformanceParts.com order. One use per customer.

#### \$10 CASH REBATE COUPON\*

To receive your \$10 cash rebate, please send (1) your name and mailing address legibly written (and optional email address in case questions arise), (2) this coupon cut from your 2015 catalog, (3) proof-of-purchase: a copy of your online order for \$50 or more, excluding shipping, shipped to the same name and address as that to which the \$10 should be sent (ordered through the www.FactoryPerformanceParts.com website) to: 2015 Chevrolet Performance Catalog Rebate, Factory Performance Parts, P.O. Box 306, Roseville, MI 48066. More information about this offer can be found under the "Chevrolet Performance Catalog" tab on the FactoryPerformanceParts.com website.

\*NOTE: Only the parts displayed on pages (370-379) are eligible for the \$10 rebate from Factory Performance Parts.

#### **ORDERING INFORMATION**

The licensed engine dress-up parts displayed on the following pages (370-379) may be purchased online through FactoryPerformanceParts.com, as well as from Chevrolet Performance Authorized Centers and participating GM dealers. To locate products, find additional product information, or receive technical support, please visit www.FactoryPerformanceParts.com and click on the "where to buy" link for a list of resellers.

ATTENTION GM DEALERS: The following pages of General Motors licensed products (370-379) may be ordered online from the licensee by visiting www.FactoryPerformanceParts.com and clicking on the "Dealer Login" button. These procedures are also referenced in Dealer Bulletin ACC08-035. Crate Engine/Dress-Up Parts Cash Rebate information is described in Dealer Bulletin GMP09-200

#### SUPER-LIGHT, FABRICATED ALUMINUM VALVE COVERS

Precision-welded fabricated aluminum valve covers are available for street and racing applications (with and without, respectively, breather holes and baffles). The valve covers have recessed Chevrolet and Bowtie logos, billet mounting rails (for maximum leak resistance), and weigh approximately three pounds less than stamped steel die-cast valve covers. Sold in pairs.

#### A. Chevrolet Small-Block V-8, 1958-1986

- Clear anodized, tall, with baffle (shown, A) ...... 141-801
- Black anodized, tall, no baffle (not shown)......141-802
- Black anodized, tall, with baffle (not shown) ...... 141-803

#### **DIE-CAST VALVE COVERS**

These premium die-cast aluminum valve covers are manufactured to GM specifications and are equipped with internal oil drippers (Small-Block only) and baffles. The valve covers are highlighted with recessed and raised Bowtie and Chevrolet logos. Available in tall only. Sold in pairs.

#### B. Chevrolet Big-Block, 1965-Later

٠	Chrome	recessed logo	(shown.	B)	
	CHIOHIC	100033001090	(3110 0011,	D/	

- Polished, recessed logo (not shown) ...... 141-142

#### C-D. Chevrolet Small-Block V-8, 1958-1986

- Polished, recessed logo (not shown) ...... 141-108
- Black crinkle, recessed logo (not shown) ......141-116
- Chrome, recessed logo (not shown).....141-117
- Chevy Orange, recessed logo (not shown)......141-118
- Black Crinkle, raised logo (shown, C) ......141-119
  Chevy Orange, raised logo (shown, D)......141-120

#### LATE-MODEL DIE-CAST VALVE COVERS

Late-model valve covers are the tall, center hold-down-style and come with mounting bolts and appropriate washers. All late-model valve covers come with baffles and grommets. Sold in pairs.

#### E. Chevrolet Small-Block V-8, 1987-Current

٠	Polished,	with baffle	(not shown)	·	141-	130
---	-----------	-------------	-------------	---	------	-----

- Black crinkle, with baffle (not shown) ......141-131
- Chrome, with baffle (shown, E)......141-132
- Replacement bolt and washer kit (not shown)......141-133
- Polished, no logo, with baffle (not shown) ...... 141-134
- Polished, no logo, circle track w/vent tubes (not shown). 141-139

#### SLANT-EDGE DIE-CAST VALVE COVERS

These tall, slant-edge die-cast valve covers have a progressive design and a modern look. Offered with raised or recessed Chevrolet and Bowtie logos, plus plain. The valve covers are baffled and sold in pairs. U.S. Pat. D580,954.

#### F-J. Chevrolet Small-Block V-8, 1958-1986

Black crinkle, raised logo (shown, H)14	
Chrome, raised logo (shown, F)14	
<ul> <li>Metallic gray, recessed logo (not shown)14</li> </ul>	
<ul> <li>Chevy<sup>®</sup> Orange, raised logo (not shown)14</li> </ul>	41-924
Cast gray crinkle, raised logo (not shown)14	41-925
Polished, no logo (not shown)14	41-926
<ul> <li>Polished, recessed red/black logo (not shown)14</li> </ul>	41-927
Black crinkle, recessed logo (not shown)14	41-928
<ul> <li>Chrome, recessed red/black logo (shown, J)14</li> </ul>	41-930
Powdercoat-ready, raised logo (shown, I)14	41-939
New Collector's Series	
Red, raised logo (shown, G)14	41-931
Blue, raised logo (not shown)14	41-932
	11-933



**J** 141-930

**1**41-939





#### STAMPED VALVE COVERS

These heavy-gauge stamped steel valve covers are designed to prevent leakage. The high-quality chromed covers feature Chevrolet and Bowtie logos. They are available in both tall and short (production height) designs. Some valve covers have oil baffles for PCV hookups. The valve covers are sold in pairs with necessary grommets, unless otherwise specified.

**NOTE:** Production height Chevy Small-Block valve covers and valve covers with baffles will not clear most stud girdle applications.

#### K, N, O, P, R

#### Chevrolet Small-Block V-8, 1958–1986

- Chrome, tall, no baffle (not shown).....141-101
- Chrome, short, with baffle (not shown) ...... 141-102

#### L, M, Q

#### Chevrolet Big-Block V-8, 1965–1996

- Chrome, short, with baffle (not shown) ......141-114
- Chrome, tall, with baffle (not shown)......141-115
- Black crinkle, short, with baffle (not shown) ...... 141-810
- Black crinkle, tall, with baffle (shown, Q) ...... 141-811
- Chrome, short, with baffle, black/red logo (not shown)... 141-812
- Chrome, tall, with baffle, black/red (shown, L)...... 141-813
- Chevy<sup>®</sup> orange, short, with baffle (not shown) ....... 141-789

#### TRANSMISSION OIL PAN

This stock-depth transmission oil pan has a drain plug for easier maintenance. The finned design aids cooling. There is a large GM logo stamped on the pan.

#### Transmission Oil Pan (not shown)

• Turbo 350 ...... 141-250

## Personalize your engine with a distinctive component combo in three easy steps:

- (1) Select your preferred color theme, choosing from various offerings in classic chrome, chrome with recessed painted logos, black crinkle, high-tech metallic gray, polished, clear anodized; or select the Chevy orange valve covers.
- (2) Select your basic materials, choosing from stamped steel, die-cast aluminum, stamped aluminum, fabricated aluminum, composite or graphite fiber.
- (3) Consider the importance of functionality, internal and external clearance, weight, mechanical strength, and surface finish characteristics.
- ...the result will be an appearance that is uniquely yours.



Plating more than four times thicker than some aftermarket parts.

#### 2-PIECE DIE-CAST ALUMINUM VALVE COVERS

Valvetrain maintenance is greatly simplified with 2-piece die-cast aluminum valve covers. The top section has a diagonal cut and a retained gasket for a tight, leak-free seal. The valve covers feature oversized bolts for fast removal. These tall valve covers will clear roller rockers and stud girdles. These valve covers are available in a variety of styles/finishes with and without Bowties and/or Chevrolet logos. Small-Block valve covers fit 1958-1986 engines, and Big-Block fit 1965-1996. The valve covers are sold in pairs and include an Allen wrench and required grommets. U.S. Pat. Nos. 7,343,890, D543,998S

#### A-B. Chevrolet Small-Block V-8, 1958–1986

- Polished, recessed logo (shown, A) ...... 141-910
- Black crinkle, recessed logo (shown, B)..... 141-911

**NOTE:** Will not fit cylinder head 12340034 or similar (with three rectangular raised internal sections near the valve cover mounting surface), unless such sections are milled off.

#### LATE-MODEL STAMPED-STEEL VALVE COVERS

These short-style valve covers are the center hold-down design for later Small-Block engines. They have baffles and grommets, but are not supplied with mounting bolts. Sold in pairs.

#### C. Chevrolet Small-Block V-8, 1987–Current

٠	Chrome, tall (shown, C)	. 141-105
٠	Chrome, short (not shown)	. 141-107
٠	Black crinkle, short (not shown)	. 141-907
٠	Metallic gray, short (not shown)	. 141-908

#### **NEW DRESS-UP KITS**

Chevy Orange and Carbon-Style Engine Dress-up Kits are the latest looks for your small-block Chevy! These limited edition kits won't be around forever, so get one while you can. For more details about contents, please visit www.FactoryPerformanceParts.com.

NOTE: Carbon-Style parts are stamped steel with a decorative finish.

#### D-E. Chevrolet Small-Block V-8, 1958-1986

٠	Carbon-Style (shown, D)	141-710
	Chevy <sup>®</sup> Orange (shown, E)	

#### **DELUXE DRESS-UP KITS**

These dress-up kits include one pair of tall valve covers, an air cleaner, timing chain cover, breather cap, 8 wing nuts and 8 hold-down clamps.

