Measuring and Adjusting Crankshaft End Play

Special Tools: **P 16** **Dial gauge mount for measuring crankshaft end play**
P 17 **Dial gauge mount for measuring crankshaft end play of assembled engine.**

Checking end play

The end play for all engine types is 0.13 to 0.18 mm (.0051 to .0071 in.), wear limit 0.3 mm (.0118 in.). End play is adjusted before installing the crankshaft.

Adjustment

1. Mount main bearing No. 1 correctly on journal No. 1 of the crankshaft.

2. Install shim of calculated thickness.

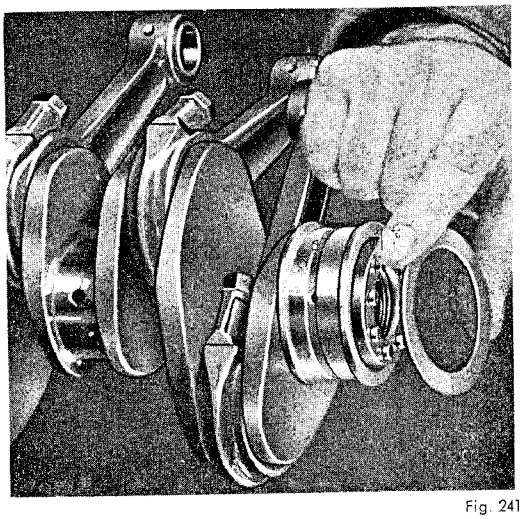

Fig. 241

3. Install flywheel and tighten gland nut to 35 to 37.5 mkg (354 to 272 ft. lb.) torque.

4. Check end play with a feeler gauge.

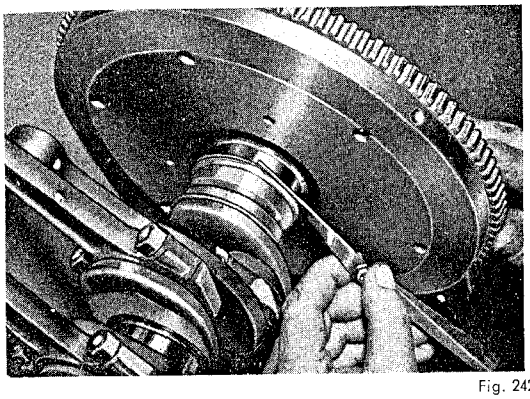

Fig. 242

End play on installed engines is measured at the V-belt pulley and on removed engines on the flywheel.

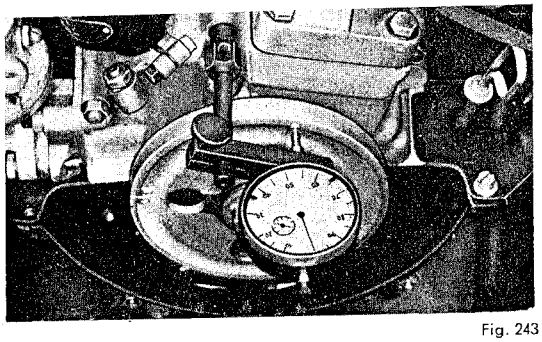

Fig. 243

For these cases use a dial gauge and holder (P 17). The holder is attached to the crankcase on one of the timing case cover studs (Fig. 243) or on the crankcase flange by an engine mount bolt (Fig. 244).

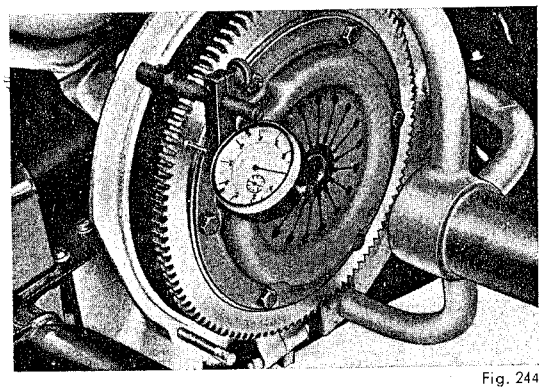

Fig. 244

Calculating end play

1. Use a dial gauge mounting P 16 on the end of the crankshaft and measure the distance between the end of the crankshaft and the thrust face of No. 1 main bearing.
   Note: Push the crankshaft firmly toward the flywheel end before measuring.

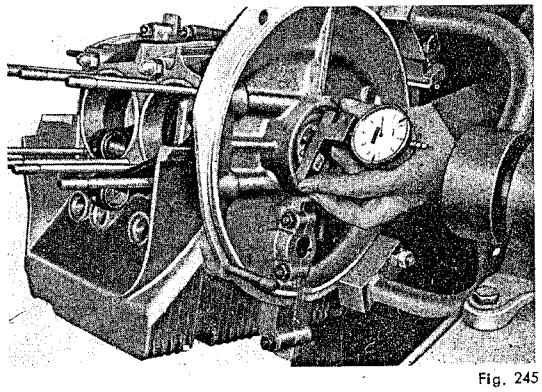

Fig. 245