



PERFORMER RPM FE CYLINDER HEADS
For 1961-1976 390-428 Ford FE V8 Engines
Catalog #60059, 60065, 60069, 60075, 60079, 61857
INSTALLATION INSTRUCTIONS

PLEASE study these instructions carefully before beginning this installation. Most installations can be accomplished with common tools and procedures. However, you should be familiar with and comfortable working on your vehicle. If you do not feel comfortable performing this installation, it is recommended to have the installation completed by a qualified mechanic. 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.

DESCRIPTION: Edelbrock Performer RPM FE Cylinder Heads are designed for street high performance use on 1961-1976, 390-427-428 FE V8s, and are interchangeable with original equipment FE Ford cylinder heads. The performance range is 1500-6500 rpm for great throttle response throughout the power band as well as top-end horsepower. The intake and exhaust port openings are CNC machine "matched" and have been designed for maximum flow velocity when matched with our Performer RPM intake manifold, Performer RPM camshaft kit, and a Performer or Thunder Series Carburetor.

Generally, Performer RPM FE cylinder heads are similar in design to Ford 427 Medium Riser cylinder heads. The deck, intake flange, exhaust flange, and valve cover flange are in the stock locations. Spark plug location and angle is the same as stock. Intake and exhaust port flange openings are the same as a 427 Ford Medium Riser head. The intake flange is compatible with our Performer RPM FE intake manifold #7105, Victor intake manifolds #2936 as well as 427 Medium Riser and 428 CJ/SCJ/Police Interceptor intake manifolds or intake manifolds with a stock port exits no larger than 1.94" x 1.24". Performer RPM FE cylinder heads are is not compatible with 427 High Riser, Low Riser, and Tunnel Port intake manifolds or any manifold with a stock port exit larger than 1.94" x 1.24". **(76cc heads have vertical bolt pattern only, 390 GT exhaust manifolds will not fit Edelbrock Cylinder heads).**

APPLICATIONS:

60059 (bare) 60065 - (Hydraulic Roller - Complete) 60069 - (Flat Tappet - Complete)	1960-1976, 390 and 428 C.I.D. Ford FE engines with a 4.05" or 4.13" bore. Cylinder head features 428 CJ valve sizes (2.09" intake and 1.66" exhaust) and 16-bolt 428 Cobra Jet exhaust flange bolt pattern (NOTE: 76cc heads have vertical bolt pattern only, 390 GT exhaust manifolds will NOT fit these cylinder heads) . The combustion chamber is as-cast with a volume of 72cc.
60075 - (Hydraulic Roller - Complete) 60079 - (Flat Tappet - Complete)	1963-68 427 Ford FE Low and Medium Riser engines with a 4.23" bore. These heads have a machined 76cc combustion chamber similar to a Ford Medium Riser chamber and an 8-bolt vertical exhaust flange bolt pattern. Complete heads also uses the 2.09" intake and 1.66" exhaust valve sizes for 427 Low Riser applications. For 427 Medium Riser applications, the #6008 bare head can be used, but must be prepared for the 2.19" intake and 1.73" exhaust valves used in 427 Medium Riser engines.
61857 (bare)	NHRA legal version of our 60059 Performer RPM FE cylinder head for use on 390 FE engines in Super Stock Drag Racing classes. Cylinder head features the 16-bolt 428 Cobra Jet exhaust flange bolt pattern. The combustion chamber is as cast with a volume of 45cc. Note: All hardware included with the head (seats, guides & heli-coils) will be supplied uninstalled.

Complete cylinder heads are assembled with the following components: Stainless steel, one-piece, swirl-polished intake and exhaust valves with under-cut stems for increased flow; steel body Viton oil control seals; Hardened steel spring cups; Edelbrock Sure-Seat Valve Springs #5792 (Flat Tappet/#5821 (Hydraulic Roller), retainers #9734, and valve locks #9612.

