



## EDELBROCK BIG BLOCK CHEVROLET CRATE ENGINE

Victor 540 C.I.D.

Catalog #46230

### GENERAL INSTALLATION INSTRUCTIONS

**PLEASE** study these instructions carefully before beginning this installation. If you do not feel comfortable performing this installation, it is recommended to have the installation completed by a qualified mechanic.

**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. ENGINE IS COVERED BY A 2-YEAR, UNLIMITED MILE WARRANTY. SEE SUPPLIED WARRANTY PAPERWORK FOR DETAILS.**

**IMPORTANT:** This instruction sheet provides general 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. Installing an engine is a complicated procedure that requires a high level of automotive and mechanical knowledge. Consulting with an experienced automotive technician is highly recommended.

**CAUTION: This engine is NOT INTENDED for marine use. Not legal for use in pollution controlled vehicles.**

**DESCRIPTION:** 46230 is a Victor level 540ci BBC Crate Engine. This engine has a 4.500" bore, 4.250" stroke and standard 9.80" BBC deck height producing 540 CID. The short block features 4340 forged connecting rods, forged pistons and 4340 forged crankshaft for extreme durability. The engine is fitted with a custom hydraulic roller camshaft and topped with E-CNC 355 cylinder heads (79555) and a Victor Jr. intake manifold (2902). This combination capable of 677 HP and 658 TQ on pump gas with appropriate carburetor and calibration.

**IMPORTANT NOTES: There is no oil in your engine.** The dipstick is included with the supplied oil pan. Remove any paint from engine mount bosses, cylinder block to clutch housing or transmission mounting surface, and crankshaft flange before installing engine.

**ENGINE OIL AND PRIMING:** Your engine is shipped without any oil in the pan or filter. Before starting engine, you will need to fill and prime the oil system. **Do not turn engine over with starter motor for priming.** To prime the engine, mark the distributor as it comes preset on #1 cylinder. Remove the distributor and use a priming tool to turn the pump shaft. A priming tool can be purchased at your local auto parts store. Edelbrock recommends using the supplied 10W-30 motor oil for the first 1,000 miles of break-in. After break-in, change the oil and filter. You may then continue to use a premium quality 10W-30 motor oil thereafter. **You may use full synthetic oil, after the break-in period ONLY.**

**FLYWHEELS AND FLEXPLATES:** Your Edelbrock 540 engine is internally (neutral) balanced. Manual transmission applications should use a high performance, SFI certified, aluminum or steel flywheel. Automatic transmission applications should use a high performance, SFI certified flexplate.

**EXHAUST SYSTEMS:** The Edelbrock 540 engine must use headers and a free-flowing muffler system. **The CNC machined Victor cylinder heads feature exhaust ports that are raised .750" higher than stock. In some applications, this feature may require the use of custom headers for proper chassis clearance.**

**THROTTLE BRACKETS:** Due to the design of Victor intake manifold, stock Chevrolet throttle brackets will not fit. Depending on the application, an aftermarket linkage assembly or throttle bracket may be required.

**FINAL NOTES:** If applicable, install the new engine assembly reversing the steps taken to remove the original engine and accessories. Refer to the factory manual for vehicle specific assembly procedures. Edelbrock recommends Champion RC-12YC spark plugs or equivalent. Edelbrock recommends a 50-50 mix of coolant and water and a new thermostat with opening threshold of 160 to 180 degrees. If original parts are worn, use new belts and hoses. Check all grounds and fluid levels before and after starting the engine for the first time. Your Max-Fire distributor comes with a preset advance curve and will work with an initial setting of 10 to 12 degrees (36° total timing is recommended). Refer to Max-Fire distributor instruction sheet for other options and distributor wiring. This engine requires **91 octane fuel**. In some cases, it may be necessary to plug the vacuum advance from the distributor to the carburetor/throttle body, to prevent detonation. Remember to save all paperwork that you receive with your engine for future reference.

**ENGINE AND CAMSHAFT RUN-IN:** Edelbrock 540 engines use a roller camshaft, and do NOT require a camshaft run-in procedure.

#### **NOTICE**

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

**SPECIFICATIONS**

<b>Item</b>	<b>Description</b>
<b>Crate Engine Part No</b>	<b>46230</b>
<b>Horsepower</b>	<b>650+</b>
<b>Torque (ft./lbs.)</b>	<b>640+</b>
<b>Bore x Stroke</b>	<b>4.500" x 4.250"</b>
<b>Compression Ratio</b>	<b>10.0:1</b>
<b>Block</b>	<b>Edelbrock Iron</b>
<b>Crank</b>	<b>4340 Forged Steel</b>
<b>Rods</b>	<b>4340 Forged Steel</b>
<b>Piston</b>	<b>Forged</b>
<b>Intake Manifold</b>	<b>Edelbrock Victor Jr. 454-R #2902</b>
<b>Carburetor</b>	<b><i>Not Included. 800 CFM Recommended</i></b>
<b>Cylinder Heads</b>	<b>Edelbrock Victor 24.5° #79555</b>
	<i>A356 T-6 Aluminum</i>
	<i>354cc Intake runner / 118cc (Raised) Exhaust Runner +.200</i>
	<i>119cc Combustion Chamber</i>
	<i>Stainless steel 2.300" Intake / 1.880" Exhaust Valves</i>
<b>Camshaft</b>	<b>Edelbrock Late Model RPM #2264</b>
	<i>.632" Intake / .648" Exhaust Lift @ Valve</i>
	<i>247° Intake / 258° Exhaust Duration @ .050" Lift</i>
	<i>112° Lobe Separation Angle</i>
<b>Pushrods</b>	<b>Manley Hardened Steel</b>
<b>Rocker Arms</b>	<b>Edelbrock 77790</b>
<b>Distributor</b>	<b>Max-Fire 22750</b>
<b>Valve Covers &amp; Breather</b>	<b>Edelbrock Racing Engraved Black Finish</b>





## CRATE ENGINE VALVE ADJUSTMENT

Your crate engine is shipped with #1 cylinder in the firing position. You want to start on #1 cylinder firing. To check, look at damper and timing tab are 0 degree TDC. Remove distributor cap and rotor should be pointing toward #1 cylinder. If so, you are ready to start. If not, turn #1 cylinder to firing position at TDC.

- Step 1. Loosen all rocker nuts until rocker arm is able to turn sideways. Remove all pushrods.
- Step 2. Install new pushrod with lube on both ends. Make sure tip hits center of lifter cup. Turn rocker arm backover end of pushrod. You are now ready to start valve adjustment.
- Step 3. With #1 cylinder at TDC firing position, adjust exhaust valves on cylinder numbers 1, 3, 4, 8 and intake valves on cylinder numbers 1, 2, 5, 7 as follows:
  - You need to set rocker at zero lash. While tightening, the rocker nut spin pushrod, when you feel it tighten, you are at zero lash. Tighten rocker nut half turn pass zero lash.
  - Note: If rocker nut has no pressure feel while tightening, replace with new nuts supplied. Nuts must have a locking fill to them.
- Step 4. Turn engine one complete revolution so #6 cylinder is at TDC firing position and adjust exhaust valves on cylinder numbers 2, 5, 6, 7 and intake valves on cylinders 3, 4, 6, 8 in the same manner. The valves are now adjusted.

Replace valve cover gaskets with new ones (supplied) if needed and install valve covers.

