

SERVICE

SHOP DOPE

No. 364

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TOOL SET FOR ASSEMBLING ENGINE SPROCKET SHAFT BEARING,
BEARING OUTER RACE SPACER, OIL SEAL AND SPROCKET SHAFT
EXTENSION ON MODELS K AND KH



ILLUSTRATION I. TOOL SET COMPLETE - PART NO. 97081-54

| <u>Item</u> | <u>Description</u> |
|-------------|--|
| 1. | Screw |
| 2. | Driver |
| 3. | Bearing Pilot (Model K) |
| 4. | Bearing Sleeve |
| 5. | Outer Race Spacer Sleeve (Model K) |
| 6. | Outer Race Spacer And Oil Seal Sleeve (Model KH) |

INSTALLING SPROCKET SHAFT IN OUTER
SPROCKET SHAFT BEARING, WITH BEARING AND
SPACER, PART # 24781-52 or 24781-54
INSTALLED IN CRANKCASE.

Assembled and aligned flywheels are to be installed in crankcase with the tools described in this bulletin.

If not already installed, press sprocket shaft bearing (A) Illustration 2, on sprocket shaft using an arbor press and a 1" I. D. x 6" long steel tube. When this is done, the sprocket side flywheel must be supported. Use Flywheel Support Plate, Part No. 96137-52 for this purpose. If an arbor press is not available, the tool set described in this bulletin may also be used, using a 1" I. D. x 3 $\frac{1}{4}$ " long steel tube under the Driver (2) Illustration 1, to press on the bearing. After pressing bearing tight against the flywheel install the bearing spacer (B) as shown in Illustration 2.

Hold pinion gear shaft end of assembled and aligned flywheels between copper jaws in a vise. Install Bearing Pilot (3), on Model K engine sprocket shaft only, with counter-bored end of pilot over splined end of sprocket shaft. This bearing pilot is not required on Model KH sprocket shaft since the shaft O. D. acts as a pilot. Insert Screw (1) through pilot and using handle, tighten onto threaded end of sprocket shaft. Remove screw handle.

Place crankcase (with outer bearing and spacer already installed) down over top end of Screw until bearing rests against end of sprocket shaft. See Illustration 3.

Install Bearing Sleeve (4) over end of Screw (1) with the step cut end of sleeve facing down, against the inner race of the bearing. Start Driver (2) on Screw (1) and bring the Driver down against the Bearing Sleeve (4). Continue turning the Driver clockwise until the two halves of the sprocket shaft bearing are brought tight against the spacer.

The two sprocket shaft bearings must be tight against the bearing spacer in order to provide correct bearing clearance.

The tool setup for the above operation is shown in Illustration 3.
Remove tools No. 1, 2, 3, and 4.

INSTALLING OUTER ENGINE SPROCKET SHAFT
BEARING WHEN IT HAS BEEN REMOVED FROM
CRANKCASE.

Hold pinion gear shaft end of assembled and aligned flywheels between copper jaws in a vise. (Inner half of sprocket shaft