NOTE: Complete cylinder heads are assembled and prepared for installation right out of the box. **Bare cylinder heads will have valve guides and seats installed, but will require final guide sizing and a valve job to match the valves you will be using.**

BEFORE BEGINNING INSTALLATION

IMPORTANT NOTES: READ BEFORE BEGINNING INSTALLATION!

For a successful installation, the Edelbrock Performer RPM Cylinder Heads require some components other than original equipment parts. To complete your installation, you will need the following items:

- Head gaskets; Edelbrock #7337
- Intake manifold gaskets; Edelbrock #7224
- Exhaust gaskets; Edelbrock #7229

NOTE: Edelbrock Cylinder Head Gasket Set #7368 may also be used in place of individual gaskets. This set contains all gaskets necessary for cylinder head installation, including cylinder head, intake, exhaust, and valve cover gaskets.

- Edelbrock head bolt kit #8557 (see instructions below)
- 14mm x 3/4" reach x 5/8" hex, gasketed spark plugs (heat range to be determined by specific application)
- Adjustable rocker arm assembly
- Edelbrock Rocker Shaft Stud Kit #6009 (recommended)
- Pushrods compatible with adjustable rocker arm assembly. Use stock length, Ford #B8AZ-6565-C (427 Ball/Cup Type). Length: 9.180" center of ball to center of cup, 9.370" overall.

CHECKING VALVE-TO-PISTON CLEARANCE: Prior to installation, it is highly recommended that valve-to-piston clearances are checked and corrected to minimum specs, if necessary. Minimum intake valve clearance should be .080". Minimum exhaust valve clearance should be .110". The point of minimum intake valve to piston clearance will usually occur somewhere between 5° and 20° After Top Dead Center during valve overlap. The point of minimum exhaust valve to piston clearance will usually occur 20° to 5° Before Top Dead Center during valve overlap. Performer RPM FE heads should be compatible with stock pistons in engines that have the stock or recommended camshafts. Other than recommended camshafts may require aftermarket pistons and/or custom machining of your pistons.

ROCKER GEOMETRY: Rocker geometry should be checked, making sure that the contact point of the roller (or pad on a stock rocker arm) remains properly on the valve tip and does not roll off the edge. Visual inspection of the rockers, valve springs, retainers, and pushrods should be made to ensure that none of these components come into improper contact with each other. If problems with valve train geometry occur, changes such as pushrod length may have to be made.

ROCKER SHAFT: The intake valve has been moved away from the bore centerline compared to a 390/428 head. The intake rocker arm may need to be shimmed over .060". A valve spring shim of the proper diameter may be used.

ACCESSORIES

Although Edelbrock Performer RPM FE cylinder heads will accept OEM components (rocker arms, valve covers, intake manifold, etc.), we highly recommend that premium quality hardware be used with your new heads. **OEM head bolts are not compatible.**

- **Head Bolts or Studs:** High quality head studs or head bolts with hardened washers must be used to prevent galling of the aluminum bolt bosses. We recommend Edelbrock Head Bolt Kit #8557. Bolt threads, underside of bolt heads, and washers should be lubricated with an oil/moly mix prior to installation and torquing. Use thread sealant on any bolts that go into coolant passages.
- **Rocker Shafts:** **Edelbrock #6009 rocker shaft stud kit is highly recommended.** This stud kit will eliminate several installation problems that can occur when installing the rocker shaft assembly. The stud kit will insure maximum thread engagement without risk of bottoming out bolts in the cylinder heads. The use of the stud kit also moves the wear on the threads caused by assembly and disassembly to the stud, which can be replaced if wear is excessive.
- **Rocker Arms:** Adjustable 1.76:1 ratio. The valve springs supplied will accommodate valve lifts up to .600". The intake valve has been moved away from the bore centerline compared to a 390/428 head. The intake rocker arm may need to be shimmed over .060". A valve spring shim of the proper diameter may be used.

