



Application: Corvette 1992-1996



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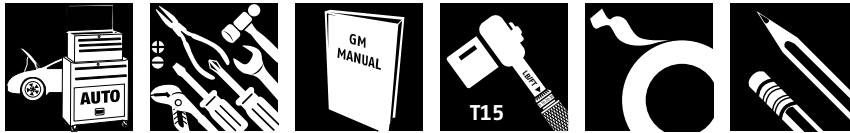
Part Includes

1 - Rollin' Thunder Series Camshaft

Camshaft, Rollin' Thunder Series



Tools Needed



REMOVAL OF ENGINE PARTS BEFORE CAMSHAFT INSTALLATION

Be sure to keep all parts in order

WARNING: DO NOT REMOVE RADIATOR CAP OR RADIATOR HOSES WHILE ENGINE IS HOT.

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.

STEP 1.

Disconnect the battery.

STEP 2.

Drain radiator coolant. Drain plug will normally be located on lower right or left side of the radiator facing the engine.

STEP 3.

Remove radiator and air conditioning condenser if so equipped. In some cases, the front grille may have to be removed. Measure distance from front cover to grille or brackets that may interfere with camshaft against the length of the camshaft.

STEP 4.

Remove the gas cap to relieve pressure. Disconnect fuel line and plug. Replace gas cap.

STEP 5.

Disconnect all linkage from carburetor such as throttle, throttle springs, transmission, cruise control and automatic choke.

STEP 6.

Tag and remove coil wires and sensor wires.

STEP 7.

Tag and remove vacuum lines.

STEP 8.

Remove valve covers.



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Description (cont.)

STEP 9.

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 (Figure 1). Make a note of the approximate position of the distributor housing in relation to the manifold to assist in getting the distributor properly located during reinstallation.

STEP 10.

Remove carburetor and intake manifold. Remove and discard intake manifold gasket.

STEP 11.

Remove rocker arms and push rods.

STEP 12.

Remove hydraulic roller valve lifters.

STEP 13.

Remove crankshaft pulley and, using a suitable puller, crankshaft dampener.

STEP 14.

Loosen oil pan and remove water pump and front cover.

NOTE: The front cover oil seal should be replaced before the front cover is reinstalled.

STEP 15.

Remove fuel pump and fuel pump push rod (vehicles with mechanical fuel pumps only). Rotate engine until timing marks are aligned (Figure 2).

STEP 16.

Remove bolts retaining camshaft sprocket. Remove sprocket and chain.

STEP 17.

Remove camshaft thrust plate and camshaft.

VALVE SPRINGS

Failure to install valve springs may cause lifter not to follow the lobes and damage engine parts. This camshaft is designed to function with valve springs with a closed pressure of 110–120, open pressure of 330–340, and a lift of .550". Special H.P. retainers may be necessary with your installation for proper spring height. Do not use rotator type valve springs or retainers for this application.

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 damaged. See installation instructions for end play specifications.

LIFTERS

Your roller lifters can be reinstalled provided they are in good condition. The best way to check the roller is to roll it, using your fingers. The rotation should feel smooth. If any roughness or sticking is felt, this is an indication of a problem and the lifter should be replaced. To reinstall your roller lifters, use fresh clean oil on the lifter and the lifter bore just prior to installing. Make sure to reinstall the factory guide system.

PUSH RODS AND ROCKER ARMS

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



Description (cont.)

OPERATING CLEARANCES

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:

- Improper valve-to-piston clearance (this should be no less than 0.080").
- Rocker arm stud slot clearance (both ends; valve closed and open). NOTE: We recommend the use of roller rockers only.
- Proper spring settings (see dimensions with spring instruction sheet). Correct dimensions mean maximum performance and longer engine life.

INSTALLATION INSTRUCTIONS

STEP 1.

Check lifters as covered in lifter section. Coat cam lobes with fresh, clean oil. Lube distributor drive of cam with assembly lube (supplied).

STEP 2.

