

CHEVY BIG-BLOCK V8

12353920 — Camshaft Kit

All models big-block Chevrolet V8 1965-66 California, 1965-68 with federal emissions. All non-emissions truck and all 1966-92 for off-highway applications. This is also an excellent marine cam.

Good idle, daily performance usage, mild bracket race, 9.5 - 10.75 - 1 compression ratio 3000 - 3400 cruise rpm. Basic rpm 2200 - 5700, 6500 rpm attainable with proper valve springs and lifters.

Technical Note: These are hydraulic flat tappet camshaft kits.

Duration .050		Lift		Lobe Centerline
Int.	Exh.	Int.	Exh.	
228"	238"	.540"	.540"	114

12353921 — Camshaft Kit

All model big-block Chevrolet V8 1965-66 California, 1965-68 with federal emissions. All non-emissions trucks, and all 1966-92 for off-highway applications. RPM range 2000 - 5500 rpm. Smooth idle, daily usage, off road, towing, economy, mild turbo-charged 8.0 - 9.5 to compression ratio, 2200 - 2600 cruise rpm. Basic rpm range 1500 - 4000, 6500 rpm attainable with proper valve springs and lifters. Also ideal for jet drive or stern drive boat applications.

Technical Note: These are hydraulic flat tappet camshaft kits.

Duration .050		Lift		Lobe Centerline
Int.	Exh.	Int.	Exh.	
208"	218"	.475"	.500"	112

12353922 — Camshaft Kit

All "Marine" and off-highway big-block Chevrolet V8 396-427-454-502. (Same as PL13PO818). Good idle, daily usage, and off road, towing, performance and fuel efficiency, compression ratio 8.75 - 10.5 to 1, 2600 - 3000 cruise rpm, basic rpm range 2000 - 4500 rpm, 6500 rpm attainable with proper valve springs and lifters.

Technical Note: These are hydraulic flat tappet camshaft kits.

Duration .050		Lift		Lobe Centerline
Int.	Exh.	Int.	Exh.	
218"	228"	.500"	.500"	114

12364056 — Hydraulic Lifter Factory Performance Camshafts

Dual pattern, blueprinted replacement for factory (P/N 3963544) 345 H.P. 454 cubic inch camshaft.

Technical Note: Basic RPM range is 1000-3500; cruise RPM at 60 MPH is 1600-2200; compression ratio 7.75 to 8.75.

Duration .050		Lift		Lobe Centerline
Int.	Exh.	Int.	Exh.	
192"	203"	.398"	.430"	110.5

12364055 — Hydraulic Lifter Factory Performance Camshafts

Dual pattern, blueprinted replacement for factory (P/N 3883986) 350 H.P. 396 cubic inch camshaft.

Technical Note: Basic RPM range is 1500-3800; cruise RPM at 60 MPH is 2600-3000; compression ratio 8.75 to 10.0.

Duration .050		Lift		Lobe Centerline
Int.	Exh.	Int.	Exh.	
214"	218"	.461"	.480"	115

12364057 — Mechanical Lifter Factory Performance Camshafts

Single pattern, blueprinted replacement for factory (P/N 3863143) 375 H.P. 396 cubic inch camshaft.

Technical Note: Basic RPM range is 3200-6500; compression ratio 10.5 to 11.5.

Duration .050		Lift		Lobe Centerline
Int.	Exh.	Int.	Exh.	
242"	242"	.520"	.520"	114

12364058 — Mechanical Lifter Factory Performance Camshafts

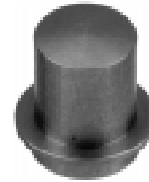
Dual pattern, blueprinted replacement for factory (P/N 3925335) 435 H.P. 427 cubic inch early L-88 camshaft.

Technical Note: Basic RPM range is 4400-7000; compression ratio 11.5 to 12.0.

