



PERFORMER RPM RETRO-FIT ROLLER CAMSHAFT
For Chrysler 383-440 ci Big Block 'B & RB' V8 Engines
Part #2206
INSTALLATION INSTRUCTIONS

• **PLEASE** study these instructions carefully before installing your new camshaft. If you have any questions, do not hesitate to contact our **Technical Hotline at: 1-800-416-8628**, from 7am-5pm Monday-Friday, Pacific Standard Time.

• **CAMSHAFT:** Edelbrock Performer RPM camshafts are ground specifically for use with the corresponding Performer RPM manifold. The Performer RPM manifold #7193, and Performer RPM Roller camshaft #2206, are designed to work as a team to give you better driveability and performance. They are dyno-matched and street-proven. For best results, use the Edelbrock manifold/camshaft package with the carburetor and headers we recommend. The Performer RPM Roller camshafts are designed for use with modified or high performance cylinder heads and valve train components only. High Performance adjustable roller rocker arms must be used.

NOTE: Maximum performance is achieved only when the Edelbrock Performer RPM Power Package components are used with the following equipment:

- Performer RPM manifold/camshaft/timing set/valve springs/cylinder heads
- Performer Series carburetor #1407 (750 cfm)
- A fuel delivery system of sufficient capacity
- 1-7/8" primary tube headers
- aftermarket/re-curved distributors

• **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; a step-by-step procedure manual would be far too lengthy. We want to caution you that installing a camshaft is a complicated procedure that requires a good general knowledge of automotive engines. If you are not confident that you can complete the camshaft installation successfully, we suggest you consider having it installed by an experienced mechanic.

CAUTION: Proper installation is the responsibility of the installer. Improper installation will void warranty and may result in low mileage, poor performance, costly reinstallation and engine or vehicle damage.

TO AVOID THESE PROBLEMS YOU MUST DO THE FOLLOWING:

Carefully study and understand all instructions.

Examine the camshaft for possible shipping damage (if damaged contact your dealer immediately).

PREPARATION CHECKLIST

• **TOOLS AND EQUIPMENT**

- box and open-end wrenches
- socket set
- distributor wrench
- pliers (channel locks & hose clamp)
- screw drivers (regular and phillips)
- torque wrench
- hammer
- gasket scraper or putty knife
- timing light
- vacuum gauge
- rags
- water bucket
- harmonic balancer puller

• **HARDWARE & PARTS TO BUY**

- Edelbrock Gasgacinch, #9300
- RTV Silicone Sealer
- Edelbrock Performer-Link True-Rolling Timing Chain and Gear Set #7805
- Appropriate Valve Springs (See Valve Spring section for details)
- Edelbrock Valve Spring Retainers, #9734 (OEM iron heads); #9644 (Edelbrock heads)
- Edelbrock Manifold bolt kit #8594
- pipe plugs, if needed
- chalk
- paper and pencil
- radiator coolant
- Intake gaskets- Edelbrock #7225 or equivalent

INSTRUCTIONS FOR ENGINE PARTS REMOVAL

• **BEFORE CAMSHAFT INSTALLATION**

IMPORTANT NOTICE: If the air conditioning condenser needs to be removed to provide clearance for camshaft removal, have the system evacuated by an appropriate repair facility **BEFORE** starting the installation. The facility can recharge the system after installation.

1. Disconnect battery.
2. For ease of installation, keep all parts in some sort of order.

WARNING: Do not remove radiator cap or hose if engine is hot.

3. Drain radiator coolant, move fan shroud back and remove fan and spacer from water pump. On air conditioned vehicles, remove bolt, lower idler pulley and compressor-to-water pump mount. Disconnect hoses and brackets. Most vehicles will require radiator removal prior to cam removal. Remove water pump.
4. Disconnect all linkage from carburetor such as throttle, throttle springs, transmission, cruise control and automatic choke.