#### F-G. Deluxe Dress-Up Kits

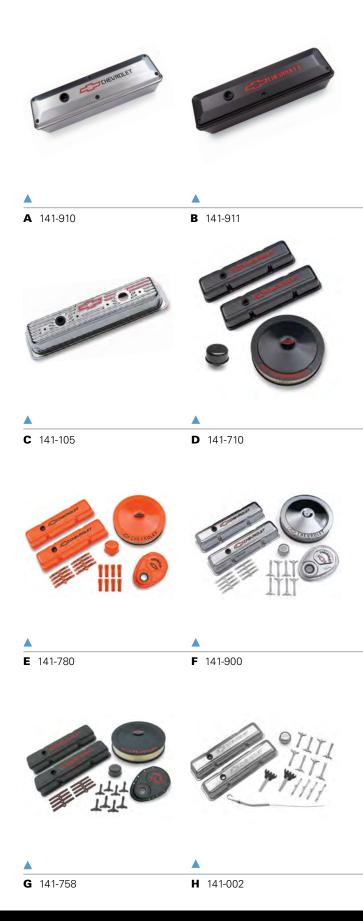
- Metallic gray (not shown).....141-360
- Black crinkle (shown, G).....141-758

<ul> <li>Chrome, black</li> </ul>	/red logos (sh	own, F)		)
	141-360	141-758	141-900	
Valve Covers	141-361	141-751	141-905	
Air Cleaner	141-362	141-752	141-906	
Timing Chain Cover	141-363	141-753	141-904	
Air Breather Cap	141-365	141-754	141-616	
8 wing Nuts	141-364 x2	141-756 x2	141-902 x2	

#### H. Chevrolet Small-Block V-8, 1958-1986

8 hold-down Clamps 141-366 x2

141-757 x2



- PERFORMANCE

141-903 x2

374



141-333 P 141-323 Q 141-369 R

#### AIR CLEANERS

These steel air cleaners are available in the classic GM style and the newer, high-performance look. They feature the Chevrolet logo and come with maximum flow ACDelco air filter elements\* and mounting hardware. The classic air cleaners include die-cast Bowtie center nuts (except P/N 141-906). The air filter bases are recessed for a low profile and maximum hood clearance (a minimum of 3.750° from the top of carburetor gasket area to hood underside).

\*14" x 3" Filter (A212CW), 10" x 2-53/64" Filter (A773)

#### I, K, L, M, N, O

#### 14" Steel Air Cleaners

- 14" Chrome, black/red logo (shown, M) ...... 141-906

#### 10" Steel Air Cleaners

• 10" High-performance (not shown)...... 141-315

#### **SUPER-LIGHT 14" AIR CLEANERS**

Weight savings can be had by using air cleaners made of aircraft aluminum, and carbon fiber. The aluminum air cleaners are available in clear anodized or black anodized finishes. These air cleaners come with a 3" tall ACDelco filter element, all necessary mounting hardware and standard wingnuts.

#### J. 14" Super-Light Air Cleaners

- Black anodized aluminum, no logo (not shown) ...... 141-690
- Clear anodized aluminum, no logo (not shown) ...... 141-691
- Black anodized aluminum, Chevrolet Bowtie logo (shown, J) ......141-692
  Clear anodized aluminum,

#### **AIR CLEANER CENTER NUTS**

Add some extra flair to your custom air cleaner by topping it with a distinctive GM or Bowtie chrome plated zinc, or black crinkle die-cast center nut. The center nuts are available in small and large sizes. They fit both 1/4"-20 and 5/16"-18 studs.

#### P-R. Large and Small Air Cleaner Center Nuts

- Bowtie, small (not shown) ...... 141-322

- Hi-tech Bowtie, large (shown, Q) ...... 141-323

## CHEVROLET PERFORMANCE LICENSED ENGINE BUILDER TOOLS (SHOWN BELOW)

Available only at FactoryPerformanceParts.com or GM Dealers



#### **NEW VALVE COVER MINI NUTS & WINGNUTS**

These custom valve cover mini nuts and wingnuts feature a Bowtie logo on the top of each fastener. Separate studs are included for precise gasket positioning. The wingnuts fit Chevrolet Big-Block, Small-Block, and V-6 cylinder heads. Sold 4 per package.

#### A-E. Valve Cover Mini Nuts

٠	Chevy <sup>®</sup> Orange (shown, A)	141-601
	Polished aluminum (shown, B)	
٠	Black crinkle (shown, C)	141-759
٠	Metallic gray (shown, D)	141-367

• Chrome, with red Bowtie (shown, E)......141-909

#### F-I. Valve Cover Wingnuts

٠	Chrome (shown, F)	141-600
٠	Metallic gray (shown, G)	141-364
٠	Black crinkle (shown, H)	141-756

Chrome, with red Bowtie (shown, I) ......141-902

#### **AIR BREATHER CAPS**

Air breather caps with raised Bowtie logos are available in a variety of finishes to complement die-cast or stamped valve covers. Use on valve covers with grommets fitting 1.220" holes unless otherwise specified. The breather caps are available in traditional domed-style and push-in, 3"-diameter air-filter-element style. Air breather/PCV grommet kit available: P/N 141-615.

#### Push-In, Rectangular

٠	Chrome (not show	n)	141-	619
---	------------------	----	------	-----

#### J-L. Push-In, 3" Diameter

Black crinkle (shown, L)	
• Chrome (shown, K) 141-6	
Chevy <sup>®</sup> Orange (shown, J)	86
Metallic gray (not shown)141-3	65

#### 1.820" Opening

	vist-On_3" Diameter	
٠	Chrome (not shown)	. 141-617

10	wist-Oil, 5 Diameter	
٠	Chrome (not shown)14	1-618

These popular push-in filter air breathers, with the raised Bowtie logo stamped prominently in the top, are offered in two styles: with the heat-shield hood and without. 3" diameter. Fits valve covers with 1.220" holes.

#### M-N. Push-In Filter Air Breathers

٠	Black crinkle, with hood (shown, M)	141-613
٠	Black crinkle, without hood (shown, N)	141-614

- Chrome, with hood (not shown) ......141-621
- Chrome, without hood (not shown) ...... 141-622 •

#### Clamp-On Filter Air Breather, Fits 1-3/8th

```
    Chrome, with hood (not shown) ......141-625
```

#### WATER NECKS

These Chevrolet water necks utilize neoprene O-ring gaskets instead of regular gaskets - eliminating leakage. Supplied with chrome bolts.

٠	V-8, 1955-1965, Chevy II V-8 1965,	
	Corvette 1956-1963 (not shown)	141-500
٠	Chevrolet, Camaro, and Chevelle V-8s,	
	1966-1975 (not shown)	141-501

#### MASTER CYLINDER COVERS

These GM dual line master cylinder covers are offered for the most popular applications. Supplied with clips and a precisely positioned GM logo. PDB = Power Disc Brakes

- Single clip, 5" x 2-3/8", PDB (not shown) ...... 141-225
- Single clip, 5-5/8" x 3", PDB or manual (not shown)..... 141-227



N 141-614



141-215 **U** 



VALVE COVER HOLD-DOWN CLAMPS

Valve cover hold-down clamps distribute the load over a wider area to minimize valve cover distortion and possible leakage. The clamps feature Bowtie logos and fit stamped valve covers for Chevrolet Small-Block V-8 and V-6/90-degree engines through 1986 (4 clamps per package).

#### O-Q. Hold-Down Clamps

Chrome, no logo (not shown)	141-610
Metallic gray (shown, O)	141-366
Black crinkle (shown, P)	
Chevy <sup>®</sup> Orange (not shown)	141-782
Chrome, red Bowtie (shown, Q)	141-903

#### TIMING CHAIN COVERS

Add a distinctive look to the front of any Chevrolet Small-Block or Big-Block engine with a custom timing cover that's accented with Chevrolet and Bowtie logos. These stamped-steel covers are engineered to GM specifications and come with a GM production oil seal pre-installed. The covers use bolt-on timing pointers.

NOTE: Replacement oil seals: S/B GM 10111769, B/B GM 3860095.

#### R-U. Chevrolet Small-Block V-8 1969-1991 and V-6/90°

<ul> <li>Chrome (shown, U)</li> <li>Metallic gray (shown, R)</li> <li>Black crinkle (shown, S)</li> </ul>	141-363
<ul> <li>Chevy<sup>®</sup> Orange (not shown)</li> <li>Chrome, black/red logo (shown, T)</li> </ul>	141-783

#### V. Chevrolet Big-Block 1965-1990

Striking die-cast timing covers, supplied with separate GM production oil seal. Bowtie logo directly cast into the upper surface.