Duration .050		Lift		Lobe Centerline
Int.	Exh.	Int.	Exh.	
264"	269"	.560"	.580"	112

12364086 — Cam Button Spacer

These cam spacer buttons are for all Big-Block (396,427,454, and 502) 1965 to 1995 Chevrolet engines. Engines without a cam thrust plate must use a cam button spacer when using a roller lifter camshaft to limit lateral movement. The solid aluminum button is priced for the budget minded racer.



BIG-BLOCK V8 CAMSHAFT KITS QUICK REFERENCE CHART

Part Number	Description	Crankshaft Duration at .050" Tappet Lift (degrees)	Maximum Lift with 1.7:1 Rocker Ratio	Lobe Centerlines (degrees)	Notes
12353920	Hydraulic flat tappet kits	I: 228 E: 238	I: .540 E: .540	114	see part number description
12353921	Hydraulic flat tappet kits	I: 208 E: 218	I: .475 E: .500	112	see part number description
12353922	Hydraulic flat tappet kits	I: 218 E: 228	I: .500 E: .500	114	see part number description
12361314	Camshaft & lifter kits	I: 202 E: 210	I: .468 E: .485	110	see part number description
12361316	Camshaft flat tappet kits	I: 210 E: 218	I: .485 E: .490	115	see part number description
12364056	Hydraulic flat tappet kits	I: 192 E: 203	I: .398 E: .430	110.5	see part number description
12364055	Hydraulic flat tappet kits	I: 214 E: 218	I: .461 E: .480	115	see part number description
12364057	Mechanical flat tappet kits	I: 242 E: 242	I: .520 E: .520	114	see part number description
12364058	Mechanical flat tappet kits	I: 264 E: 269	I: .560 E: .580	112	see part number description

CONNECTING RODS & COMPONENTS

GROUP 0.603 CONNECTING RODS AND COMPONENTS

10198922 — Forged Connecting Rod

This rugged LS-6/LS-7 connecting rod is forged from 4340 steel, Magnaflux inspected and shotpeened. It has heavy-duty $\frac{7}{16}$ " diameter rod bolts with knurled shanks (P/N 14096148). This rod is machined for pressed piston pins, and is color coded white. This is also the **Gen. V** 454 & 502 rod.

Technical Notes: All big-block Chevrolet connecting rods are 6.135" from center-to-center. Recommended bolt torque is 73 ft./lbs.



► **NEW** 12496661 — Connecting Rod Kit

This connecting rod kit can be used on all 396, 427, 454, and 502 big-block engines. There are eight of P/N 10198922 steel forged rods in this kit.

Technical Note: Use P/N 10198922 for service.



12510121 — Forged Connecting Rod

This heavy-duty L-88/ZL-1 connecting rod is finished for floating wrist pins. It is forged from 4340 steel, Magnaflux inspected, and shotpeened. This rod is equipped with super-quality $\frac{7}{16}$ " boron steel bolts (P/N 3969864) which are also inspected and shotpeened. It is color coded green.

Technical Note: Recommended bolt torque is 67-73 ft./lbs. or .009" bolt stretch.

12329715 — Connecting Rod Bearing

Standard diameter bearing insert for all big-block Chevrolet V8s.

14096148 — Connecting Rod Bolt

This $\frac{7}{16}$ -20 x 2.28" bolt is used in LS-6 and LS-7 engine assemblies with connecting rod P/N 10198922. It has a knurled shank.

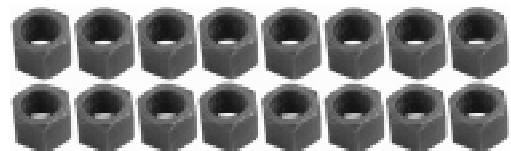
3969864 — Boron Steel Connecting Rod Bolt

Special boron steel bolts are installed in heavy-duty L-88/ZL-1 connecting rod P/N 3969804. These bolts are 100% Magnaflux inspected and shotpeened. They have a ground shank.



12366568 — Connecting Rod Nut

This quality nut kit includes 16 of P/N 3942410 6-point nuts. They are $\frac{7}{16}$ -20 and made of 1038 steel. They are used on all 396, 427, 454, and 502ci production engines. For single service replacement use P/N 3942410.