5. Tag and remove vacuum lines.
6. Remove valve covers.
7. Remove distributor cap and wires, rotate engine until rotor points towards number 1 terminal in cap and pointer on front cover is on Top Dead Center (TDC) and remove distributor. Note the approximate position of the vacuum advance canister in relation to the manifold to assist in getting the distributor properly located during re-installation.
8. Remove carburetor and intake manifold. Remove fuel pump.
9. Remove rocker shaft and pushrods.
10. Remove hydraulic valve lifters.
11. Remove crankshaft pulley and, using a suitable puller, crankshaft dampener.
12. Remove front cover. **NOTE:** The front cover oil seal should be replaced before the front cover is re-installed.
13. Rotate engine until timing marks are aligned as shown in Figure 2.
14. Remove cam sprocket bolt, washer, and fuel pump eccentric. Slide sprocket and timing chain forward to remove.
15. Install a long bolt in the front of the camshaft to facilitate removal and carefully remove camshaft. Using an appropriate gear puller, remove the crank sprocket.

- **VALVE SPRINGS**

- **CAUTION: WARNINGS ABOUT YOUR WARRANTY**

In order for this Performer RPM cam and lifter kit to be covered under ANY WARRANTY you MUST use valve springs with a closed pressure of 125-135 lbs., an open pressure of 330-340 lbs. and a lift of .550". Failure to install the correct valve springs may cause lifters to not follow the cam lobes and damage engine parts.

1. Edelbrock complete heads include appropriate valve springs. Do not use dual valve springs with this camshaft. Edelbrock retainers #9734 may be necessary with your installation for proper spring height. **Do not use rotator valve springs or retainers for this application.**

- **LIFTERS**

1. This camshaft has been developed specifically for use with Edelbrock Retro-Fit Roller Lifters #97483. To install your roller lifters, use fresh clean oil on the lifter and the lifter bore just prior to installing. The guide bar (high side of tappet) must face the opposite side of block.
2. Check to be sure that all lifters fit freely in the lifter bores and that the factory did not install oversized lifters in your block to compensate for machining errors.

- **INSTALLATION INSTRUCTIONS**

1. Coat cam lobes and bottoms of each lifter with MoS2 lube (supplied) to prevent cam lobe and lifter wear from occurring during initial start-up.
2. Install new camshaft with new sprockets, timing chain and lifters. **CAUTION:** Use Edelbrock Performer-Link True Rolling Timing Chain and Gear Set #7805. Do not use late model timing chain & gear sets that are designed in a retarded position and are not recommended for this camshaft installation. Edelbrock Timing Sets feature three keyways for specific timing selection. Use locking compound material

on the bolt threads holding timing gear to cam. Torque to factory recommendations specified in motor repair manual. Install camshaft with timing marks lined up as recommended by factory specifications. See Figure 2. When using Performer-Link Timing Chain and Gear Sets with Edelbrock cam and lifter kits, straight up timing alignment is achieved. If any other timing gear set is used, it is necessary to check cam position for correct timing alignment. This requires indexing the camshaft with a degree wheel to verify timing alignment. O.E.M. or non-Edelbrock timing gear sets are not recommended for use with Edelbrock camshafts.

- **INSTALLING PUSHRODS AND ROCKER ARMS**

High performance pushrods and rocker arms are recommended for this installation. After the cam is installed and timed correctly (see Figure 2), it will be necessary to check each pushrod for correct lifter preload.

- **VALVE ADJUSTMENT**

1. Turn the engine over until the No. 1 cylinder exhaust lifter starts to move up. Adjust intake rocker arm to zero clearance between rocker arm and valve tip. From this point turn adjusting nut down (clockwise) 3/4 to a full turn more for final adjustment.
2. Turn the engine over again until the intake lifter just stops coming down. Adjust exhaust rocker arm to zero clearance between rocker arm and valve tip. From this point turn adjusting nut down (clockwise) 3/4 to a full turn more for final adjustment.
3. The above procedure assures correct hydraulic lifter preload. Repeat this procedure for each of the other seven cylinders.
4. Re-install front cover, fuel pump and water pump using new gaskets.
5. Install intake manifold using new intake gasket set and torque manifold bolts to 25 ft./lbs. **CAUTION:** Remove front and rear seal dowel pins in block if so equipped.
6. Install crankshaft dampener and torque to factory specifications.