#### W. Die-Cast Aluminum, Chevrolet Small-Block V-8 1965-1990

٠	Polished (shown, W)	. 141-217
٠	Chrome (not shown)	. 141-218

#### HARMONIC BALANCER COVERS

Enhanced looks and engine timing accuracy are benefits of installing a custom aluminum harmonic balancer cover. More than just a dress-up item, the precision-degreed Small-Block and Big-Block covers are mounted directly through the center hub, which eliminates any timing inaccuracies caused by outer inertia ring slippage. The balancer covers are marked with a Bowtie logo, Top Dead Center and proper timing degrees. They are available in black and chrome finishes. U.S. Patent 5,675,078

#### Chevrolet Small-Block, 6-3/4"

•	Black (not snown)	
•	Chrome (not shown)	141-725

Onionic	(100.	5110 441	·/ ·	•••••••••••••••••••••••••••••••••••••••	-	120

#### Chevrolet Small-Block, 8"

Black (not shown)......141-728
 Chrome (not shown) .....141-726

#### X. Chevrolet Big-Block

WWW.CHEVROLET.COM/PERFORMANCE

141-216 V

#### **CHROME ALTERNATORS**

These chrome (with red Bowtie logo) alternators are totally new with no rebuilt components, so they perform as well as they look. The quality is assured with generous over-spec amperage and an individual Quality Assurance graph that documents operating performance. The alternators come with a machined pulley.

#### A. 100% New Chrome Alternators

- 1973-1986 internal regulator (not shown) ...... 141-656
- 60 amp, 1-wire (not shown) ...... 141-658
- 80 amp, 1-wire (not shown) ..... 141-659 120 amp, 1-wire (not shown)......141-660

#### ALTERNATOR BRACKETS Alternator Brackets

- Top bracket bolts to manifold (not shown) ...... 141-402
- Top bracket bolts to neck (not Corvette) (not shown) ... 141-403

#### **HEI DISTRIBUTORS**

These high quality, 100% new, and dependable HEI distributors set the standard in ignition, loaded with premium components like the original GM-melonized distributor gear and sintered steel weights to optimize GM engine performance. Includes an adjustable vacuum advance for fine-tuning the rate and amount of advance that will result in increased power and eliminate harmful detonation.

#### B. Chevrolet Small- and Big-Block, 1955-1982

٠	Yellow cap, with coil (not shown)	. 141-681
٠	Black cap, with coil (not shown)	. 141-682
	Red can with coil (shown B)	1/1-683

Red cap, with coil (shown, B)......141-683

#### **BOWTIE HIGH PERFORMANCE ELECTRIC FANS**

Auxiliary electric fans can improve engine performance and increase gas mileage, as well as prevent overheating in congested traffic. The fans are available in 10", 12", 14", heavy-duty 15" with thermostat, and 16" sizes to fit most popular cars and trucks. Their ultra-thin design is great for cramped locations. The 15" fan has an adjustable 180-240° F thermostat, and pulls 2,800 cfm, bolting to the radiator supports with supplied sturdy brackets. Installation is easy with basic hand tools. The fans feature a red Bowtie logo.

#### C-D. Bowtie High Performance Electric Fans

٠	10" fan (not shown)	. 141-641
٠	12" fan (not shown)	. 141-642
٠	14" fan (shown, C)	. 141-644
	15" fan with adjustable thermostat (shown, D)	
٠	16" fan (not shown)	. 141-646

#### **ELECTRIC WATER PUMPS**

Electric water pumps help race- and high-performance street engines save weight and eliminate high-rpm impeller drag. The lightweight, but durable, die-cast aluminum pumps are epoxy-powder-coated in four colors (plus chrome and polished finishes) for corrosion resistance. The flow rate is more than 35 gallons per minute. The units are decorated with a red Bowtie logo. A stepped fitting (1" pipe to 1.750" hose) and weathertight connector are included.

#### E-G. Electric Water Pumps

	Big-Block	Small-Block
Polished	141-670 (shown, E)	141-654
Chrome	141-671	141-650
Red	141-672	141-652
Blue	141-673	141-653
Black	141-674	141-651 (shown, G)
Orange	141-675 (shown, F)	141-655

#### **HEAVY DUTY HIGH-TORQUE MINI STARTER**

High-torque, gear-reduction design. 100% New, not rebuilt. Offset design results in more clearance between the oil pan and the starter, and can be rotated for additional chassis clearance. 15-to-1 compression for maximum cranking!

#### H. High-Torque Mini Starter

Heavy-duty, 2.0 KW starter (shown, H)......141-684



141-657

**B** 141-683



**C** 141-644

**D** 141-647



**E** 141-670

141-675 F



378



#### **BOWTIE LOGO FREEZE PLUG INSERTS**

Make your engine block Bowtie all the way with decorative machined billet aluminum Bowtie logo freeze plug inserts. These are NOT freeze plug replacements. They fit all Chevy Small-Block engines except the LS-Series. Two per package.

#### I-J. Freeze Plug Inserts

 Black, raised logo (shown, I) .....141-232 • Red, recessed logo (shown, J).....141-233

#### **PUSH-IN OIL FILLER CAP**

A raised, embossed Bowtie logo adorns the top of this push-in filler cap that fits valve covers with 1.220" holes.

#### K. Oil Filler Cap

- Black crinkle (shown, K) ...... 141-629
- Chrome (not shown) ...... 141-630

#### TWIST-ON OIL FILLER CAP

A large, white-on-blue epoxy-coated GM logo highlights this large, twist-on oil filler cap. It fits Chevrolet-style holes and includes a non-asbestos gasket.

#### **Twist-On Oil Filler Cap**

Chrome with GM logo (not shown)......141-631

#### FUEL PUMP BLOCK-OFF PLATES

These Chevrolet V-8 fuel pump block-off plates feature a stamped Bowtie logo and come with a special non-asbestos gasket.

#### L. Fuel Pump Block-Off Plates

- Small-Block, chrome (not shown)..... 141-210 •

- Big-Block, black crinkle (not shown)......141-213

#### LINEAR WIRE LOOMS

Messy spark plug wires can detract from an otherwise sharp engine, but those unruly wires can easily be tamed with Bowtie logo linear wire looms. The looms attach to the valve cover bolts and hold the wires in a neat parallel arrangement. A patented nylon wedge allows the wire holders to be opened and closed individually. One pair per package.

#### M. Linear Wire Looms

- Chrome, Small-Block V-8, 1959-1986 (not shown)..... 141-638
- Chrome, Big-Block V-8, 1965-1991 (not shown) ...... 141-639 ٠
- Black Crinkle, Small-Block V-8, 1959-1986 (shown, M) .... 141-714

#### **IGNITION WIRE LOOMS**

These ignition wire looms feature black nylon separators with Bowtie and Chevrolet logos in red. They're mounted on chrome stems. They fit Small-Blocks from 1959-1986 and Big-Blocks from 1965-1991. Two per package.

#### N. Ignition Wire Looms

٠	Wire looms	(shown,	N)		141-636
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#### **TIMING POINTERS**

Chrome, bolt-on timing pointers are available for 6.750" or 7" balancers and 8" balancers on Small-Block Chevrolet engines from 1969-1990 and Big-Blocks from 1965-1991.

#### O. Chevrolet Small-Block V-8 or V-6/90°, 1969-1990

- 6-3/4" or 7" balancer (shown, O) ......141-200
- 8" balancer (not shown)......141-202

#### Chevrolet Big-Block, 1965-1991

• 8" balancer (not shown)...... 141-201

#### **OIL DIPSTICK KITS**

Chrome dipstick kits are available for a large variety of Chevrolet Small-Block and Big-Block engines. The kits include the dipstick tube and a hooked handle dipstick that has the Bowtie logo stamped near the fill indicator mark.

#### P. Chevrolet Oil Dipstick Kits

- Small-Block V-8, through 1977 (shown, P)......141-550
- Small-Block V-8, 1978-1981 (not shown) ...... 141-551
- •

# Chevrolet Performance Licensed Gauges from Auto Meter

GM Performance enthusiasts rely on Auto Meter Licensed gauges to accurately deliver the information they need to win. That's because Auto Meter puts rugged, race-proven movements into every gauge. When it comes to style, nobody offers you more great looking options than Auto Meter. You can make over your entire dashboard or just add some extra gauges from Auto Meter's huge selection of speedometers, tachometers, gauges, data collection, and shift lights. Auto Meter also has the wiring kits, mounting solutions, and accessories you need for easy installation. Look inside any winning ride—you're bound to find Auto Meter.





#### **BOWTIE LOGO GAUGES**

Now that you've built your dream high-performance Chevrolet engine, let Chevrolet Performance keep tabs on all vital functions with handsome Chevrolet logo gauges. A wide variety of gauges and styles are offered by Auto Meter products with Chevrolet, Bowtie, and GM Performance Parts logos. These gauges are designed to withstand the rigors of racing or high-performance street use. Mounting hardware is included unless otherwise specified.

**NOTE:** ATTENTION GM DEALERS: The following pages are General Motors' LICENSED PRODUCTS and must be ordered from the licensee. For detailed instructions, see Bulletin number ACC08-035 or visit the www.chevrolet.com/performance website, click on "Dealer Info," and then click on "Dealer Sites."

