

Fig. 29—Inspecting Seal for Proper Seating

cylinder block are clean and free from burrs.

(2) Using a new gasket carefully install chain case cover to avoid damaging oil pan gasket. Tighten chain case cover capscrews to 30 foot-pounds first then tighten oil pan capscrews to 15 foot-pounds.

(3) Lubricate seal lip with lubriplate, position damper hub slot on key in crankshaft, and slide hub on crankshaft.

(4) Place installing tool, part of Puller set Tool C-3688 in position and press damper hub on crankshaft (Fig. 30).

(5) Slide pulley over the shaft and attach with bolts and lockwashers. Tighten the bolts to 15 foot-pounds.

(6) Install damper hub retainer washer and bolt.

(7) Install fuel pump and fuel lines.

(8) Install water pump and housing assembly using new gaskets. Tighten bolts to 30 foot-pounds.

(9) Install radiator, fan and belt, hoses and close drains.

(10) Fill cooling system.

(11) With timing indicator on "O" install distributor drive gear with slot pointing to the first intake manifold bolt on left side of engine (Fig. 31).

CAMSHAFT

(Engine Removed from Vehicle)

The camshaft has an integral oil pump and distrib-

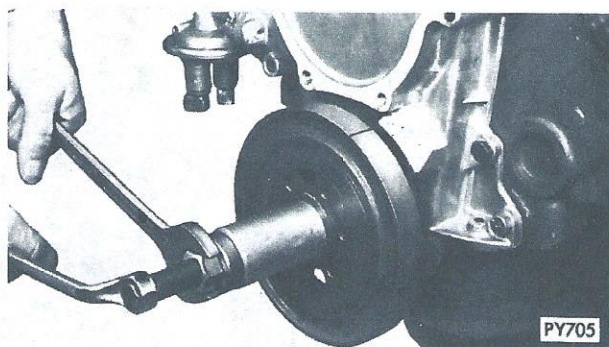
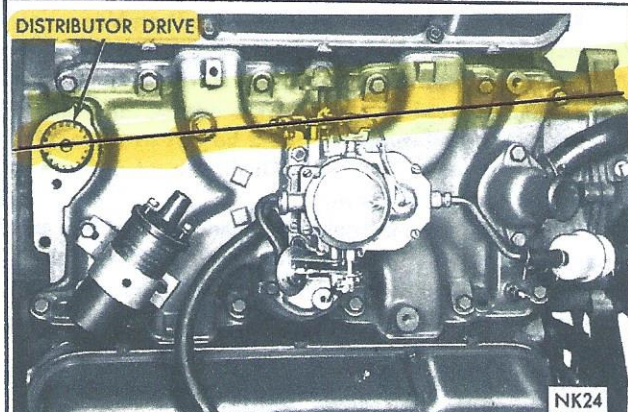


Fig. 30—Installing Vibration Damper Assembly



**Fig. 31—Positioning of Distributor Drive Gear
318 Cubic Inch Shown**

utor drive gear and a bolt on fuel pump eccentric, as shown in (Fig. 32). With engine in repair stand C-3167 and adapter C-3662. Remove intake manifold, cylinder head covers, timing case cover, and timing chain.

Removal

(1) Remove rocker arm and shaft assemblies.

(2) Remove push rods and tappets; identify so each part will be replaced in its original location.

(3) Remove distributor and lift out the oil pump and distributor drive shaft.

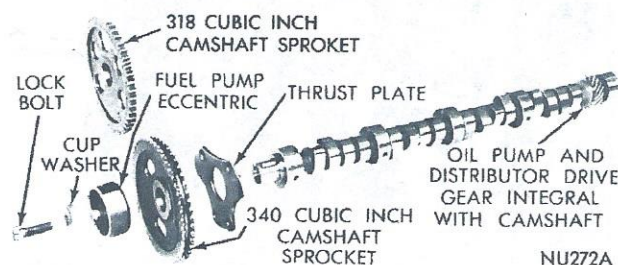
(4) Remove camshaft thrust plate and carefully withdraw the camshaft being careful not to damage cam bearings with the cam lobes.

Installation

(1) Lubricate camshaft lobes and camshaft bearing journals and insert the camshaft to within 2 inches of its final position in cylinder block.

(2) Install Tool C-3509 with tongue back of distributor drive gear, (Fig. 23).

