Performer-Plus 5.0L
Hydraulic Roller Lifter Camshaft only
CATALOG #3722
MODEL: 5.0 Litre Ford V8, 1985 & later
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: 1-800-416-8628.**

- **CAMSHAFT:** Edelbrock Performer-Plus camshafts are ground specifically for use with the corresponding Performer manifold on engines operating between idle and 5500 rpm. The Performer 5.0 EFI manifold #3821 and Performer-Plus hydraulic roller lifter camshaft #3722 are designed to work as a team to give you better driveability and street performance. They are dyno-matched and street-proven. For best results, use the Edelbrock manifold/camshaft package with the Throttle Body/EGR Plate and headers we recommend. The Performer-Plus hydraulic roller lifter camshafts are designed for use with stock or Edelbrock Performer aluminum cylinder heads. Edelbrock Performer-Plus cam #3722 is street legal in all 50 states, E.O. #D-215-14.

  NOTE: Maximum performance is achieved only when the Edelbrock Performer 5.0 EFI Power Package components are used with the following equipment:
  - Performer 5.0 EFI manifold/camshaft/timing set/valve springs
  - Edelbrock/BBK 70mm Throttle Body #3825 and EGR Plate #3828
  - Tubular Exhaust System #6845 or #7945 (1986-93 Mustangs only)
  - Edelbrock RPM Series Cat-back Exhaust System #5645 (1987-93 Mustang GT) or #5646 (1986 Mustang GT and 1986-93 Mustang LX)

- **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 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**

❏ Use the following checklist for items needed.
❏ 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**

❏ gaskets- Fel-Pro Printoseal, OEM or equivalent
❏ pipe plugs, if needed
❏ Edelbrock Gasgacinch, #9300
❏ RTV silicone gasket sealer
❏ chalk
❏ paper and pencil
❏ radiator coolant
❏ teflon tape
❏ Edelbrock Street Legal Performer-Link True Rolling Timing Chain and Gear Set #7814 or #7811 (for off-road applications)
❏ Edelbrock Sure Seat Valve Springs, #5822 or #5922 (for rotators)
❏ Intake gasket Fel-Pro #1250
❏ Manifold bolt kit #8524

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INSTRUCTIONS FOR ENGINE PARTS REMOVAL

- **BEFORE CAMSHAFT INSTALLATION**
- For ease of installation, keep all parts in some sort of order.
  WARNING: Do not remove radiator cap or radiator hose if engine is hot.

1. Disconnect negative battery cable and drain cooling system.
2. Disconnect necessary electrical connections, control cables, linkages, vacuum hoses, ventilation hoses, and coolant hoses at throttle body and manifold. **Do not disconnect fuel lines unless absolutely necessary. Special tooling and procedures are required to re-install fuel lines. See "Fuel Line Removal and Installation" Figure 3, page 4.**
3. Remove distributor cap and spark plug wires as an assembly. Place reference mark on distributor for rotor alignment during reassembly. Remove retaining bolt and distributor.
4. Remove cover plates, retaining bolts, upper intake manifold and gasket. Remove accessory brackets attached to lower manifold. Remove heater tube assembly from lower manifold. Remove retaining bolts, lower manifold, gaskets, and seals.
5. Remove fuel pump.
6. Remove rocker arms and pushrods.
7. Remove old valve lifters.
8. Remove crankshaft pulley and, using a suitable puller, crankshaft dampener.
9. Loosen oil pan and remove front cover.
   NOTE: The front cover oil seal should be replaced before the front cover is re-installed.
10. Rotate engine until timing marks are aligned as shown in Figure 2.
11. Remove cam sprocket bolts. Slide sprocket and timing chain forward to remove.
12. Remove camshaft. Using appropriate gear puller, remove crank sprocket.

- **VALVE SPRINGS**

CAUTION: WARNINGS ABOUT YOUR WARRANTY
In order for this Performer-Plus cam to be covered under ANY WARRANTY you MUST use the correct Edelbrock Sure Seat Valve Springs or equivalent. Failure to install new Edelbrock valve springs or equivalent with your new Performer-Plus 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 #5822 or #5922 (for rotators). Do not use dual valve springs with this camshaft.

- **LIFTERS**

1. The original hydraulic roller lifters should be used with this camshaft. Inspect each lifter for unusual wear and replace as needed with new original equipment Ford or SVO lifters.
2. Check to be sure that all lifters fit freely in the lifter bores.

