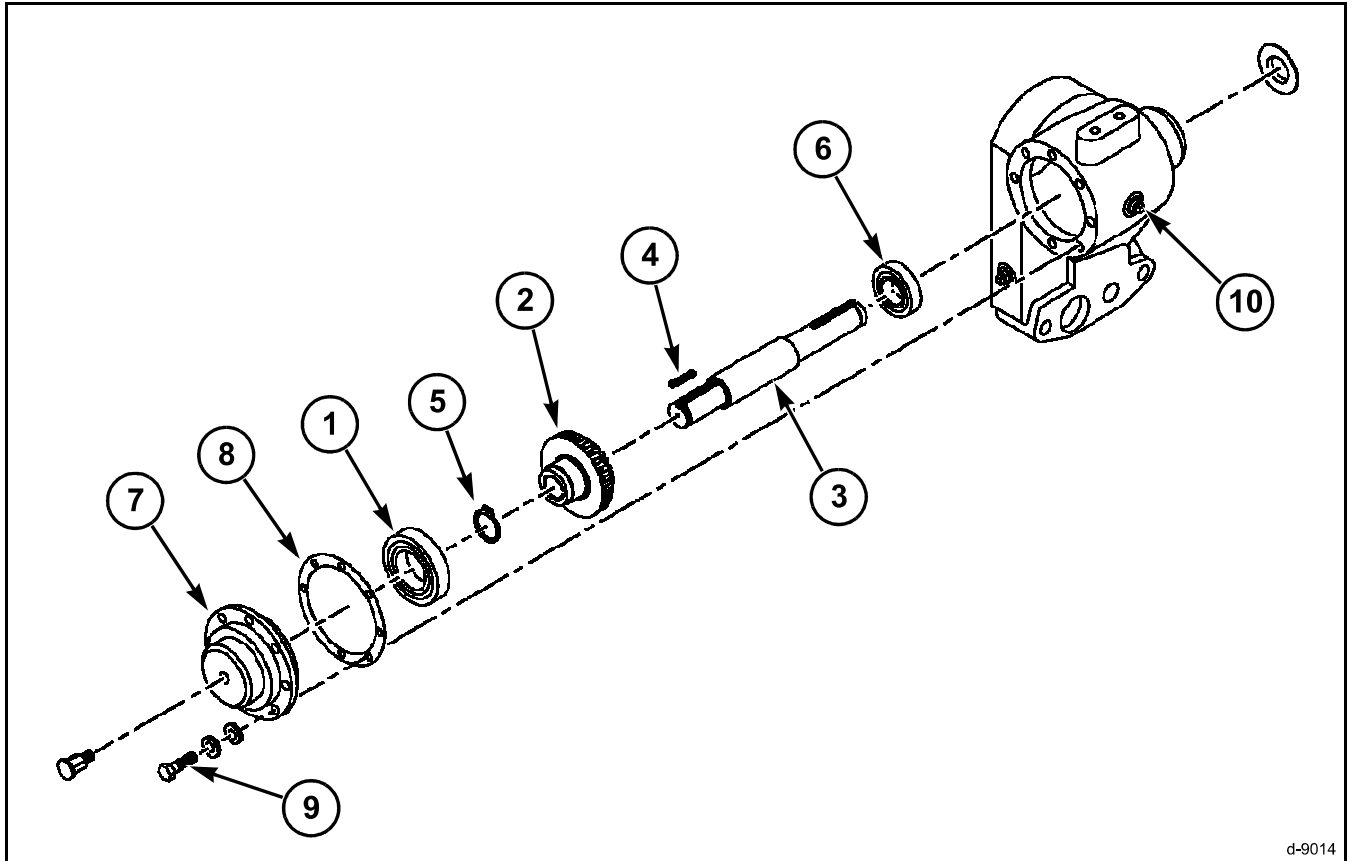


# Gearbox

## Input Shaft



**FIG. 145**

**FIG. 145:** Press the bearing (1) onto the bevel gear (2) until fully seated. Press only on the inner race of the bearing.

Install the bevel gear onto the input shaft (3). The gear must be against the shoulder on the shaft. Install the key (4) for the bevel gear. Install the snap ring (5).

Install the bearing (6) onto the opposite end of the input shaft. Press against the inner race only. The inner race must be against the shoulder on the shaft.

Install the input shaft assembly into the end cap (7). Make sure the bearing is completely seated in the end cap by hitting the input shaft with a soft face hammer.

Install the input shaft and end cap into the housing. Use the original shim pack (8) or one that is thicker. Install the 3/8-16 x 1-1/4 locking cap screws (9) and washers. There are two washers on each cap screw. Tighten the cap screws to 48 to 54 Nm (35 to 40 lbf ft).

Hold the pinion shaft with a tool through the pipe plug hole (10) to keep the pinion shaft from moving. See Pinion Gear Retainer on page 62 in this section.

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**FIG. 146:** Install the dial indicator lever (1) onto the input shaft. The dial indicator lever must be used to get the correct distance from the pointer of the dial indicator to the center of the input shaft. See Dial Indicator Lever on page 62.

Put a dial indicator (2) into position so the pointer is at the mark on the dial indicator lever.

Lightly rotate the input shaft in both directions to check the backlash using the dial indicator. The correct backlash is 0.178 to 0.406 mm (0.007 to 0.016 in).

If the backlash is not correct, remove the input shaft and end cap. Add or remove shims as necessary. Shims are available in the following thickness: 0.004, 0.008, and 0.020 inch.

When the backlash is correct, remove the input shaft and end cap. Apply Permatex® Aviation Form-A-Gasket® No. 3 to the inside lip of the end cap which fits inside the bore in the housing. Do not apply Form-A-Gasket to the shim lip. Install the input shaft and end cap. Tighten the cap screws to 48 to 54 Nm (35 to 40 lbf ft).

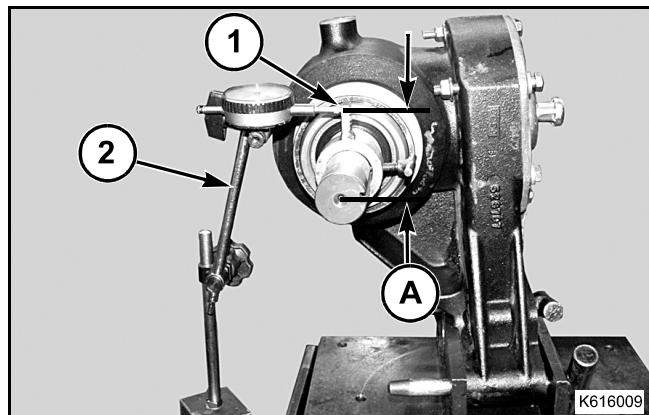
Remove the tool that is holding the pinion shaft. Do not remove the dial indicator and dial indicator lever.

Check to total backlash in the gearbox:

- Lock the cutterbar drive gear into position using thin locking pliers. Put the locking pliers into the bore of the cutterbar drive gear and lock to the bottom of the housing.
- Make sure the pointer of the dial indicator is aligned with the mark on the dial indicator lever.
- Lightly rotate the input shaft in both directions to check the backlash using the dial indicator. The maximum total gear backlash is 1.524 mm (0.060 in). If the backlash is too large, check for and replace worn gears.
- Remove the locking pliers, the dial indicator, and the dial indicator lever.

Add EP-O grease to both gearbox compartments. See the Specifications section for the correct amount of grease.

Make sure gearbox gears turn freely by rotating the input shaft a minimum of ten revolutions. The gearbox must rotate freely for all ten revolutions. If not, then the gearbox must be disassembled to determine the cause.



**FIG. 146**