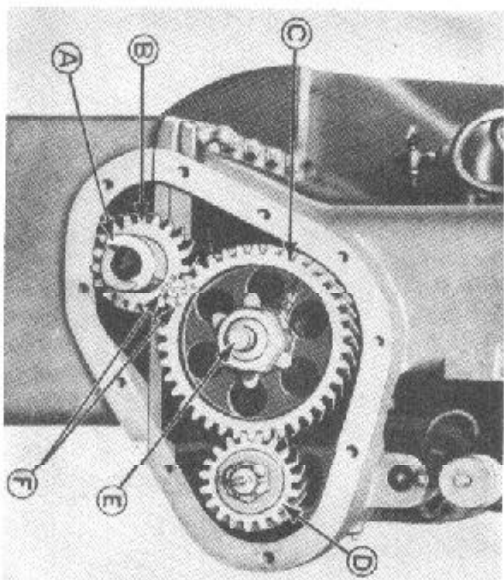


29. FITTING MAIN BEARINGS.

To fit new main bearings on the engine crankshaft (fig. 30) split the engine and remove the generator assembly, as described previously in this section. Remove the bearing caps and after lifting out the crankshaft, examine the bearings. If the bearings are scored or cut, scrape them to fit, if practicable, or fit new bearings. Follow the same procedure for fitting main bearings as described in paragraph 27b for connecting rod bearings. Adjust bearings for clearance of 0.002 inches after replacing crankshaft. When bearings are properly adjusted, the shaft can be turned easily by pulling on the flywheel. There should be no binding. Replace cover pins in main bearing bolts after tightening nuts.

30. CRANKSHAFT AND CAMSHAFT GEAR TIMING.

The crankshaft and camshaft gears in the 1½ KVA Kohler unit are marked S O S. For proper timing they must be meshed so that the O on the crankshaft gear matches the O on the camshaft gear (fig. 33).



TL-90733

- A. Starting jaw.
B. Crankshaft gear.
C. Camshaft gear.
D. Magneto drive gear.
E. Timing marks.
F. Camshaft thrust plug.

Figure 33. Correct meshing of camshaft and crankshaft gears.

31. REPLACING ENGINE ON OIL BASE.

After making internal repairs on the engine in the Kohler unit, clean off the flange joints and examine condition of gaskets. Coat the face of the cylinder block joint with shellac and press gasket firmly into place. Be sure not to bind any of the holes. After gasket has stuck fast apply a little oil to it. Remove the string or rubber band from the oil pump tapet, and replace the engine on the oil base. Set it in place squarely. Be sure not to displace gasket. To replace the remainder of the engine components, reverse the disassembly procedure given in paragraph 25.

Section II

GENERATOR AND FLYWHEEL**32. REMOVING BRUSH HOLDER BRACKET.**

a. General. The commutator or collector rings in the a-c generator may require servicing when the Kohler unit has been operated for a long period. For access to the commutator to dress the bars or undercut the mica, or for access to collector rings for sanding, remove the brush holder bracket from the generator assembly.

b. Procedure. To remove the brush holder bracket, proceed as follows:

- (1) Remove generator end cover. Four retaining screws held it in place.
- (2) Remove brushes from brush holders and disconnect leads connected to voltage regulating relay and switchbox.
- (3) Remove the cap screws holding the brush holder bracket to the generator frame, and pull the bracket off (fig. 34).

33. REMOVING COLLECTOR RINGS AND ARMATURE.

a. Collector Rings (fig. 35). Collector rings may wear excessively due to brush sparking, excessive brush holder spring tension, or a stuck or binding brush. If they do, replace them. To remove collector rings:

- (1) Remove generator brush holder bracket according to instructions in paragraph 32b.
- (2) Remove armature leads which fasten to terminals inside the collector rings.
- (3) Remove the two bolts from the collector rings.
- (4) Withdraw collector rings from armature shaft over the ball bearing.
- (5) New collector rings may be installed by reversing the above disassembly procedure.