- **INSTALLING DISTRIBUTOR AND TIMING ENGINE**

NOTE: Due to the fact that the #2206 camshaft has been ground from a new stainless steel core, it will be necessary to install the supplied bronze oil pump drive gear on your distributor shaft. Failure to do so will result in damage to the OEM drive gear.

1. Turn the engine over in the direction of rotation until the No. 1 intake valve closes and continue until the pointer on the front cover is approximately 5 degrees BTDC.
2. Re-install the distributor with the rotor pointing towards No. 1 terminal in the cap, and with the vacuum advance canister in its original position.
3. Lightly tighten the hold-down clamp so that the distributor can still be turned to determine final setting using a timing light with the engine running.
4. Replace valve covers, carburetor linkage and remaining vacuum and electrical connections.
5. Re-install air conditioner, if so equipped.
6. Refill radiator with coolant and re-connect battery.
7. Double check all connections, fuel lines, etc. before starting engine.

- **CAM LOBE DAMAGE:** Cam lobe wear is almost non-existent unless mismatched parts are used or installation of the cam and lifters is done improperly. Cam damage can result from the timing gear loosening due to improper torque on the bolts. Bolts holding the gear to the camshaft should be torqued carefully and a locking compound applied to the threads of bolts. Before installing your new hydraulic roller camshaft, you must replace the gear drive on the distributor with the supplied bronze gear or you may wear out your camshaft prematurely. High-pressure oil pumps are not recommended with hydraulic roller camshafts. Edelbrock camshafts are designed for use with Edelbrock timing chains. The bolts holding the timing gear to the camshaft should be torqued to 35 ft./lbs. and a locking compound applied to the threads of the bolts.

- **CAM GEARS AND CAMSHAFT END PLAY-** If cam gear becomes loose, the cam will slide back in the block, causing the lifters to hit the lobes next to them and also the cam bearing journals. If the engine is run after this happens, the bottom of the lifters and the sides of the lobes will become clipped. When installing a camshaft, it is always important to check for proper operating clearances, especially when high performance components are used. Things to look for that can cause failure and damaged parts are as follows:

1. Improper valve-to-piston clearance (this should be no less than 0.080" on the intake side and 0.100" on the exhaust).
2. Rocker arm to retainer clearance (both ends; valve closed and open).
3. Proper spring settings (see dimensions with spring instruction sheet; correct dimensions mean maximum performance and longer engine life).

- **SPECIAL INSTRUCTIONS**

With the Edelbrock manifold and camshaft package plus a header installation, a carburetor jet change may be required for best performance. Due to the varied applications of year and model of vehicles, no one combination could suffice for all installations. The following procedure is only a guideline and in many cases, the manufacturing specifications for recommended carburetors or timing may be best.

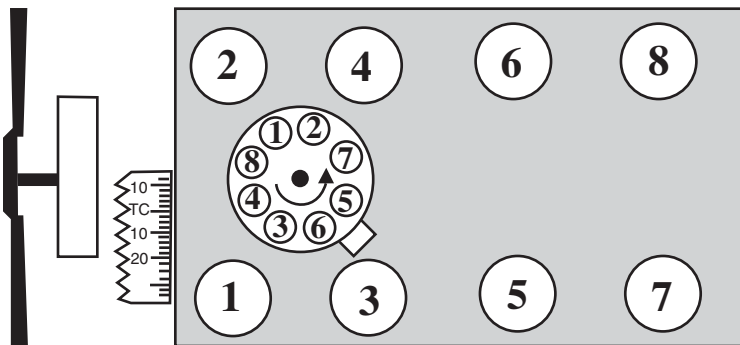


Figure 1- Chrysler 383-440 c.i.d. V8

Firing Order 1-8-4-3-6-5-7-2

Turn distributor counter-clockwise to advance timing.

