

Removing and Installing Main Bearings

Removal

1. Disassemble crankcase.
2. Remove crankshaft.
3. Remove bearing inserts from the crankcase halves, and inspect whether white metal surface is reusable. If the lead bronze layer is visible a complete set of new main bearings should be installed.

Inspection

1. Clean crankcase and bearing seats thoroughly.
2. Assemble empty crankcase and tighten cap nuts to 4 mkg (29 ft. lb.) torque.
3. Using VW 247 gauge ring measure the bearing bores in the crankcase (for dimensions see SE 15).

Installation

Note

The bearing seats have an index recess into which the insert index fits in order to prevent the bearing from rotating in the crankcase.

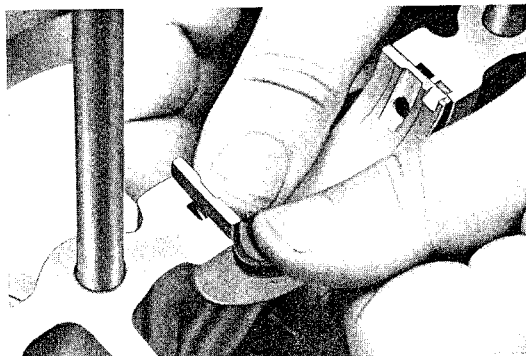


Fig. 2

1. Thoroughly clean the crankcase halves and insure that bearings, bearing seats, and oil passages are clean.
2. Install bearing insert at index first; then press firmly into place (Fig. 2).
3. Lay the crankshaft on the well oiled bearings observing the fit of the thrust faces at bearing No. 1. Apply a uniform thin coat of sealing compound to the crankcase joint allowing no compound to enter the bearing surfaces or into the oil passages. Install right crankcase half and tighten cap nuts to the prescribed torque.
4. Turn crankshaft and check free rotation.

Adjusting End Play

General

The end play (new installation) for the 1600 S-90 engine is 0.10 to 0.18 mm. To achieve the correct clearance, five sizes of thrust washers are available.

Size A	=	2.80 mm
Size B	=	2.85 mm
Size C	=	2.90 mm
Size D	=	2.95 mm
Size E	=	3.00 mm

The thrust washers are marked with a letter indicating the size group.

1. Install bearing inserts into both crankcase halves.

2. Install the crankshaft in the well oiled bearings.
3. Place the thrust washer on the end of the installed crankshaft.

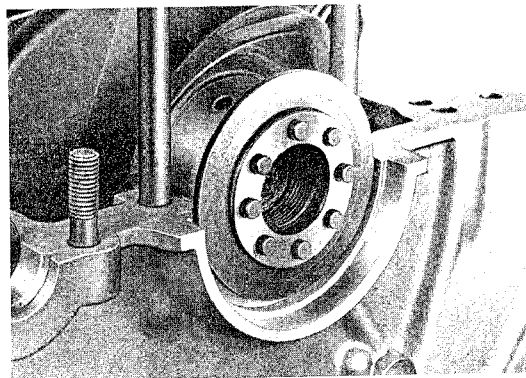


Fig. 3