Install new camshaft/cam plate with new sprockets and timing chain. Torque timing chain sprocket to factory specification listed in General Motors or other repair manual.

NOTE: Check camshaft end-play, and maintain end-play clearance between .005" and .010".

CAUTION: WHEN USING PERFORMER-LINK TRUE ROLLING TIMING CHAIN AND GEAR SET WITH AN EDELBROCK CAM, STRAIGHT UP TIMING ALIGNMENT IS ACHIEVED. IF ANY OTHER TIMING GEAR SET IS USED, IT IS NECESSARY TO CHECK CAMSHAFT POSITION FOR CORRECT TIMING ALIGNMENT. THIS REQUIRES INDEXING THE CAMSHAFT WITH A DEGREE WHEEL TO VERIFY TIMING ALIGNMENT. OEM OR NON-EDELBROCK TIMING GEAR SETS ARE NOT RECOMMENDED FOR USE WITH EDELBROCK CAMSHAFTS. USE LOCKING COMPOUND MATERIAL ON BOLT THREADS HOLDING GEAR TO CAM. TORQUE TO FACTORY SPECIFICATION LISTED IN GENERAL MOTORS OR OTHER REPAIR MANUAL.

STEP 3.

Reinstall your roller lifters using fresh, clean oil on the lifter and the lifter bore just prior to installing. Make sure to reinstall the factory guide system. Check to make sure all lifters fit freely in lifter bores.

STEP 4.

Install camshaft with timing marks lined up as recommended by factory specifications (Figure 2).

NOTE: Install new seal between oil pan and front cover if old seal is damaged after removal. Use RTV silicone sealant on seal to ensure proper seal to pan.

STEP 5.

Torque front timing cover bolts to 6-7 ft/lbs.

STEP 6.

Install front harmonic balancer and torque to 60 ft/lbs.

STEP 7.

Install fuel pump and push rod.

STEP 8.

Install water pump using new gaskets and torque to 30 ft/lbs.

STEP 9.

VALVE ADJUSTMENT

a. Install push rod with lube on both ends. Make sure tip hits center of lifter cup Install rocker arms. You are now ready to start valve adjustment.



Description (cont.)

b. With #1 cylinder at TDC firing position (Both #1 lifters are down in the lifter bores and cyl #6 are up), adjust exhaust valves on cylinder number 1, 3, 4, 8 and intake valve on cylinder numbers 1, 2, 5, 7 as follows: You need to set rockers at zero lash. While tightening the rocker nut, spin the push rod, when you feel resistance, you are at zero lash. Tighten rocker nut half turn past zero lash.

c. 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.

STEP 10.

Install the intake manifold using new intake gasket set and torque bolts to 25 ft/lbs.

DISTRIBUTOR INSTALLATION AND ENGINE TIMING

NOTE: This cam is a cast cam and requires a cast distributor drive gear.

STEP 1.

Turn the engine over in direction of rotation until the No. 1 intake valve closes and continue until the pointer on the front cover is approximately five degrees before top dead center (BTDC) (See Figure 1 for firing order).

STEP 2.

Reinstall the distributor with the rotor pointing towards No. 1 terminal in the cap, and with the distributor housing in its original position. If distributor will not drop down all the way to the flange on the manifold, it will be necessary to align the distributor shaft with the oil pump drive. Slowly rotate the engine until the distributor drops down against the manifold, then continue turning until two complete revolutions are completed and the timing marks once again come to five degrees BTDC.

STEP 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.

STEP 4.

Replace valve covers, carburetor linkage, and remaining vacuum and electrical connections.

STEP 5.

Engine oil and filter should be changed before start-up.

CAMSHAFT AND LIFTER RUN-IN

Standard camshaft run-in is not required when using a roller cam.

SPECIAL INSTRUCTIONS

With the Edelbrock manifold and camshaft package installation, a carburetor jet change and ignition timing changes may be required for best performance. Due to the varied applications of years and models of vehicles, no one combination could suffice for all installations. The following procedure is only a guideline.