- **IGNITION TIMING**

Ignition timing for this package may vary with each application. A good starting figure would be between 10 degrees to 14 degrees initial timing at idle with vacuum advance disconnected. Total advance should not exceed 32 degrees to 36 degrees with initial and centrifugal weights combined and should be at full advance by 3000 rpm. After timing is adjusted, re-connect the vacuum advance line.

NOTE: The best combination for any particular vehicle or application must be determined by trial and error using the above information as a guideline.

- **HEADERS**

For best performance, headers are recommended. For this application, they should be 1-7/8" diameter or larger, approximately 31" long and terminating into a 3-1/2" collector. The remainder of the exhaust system should consist of dual exhaust and tail pipes, at least 2-1/4" diameter with low back-pressure mufflers such as Edelbrock RPM Series stainless steel mufflers.

- **WARNING**

In order for this Performer RPM cam and lifter kit to be covered under ANY WARRANTY you MUST use the correct Edelbrock Sure Seat Valve Springs. The end flap or label from your Sure Seat Valve Spring box must be sent in with your camshaft warranty card. Failure to install new Edelbrock Sure Seat Valve Springs with your new Performer RPM cam and lifter kit could cause the cam lobes to wear excessively and could cause additional engine damage. **IF YOU HAVE ANY QUESTIONS ABOUT THIS APPLICATION, PLEASE CONTACT OUR TECHNICAL DEPARTMENT IMMEDIATELY.**

- **CAUTION:** Use Edelbrock Performer-Plus Timing Chain and Gear Set #7805. Do not use late model timing chain and gear sets that are designed for emission-controlled engines. These timing sets are machined in a retarded position and are not recommended for this camshaft installation. Edelbrock Timing Sets feature three keyways for specific timing selection.

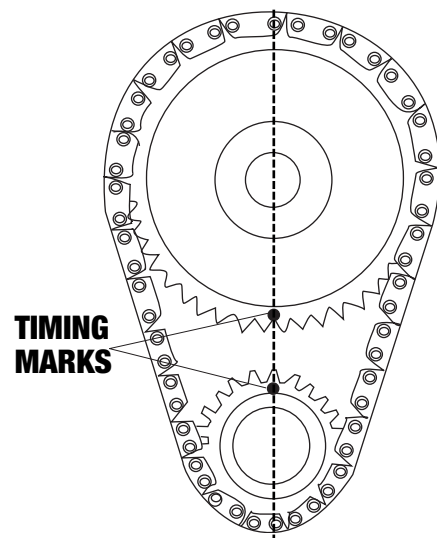


Figure 2- Timing Chain Sprocket Alignment

Edelbrock LLC, 2700 California St., Torrance, CA 90503
Tech Line: 1-800-416-8628 Office: (310) 781-2222

PART #2206**ENGINE: Chrysler 413-426-440 c.i.d. V8****RPM RANGE: 1500-6500****CAUTION:** Do not use dual valve springs.

Use only recommended Edelbrock Sure Seat Valve Springs #5792. Use stock ratio rocker arms only.

- **Duration at .004" Lift:** Intake 300° Exhaust 308°
- **Duration at .050" Lift:** Intake 240° Exhaust 248°
- **Lift at cam:** Intake .360" Exhaust .363"
- **Lift at valve:** Intake .540" Exhaust .545"

- **Timing at .050 Lift:**

Open	Close
Intake 14° BTDC	61° ABDC
Exhaust 47° BBDC	7° ATDC

- **Centerlines:**
 - Lobe separation angle: 112°
 - Intake centerline: 107°

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Rev. 8/10 - AJ/mc**PART #2206****ENGINE: Chrysler 413-426-440 c.i.d. V8****RPM RANGE: 1500-6500****CAUTION:** Do not use dual valve springs.

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