Bowtie Logo Gauges:

- Red Bowtie logo
- White LED Through-the-dial lighting
- Black dial, white numbers

Part Number	Description
3613-00406	2-1/16" Fuel Level, 0-90 Ohms GM, Short Sweep Electrical
3627-00406	2-1/16" Oil Pressure, 0-100 PSI, Short Sweep Electrical
3637-00406	2-1/16" Water Temperature, 100-250° F, Short Sweep Electrical
3644-00406	2-1/16" Pyrometer Kit, 0-1,600° F, Full Sweep Electrical
3645-00406	2-1/16" Pyrometer Kit, 0-2,000° F, Full Sweep Electrical
3649-00406	2-1/16" Transmission Temperature, 100-250° F, Short Sweep Electrical
3653-00406	2-1/16" Oil Pressure, 0-100 PSI, Full Sweep Electrical
3655-00406	2-1/16" Water Temperature, 100-260° F, Full Sweep Electrical
3657-00406	2-1/16" Transmission Temperature, 100-260° F, Full Sweep Electrical
3659-00406	2-1/16" Boost, Vacuum 30 In Hg/30 psi, Full Sweep Electric
3674-00406	2-1/16" Nitrous, 0-1,600 psi, Full Sweep Electrical
3675-00406	2-1/16" Air/Fuel Ratio, Full Sweep Electrical
3688-00406	3-3/8" Electrical Speedometer, 160 mph Programmable
3690-00406	3-3/8" Tachometer, 10,000 rpm with Shift Light. 4-, 6-, and 8-cylinder compatible
3692-00406	2-1/16" Voltmeter, 8-18 Volt, Short Sweep Electrical
3697-00406	3-3/8" Tachometer, 10,000 rpm. 4-, 6-, and 8-cylinder compatible. In-dash mount
3699-00406	5" Tachometer, 10,000 rpm with Shift Light. 4-, 6-, and 8-cylinder compatible. In-dash or pedestal mount
3603-00406	2-1/16" Boost, Vacuum 30 in Hg/30 psi, Mechanical
3604-00406	2-1/16" Boost, 0-35 psi, Mechanical
3605-00406	2-1/16" Boost, 0-60 psi, Mechanical
3607-00406	2-1/16" Boost, Vacuum 30 in Hg/20 psi, Mechanical
3621-00406	2-1/16" Oil Pressure, 0-100 psi, Mechanical
3632-00406	2-1/16" Water Temperature, 120-240° F, Mechanical
3663-00406	2-1/16" Fuel Pressure, 0-100 psi, Full Sweep Electrical

#### **VINTAGE BOWTIE LOGO GAUGES**

#### A. 1300-00408

- 5-Piece Kit Box with Mechanical Speedometer
- Vintage logo
- White dial, black logo
- Perimeter lighting
- All 2" gauges feature chrome-embossed Bowtie bezel
- Orange pointer
- Includes speedometer, oil pressure, voltmeter, water temperature, fuel level gauges and all required sensors, sending units and mounting hardware

#### B. 1302-00408

#### 5-Piece Kit Box with Electrical Speedometer

- Vintage logo
- White dial, black logo •
- Perimeter lighting
- Orange pointer
- Includes speedometer, oil pressure, voltmeter, water temperature, fuel level gauges and all required sensors, sending units and mounting hardware

#### C. 1303-00408

#### 5" Quad Gauge and Speedometer

- Vintage logo
- White dial, black logo
- Perimeter lighting
- Orange pointer
- Includes speedometer, oil pressure, voltmeter, water ٠ temperature, fuel level gauges and all required sensors and sending units

#### D. 1398-00408

#### 3-1/8" Tachometer, 7,000 rpm

- Vintage logo
- White dial, black logo
- Perimeter lighting
- Orange pointer
- 4-, 6-, and 8-cylinder compatible



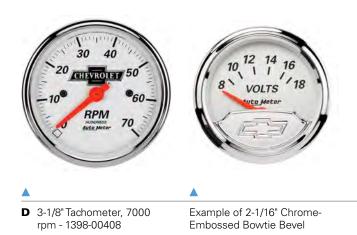
A 5-Piece Kit Box with Mechanical Speedometer - 1300-0048



B 5-Piece Kit Box with Electrical Speedometer - 1302-00408



C 5" Quad Gauge and Speedometer





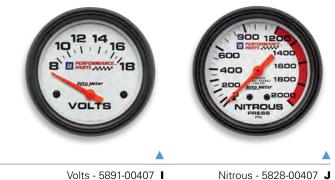
Tachometer - 5899-00407 E



Speedometer - 5889-00407 F



- Water Temperature 5837-00407 G
- Oil Pressure 5827-00407 H



Volts - 5891-00407



- Perimeter lighting • White dial, black numbers

#### E. 5899-00407

- 5" Tachometer, 10,000 rpm with Shift Light
- 6- and 8-cylinder compatible
- Pedestal mount
- F. 5889-00407 5" Electrical, Programmable Speedometer, 160 mph
- G. 5837-00407 2-5/8" Water Temperature, 100-250° F, Short Sweep Electrical
- H. 5827-00407 2-5/8" Oil Pressure, 0-100 psi, Short Sweep Electrical
- I. 5891-00407 2-5/8" Voltmeter, 8-18 Volts
- J. 5828-00407
  - 2-5/8" Nitrous, 0-2,000 psi, Mechanical

#### 5898-00407

5" Tachometer, 10,000 rpm In-Dash (not shown)

• 4-, 6-, and 8-cylinder compatible

#### 5814-00407

2-5/8" Fuel Level (not shown)

0 Ohms empty, 90 Ohms full

#### 5812-00407

2-5/8" Fuel Pressure, 0-100 psi, Mechanical (not shown)

#### 5813-00407

2-5/8" Fuel Pressure, 0-15 psi with Isolator, Mechanical (not shown)

#### 5821-00407

2-5/8" Oil Pressure, 0-100 psi, Mechanical (not shown)

#### 5780-00407

3-3/4" Tachometer, 8,000 rpm (not shown)

• 4-, 6-, and 8-cylinder compatible

#### 5795-00407

5" Electrical Tachometer, 10,000 rpm with Memory, Standard Ignition (not shown)

- 4-, 6-, and 8-cylinder compatible ٠
- Pedestal mount

#### 5832-00407

2-5/8" Water Temperature, 120-240° F, Mechanical (not shown)

#### **BOWTIE LOGO GAUGES**

- Red Bowtie logo
- Perimeter lighting
- White dial, black numbers

#### A. 5889-00406

5" Electronic Programmable Speedometer, 160 mph

#### B. 5832-00406 2-5/8" Water Temperature, 120-240° F, Mechanical

#### C. 5780-00406

#### 3-3/4" Tachometer, 8,000 rpm

- 4-, 6-, and 8-cylinder compatible
- Pedestal mount

#### D. 5814-00406

- 2-5/8" Fuel Level, Short Sweep Electrical
- 0 Ohms empty, 90 Ohms full

#### E. 5837-00406

2-5/8" Water Temperature, 100-250° F, Short Sweep Electrical

#### F. 5827-00406

2-5/8" Oil Pressure, 0-100 psi, Short Sweep Electrical

#### G. 5828-00406 2-5/8" Nitrous, 0-2000 psi, Mechanical

#### 5795-00406

5" Tachometer, 10,000 rpm with Memory,

- Standard Ignition (not shown)
- 4-, 6-, and 8-cylinder compatible
- Pedestal mount

#### 5812-00406

2-5/8" Fuel Pressure, 0-100 psi, Mechanical (not shown)

#### 5813-00406

2-5/8" Fuel Pressure, 0-15 psi with Isolator, Mechanical (not shown)

#### 5821-00406

2-5/8" Oil Pressure, 0-100 psi, Mechanical (not shown)



A Speedometer - 5889-00406





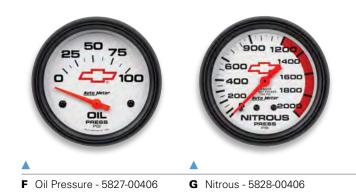
- B Water Temperature 5832-00406
- **C** Tachometer 5780-00406





**D** Fuel Level - 5814-00406

E Water Temperature - 5837-00406





Tachometer - 880445 H



20 80 10 ESAMETER 10 FUEL 100 10 FUEL 100 10 FUEL 100 10 FUEL 260 10 FUEL 260

Fuel Pressure - 880449 K Trans Temperature - 880448 L



Oil Pressure - 880447 M Brake Pressure - 880450 N

#### **GOLD BOWTIE LOGO GAUGES**

- Gold Bowtie logo
- White LED Through-the-dial lighting
- Black dial, white numbers
- As installed on COPO Chevy Camaro
- H. 880445 5" 10K RPM FSE Shift Light Tachometer
- I. 880446 2-1/16 100-260 F FSE Water Temperature
- J. 880444 2-1/16 8-18V SSE Voltmeter
- K. 880449 2-1/16 0-100 PSI FSE Fuel Pressure
- L. 880448 2-1/16 100-260 F FSE Trans Temperature
- M. 880447 2-1/16 0-100 PSI FSE Oil Pressure

#### N. 880450

2-1/16 1600 PSI FSE Brake Pressure

GM

Parts

#### **Restoration** The Most Authentic and Accurate Parts For Your Restoration

It was a chance find, based on a story recounted by a friend of a friend. But there it was - the classic muscle car you'd been searching for, hidden beneath a dusty tarp in an old barn. You worked hard, but finally convinced the stubborn farmer to sell it.

With the car safely in your garage, the exuberance of the thrill of the hunt morphs into the realization that a careful and accurate restoration is needed to bring that vintage car back to its original glory. That means more hunting for the right parts; everything from the carburetor to the clamps that hold the fuel lines in place.

