

## FLYWHEEL SPROCKET SHAFT BEARING-ELECTRA GLIDE/SPORTSTER

The sprocket shaft bearing (Timken) used on the Sportster and Electra Glide engines must have slight operating clearance (endplay) to function correctly.

Endplay should be checked with a dial indicator before disassembling the crankcases whenever engine is to be taken down. Endplay should be checked again if a new Timken is installed, when engine is assembled. Procedures are described in this bulletin.

Normally a set of bearings supplied by the bearing manufacturer will provide the correct endplay when installed in the engine. However, to bring the endplay within specifications when installing a replacement bearing in the Electra Glide engine, it may be necessary to increase the endplay by adding shims to the inner race spacer, or reduce endplay by removing shims, or (if necessary) grind spacer.

Shims .003 inches thick are available under Part No. 23741-55 for the Electra Glide sprocket shaft bearing. Shimming should not be necessary on the Sportster model because it has a greater range of acceptable endplay.

### 1. Checking Endplay before Disassembling Engine

After engine has been removed from motorcycle and before removing crankcase tie bolts, assemble sprocket shaft bearing tool (Electra Glide, part No. 97225-55, or Sportster, Part No. 97081-54) tightly against bearing inner race (60 ft.-lbs.). Remove gear side cover, fasten dial indicator to gear side crankcase and place dial indicator stem on end of gearshaft. Securely fasten engine base to stand and workbench. Find flywheel endplay in bearing by rotating tool while pushing, and pulling on tool, and reading dial indicator at extremes of travel. This operation is shown in Figure 1.

Endplay specifications are as follows:

Electra-Glide	.0005 to .006 inches
Sportster	.001 to .010 inches

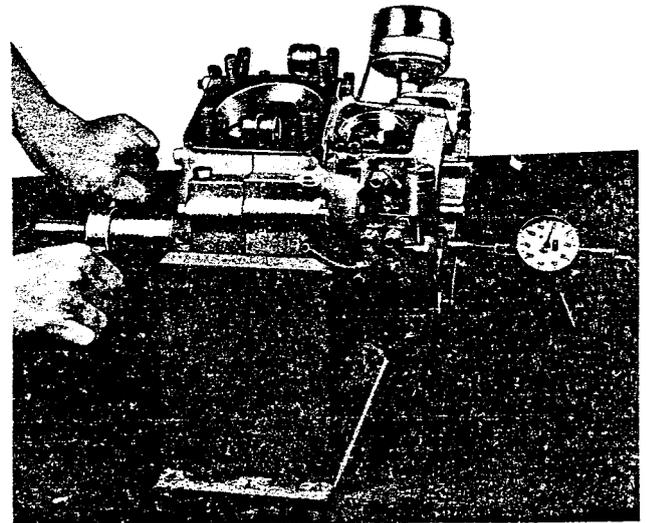


Figure 1. Checking Flywheel Endplay

If endplay is not within above specifications, either install new sprocket shaft bearing (depending on condition after disassembling bearing and inspecting) or correct endplay of existing bearing when engine is reassembled by adding required .003 shims, 23741-55, against spacer or grinding face of spacer with emery cloth on flat surface the required amount to reduce endplay. See Figure 2.

### 2. Checking Endplay when Reassembling Engine

Assemble flywheels into sprocket side crankcase as shown in Figure 3 and with installing tool tightly in place against bearing race, check to see that case rotates freely on the bearing assembly with no trace of bind, and further, a slight amount of shake should be left at the extreme edges of the case with flywheel assembly held in the vise.

If endplay or clearance does not exist, the flywheels should be removed. On Sportster engines a new bearing must be installed. On Electra Glide engines required number of shims should be added next to spacer to increase endplay until any bind is eliminated and slight clearance is felt when checking it per preceding paragraph.