- **INSTALLATION INSTRUCTIONS**

1. Coat cam lobes and rollers 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 Street Legal Performer-Plus True Rolling Timing Chain and Gear Set #7814. 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 Street Legal Timing Sets feature a single keyway for accurate timing selection. Use locking compound material on the bolt threads holding timing gear to cam. Torque to 35 ft./lbs. or factory recommendations. Install camshaft with timing marks lined up as recommended by factory specifications. See Figure 2.
   When using Performer-Plus Timing Chain Sets (#7814 or #7811) 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**

After the cam is installed and timed correctly (see Figure 2), it will be necessary to check each pushrod for correct lifter pre-load. Before installation, be sure to coat friction surfaces of pushrods, rocker arms and pivots with a suitable lubricant such as motor oil or assembly lube.

- **VALVE ADJUSTMENT**

1. Turn the engine over until the No. 1 cylinder is at Top Dead Center (TDC) on the compression stroke (both lifters will be at the bottom of their travel in the lifter bores). Install both intake and exhaust pushrods, rocker arms, rocker arm pivot, and rocker arm bolts. Carefully tighten bolts while feeling pushrods for vertical clearance. As soon as all vertical clearance is gone from pushrods, count number of turns until bolts bottom out. There should be 1/2 to 1 full turn of lifter pre-load. If vertical clearance exists after bolts bottom out, longer-than-stock pushrods are required. They are available from Ford dealers or other pushrod suppliers. If excessive lifter pre-load exists, use shims under rocker arm pivots to achieve 1/2 to 1 turn pre-load.
2. The above procedure assures correct lifter pre-load. Repeat this procedure for each of the other seven cylinders by rotating the engine 90° and following the firing order (1-3-7-2-6-5-4-8).
3. Re-install front cover, fuel pump, water pump, and oil pan using new gaskets.
4. Install intake manifold using new intake gasket set and torque manifold bolts to 25 ft./lbs.
5. Install crankshaft dampener and torque to 70-90 ft./lbs.

- **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 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.

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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.

- **CAMSHAFT/LIFTER RUN-IN**

CAUTION: Change the engine oil and filter before start-up.

1. No break-in is required with roller lifters.

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 chipped.

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).

- **IGNITION TIMING**

Ignition timing for this package may vary with each application. Best results were obtained using stock Ford timing setting specified for your year and model vehicle (10° BTDC initial). **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. Edelbrock Tubular Exhaust System #6845 or #7945 is a street legal replacement part for 1986-93 Mustangs with the 5.0L V8. RPM Series Cat-back Exhaust systems are also available featuring mandrel-bent tubing and free-flowing RPM Series stainless steel mufflers. Use Edelbrock RPM Series Cat-back Exhaust System #5645 (1987-93 Mustang GT) or #5646 (1986 Mustang GT and 1986-93 Mustang LX).

- **WARNING**

In order for this Performer-Plus cam to be covered under ANY WARRANTY you MUST use the correct Edelbrock Sure Seat Valve Springs or original equipment replacements. 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-Plus cam 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.**

- **SPECIAL NOTICE:** Edelbrock Performer-Plus camshaft kit #3722 has received E.O. #D-215-14 making it legal for street use on pollution-controlled motor vehicles in all 50 states. To assist you with emissions equipment certification, we have included a fan shroud decal to help testing personnel verify that the camshaft is a legal replacement part for 5.0L Ford vehicles. The adhesive-backed decal should be affixed to your fan shroud next to the existing emission and engine specification decal. Do not cover your original equipment specification decal with the Edelbrock Performer-Plus camshaft decal.

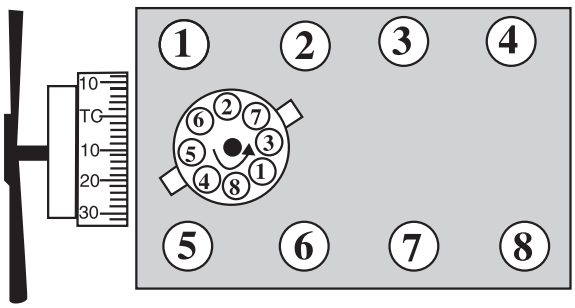


Figure 1—*5.0 Litre Ford*
Firing Order 1-3-7-2-6-5-4-8
Turn Distributor Clockwise to Advance Timing

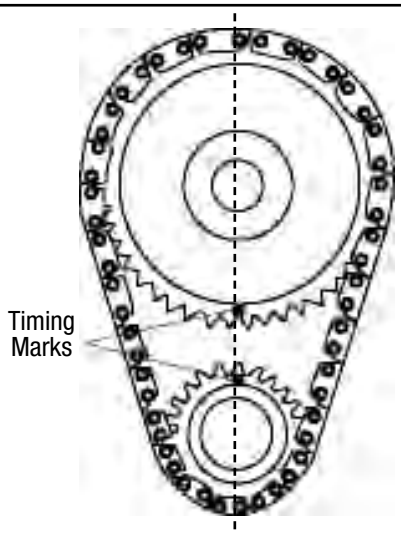


Figure 2-
Timing Chain Sprocket Alignment

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- **FUEL LINE REMOVAL AND INSTALLATION (Optional; <u>Do Not</u> remove fuel lines unless necessary)**

CAUTION: Fuel system is under pressure. Pressure must be released before servicing fuel system components.