GM knows it's the little things that count with a restoration. With countless resources for restoration components, assurance that you're getting the most authentic and best-fitting parts comes when you buy officially licensed GM

Restoration Parts. They're made by manufacturers who build to GM's specifications and label them accordingly. Many even use original tooling for unparalleled accuracy in look, feel and performance.

You can find licensed GM Restoration Parts for everything from the grille badge for a 1969 Camaro to the body shell itself for that Camaro. That's right - an entire classic Camaro body!

Before purchasing any reproduction parts for your valuable project, make sure the manufacturer is licensed by GM Restoration Parts.

With mint condition on your mind, licensed GM Restoration Parts are the only parts that should go into your barn-find beauty.

#### **GM RESTORATION PARTS – LICENSED MANUFACTURERS**

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ATTERIES			Melrose T-Top International	815-758-2783	www.melroset-tops.com
he Antique Auto Battery Mfg.Co. Inc.	800-426-7580	www.antiqueautobattery.com	Mid America Motorworks	217-540-4301	www.madvet.com
xion Power Battery Mfg., Inc.	724-654-9300	www.turbostart.com	Paragon Reproductions, Inc.	800-882-4688	www.corvette-paragon.com
ELTS AND HOSES			Vette Masters inc.	757-575-8715	www.vettemasters.com
round Up Restorations, Inc.	203-235-1200	www.ss396.com	EMBLEMS/LENSES/DECALS/TRIM		
uanta Products, LLC	410-658-5700	www.quantaproducts.com	Bill's Birds, Inc.	631-667-3853	www.bb-ny.com
D6 Products, LLC	616-426-4340	www.corvettecentral.com	Bob's Antique	310-515-1089	www.bobsantiques.com
DDY PARTS			Counterpart Automotive, Inc.	714-771-1732	
uto Metal Direct	866-591-8309	www.autometaldirect.com	Dobbins Restoration Publishing, Inc.	215-443-0779	www.yankeelady.com/dobbins
nacorn International, Inc.	805-486-2612	www.dynacorn.com	Drake Automotive Group, Inc.	702-853-2064	www.scottdrake.net
-Rite Auto Body Parts Inc.	800-992-1064	www.keypartsonline.com	ECS Automotive Concpts, LLC	636-207-7767	www.ecsautomotive.com
Iden Star Corporation	214-544-2395	www.goldenstarauto.com	Eurosport Daytona, Inc.	800-874-8044	www.eurosportdaytona.com
ar-K Specialized Manufacturing, Inc.	405-721-7945	www.mar-k.com/dealer_program.html	GT Performance Products	818-847-9611	www.gtperformanceproducts.com
plus Co. Ltd.	011-886-2-27557686	www.triplus.com.tw	Jim Osborn Reproductions, Inc.	770-962-7556	www.osborn-reproduction.com
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o's Automotilia	805-434-2963	www.bobsautomobilia.com	Millenium Industries, Inc.	708-895-1381	
ght Ideas	270-535-5623		Motor City Cinyl Graphics	586-243-0733	www.motorcityvinyl.com
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ghway Stars, Inc.	847-599-1600	www.highwaystars.org	Sharpline Converting, Inc.	888-615-4214	=www.sharpline.com
e Parts Place Inc.	630-365-1800	www.thepartsplaceinc.com	Specialty Reproductions	515-727-1310	
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aulin Enterprises, Inc.	913-722-2783	www.mcveys.com	Technostalgia Inc.	866-258-5670	www.cool-leds.com
dillac King	818-890-0621	www.cadillacking.com	TransAm Stripes	210-326-6503	www.transamstripes.net
SA Parts Supply, Ltd.	304-724-6600	www.usapartssupply.com	Trim Parts, Inc.	513-934-0815	www.trimparts.com
IEVROLET			Year One, Inc.	800-950-9503	www.yearone.com
isley's (J'Leys and Co.)	336-228-6701	www.chevelle.com	GLASS	000 000 0000	
tocraft Investments, Inc., d/b/a (NPD)	352-378-2473	www.nationalparts.com	Pilkington North America, Inc.	614-443-0231	www.pilkingtonclassics.com
rfre Inc.	626-282-8381	www.genesmithparts.com	HARD / MECHANICAL PARTS	011110 0201	www.pikingtonoldsoles.com
IQ Reproductions	800-441-3866	www.chgreproductions.com	Custom Autosound	714-535-1091	www.casmfg.com
ark's Corvair Parts, Inc.	413-625-9776	www.corvair.com	Forever Sharp Products, Inc.	888-878-2156	www.foreversharp.com
lassic Industries Inc. (OER®)	800-854-1280	www.classicindustries.com	Henry Nunn dba Nunnbetter Reproductions	405-364-0416	www.ioieversnarp.com
&R Classic Automotive, Inc.	630-393-0009	www.drclassic.com	Instrument Sales and Service, Inc.	503-286-3938	www.instrumentsales.com
inchuk Manufacturing, Inc.	714-540-4363	www.danchuk.com	Jim Carter's Antique Truck Parts	816-833-1913	www.oldchevytrucks.com
nacorn Classic Bodies, Inc.	805-486-2612	www.dynacorn.com	Ken Harrison	800-497-5294	www.oldenevytrucks.com
Camino Manufacturing, Inc.	360-417-9201	www.elcaminomanufacturing.com	MB Marketing and Manufacturing	800-231-4125	www.mbmbrakeboosters.com
eartbeat City, LLC	586-226-8811	www.heartbeatcity.com	Tedd Cycle, Inc.	914-565-2806	www.Vtwinmfg.com
bbard's Impala Parts, Inc.	336-227-1589	www.impalaparts.com	-	614-440-9994	-
Reproductions, Inc.	562-531-8117	www.iandireproduction.com	The Right Stuff OLDSMOBILE	014-440-3334	www.rightstuffdetailing.com
IS Accessories/Grand General Accessories	310-631-2589	www.knsacc.com	Fusick Automotive Products, Inc.	860-623-1589	www.fusick.com/dwnldcat.htm
uscle Factory	714-635-2314				
iginal Parts Group, Inc.	800-243-8355	www.muscle-factory.com www.opgi.com	Thornton Reproductions, LLC	215-257-6070	www.themotorcompany.com
emier Street Rod Parts	800-447-5000	www.premierstreetrod.com	PONTIAC	960 694 6762	www.loodorind.com
al Deal Steel	407-585-1957		Leader Industries Inc., d/b/a The Fiero Store Performance Years	860-684-6762	www.leaderind.com
ited Pacific Industries, Inc.	310-638-5988	www.realdealsteel.com	PW Distribution LLC	267-638-3500	www.performanceyears.com
		www.uapac.com		011-612-4257-1230	www.pontiworld.com.au
ntique, Inc. Institute Custom Lint Data	714-634-1932	www.vintiqueinc.com	Resto-Perfect LLC	201-218-8662	(
oody's Custom Hot Rodz DRVETTE	855-567-1957	www.woodyshotrodz.com	Stephen R. Ames, d/b/a Ames Automotive Ent.	003-870-3932	www.amesperf.com
	000 022 0020	www.acivotto.com	WHEELS PARTS	000 626 2267	www.iooooglo.orm
erican Custom Industries (Bobbart)	800-822-8020	www.acivette.com	Jae Enterprises, Inc.	800-626-3367	www.jaeeagle.com
to Accessories of America	717-667-3004	www.corvetteamerica.com	Jenica Inc, d/b/a Excalibur Wheel Accessories		www.excaliburwheel.com
to Pro USA, Inc.	310-637-4500	www.autoprousa.net	Mike's Auto Parts & Accessories	419-589-8855	
Industries, LLC, d/b/a Corvette Central	269-426-3342	www.corvettecentral.com	Revolution Supply Co. Inc.	877-738-9990	www.revolutionsupply.com
vette Specialties Manufacturing	410-795-3180	www.grilleteeth.com	Roadster Wheels, LLC	310-503-8637	www.roadsterwirewheel.com
rvette Stainless Steel Brakes aka CSSB, Inc.		www.cssbinc.com	MISC		
Witt's Reproductions, Inc.	810-220-0181	www.dewitts.com	Bryant Auto Sales	513-528-7452	
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Bachma Auto Group, Inc.Tom Finley9650 Bluegrass ParkwLouisville4029502.498.616bachmanchevrolet.comtinley@bachmanautogroup.comBob Hook Chevrolet, Inc.Bob Mabery1444 Bardstown RdLouisville4028502.498.806bohook.combmabery@bohook.netMAINEState State		0 N		0.4			<b>W</b> 1 %	F 11411
Bob Hook Chevrolet, Inc.Bob Maberry4144 Bardstown RdLouisville40218502.499.806bobhook.combmaberry@bobhook.netMAINECompany NameContact NameAddressCityZipPhoneWebsiteEmail AddressQuirk Chevrolet, CadillacJohn Raymod293 Hogan RdBangor0400207.576.101quirkautopark.comjraymond@quirkauto.comMICHIGANVerseVerseVerseVerseVerseImail AddressImail AddressEd Rinke Chevrolet, Co.Jim Hensley26125 Van DykeCenterline4005566.754.700edrinke.comjhensley@edrinke.comBerger Chevrolet, Inc.Kendall Tolan2525 28th St SEGrand Rajka49512616.575.9473bergerchevy.comktolan@bergerchevy.comLaFontaine Performance CenterJoe Sabo2800 N. Milford RdHighland483580.883.462lafontaineperformancecenter.comjabo@diotnaineauto.comMINNESOTALVerseVerseVerseVerseVerseverseverseSuburban ChevroletMike Kraft12475 Plaza DriveEden Prair53492.947.543gubrbanchev.commkaft@suburbanchev.comSUBSOURIVerseVerseVerseVerseVerseVerseVerseVerseCompany NameContact NameAddressEden Prair534492.947.5432gubrbanchev.commkaft@suburbanchev.comSuburban ChevroletMike Kraft12475 Plaza DriveEden Prair534492.947.5432gubr				-				
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Company NameContact NameAddressCityZipPhoneWebsiteEmail AddressQuirk Chevrolet, CadillacJohn Raymoni23 Hogan RdBargor044020.7576.103quirkautopark.comjraymond@quirkauto.comMICHIGANCompany NameContact NameAdressVinyYingPhoneWebsiteEmail AddressEd Rinke Chevrolet Co.Jim Hensley26125 Van DykeCenterline480558.754.700derinke.comjensle@derinke.comBerger Chevrolet, Inc.Kendall Tolan252 28th St StGrand Rapide480561.557.5473bergerchevy.comktolan@bergerchevy.comLaFontaine Performance CenterJoe Sabo280 N. Milford RdHighland435780.883.462Idontaineperformance.eeterjab@definite.comShurban Chevrolet, Inc.Kitak ChevroletContact NameAdressCity7PineMetsiteisda@definite.comBerger Chevrolet, Inc.Kondall Tolan252 28th St StGrand Rapide483780.883.462Isdneineperformance.eeterjab@definite.comBrith MENSECTAKondall Tolan260 N. Milford RdHighland4359PineMebsiteMeinstein.eeterSuburban Chevrolet, Inc.Mile Karta1475 Plaza DriveLingSipPineMebsiteMile AddressSuburban ChevroletMile Karta1475 Plaza DriveLingSipSipNateSipLandenke.comMile AddressSuburban ChevroletMile Karta1475 Plaza DriveLing <td>Bob Hook Chevrolet, Inc.</td> <td>Bob Maberry</td> <td>4144 Bardstown Kd</td> <td>Louisville</td> <td>40218</td> <td>502.499.8060</td> <td>bobhook.com</td> <td>bmaberry@bobhook.net</td>	Bob Hook Chevrolet, Inc.	Bob Maberry	4144 Bardstown Kd	Louisville	40218	502.499.8060	bobhook.com	bmaberry@bobhook.net
Auric Chevrolet, CadillacJohn Raymond293 Hogan RdBangor0440207.576.1013quirkautopark.comjraymond@quirkauto.comMICHIGANCompany NameContact NameAddressCityZipPhoneWebsiteEmail AddressEd Rinke Chevrolet Co.Jim Hensley26125 Van DykeCenterline48015586.754.7000edrinke.comjhensley@edrinke.comBerger Chevrolet, Inc.Kendall Tolan2525 28th St SEGrand Rapids4912616.575.9473bergerchevy.comktolan@bergerchevy.comLaFontaine Performance CenterJoe Sabo2800 N. Milford RdHighland483780.883.4627lafontaineperformancecenter.comjsabo@lafontaineauto.comMINNESOTAContact NameAddressCityZipPhoneWebsiteEmail AddressSuburban ChevroletMike Kraft12475 Plaza DriveEden Prait536952.947.5432suburbanchev.commkraft@suburbanchev.comMISSOURIVebsiteContact NameAddressCityZipPhoneWebsiteEmail AddressCompany NameContact NameAddressCityZipPhoneWebsiteEmail AddressSuburban ChevroletMike Kraft12475 Plaza DriveCityZipPhoneWebsiteEmail AddressCompany NameContact NameAddressCityZipPhoneWebsiteEmail AddressCompany NameContact NameAddressCityZipPhoneWebsiteEmail Address	MAINE							
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Company NameContact NameAddressCityZipPhoneWebsiteEmail AddressEd Rinke Chevrolet Co.Jim Hensley6125 Van DykeCenterline48015586.754.700eirnke.comjhensley@edrinke.comBerger Chevrolet, Inc.Kendal Totan252 58th St SEGrand Rapide49512616.575.473bergerchev.comktolan@bergerchev.comLaFontaine Performance CenterJoe Sabo2500 N. Milford RdHighland435780.883.462lafontaineperformance.centerjsab@elafontaineauto.comCompany NameContact NameAddressKigYanPhoneWebsiteEmail AddressSuburban ChevroletMike Kraft1245 Plaza DriveFigSol52.947.543suburbanchev.commkraf@esuburbanchev.comMISSOURIKinstonKotanteKotanteKotanteKotanteKotanteKotanteKotanteCompany NameKotanteKotanteKotanteKotanteKotanteKotanteKotanteKotanteMISSOURIKotanteKotan	Quirk Chevrolet, Cadillac	John Raymond	293 Hogan Rd	Bangor	04401	207.576.1013	quirkautopark.com	jraymond@quirkauto.com
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MINNESOTA       Company Name       Contact Name       Address       City       Zip       Phone       Website       Email Address         Suburban Chevrolet       Mike Kraft       12475 Plaza Drive       Eden Prairie       55344       952.947.5432       suburbanchev.com       mkraft@suburbanchev.com         MISSOURI       Company Name       Contact Name       Address       City       Zip       Phone       Website       Email Address	•			•				<b>,</b>
Company NameContact NameAddressCityZipPhoneWebsiteEmail AddressSuburban ChevroletMike Kraft12475 Plaza DriveEden Prairie5534952.947.5432suburbanchev.commkraft@suburbanchev.comMISSOURICompany NameContact NameAddressCityZipPhoneWebsiteEmail Address	LaFontaine Performance Center	Joe Sabo	2800 N. Militora Ra	Highland	48357	800.883.4627	latontaineperformancecenter.com	jsado@latontaineauto.com
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MISSOURI Company Name Contact Name Address City Zip Phone Website Email Address	Company Name	Contact Name	Address	City	Zip	Phone	Website	Email Address
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NEBRASKA							
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Champion Chevrolet Geo	Dean Younie	800 Kietzke Lane	Reno	89502	775.786.3111	championchev.com	info@championchev.com
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Nesenger 112 Chevrolet	Mike Charity	2096 Rte 112 Medford Ave	Medford	11763	631.475.0798	chevrolet112.com	mcharity.chevy112@gmail.com
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Flow Chevrolet	Chris Porter	1400 S. Stratford Road	Winston-Salem	27105	336.760.7046	gmpartsdirect.com	cporter@flowauto.com
Modern Chevrolet Company	Ivil Porter	5415 Kelley-Moore Dr	Winston-Salem	27120	336.722.4191	modernchevy.com	iporter@modernauto.com
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Rydell Chevrolet, Cadillac, Buick , GMC		2700 S. Washington	Grand Forks	•	800.354.7278	rydellcars.com	parts@rydellcars.com
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оню							
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Pace Performance	Chuck Fitch	50 Kargo Avenue	Youngstown	44446	800.748.3791	paceperformance.com	parts@paceperformance.com
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Company Name	Contact Name	Address	City	Zip	Phone	Website	Email Address
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Wentworth Chevrolet Co.	Darrin Rea	107 SE Grand Ave	Portland		800.232.8097	wentworthchevrolet.com	darrinrea@wentworthchevrolet.com