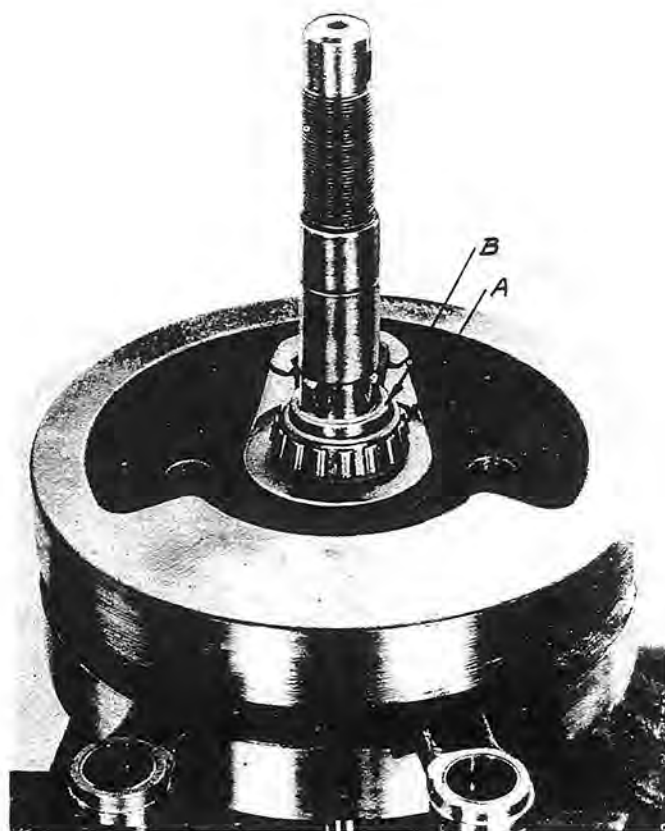


ILLUSTRATION 2

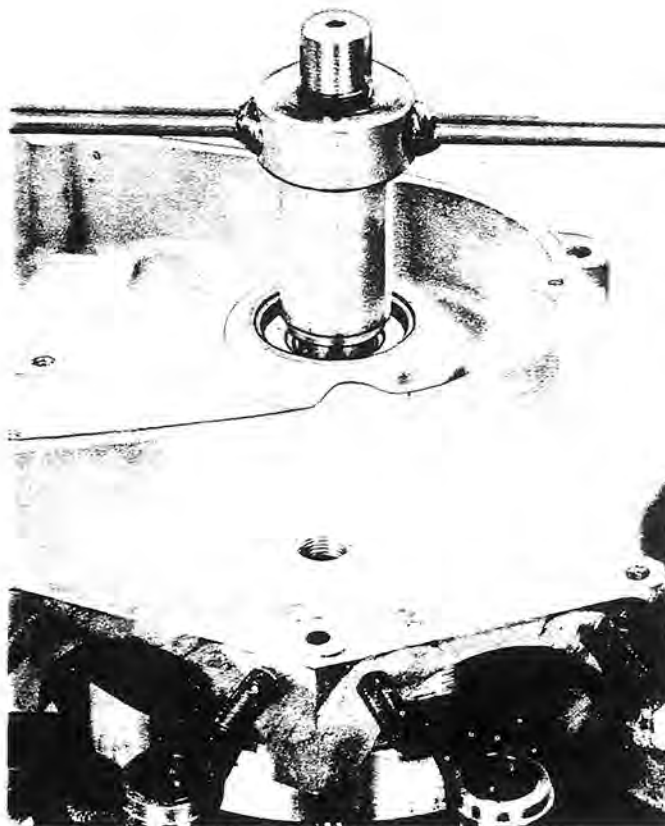


ILLUSTRATION 3

bearing already installed on the sprocket shaft tight against the flywheel, and the bearing spacer in place as shown in Illustration 2).

Take crankcase with engine sprocket shaft bearing race already installed, and place over end of sprocket shaft, and bring the bearing outer race to rest against the inner half of engine sprocket shaft bearing located next to flywheel.

On Model K engine only install Pilot (3) on sprocket shaft with counterbored end of pilot over the splined end of sprocket shaft. Insert Screw (1) through Pilot (3) when used and tighten onto threaded end of sprocket shaft.

Install outer half of sprocket shaft bearing (taper end of bearing down) over end of screw against end of sprocket shaft. Install Bearing Sleeve (4) over end of Screw with step cut end of Sleeve facing down, and bring Sleeve to rest against the inner race of bearing.

Start Driver (2) on Screw (1) and bring Driver down against Bearing Sleeve (4). Continue turning Driver clockwise until the two halves of sprocket shaft bearing are brought tight against the bearing spacer.

The tool setup for above operation is shown in Illustration 4.

