



SIGNATURE SERIES SMALL BLOCK CHEVROLET CRATE ENGINE

Part #46213

GENERAL INSTALLATION INSTRUCTIONS

PLEASE study these instructions carefully before beginning this installation. If you have any questions, please call our **Technical Hotline at: 1-800-416-8628**, 7:00 am - 5:00 pm, Pacific Standard Time, Monday through Friday.

IMPORTANT NOTE: Proper installation is the responsibility of the installer. Improper installation will void your warranty and may result in poor performance and engine or vehicle damage.

IMPORTANT: This instruction sheet provides general installation guidelines which can affect your warranty. Read it carefully. It is not our intent to cover each detail of installation here as the procedures are vehicle specific. We want to caution you that installing an engine is a complicated procedure that requires a good general knowledge of automotive mechanics. It is a good idea to refer to the factory service manual for your vehicle. If you are not confident that you can complete the engine installation successfully, we suggest you consider having it installed by an experienced mechanic.

DESCRIPTION: Your new Signature Series crate engine is assembled using all new parts. The short block is from General Motors and Edelbrock Power Package components have been installed by trained technicians at Edelbrock. The Signature Series engine has an operating range from 1500 to 6500 rpm, and a torque converter with a stall speed of 1800 to 2200 rpm is recommended. Use of a torque converter with a stall speed greater than recommended can cause significant power loss and damage to various drivetrain components. The Performer RPM Air-Gap E-Tec intake manifold will require modifications when used with standard brackets to fit the upright Vortec style manifold bolts.

INSTALLATION NOTES: There is no oil in your engine. Signature Series engines use a right side dipstick only. Remove any paint from engine mount bosses, cylinder block to clutch housing or transmission mounting surface, and crankshaft flange before installing engine.

Note: These engines are **not** supplied with the crankshaft damper bolt due to many different applications. The customer must purchase and install the crankshaft damper bolt that matches the given application.

ENGINE OIL: Your engine is supplied with Edelbrock Break-In Oil in the crate. Before starting engine, you will need to prime the oil system. **Do not turn engine over with starter motor for priming.** You will need to mark distributor, as it comes preset on #1 cylinder. Then, remove and use a priming tool to turn pump shaft. This tool can be purchased at your Speed Shop. Change the engine oil no more than 300 miles after break-in. **Vic Edelbrock** recommends Edelbrock Zinc Enhanced 10w40 motor oil (#1073 1qt.; #1083 case of 12 qts.) to be used with this engine in most climates to provide the necessary wear protection that is no longer found in most conventional oils. This special formulation has been developed specifically to enhance the longevity and performance of both classic and modern V8 engines.

FLYWHEELS AND FLEXPLATES: Your Signature Series engine includes a GM flexplate (GM #14088765) intended for use with automatic transmissions equipped with a 10.75" torque converter with 153 starter ring gear teeth. Signature Series engines use special flexplates or flywheels for one-piece seal engines (late model type). See below for other applicable GM flexplates or flywheels.

SIGNATURE SERIES ENGINES USE FLEXPLATES OR FLYWHEELS FOR ONE-PIECE CRANKSEAL ENGINES

Flex Plates:

GM Part Numbers	Outside Diameter	Converter Bolt Pattern	Starter Ring Gear Tooth
14088761	14"	10.75, 11.50	168

Flywheels:

GM Part Numbers	Outside Diameter	Clutch Bolt Pattern	Starter Ring Gear Tooth
14088650	12 3/4"	10.4	153
10105832	14"	11.0, 11.85	168

EXHAUST SYSTEMS: It is to your advantage to install headers and a good free flowing muffler system. Signature Series engines must use headers and a free-flowing muffler system.

THROTTLE BRACKETS: Due to the design of E-Tec intake manifolds, stock Chevrolet throttle brackets will not fit. Purchase Edelbrock throttle bracket #8032 for the Signature Series engine. See the "Install Items" listed on our website and in our catalog.

