



## Performer RPM Camshaft/Lifters/Lube Kit Part #7167 For 1968-87 429/460 Ford V8 Engines Installation Instructions

- **PLEASE** study these instructions carefully before installing your new camshaft. If you have any questions or problems, do not hesitate to call our **Technical Hotline at: 800-416-8628** or general sales and office line: (310) 781-2222.
- **CAMSHAFT:** Edelbrock Performer RPM camshafts are ground specifically for use with the corresponding Performer RPM manifold. The Performer RPM manifold #7166, and Performer RPM camshaft #7167, 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 camshafts are designed for use with modified or high performance cylinder heads and valve train components only. Screw-in studs and H.P. adjustable 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
  - Performer Series carburetor #1407 (750 cfm)
  - fuel delivery system of sufficient capacity
  - 1-3/4" 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: Improper installation will result in LOW MILEAGE, POOR PERFORMANCE, COSTLY REINSTALLATION, and ENGINE DAMAGE.**
- **TO AVOID ANY PROBLEMS 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**  
Use the following checklist for items needed:
  - Open-end and box 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
  - Gear puller- for crankshaft sprocket
- **HARDWARE & PARTS TO BUY**
  - Gaskets- Fel-Pro #1230 Print-o-Seal, OEM or equivalent
  - Pipe plugs, if needed
  - Edelbrock Gasgacinch, #9300
  - RTV Silastic gasket, silicone
  - Chalk
  - Paper and pencil
  - Radiator coolant
  - Teflon tape
  - Edelbrock Performer-Link True Rolling Timing Chain and Gear Set #7830
  - Edelbrock Sure Seat Valve Springs, #5767
  - Manifold bolt kit #8569

### • INSTRUCTIONS FOR ENGINE PARTS REMOVAL BEFORE CAMSHAFT INSTALLATION

1. Disconnect battery.
2. For ease of installation, keep all parts in some sort of order.
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.  
**WARNING:** Do not remove radiator cap or radiator hose if engine is hot.
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 arms and pushrods.  
**CAUTION:** If your engine has non-adjustable rocker arms you must install screw-in studs and high performance adjustable rocker arms. Crane and other manufacturers sell conversion kits for this which do not require removal and machining of the heads.
10. Remove hydraulic valve lifters.

11. Remove crankshaft pulley and, using a suitable puller, crankshaft dampener.
12. Loosen oil pan and 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 1.
14. Remove cam sprocket bolt, washer, and fuel pump eccentric. Slide sprocket and timing chain forward to remove.
15. Remove thrust plate and camshaft. Using appropriate gear puller, remove crank sprocket.

- **LIFTERS**

1. New lifters must be used with new camshaft. Use only the high rev lifters supplied with this kit.
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.

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- **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 #7830. 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 1.

When using Performer-Plus Timing Chain and Gear Sets (7830 series) 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 and studs are recommended for this installation. After the cam is installed and timed correctly (see Figure 1), it will be necessary to check each pushrod for correct lifter pre-load.

- **VALVE ADJUSTMENT**

1. Turn the engine over until the No. 1 cylinder exhaust lifter starts to move up. At this point install adjusting nut on intake rocker arm and adjust to zero clearance between rocker arm and valve tip. From this point turn adjusting nut down (clockwise) 1/4 turn more for final adjustment.
2. Turn the engine over again until the intake lifter just stops coming down. At this point install adjusting nut on exhaust rocker arm and adjust to zero clearance between rocker arm and valve tip. From this point turn adjusting nut down (clockwise) 1/4 turn more for final adjustment.

- **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 the correct Edelbrock Sure Seat Valve Springs. Failure to install new Edelbrock valve springs with your new Performer RPM cam could cause the cam lobes to wear excessively and could cause additional engine damage.

1. This camshaft is designed to function with Edelbrock Sure Seat valve springs #5767. Do not use other dual valve springs which may have excessive pressure with this camshaft. Valve Spring Retainers #9724 may be used if your stock retainers give insufficient installed valve spring height. Do not use rotator type valve springs or retainers for this application.

3. The above procedure assures correct hydraulic lifter pre-load. Repeat this procedure for each of the other seven cylinders.
4. Re-install front cover, fuel pump, water pump, and oil pan using new gaskets.
5. Install intake manifold using new intake gasket set and torque manifold bolts to 25 ft./lbs.
6. Install crankshaft dampener and torque to factory specification.

- **INSTALLING DISTRIBUTOR AND TIMING ENGINE**

**NOTE:** Before installing your distributor, check the gear drive on the distributor and oil pump for any signs of wear. If worn, be sure to replace with new or you may wear out your camshaft prematurely. This is especially true when rebuilding your engine and a high performance oil system is used, which generates a heavier load on the camshaft gear system. Edelbrock camshafts are designed to use OEM-type gears and oil pumps only.

