

**Fig. 19—Alignment of Timing Marks**

through the seal opening (inside of chain case cover facing up).

(5) Place the seal in cover opening, with seal lips down. Place seal installing plate into the new seal, with the protective recess toward lip of seal retainer Tool SP5598, part of Tool C-3506.

(6) Install flat washer and nut on the installing screw; hold screw and tighten nut.

(7) Seal is properly installed when the seal case is flush against face of cover. Try to insert a .0015 inch feeler gauge between the seal case and cover. If the seal is installed properly, the feeler gauge cannot be inserted.

### Cover Installation

(1) Be sure mating surfaces of chain case cover and cylinder block are clean and free from burrs.

(2) Add 1/8" dia. bead of sealer 4026070 or equivalent at junction of rubber pan seals and cork oil pan gaskets.

(3) Using a new gasket, slide chain case cover over locating dowels and tighten bolts to 200 inch-pounds. Be sure all oil pan gaskets are in place and tighten oil pan bolts to 200 inch-pounds.

(4) Place damper pulley assembly hub key in the slot in crankshaft, lubricate seal lip with Lubriplate and slide hub on the crankshaft.

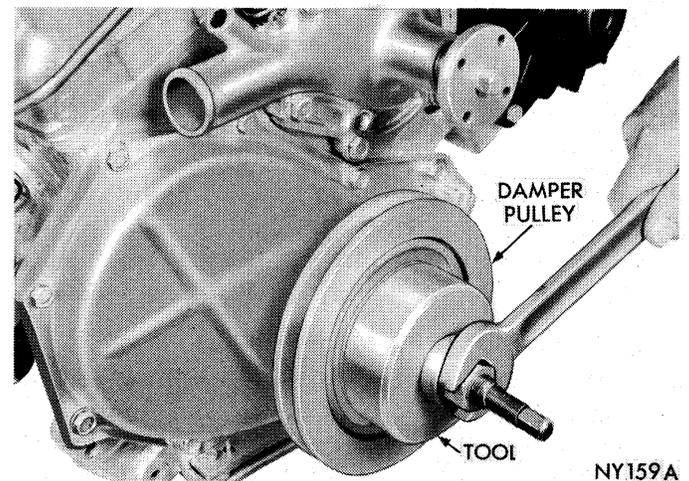
(5) Place installing tool, part of puller set Tool C-3732A in position and press damper pulley assembly on the crankshaft (Fig. 20).

### Oil Seal (Cover Not Removed)

With cover in place and seal removed by the use of suitable tool being careful not to damage seal surface or cover. Install new seal by installing threaded shaft part of tool C-4251 into threads in front end of crankshaft. Place seal in opening with seal spring towards inside of engine. Place the installing adapter with thrust bearing and nut on shaft. Tighten nut until tool is flush with timing chain cover.

### CAMSHAFT

The camshaft has an integral oil pump and dis-



**Fig. 20—Installing Vibration Damper with Tool C-3732A**

tributor drive gear and fuel pump eccentric (Fig. 21).

Rearward camshaft thrust is taken by the rear face of the aluminum camshaft sprocket hub, bearing directly on the front of the cylinder block, eliminating the need for a thrust plate.

The helical oil pump distributor drive gear and camshaft lobe taper both tend to produce only a rearward thrust.

### Removal

(1) Remove tappets, using Tool C-4129.

(2) Remove timing sprockets, distributor and oil pump.

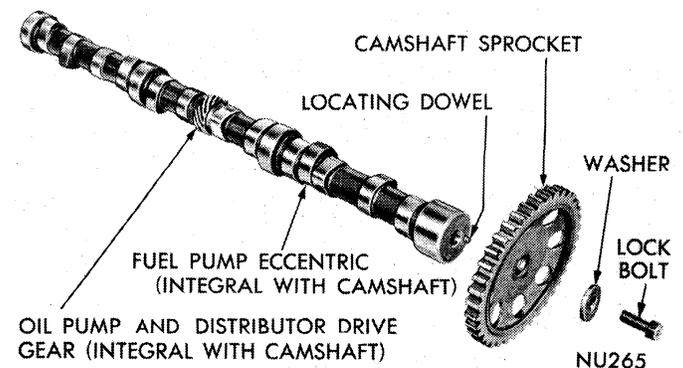
(3) Remove fuel pump.

(4) Install a long bolt into the front of camshaft to facilitate removal of the camshaft; remove camshaft, being careful not to damage cam bearings with the cam lobes (Fig. 22).

### Installation

(1) Lubricate camshaft lobes and camshaft bearing journals and insert the camshaft in cylinder block (Fig. 22).

**Whenever an engine has been rebuilt and/or a new**



**Fig. 21—Camshaft and Sprocket**