(3) Hold tool in position with distributor lock plate screw. This tool will restrict camshaft from being pushed in too far and prevent knocking out the Welch plug in rear of cylinder block. **Tool should remain installed until the camshaft and crankshaft sprockets and timing chain have been installed.**



**Fig. 32—Camshaft and Sprocket Assembly
(Disassembled View)**

Whenever an engine has been rebuilt and/or a new camshaft and/or tappets are installed, one quart of engine supplement, Chrysler Part Number 1879406 or equivalent should be added to the engine oil to aid in break-in. The oil mixture should be left in the engine for a minimum of 500 miles. Drain the oil mixture at the next normal oil change.

Whenever the camshaft is replaced, all of the tappet faces must be inspected for crown with a straight-edge. If any negative crown (dish) is observed, tappet must be replaced.

CAMSHAFT BEARINGS (Engine Removed from Vehicle)

Removal

- (1) With engine completely disassembled, drive out rear cam bearing welch plug.
- (2) Install proper size adapters and horse shoe washers (part of Tool C-3132A) at back of each bearing shell to be removed and drive out bearing shells, (Fig. 33).

Installation

- (1) Install new camshaft bearings with Tool C-3132A by sliding the new camshaft bearing shell over proper adapter.
 - (2) Position rear bearing in the tool. Install horse shoe lock and by reversing removal procedure, carefully drive bearing shell into place.
 - (3) Install remaining bearings in the same manner.
- Bearings must be carefully aligned to bring oil holes into full register with oil passages from the main bearings. Also, Number two bearing must index with the oil passage to the left cylinder head and Number four bearing must index with the oil passage to the right cylinder head. If the camshaft bearing shell oil holes are not in exact alignment, remove and reinstall them correctly. Install a new core hole plug at the rear of camshaft. **Be sure this plug does not leak.**

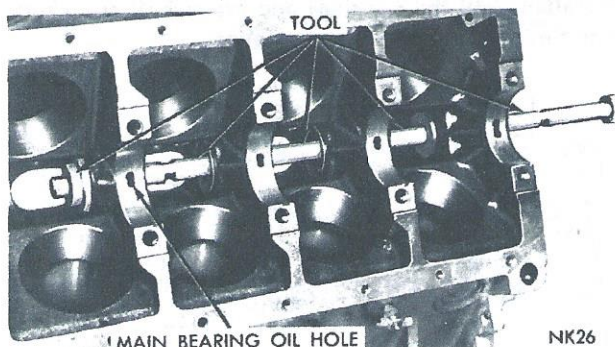


Fig. 33—Removing Camshaft Bearings

DISTRIBUTOR DRIVE SHAFT BUSHING

Removal

- (1) Insert Tool C-3052 into old bushing and thread down until a tight fit is obtained, (Fig. 34).
- (2) Hold puller screw and tighten puller nut until bushing is removed.

Installation

- (1) Slide new bushing over burnishing end of Tool C-3053 and insert the tool and bushing into the bore.
- (2) Drive bushing and tool into position, using a hammer, (Fig. 35).
- (3) As the burnisher is pulled through the bushing by tightening the puller nut, the bushing is expanded tight in block and burnished to correct size, (Fig. 36). **DO NOT REAM THIS BUSHING.**

Distributor Timing

Before installing the distributor and oil pump drive shaft, time engine as follows:

- (1) Rotate crankshaft until No. 1 cylinder is at top dead center on the firing stroke.
- (2) When in this position, the straight line on vibration damper should be under ("O") on the timing indicator.
- (3) Coat shaft and drive gear with engine oil. Install the shaft so that after gear spirals into place, it will index with the oil pump shaft, so slot in top of drive gear will point to the first intake manifold bolt on left side of engine as shown in (Fig. 31).

Installation of Distributor

- (1) Hold the distributor over the mounting pad on cylinder block with vacuum chamber pointing toward right of engine.
- (2) Turn rotor until it points forward and to approximate location of No. 1 tower terminal in distributor cap.
- (3) Place distributor gasket in position.
- (4) Lower the distributor and engage the shaft in the slot of distributor drive shaft gear.

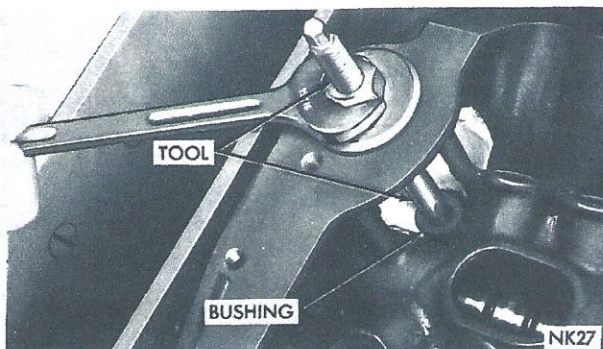


Fig. 34—Removing Distributor Drive Shaft Bushing