FINAL NOTES: Install the engine assembly reversing the steps taken to remove the engine and accessories. When in doubt, refer to the factory manual. We recommend a 50-50 mix of coolant and water. We recommend a new thermostat of 160 to 180 degrees, along with new belts and hoses. Check all grounds and fluid levels. Spark plug recommendation is Champion RC-12YC or equivalent. Your MSD ignition comes with a preset advance curve and will work with an initial setting of 10 to 12 degrees. Check MSD instruction sheet for other options and also distributor hook up. Check carburetor instruction sheet for hook ups and owner's manual for tuning tips. Performer RPM engines require **91 octane fuel**. In some cases, it may be necessary to plug the vacuum advance from the distributor to the carburetor, to prevent detonation. The Performer engines always use the vacuum advance. A re-torque is recommended after initial start-up and cool-down (allow 2-3 hours for adequate cooling). Torque cylinder heads to 65 ft./lbs. following the tightening sequence (**See Figure 1**). Torque RPM Air-Gap E-Tec intakes to 11 ft./lbs. (**See Figure 2**). Save all paperwork that you receive with your engine for future reference.

ENGINE AND CAMSHAFT RUN-IN: Signature Series engines use a roller camshaft, and do NOT require a run-in procedure.

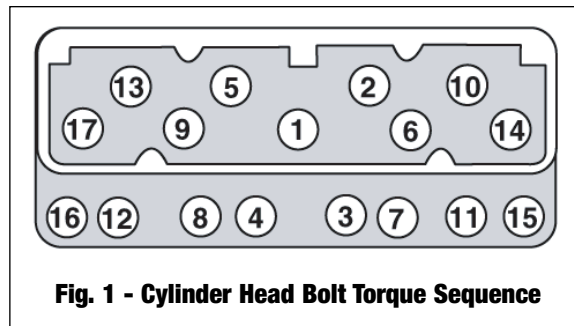


Fig. 1 - Cylinder Head Bolt Torque Sequence

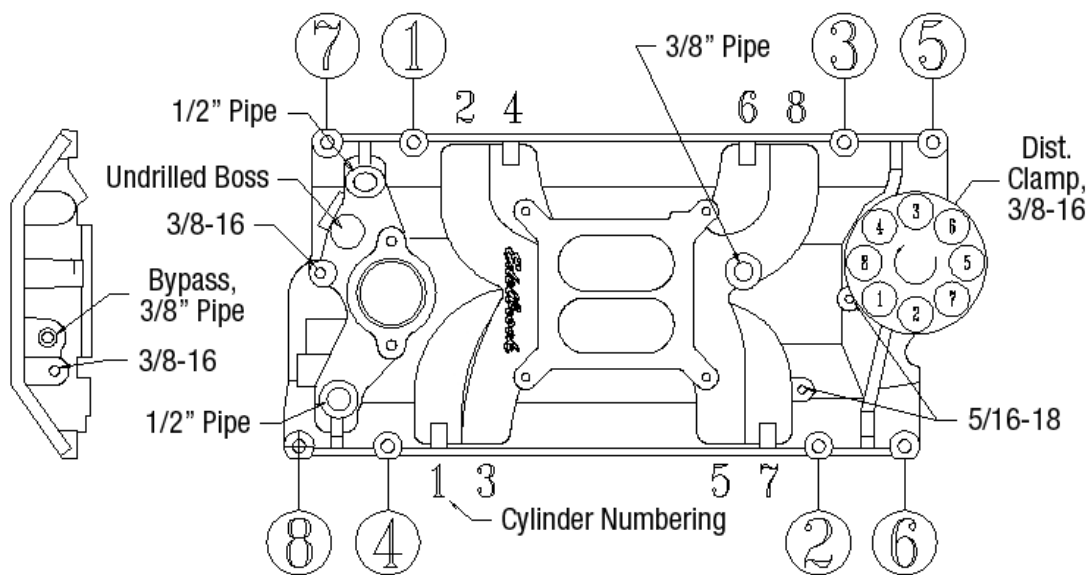


Figure 2 - Intake Manifold Bolt Torque Sequence, Cylinder Numbering, and Firing Order
Small Block Chevy Firing Order - 1-8-4-3-6-5-7-2
Turn Distributor Counter Clockwise to Advance Timing

NOTICE

TO PROPERLY PROTECT YOUR INVESTMENT, YOU MUST SEND IN YOUR WARRANTY INFORMATION.
WARRANTY PAPERWORK IS SUPPLIED IN YOUR KIT.



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