- **Valve Covers:** Use Edelbrock Classic Finned Aluminum valve covers #4162, or Signature Series chrome valve covers #4462.
- **Intake Manifold:** Although stock intake manifolds (with a stock port exit no larger than 1.94" x 1.24") may be used, the Edelbrock Performer RPM FE cylinder heads are matched in size and operating range with Edelbrock Performer RPM intake manifolds. Intake ports are CNC-profiled to match Edelbrock #7224 intake gaskets which are recommended for this application.
- **Exhaust Headers:** Most headers or exhaust manifolds designed for original equipment heads will fit the Edelbrock Street Cylinder Heads (**NOTE: 390 GT exhaust manifolds will not fit Edelbrock Cylinder heads**). If cast iron exhaust manifolds are desired with #60059 or #60069 cylinder heads, use 428 Cobra Jet exhaust manifolds; Ford #C80Z-9430-A (RH) and #C80Z-9431-A.(LH). Exhaust ports are CNC-profiled to match Edelbrock #7229 exhaust gaskets which are recommended for this application. Refer to **Figure 2** for bolt flange description.
- **Spark Plugs:** Use 14mm x 3/4" reach gasketed spark plugs with a 5/8" hex. Heat range will vary by application; typical street plug would be Champion RC12-YC. Use anti-seize compound on the plug threads to prevent galling in the cylinder head, and torque to the spark plug manufacturers specification for aluminum heads.
- **Lubricants:** For added performance and protection, we recommend using Edelbrock performance lubricants.

Protect Your Brand New Engine		
High Performance Break-In Oil	SAE 30	P/N 1070
Engine Assembly Lube		P/N 1075

INSTALLATION PROCEDURE

Installation is the same as for original equipment cylinder heads. Consult service manual for specific procedures, if necessary. Be sure that the surface of the block and the surface of the head are thoroughly cleaned to remove any oily film before installation. Use alcohol or lacquer thinner on a lint-free rag to clean. Apply oil or suitable thread lubricant to head bolt threads and the underside of bolt heads and washers to prevent galling and improper torque readings. Use thread sealant on any bolts that go into coolant passages. Torque top row of bolts to 110 ft./lbs. and bottom row of bolts to 100 ft./lbs. in three or four steps, following the factory tightening sequence (**See Figure 1**). A re-torque is recommended after the initial start-up and cool-down (allow 2-3 hours for adequate cooling).

ROCKER SHAFT ASSEMBLY:

With Edelbrock Rocker Shaft Stud Kit #6009:

1. If using the Edelbrock Rocker Shaft Stud Kit #6009, apply a removable strength thread locker, like Loctite blue 242 or equivalent to the cylinder head side of the stud, and install stud hand tight. It does not require a heavy torque due to the thread locker. This will ensure the studs do not back out.
2. When installing the rocker shaft assembly, ARP Lubricant is recommended. Apply lube to the stud threads, nuts and washers. Tighten the nuts evenly as the rocker shaft assembly is being pulled down into position against the pressure of the valve springs. When using ARP assembly lubricant, tighten nuts to 35 Ft-lbs. If using engine oil, tighten nuts to 40-45 Ft-lbs.

With Factory Rocker Shaft Bolts:

1. If not using the Edelbrock Stud kit - The rocker shaft hold down bolts need to be checked to make sure the bolts do not bottom out in the cylinder heads and that the bolt is long enough to engage with the entire length of the heli-coil thread insert in the cylinder heads.
2. When installing the rocker shaft assembly, tighten the bolts evenly as the rocker shaft assembly is being pulled down into position against the pressure of the valve springs. Use engine oil on the bolt threads and bolt head. Tighten bolts to 40-45 Ft-lbs.

Other Assembly Tips: When installing the spark plugs and exhaust manifolds, be sure to use a high temperature anti-seize compound on the threads to reduce the possibility of thread damage in the future. Do not exceed a torque of 25 ft./lbs. on the intake manifold bolts and lubricate the bolt threads prior to assembly.

NOTE: Torque spark plugs to 10 ft./lbs. Do not overtighten spark plugs! If short reach plugs are used, poor performance and possible engine damage may occur.