1. Remove fuel cap to release fuel tank pressure. Using EFI pressure gauge (T80L-9974-B), release fuel pressure from fuel pressure relief on fuel rail.
2. Before disconnecting fuel lines, disconnect negative battery cable. To disconnect fuel lines, remove retaining clip from outside of fuel line coupling.
3. Use Spring Lock Coupling Remover (D87L-9280-A) for 3/8" line or (9D87L-9280-B) for 1/2" line. Install spring lock coupling remover on fuel line coupling so it enters cage opening. See Figure 3.
4. Push spring lock coupling remover into cage opening to release female fitting from garter spring. Pull couplings apart. Remove spring lock coupling remover.
5. To install fuel lines, install new O-rings on fuel lines. Use only specified fuel resistant brown O-rings. Before installing, lightly coat O-rings with clean engine oil. Clean fittings and replace garter spring (if necessary).
6. Fit female fitting to male fitting and push until garter spring snaps over flared end of female fitting. Ensure lines are locked together and garter spring is over female fitting flared end.
7. Install retaining clip. Ensure horseshoe portion of clip is over coupling. **DO NOT** install retaining clip over rubber fuel line.
   NOTE: Black retaining clip should be installed on fuel supply line and Gray clip on fuel return line.

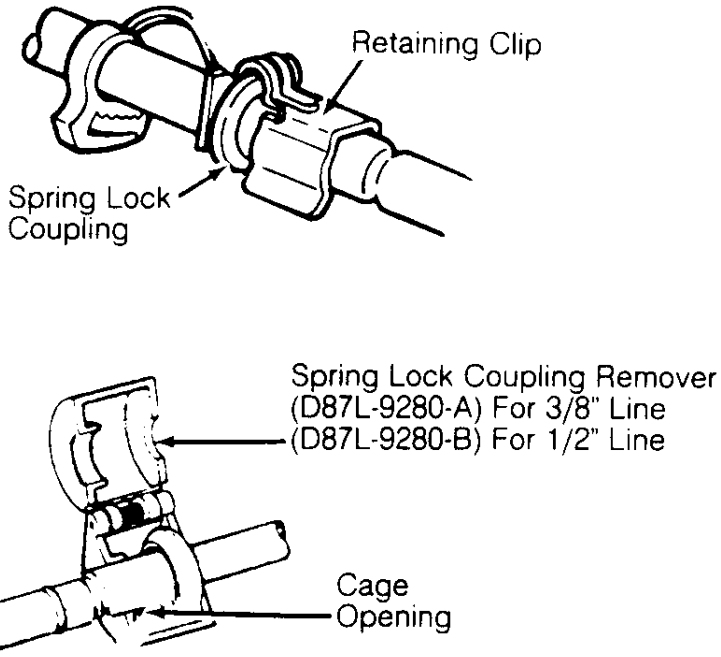


Figure 3
Disconnecting Fuel Lines

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- **CAMSHAFT: Performer-Plus 5.0L**
- **CATALOG #3722**
- **ENGINE: Ford 5.0L V8, 1985 & later**
- **RPM RANGE: idle-6000**
- **CAUTION:** Use only recommended stock or Edelbrock Sure Seat Valve Springs #5822 or #5922 (for rotators).

Duration at .004" Lift:	**Intake 282°**	**Exhaust 282°**
Duration at .050" Lift:	**Intake 220°**	**Exhaust 220°**
Lift at cam:	**Intake .311"**	**Exhaust .311"**
Lift at valve: (w/1.6:1 ratio)	**Intake .498"**	**Exhaust .498"**

Timing at .050 Lift:

	Open	Close
Intake	**0° BTDC**	**40° ABDC**
Exhaust	**40° BBDC**	**0° ATDC**

- **CENTERLINES**
  - **Lobe Separation angle: 110°**
  - **Intake Centerline: 110°**

- **CAUTION:** Use Edelbrock Street Legal Performer-Link Timing Chain and Gear Set #7814. 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 Street Legal Timing Sets feature one keyway for accurate timing selection.

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