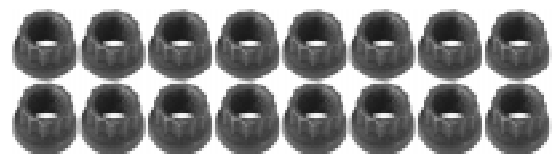


340289 — Connecting Rod Nut

$\frac{7}{16}$ -20 nut, extra heavy-duty 12-point aircraft design, 6304 steel.

12366569 — Connecting Rod Nut "12-Point Design"

This aircraft quality nut kit includes 16 of P/N 14044866 12-point nuts. They are $\frac{7}{16}$ -20 and made of 6304 steel. They can be used on all 396, 427, 454, and 502ci engines. For single service replacement use P/N 14044866.



CHEVY BIG-BLOCK V8

PISTONS

GROUP 0.629 PISTONS

Forged aluminum pistons are available in standard and oversize diameters for many high-performance Chevrolet big-block V8 engines. These forged pistons will stand up to the heat and cylinder pressures in high compression

engines. All service replacement pistons with 9:1 and 11:1 compression use $\frac{5}{64}$ " compression rings and $\frac{3}{16}$ " oil rings; 12.5:1 compression pistons use $\frac{1}{16}$ – $\frac{1}{16}$ – $\frac{3}{16}$ " rings. Pistons include wrist pins. The accompanying chart summarizes the vital statistics for GM Performance Parts big-block pistons.

CHEVROLET BIG-BLOCK V8 HIGH-PERFORMANCE PISTONS QUICK REFERENCE CHART

Part Number	Engine	Compression Ratio	Size	Dome Type	Pin Type	ID#	Notes
10215228	454	8.75:1	Std.		Pressed	10185058	Use with <i>Gen. V & Gen VI</i> 454 HO engine.
12529559	454	8.75:1	+ .030		Pressed	10185058	Use with <i>Gen. V & Gen VI</i> 454 HO engine.
12533507	502	8.75:1	Std.		Pressed		Use with all 502 (8.2L) engines (compression base on 119 cc head)
10244451	502	8.75:1	+ .030		Pressed		Use with all 502 (8.2L) engines (compression base on 119 cc head)
3976014	454	12.25:1	Std.	Open	Pressed	3963551 or 3976032	1970 LS-7. Used in engine assembly P/N 3965774.
3976018	454	12.25:1	+ .001 (Std. high limit)	Open	Pressed	3976036	1970 LS-7. Used in engine assembly P/N 3965774.
6262976	454	9:1	Std.	Closed	Pressed	3994031, 3999295, 6262972, or 6269362-3	1971 LS-6.



Left to right: 10244451, 6262976, 3976014.

GROUP 0.639 PISTON PIN RETAINERS

3942423 — Spirolox Retainer

1.103" OD x .050" thick. Replacement retainer for 427ci 1969 L–88 engine.

3964238 — Spirolox Retainer

1.103" OD x .072" thick. Use when converting special high performance and heavy-duty 454 pistons to floating pins.

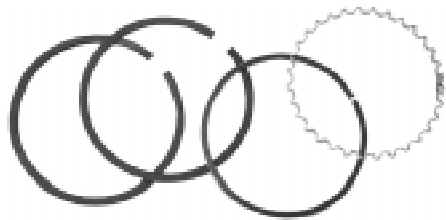
Technical Notes: *This retainer is recommended for competition engines. The piston pin retainer grooves may have to be widened to fit this Spirolox.*

GROUP 0.643 PISTON RINGS

GM Performance Parts piston ring sets for big-block Chevrolets feature high-strength iron top and second rings. Both compression rings have a moly facing which produces a tight cylinder seal. These rings offer excellent performance in competition engines. Eight ring units are required for a complete engine assembly.

12523921 — Piston Ring Unit (std.)

For *Gen. V* 454 HO engine.



10174808 — Piston Ring Unit (.030, 0.5)

For *Gen. V & Gen VI* 454 HO engine.