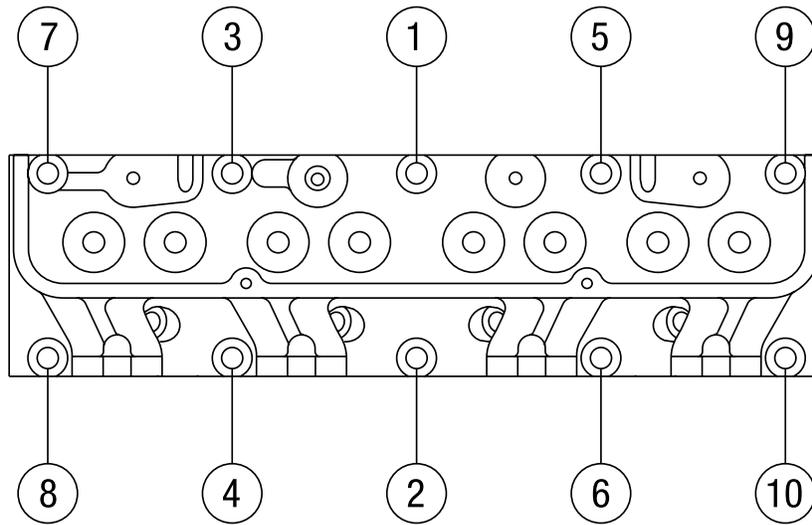
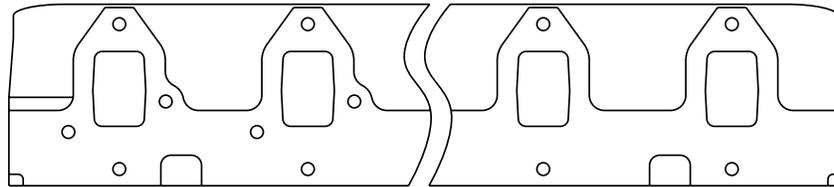


Figure 1 - Ford FE Cylinder Head Bolt Torque Sequence
Torque Top Row of Bolts to 110 ft./lbs.
Torque Bottom Row of Bolts to 100 ft./lbs.
(Torque bolts in 3 to 4 steps, gradually approaching final torque spec.)



60057-60059 / 60069

60079 / 60089

Figure 2 - Exhaust Flange Bolt Patterns

SPECIFICATIONS

Head Bolt Torque:	Top row: 110 ft-lbs Bottom row: 100 ft-lbs	Valve Locks:	3/8" x 7° (#9612)
Intake Bolt Torque:	25 ft./lbs.	Valve Spring Retainers:	7° 4140 Steel (#9734)
Rocker Stand Torque:	35-45 ft./lbs. (See Instructions)	Valve Spring Diameter:	1.55"
Deck Thickness:	5/8"	Valve Spring Installed Height:	1.885" (Flat Tappet) 1.900" (Hydraulic Roller)
Combustion Chamber Volume:		Valve Spring Seat Pressure:	132 lbs. (Flat Tappet) 150 lbs. (Hydraulic Roller)
60057/60058/60059/60065/60069	72cc	Maximum Valve Lift:	.600"
60079/60087/60089	76cc	Rocker Arms:	Adjustable 1.76:1 Pushrods: Stock Length Pushrods. Use Ford #B8AZ-6565-C with Adjustable Rockers (427 Ball/Cup Type)
61857	45cc	Length:	9.180" center of ball to center of cup, 9.370" Overall Length
Deck Surface Milling	Every .005" removed is equivalent to 1cc decrease in Chamber	Spark Plugs:	14mm x 3/4" reach, 5/8" hex, gasketed seat
Volume (Max Deck Milling = .060")			
Intake Port Volume:	170cc		
Exhaust Port Volume:	125cc		
Valve Seats:	Hardened, Interlocking Ductile Iron. Compatible with unleaded fuels		
Valve Size:	Intake - 2.09" Exhaust - 1.66"		



Edelbrock LLC • 2700 California St. • Torrance, CA 90503
Tech-Line: 1-800-416-8628