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Rohrich Cadillac, Inc.	Paul Lilja	1000 Saw Mill Run Blvd	Pittsburgh	15220	412.390.2900	rohrichcadillac.com	plilja@rohrich.com
Apple Chevrolet Cadillac	Jason Alwood	1200 Loucks Rd, P.O Box 7767	York	17404	717.848.1300	applechevroletcadillac.com	jalwood@pplauto1.com
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TENNESSEE							
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Freeland Chevrolet	Gordon Mangrum	5333 Hickory Hollow Pky	Antioch	37013	615.731.3000	freelandchevy.com	gordonm@freelandchev.com
James Corlew Chevrolet	James West	722 College St	Clarksville	37040	931.552.2020	jamescorlewautomotive.com	jameswest@jamescorlew.com
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Scoggin-Dickey Chevrolet, Buick	Chris Storie	5901 Spur 327	Lubbock	79424	800.456.0211	sdparts.com	cstorie@sdparts.com
Classic Chevrolet	Ken Williams	13115 S.W. Freeway	Sugar Land	77478	800.800.PART	classicchevysugarland.com	kwilliams@classicchevysugarland.com
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McCurley Chevrolet, Cadillac	Dean Goody	1325 Auto Plex Way	Pasco	99301	509.547.5555	billmccurley.com	dean.goody@mccurley.net
Camp Automotive, Inc.	Brian Kegley	101 Montgomery	Spokane	99207	509.456.7890	campchevrolet.com	bkegley@lithia.com
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Gandrud Chevrolet, Inc.	Chris Slack	919 Auto Plaza Dr	, Green Bay	54302	920.468.6800	gmperformancemotor.com	parts@gandrud.com

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ckallies@holzmotors.com

PERFORMANCE WWW.CHEVROLET.COM/PERFORMANCE

Chad Kallies 5961 S. 108 Place

Holz Motors, Inc.