12524293 — Piston Ring Unit (std.)

For all 502ci (4.47") engines.

12524294 — Piston Ring Unit (+.30" O.S.)

These are piston rings for 502ci (4.470") that are over-bored .030".

CRANKSHAFTS

GROUP 0.646 CRANKSHAFTS

3967811 — 427ci Forged Steel Crankshaft

This 1053 forged steel crankshaft has a 3.76" stroke. It is nitride treated to increase journal hardness and enhance fatigue strength. The main bearing journals are cross-drilled to provide a constant supply of oil to the rod bearings. Use with 1965–89 two-piece rear seal blocks.

Technical Notes: *Main journal diameter is 2.75"; rod journal diameter is 2.20". Crankshaft ID #7115.*



BALANCERS AND PULLEYS

GROUP 0.659 BALANCERS AND PULLEYS

3879623 — 8" Torsional Damper

This 8" diameter torsional damper is designed for all internally balanced big-block V8s. It was originally used on 1967–69 427ci engines.

Technical Note: Use with crankshaft P/N 3967811 and chromed timing pointer P/N 12342001.



10216339 — 8" Torsional Damper

An externally balanced 4.00" stroke crankshaft used in a 454 and 502ci big-block Chevrolet engine requires a counterweighted damper for proper engine balance. This harmonic balancer is used with LS-6 and LS-7 engine assemblies.

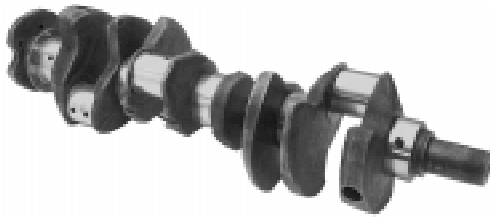
Technical Note: Use with crankshafts P/N 3963523-4 and chromed timing pointer P/N 12342001.



3963523 — 454ci and 502ci Forged Steel Crankshaft

This forged 1053 steel 4.00" stroke crankshaft is used in LS-6 and LS-7 big-block V8s. It is nitride treated to increase its hardness and fatigue strength. The main bearing journals are cross-drilled to provide a constant supply of oil to the rod bearings. For use with Mark IV 502ci engines.

Technical Notes: This crankshaft is externally balanced. It must be used with a counterweighted torsional damper and flywheel (or flexplate) for correct engine balance. Main journal diameter is 2.75"; rod journal diameter is 2.20". Crankshaft ID #3520 or 7416.



3963524 — 454ci and 502ci Forged Steel Crankshaft

This forged 5140 steel 4.00" stroke crankshaft is the highest quality GM offers for big-block V8s. It is nitride treated to increase its hardness and fatigue strength. The main bearing journals are cross-drilled to provide a constant supply of oil to the rod bearings. For use with Mark IV design engines only.

Technical Notes: This crankshaft is externally balanced. It must be used with a counterweighted torsional damper and flywheel (or flexplate) for correct engine balance. Main journal diameter is 2.75"; rod journal diameter is 2.20". Crankshaft ID is #3521.



14096983 — Crankshaft

This forged steel crankshaft (forging ID #14097044) is made from 1053 steel. It is a **Gen. V & Gen VI** 454 (7.4-liter) big-block design with the one-piece rear main seal. It is externally balanced.

10183723 — Crankshaft

This forged steel crank shaft (forging ID #14097044) is designed for use in the 502 cid (8.2-liter) big-block V8. It is a **Gen. V & Gen VI** design with a one-piece rear main seal. It is externally balanced, nitridated and cross drilled.

10114186 — Crankshaft

This **Gen. V & Gen VI** crankshaft is 1053 steel with 3.75 stroke. It is used in 427 trucks 1991 & later.

GROUP 0.469 PILOT BEARINGS

14061685 — Clutch Pilot Bearing

This heavy-duty needle roller pilot bearing is used in Chevrolet 6.2-liter diesels. It can be installed in place of a bronze pilot bushing in all Chevy big-block V8s.