IGNITION TIMING

Increase initial setting to 14 degrees BTDC (Before Top Dead Center). Total advance not to exceed 38 degrees. To select the proper distributor vacuum advance port on your carburetor, we suggest the following procedure. Before removing the vacuum line from your carburetor, with the engine idling, pull the hose off the port that routes to the vacuum advance canister. After the hose has been removed from the carb, place your finger over the vacuum outlet. If (at idle) you feel your finger being sucked in toward the carburetor, you have full-time vacuum advance. If you do not feel any vacuum pulling at your finger with the engine at an idle, you have timed/ported vacuum advance.

TUBULAR EXHAUST SYSTEM

For best performance, a tubular exhaust system is recommended with the Performer RPM package for optimum performance.



Description (cont.)

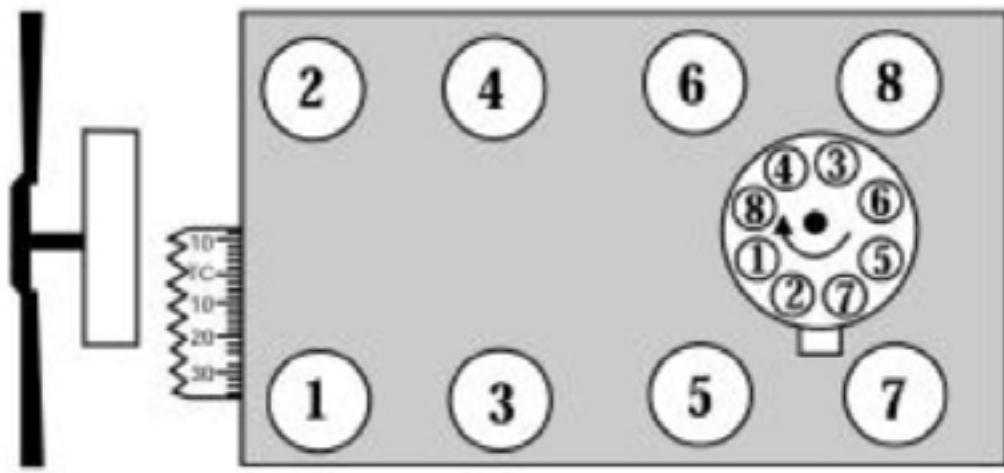


Figure 1 - 350-400 c.i.d Chevrolet V8

Firing Order and Timing Marks

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

Turn distributor counter clockwise to advance timing

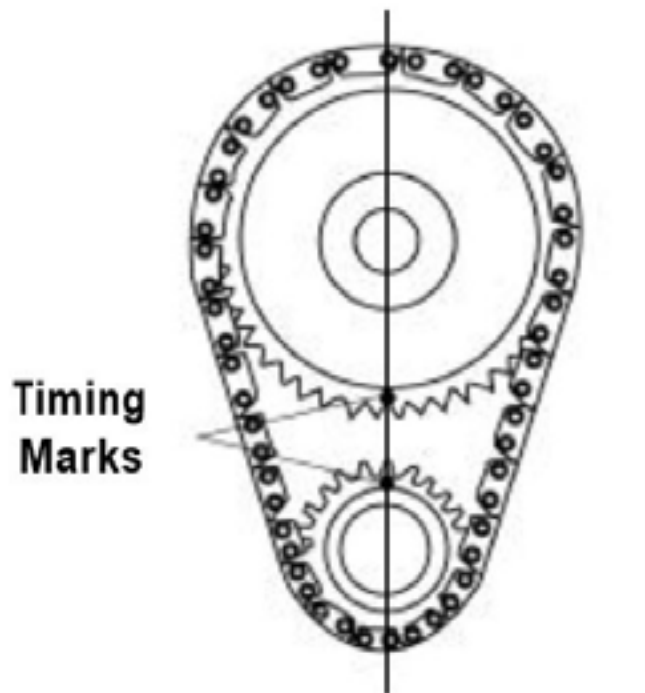


Figure 2

Timing Chain Sprocket Alignment