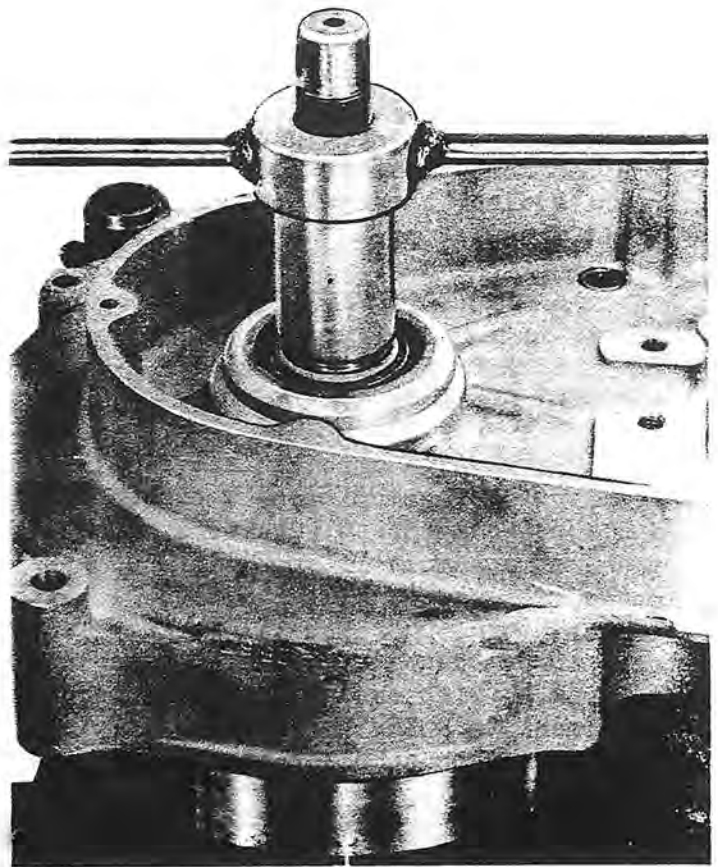


ILLUSTRATION 4

INSTALLING SPROCKET SHAFT SPACER.

PART # 27481-52 (MODEL K)

PART # 27481-54 (MODEL KH)

Insert Screw (1) with Driver (2) into small end of Spacer Sleeve item (5) for Model K or (6) for Model KH. Install sprocket shaft bearing spacer on large end (flanged end) of Sleeve with notched end of spacer facing away from flanged end of driver.

Hold this assembly together and bring spacer to rest against bearing boss in crankcase. Tighten screw onto end of sprocket shaft. Turn Driver (2) in clockwise direction until spacer is pressed into bearing boss tight against sprocket shaft bearing outer race.

The tool setup for above operation is shown in Illustration 5.

Remove tools No. 1, 2, and 5 or 6.

Install sprocket shaft bearing lock ring part # 24701-52.

If a Model KH engine, the lip type seal, Part # 35151-52A is installed at this time.