CHEVY BIG-BLOCK V8

10051171 — GM/Fluidamper

This 8" diameter damper uses a viscous fluid instead of an elastomer ring to control destructive crankshaft vibrations. It is designed for all externally balanced big-block V8s, including LS-6 and LS-7. The GM/Fluidamper's inertia ring and viscous fluid are contained inside a hermetically sealed housing. Differences in the rotational speed of the housing and the inertia ring dampen crankshaft harmonics by shearing the silicone fluid. Unlike a conventional torsional damper, the GM/Fluidamper is not tuned to a specific vibration frequency; its performance is not affected by changes in the weight of the engine's crankshaft assembly. Errors in spark timing caused by movement of the outer ring on a conventional damper are eliminated. The GM/Fluidamper requires no periodic maintenance. The outer housing has contrasting timing marks from 50° before Top Dead Center to TDC. This balancer meets SFI 18-1 specifications, and is accepted for competition by NHRA and other racing sanctioning bodies.

Technical Notes: This damper should be used only with externally balanced crankshafts. Use chromed timing pointer P/N 14044821. Damper weight is 17.3 pounds.



3899660 — Crankshaft Pulley

This 6" diameter cast iron crankshaft pulley has two deep grooves that are designed to retain the fan belts at high engine speeds. Its small diameter produces "free" horsepower by reducing parasitic power losses in the accessory drive system.

GROUP 0.662 BALANCER BOLTS AND WASHERS

9419218 — Crankshaft Bolt

This 1/2"-20 x 1 1/2" bolt positively retains the balancer and pulley on the crankshaft snout. For all big-block V8s with tapped crank snouts.

Technical Note: Use with washer P/N 3864814.

3864814 — Washer

2.06" OD x .52" ID x .28" thick.

FLYWHEELS

GROUP 0.666 FLYWHEELS AND FLEXPATES

10185034 — Flexplate 1991 & Later

For 1991 & later Gen. V & Gen VI 454 (7.4L) HO & 502 HO engines. This flexplate is required when using a steel forged crank on Gen. V design engines. This flexplate is 14" diameter (168 teeth).

Technical Note: This flexplate is similar to Mark IV design but not interchangeable because of balance. It has a dual-bolt pattern design.

10185035 — Flexplate 1991 & Later

For use with 454 (7.4L) Gen. V & Gen VI design engine with a cast iron crankshaft. This flexplate is 14" diameter (168 teeth).

Technical Note: This flexplate is similar to Mark IV design but not interchangeable because of balance. It has a dual-bolt pattern design.

14085720 — Nodular Iron Flywheel 1965-69

This lightweight 15 pound nodular iron flywheel reduces an engine's rotating inertia and quickens its throttle response. It is designed for internally balanced big-block V8s. This flywheel uses a 10.4" clutch. Its ring gear outside diameter is 12 3/4". Flywheel ID #3856579.

Technical Notes: This flywheel is neutral balanced; do not use with externally balanced 454ci engines. Use with neutral balanced torsional damper P/N 3879623. 153 tooth starter ring gear.



3963537 — Nodular Iron Flywheel (454ci) 1970-90

This counterweighted flywheel is designed for externally balanced 454ci big-blocks. Its lightweight design reduces the engine's rotating mass and improves its throttle response. This flywheel uses a 10.4" diameter clutch. Its ring gear outside diameter is 12 3/4". Flywheel ID #3935411. Approximate weight 15 lbs.

Technical Notes: This flywheel is unbalanced; do not use with internally balanced engines. Use with counterweighted balancer P/N 3963530. 153 tooth starter ring gear. For use with Mark IV engine only.

3991469 — Flywheel 1965-69

This 14" diameter manual transmission flywheel accepts an 11" diameter heavy-duty clutch. It can be used with all internally balanced Chevy big-block V8 engines.

Technical Notes: Do not use with externally balanced 454ci engines. Use with neutral balanced damper P/N 3879623. 168 tooth starter ring gear. For use with Mark IV engine only.