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ACCESSORY DRIVE KITS	
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LS376/480
LS376/515
LS376/525
LSA 6.2L SC
LS9 6.2L SC
LS7 7.0L 202
LT1 6.2L 204
LTG 2.0L 206
EROD Systems 208
Connect & Cruise Powertrain Systems
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LSX376-B15
LSX454
LSX454R
Big-Block Crate Engines
Anniversary Edition 427 278
ZZ427/480
454 HO
ZZ454/440
HT502
502 HO
ZZ502/502 Deluxe
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ZZ572/620
ZZ572/720R
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LS-Series
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DISTRIBUTORS & COMPONENTS
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Big-Block
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PERFORMANCE

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#### GM SERVICE REPLACEMENT POWERTRAIN & CHEVROLET PERFORMANCE LIMITED WARRANTY Engines, Engine Components, Transmissions, Transmission Components & Transfer Cases

To retain the safety and dependability built into this product, it is essential that your product receives the scheduled maintenance at the recommended intervals contained in your vehicle Owner's Manual/Maintenance Schedule\* or Chevrolet Performance Engine Instruction Sheet. Since emissions-related components vary by model and engine application, you should follow the emissions maintenance recommendations also contained in your vehicle's manuals.

General Motors Company ("GM") warrants to the purchaser for the time and/or mileage indicated below that it will repair or replace, at its option, any GM Parts Service Replacement Engine, Engine Component, Transmission/ Transaxle, Transmission Component, Transfer Case or Short Block Assembly that fails due to a defect in material or workmanship. GM will use new or remanufactured parts for repair or replacement.

Warranty coverage is based on months/mileage, whichever comes first, and begins on the date of installation by an authorized GM dealer or by a qualified Independent Service Center (ISC). For all other over-the-counter sales, warranty begins on date of retail sale.

## Genuine 🚨 I Parts

Product	Cataloged Passenger Car & Light-DutyTruck (Series 10-30)	Medium-Duty Truck (Series 40-80) Class A Motor Home, Taxi & Police	Non-Cataloged Passenger Car & Light-Duty Truck <sup>2</sup>
Engines, Automatic Transmissions & Transfer Cases <sup>3,4</sup>	36 months or 100,000 miles <sup>1,2</sup>	18 months or 100,000 miles <sup>1,2</sup>	12 months or 12,000 miles
Manual Transmissions	12 months or	12 months or	12 months or
& CVT	12,000 miles <sup>1,2</sup>	12,000 miles <sup>1,2</sup>	12,000 miles
Engine & Transmission	12 months/	12 months/	12 months/
Components <sup>5</sup>	unlimited miles	unlimited miles	unlimited miles

#### | **PERFORMANCE**

I VEHICLES • PARTS • RACING			
	Product	Passenger Car & Light-Duty Truck (Series 10-30) <sup>6</sup>	Other⁵ (Start-up Warranty)
	Performance Parts Engines <sup>4</sup>	24 months or 50,000 miles $^{\rm 1,2}$	30 Days
	E-ROD & E-ROD Connect & Cruise Crate Powertrain Systems <sup>7</sup>	36 months or 50,000 miles <sup>1,2</sup>	N/A
	Connect & Cruise Crate Powertrain Systems7 (non-E-ROD)	24 months or 50,000 miles <sup>1,2</sup>	N/A
	Performance Parts, Transmissions, Short Block Assemblies & Components <sup>5</sup>	12 months / unlimited miles	30 Days

<sup>1</sup>Parts and labor warranty when installed by a GM Dealer or qualified installing Independent Service Center (ISC). <sup>2</sup>Parts and labor warranty when sold over the counter and REPAIRED by a GM Dealer or qualified installing Independent Service Center (ISC), on-highway applications only. Parts only warranty when consumer repaired or when installed in non-highway application. Coverage limited to defects in material and/or workmanship of the specific part only. <sup>3</sup>Includes Allison 1000 Series assemblies sold through GM Dealers. <sup>4</sup>Engine upgrades require appropriate

associated parts to ensure proper engine and transmission cooling and argunes require application livery and emission controls (upgrade example: 305 engine replaced with 350 engine). \*Parts-only warranty when sold over the counter. \*Must be installed in a "street legal" automotive application for use on public roads. ?Warranty valid when all required components are installed on the same which and purchased on one invoice.

## Warranty begins on the date of installation by an authorized GM dealer or by a qualified independent service center. For over-the-counter sales, warranty begins on date of retail sale. THIS WARRANTY DOES NOT COVER:

- Damage due to improper installation, negligence, alteration (including changes to engine controls), accident, or improper use. Proper vehicle use is discussed in the vehicle Owner's Manual.
- Any vehicle that has been used for racing (on or off track), stunt driving, performance testing, or used under other extreme operating conditions.
- Any vehicle where the odometer has been disconnected or the mileage reading has been altered.
- Damage caused by lack of proper maintenance as described in the vehicle's original Owner's Manual/ Maintenance Schedule, failure to follow Maintenance Schedule intervals, or failure to use or maintain proper type and levels of fluid, fuel, oil, and lubricants recommended in the Owner's Manual/Maintenance Schedule. Proof of proper maintenance is the owner's responsibility. Keep all receipts and be prepared to present them if questions arise about maintenance.
- Damage as a result of overheating, contamination or lack of lubrication.
- Damage caused by a turbocharger, supercharger, nitrous oxide, or similar product, which is not an approved Chevrolet Performance Part or Accessory.
- Racing engines and/or their components

- Use of components in excess of maximum torque specification.
- Damage as a result of modification/replacement of torque converter that is part of transmission assembly.
- Loss of time, inconvenience, loss of use, or other economic loss.
- Vehicles registered and normally operated outside of the United States.
- This warranty does not apply to any unit installed under the General Motors New Vehicle Limited Warranty.

#### DOCUMENTATION REQUIREMENTS:

The GM Dealer or Independent Service Center must be furnished with the purchaser's original repair order or sales slip (or Dealer's photocopy). This warranty is transferable to subsequent owners, free of charge, by providing the above required documents to any purchaser of the vehicle in which the assembly/component was originally installed.

#### **OBTAINING REPAIRS:**

**GM Dealer Installation** – The GM Dealer who initially installed the assembly/component or any other GM Dealer may perform the repairs. You must allow a reasonable period of time for repairs following delivery of the vehicle to the GM Dealer.

Independent Service Center Installation – The Independent Service Center (ISC) that installed the assembly/component or any GM Dealer may perform repairs. Before any repairs can be performed under warranty by an Independent Service Center, the selling GM Dealer (or any GM Dealer) must first authorize needed repairs as a sublet service.

**Towing** – for GM Parts Engine, Transmission, and Transfer Case assemblies will be covered to the nearest GM Dealership or ISC who performed the installation, not to exceed \$150.00, under the following conditions: – The vehicle is inoperative.

The vehicle is inoperative.

The failure was the result of the unit; not the installation.
 \*Chevrolet Performance Parts Engines and Transmissions are excluded.

**Emergency Repairs (GM Dealers Only):** Reimbursement to an owner for repairs performed by other than a GM Dealer will be considered when GM Dealer service was not available (e.g., weekends, evenings, etc.) or when repairs were made in a foreign country where warranty repairs by a GM Dealer are difficult to obtain.

#### OTHER TERMS:

GM sells other engines and transmissions in various states of completion. This warranty covers only those engines and transmissions that are marketed by GM as GM Parts or Chevrolet Performance Parts.

This warranty gives you specific legal rights, and you may also have other rights, which vary from state to state.

General Motors does not authorize any person to create for it any other obligations or liability in connection with these assemblies.

ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE APPLICABLE TO ASSEMBLIES OR PARTS IS LIMITED IN DURATION TO THE DURATION OF THIS WRITTEN WARRANTY. THE PERFORMANCE OF REPAIRS OR REPLACEMENT IS THE EXCLUSIVE REMEDY UNDER THIS WRITTEN WARRANTY OR ANY IMPLIED WARRAN-TY. GM SHALL NOT BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM BREACH OF THIS WRITTEN WARRANTY OR ANY IMPLIED WARRANTY.

Some states do not allow limitations on how long an implied warranty will last or the exclusion or limitation of incidental or consequential damages, therefore, the above limitation or exclusions may not apply to you.

#### SERVICE CHECKS:

**Transmissions:** It is important for you or a service technician to check the transmission/transaxle fluid level at regular intervals.

Engines: It is important for you or a service technician to perform these underhood checks at each fuel fill:

- Check engine oil level and add if necessary.
- Check engine coolant level in coolant reservoir and add if necessary.
- Check belts and hoses for visible wear and replace if necessary

The parts listed in this catalog are intended primarily for use in race or "off-highway" vehicles only. Federal law restricts the removal, modification or knowingly making inoperative of any part or element of design installed in compliance with an applicable Federal Motor Vehicle Safety Standard or any part of federally required emission control systems on a motor vehicle used on public roads. Further, many states have enacted laws with various penalties for tampering with, or otherwise modifying any required emission or noise control system. Parts which have been granted an exemption by the California Air Resources Board (CARB) are noted as such.