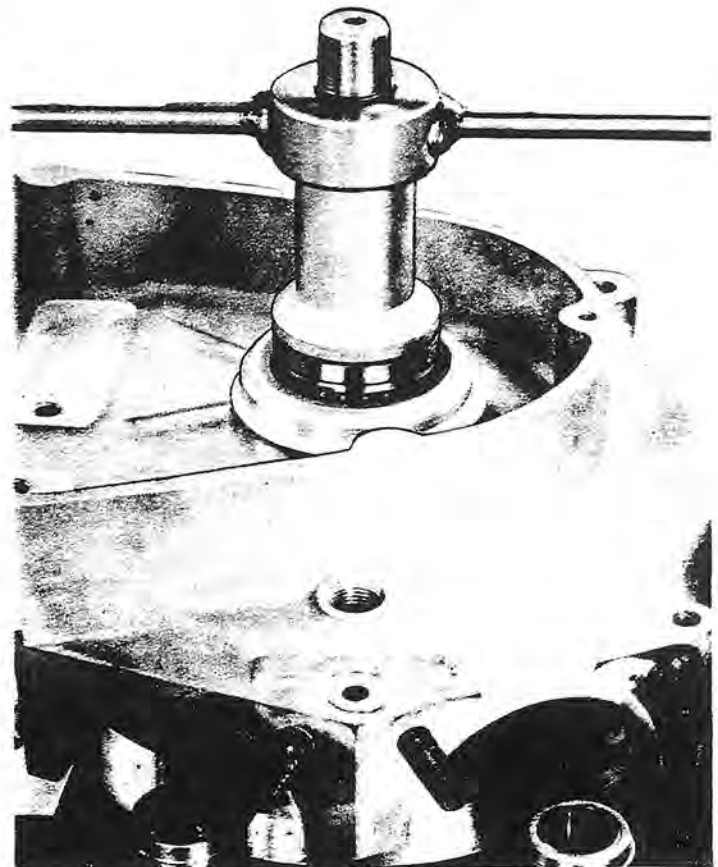


ILLUSTRATION 5

Place the lip side of the seal toward the spacer, insert Screw (1) through Sleeve (6) and tighten screw onto end of sprocket shaft. Turn Driver (2) clockwise until tight against the seal and continue turning until screw stops.

INSTALLING SPROCKET SHAFT EXTENSION ON SPROCKET SHAFT

A) The Model K sprocket shaft oil seal consists of three pieces; a rubber O-ring and two O-ring brass retainers. The correct order of assembly is shown in the parts book. Assemble parts of oil seal together with Harley-Davidson Grease-all so they cannot fall apart when installing. Assemble oil seal parts with enough grease on brass retainers to hold the assembly in place on its seat on sprocket shaft extension.

B) Start sprocket shaft extension on end of sprocket shaft by hand. Insert Screw (1) through sprocket shaft extension and tighten onto end of sprocket shaft. Making sure that splines are aligned, turn Driver (2) clockwise until sprocket shaft extension bottoms against inner race of the sprocket shaft bearing.

During this operation be sure that this oil seal reaches its seat correctly assembled.

The tool setup for the above operation is shown in Illustration 6.

C) The Model KH sprocket shaft extension is installed per procedure B above.

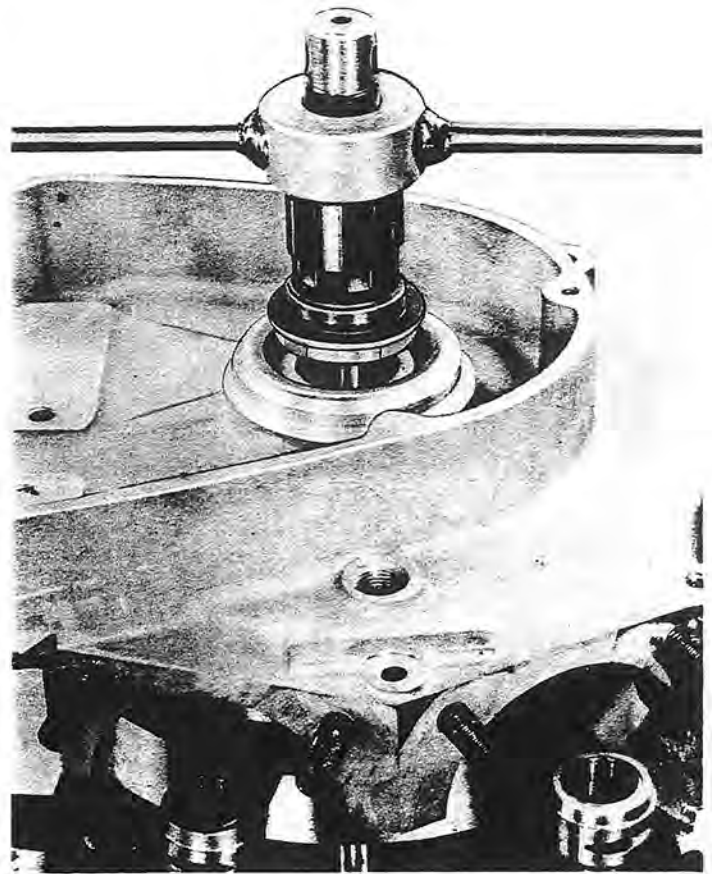


ILLUSTRATION 6

HARLEY-DAVIDSON MOTOR COMPANY
Milwaukee 1, Wisconsin, U.S.A.