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. Re-fill radiator with coolant and re-connect battery.
7. Double check all connections, fuel lines, etc. before starting engine.

- **CAMSHAFT/LIFTER RUN-IN**

**CAUTION:** Change the engine oil and filter before start-up and again after the initial break-in. Do not allow the engine to run under 2000 rpm for the first 1/2 hour. Vary engine speed between 2000 and 2500 rpm. Slow idle speeds may result in severe cam and lifter wear.

1. Start the engine and bring to break-in rpm.

- **IMPORTANT INSTRUCTIONS AFFECTING YOUR WARRANTY**

- **CAM LOBE WEAR-** Cam lobe wear is almost non-existent unless mismatched parts are used or installation of the cam and lifters is done improperly. Most cam damage is caused by the timing gear coming loose due to improper torque on bolt. Bolts holding gear to camshaft should be torqued carefully and a locking compound applied to threads of 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").
2. Rocker arm stud slot 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 INSTRUCTION**

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.

- **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 34 degrees with initial and centrifugal weights combined and should be at full advance at 3000-3500 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 1-3/4" diameter, approximately 31" long and terminating into a 3" or 3-1/2" collector. The remainder of the exhaust system should consist of dual exhaust and tail pipes, at least 2" diameter with low back-pressure 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.**

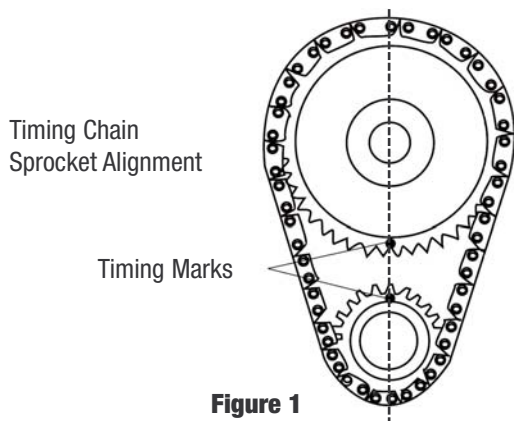


Figure 1

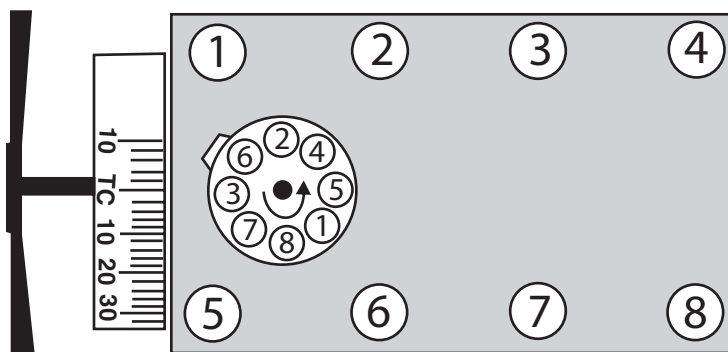


Figure 2

- **CAUTION:** Use Edelbrock Performer-Link Timing Chain and Gear Set #7830. 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.

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

429/460 c.i.d. Ford V8

Turn distributor clockwise to advance timing.

**CAMSHAFT: Performer RPM Hydraulic  
CATALOG #7167  
ENGINE: Ford 429/460 V8  
RPM RANGE: 1500-6500**



**CAUTION:** Do not use racing type dual valve springs. Use only recommended Edelbrock Sure Seat Valve Springs #5767. Use stock ratio (1.73:1) rocker arms only.

**Duration at .006" Lift:** Intake 290° Exhaust 300°  
**Duration at .050" Lift:** Intake 234° Exhaust 244°

**Lift at cam:** Intake .325" Exhaust .340"  
**Lift at valve:** Intake .562" Exhaust .588"

**Timing at .050 Lift:**      **Open**              **Close**  
**Intake**                      14° BTDC      40° ABDC  
**Exhaust**                    55° BBDC      9° ATDC

**Centerlines:**      Lobe Separation:      108°  
                         Intake Centerline:      103°

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Part #7167

Brochure #63-7167C  
Rev. 9/09 - AJ/mc

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**WARNING:** *In addition to the break-in procedure described in the main installation instructions, you must use Edelbrock break-in oil PN 1070 or equivalent. If using your own engine oil, use Edelbrock Zinc Additive PN 1074 or equivalent. Failure to use proper engine break-in oil or zinc additive can permanently damage the new camshaft and void manufacture warranty. Engine break-in oil and zinc additive is NOT included with this camshaft and must be purchased separately.*



PN 1070



PN 1074

**Edelbrock**

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