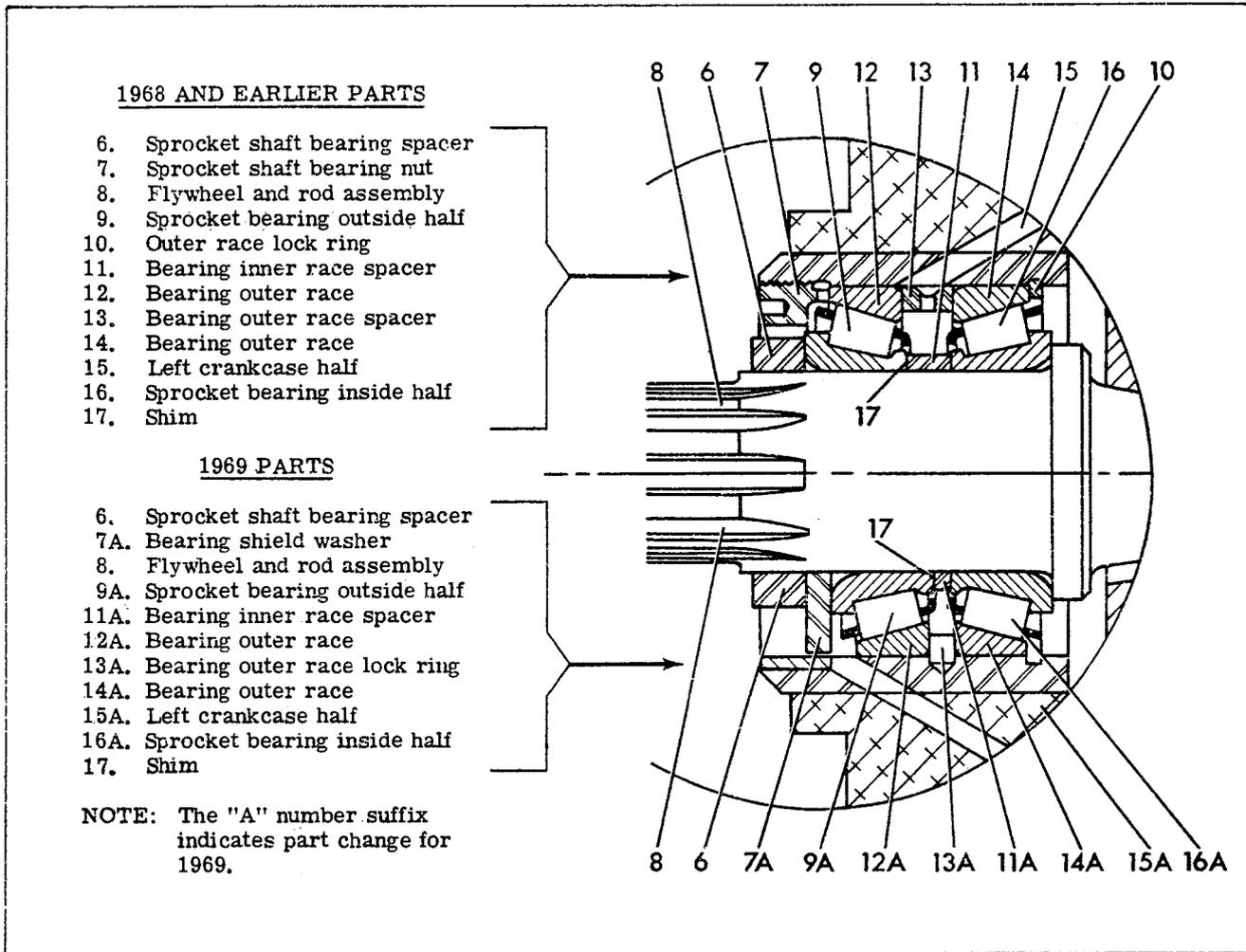


Figure 2. Sprocket Shaft Bearing Parts - Section View

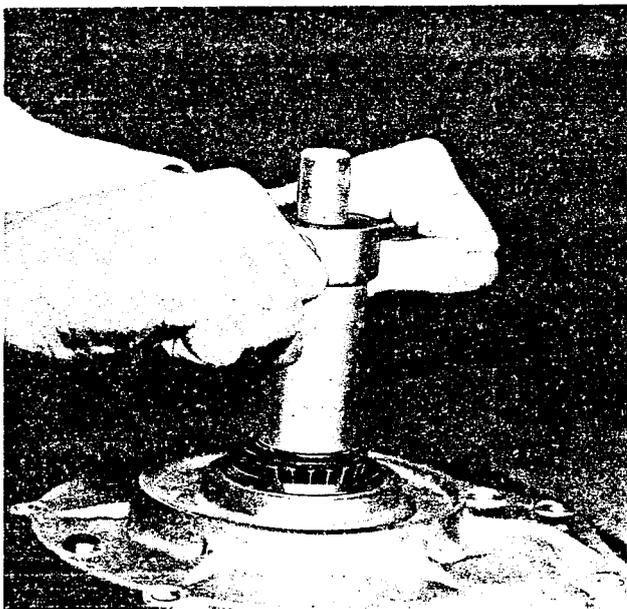


Figure 3. Assembling Flywheels into Sprocket Side Crankcase

When bearing seems free, assemble crankcases complete with pinion bearing and check endplay with dial indicator on gearshaft using the installing tool tightened to approximately 60 ft.-lbs. Rotate flywheels and read dial indicator at extreme ends of crankshaft endplay to determine endplay and correct endplay if necessary.

**HARLEY-DAVIDSON MOTOR CO., INC.**