Unless specifically noted to the contrary herein, vehicles equipped with Chevrolet Performance Parts may not meet Federal Motor Vehicle Safety Standards and emissions regulations and should not be operated on public roads. Chevrolet Performance customers are responsible for ensuring their use of Chevrolet Performance Parts complies with applicable federal, state and local laws, regulations and ordinances.

Many parts intended for racing or other "off-highway" use are not designed or tested for crashworthiness or to meet the safety needs of the motoring public, and may adversely affect the original intended performance or handling characteristics of the vehicle. These parts are designed and intended to be used with experts supervising their installation and use, to help assure the proper and safe operation of the vehicle.

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Direct any inquiries to: General Motors Co., Consumer Relations Dept., P.O. Box 33136, Detroit, MI 48232-5136

#### GM SERVICE REPLACEMENT POWERTRAIN & CHEVROLET PERFORMANCE LIMITED WARRANTY Engines, Engine Components, Transmissions, Transmission Components & Transfer Cases

To retain the safety and dependability built into this product, it is essential that your product receives the scheduled maintenance at the recommended intervals contained in your vehicle Owner's Manual/Maintenance Schedule\* or Chevrolet Performance Engine Instruction Sheet. Since emissions-related components vary by model and engine application, you should follow the emissions maintenance recommendations also contained in your vehicle's manuals.

General Motors of Canada Limited ("GM Canada") warrants to the purchaser for the time and/or mileage indicated below that it will repair or replace, at its option, any GM Parts Service Replacement Engine, Engine Component, Transmission/Transaxle, Transmission Component, Transfer Case or Short Block Assembly that fails due to a defect in material or workmanship. GM Canada will use new or remanufactured parts for repair or replacement.

Warranty coverage is based on months/mileage, whichever comes first, and begins on the date of installation by an authorized GM Canada -dealer or by a qualified Independent Service Center (ISC). For all other over-the-counter sales, warranty begins on date of retail sale.

GM Canada only warrants GM Canada supplied parts and components purchased in Canada from a GM Canada Dealer or Canadian qualified ISC.

## Marts

Canada			
Product	Cataloged Passenger Car & Light-DutyTruck (Series 10-30)	Medium-Duty Truck (Series 40-80) Class A Motor Home, Taxi & Police	Non-Cataloged Passenger Car & Light-Duty Truck <sup>2</sup>
Engines, Automatic Transmissions & Transfer Cases <sup>3,4</sup>	36 months or 160,000 kilometers <sup>1,2</sup>	18 months or 160,000 kilometers <sup>1,2</sup>	12 months or 20,000 kilometers
Manual Transmissions & CVT	12 months or 20,000 kilometers <sup>1,2</sup>	12 months or 20,000 kilometers <sup>1,2</sup>	12 months or 20,000 kilometers
Engine & Transmission Components <sup>5</sup>	12 months/ unlimited kilometers	12 months/ unlimited kilometers	12 months/ unlimited kilometers

#### 

I VEHICLES • PARTS • RACING			
Product	Passenger Car & Light-Duty Truck (Series 10-30) <sup>6</sup>	Other⁵ (Start-up Warranty)	
Performance Parts Engines <sup>4</sup>	24 months or 80,000 kilometers <sup>1,2</sup>	30 Days	
E-ROD & E-ROD Connect & Cruise Crate Powertrain Systems <sup>7</sup>	36 months or 80,000 kilometers <sup>1,2</sup>	N/A	
Connect & Cruise Crate Powertrain Systems7 (non-E-ROD)	24 months or 80,000 kilometers <sup>1,2</sup>	N/A	
Performance Parts, Transmissions, Short Block Assemblies & Components⁵	12 months / unlimited kilometers	30 Days	

Parts and labor warranty when installed by a GM Canada Dealer or qualified installing Independent Service Center (ISC). "Parts and labor warranty when sold over the counter and REPARED by a GM Canada Dealer or qualified installing Independent Service Center (ISC), on-highway applications only. Canadian Parts only warranty when consumer repared or when installed in non-highway application. Coverage limited to defects in material and/or workmanship of the specific part only." Includes Allison 1000 Series assemblies sold through GM Dealers. "Engine upgrades require appropriate associated parts to ensure proper engine and transmission cooling and torque capacity, fuel/air delivery and emission controls (upgrade example: 305 engine replaced with 350 engine). "Parts-only warranty when sold over the counter, «Must be installed in a "street legal" automotive application for use on public roads. "Warranty and when all required components are installed on the same vehicle and purchased on one invoice.

#### WARRANTY BEGINS ON THE DATE OF INSTALLATION BY AN AUTHORIZED GM CANADA DEALER OR BY A CANADIAN QUALIFIED INDEPENDENT SERVICE CENTER. PARTS ONLY WARRANTY (NO LABOUR) APPLIES FOR WARRANTY REPAIRS NOT PERFORMED BY AN CANADIAN AUTHORIZED GM CANADA DEALER OR QUALIFIED INDEPENDENT SERVICE CENTER.

GM Canada sells other engines and transmissions in various states of completion. This warranty covers only those engines and transmissions that are marketed by GM Canada as Goodwrench or GM Parts.

#### THIS WARRANTY DOES NOT COVER:

- Damage due to improper installation, negligence, alteration, accident, improper use, or any use related to racing or competition. Proper vehicle use is discussed in the vehicle Owner's Manual. In addition, coverage does not apply if the odometer has been disconnected or the mileage reading has been altered.
- Damage caused by lack of proper maintenance as described in the vehicle's original Maintenance Schedule/Owner's Manual, failure to follow Maintenance Schedule intervals, or failure to use or maintain proper type

and levels of fluid, fuel, oil and lubricants recommended in the Maintenance Schedule/Owner's Manual. Proof of proper maintenance is the owner's responsibility. Keep all receipts and be prepared to make them available if questions arise about maintenance.

- Damage as a result of overheating, contamination or lack of lubrication.
- Damage caused by a turbocharger, supercharger, nitrous oxide, or similar product, which is not an approved GM Performance Part or Accessory.
- · Racing engines and/or their components.
- Use of components in excess of maximum torque specification.
- Damage as a result of modification/replacement of torque converter that is part of transmission assembly.
- Loss of time, inconvenience, loss of use, or other economic loss.
- Vehicles registered and normally operated outside of Canada.
- This warranty does not apply to any unit installed under the General Motors New Vehicle Warranty.

#### DOCUMENTATION REQUIREMENTS

The GM Canada dealer or independent service center must be furnished with this warranty statement, purchase receipt, installation date invoice and proof of proper maintenance. This warranty is transferable to subsequent owners by providing the above required documents to any purchaser of the vehicle in which the assembly/component was originally installed.

#### **OBTAINING REPAIRS**

GM Canada Dealer Installation—The GM Canada dealer who initially installed the assembly/component or any GM Canada dealer may perform the repairs. You must allow a reasonable period of time for repairs following delivery of the vehicle to the GM Canada dealer's place of business.

Independent Service Center Installation—The Canadian independent service center that installed the assembly/component or any GM Canada dealer may perform repairs. Before any repairs can be performed under warranty by a Canadian independent repair center, the selling GM Canada dealer (or any GM Canada dealer) must first authorize needed repairs as a sublet service.

#### **OTHER TERMS**

TO THE FULL EXTENT PERMITTED BY APPLICABLE CANADIAN LAW: The foregoing warranty is the only and the entire warranty provided by GM Canada and is in lieu of and excludes all other representations, warranties or conditions, express or implied (including any implied warranty or condition of merchantability or fitness for a particular purpose).

The performance of repairs, the provision of replacement parts, or reimbursement thereof, as described above, is the exclusive remedy under this written warranty or under any otherwise applicable implied warranty or condition.

GM CANADA DOES NOT AUTHORIZE ANY PERSON TO CREATE FOR IT ANY OTHER OBLIGATIONS or liability in connection with the products and no person is permitted to extend or enlarge this warranty on behalf of GM Canada by written, verbal or other representation and if made, such representation or warranty will not be enforceable against GM Canada.

DISCLAIMER OF LIABILITY: Except as provided in this limited warranty, GM Canada will not be liable in contract, tort or otherwise for any direct, indirect, economic, commercial, incidental, or consequential or special loss or damage or expense or claim howsoever caused, arising in connection with the sale, use, loss of use, performance or non-performance of the product.

NOTICE REGARDING LIMITATIONS: The terms contained in this limited warranty are not intended to limit or otherwise modify or exclude any warranty that by law cannot be limited, disclaimed or excluded. When and to the extent that any applicable Canadian law prohibits in a particular situation, any term contained in this warranty, such term will be considered severable and deemed deleted from this warranty in that situation.

Some provinces do not allow limitations on how long an implied warranty will last or the exclusion or limitation of incidental or consequential damages, therefore, the above limitation or exclusions may not apply to you.

#### SERVICE CHECKS:

Transmissions: It is important for you or a service technician to check the transmission/transaxle fluid level at regular intervals.

Engines: It is important for you or a service technician to perform these underhood checks at each fuel fill:

- Check engine oil level and add if necessary.
- Check engine coolant level in coolant reservoir and add if necessary.
- · Check belts and hoses for visible wear and replace if necessary.
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NOTES	

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