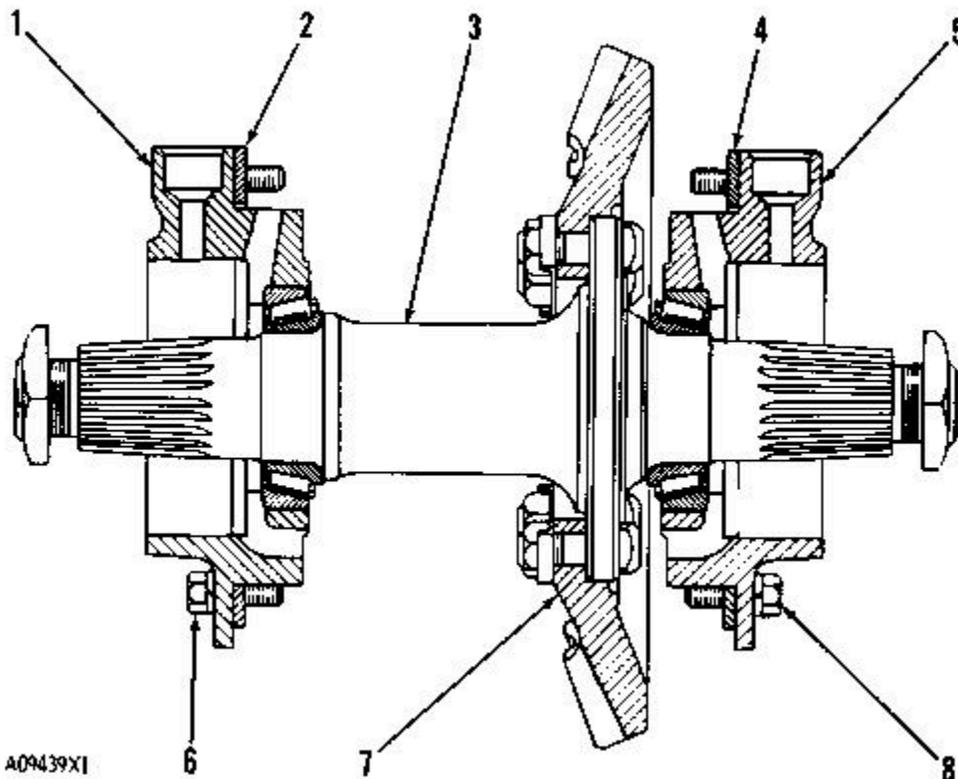


Bevel Gear And Pinion (Power Shift)

SMCS - 1202-11; 1202-12



Adjustment of the Bearings for the Bevel Gear Shaft

1. Install bevel gear shaft (3) without the bevel gear (7) if the transmission is installed in the machine. Install bevel gear shaft (3) with the bevel gear if the transmission is removed from the machine.
2. Install the bearing cage (5) for the right side with a full pack of shims to give free movement (backlash) between the bevel gear and bevel pinion. Install the bolts (8) that hold the bearing cage to the case.
3. Install the bearing cage (1) for the left side without shims (2). Install the bolts (6), without lockwashers, that hold the bearing cage to the case.
4. Tighten bolts (6) evenly while slowly turning the bevel gear shaft until the end play of the shaft is zero.
5. Use a feeler gauge to measure the clearance between the flange of bearing cage (1) and the face of the case, at each bolt. Make sure the measurement at each bolt is the same.

6. Remove bearing cage (1). Install bearing cage (1) and shims (2) with a total thickness of shims .005 in. (0.13 mm) less than the measurement in Step 5.

7. Install the nut for the steering clutch hub on the bevel gear shaft. Turn the bevel gear shaft to make a check of the bearing adjustment. The torque needed to turn the bevel gear shaft must be ... 30 to 40 lb. in. (35 to 46 cm.kg)

8. Adjust the bevel gear free movement (backlash).

Adjustment of the Free Movement (Backlash)

1. Install a 5/8 in.-11 NC bolt in the hole in the transfer case. Tighten the bolt to not more than ... 5 lb. ft. (0.7 mkg)

NOTE: This will keep the bevel pinion as far to the front of the transmission as possible and will keep the pinion from turning.

2. Install a dial indicator so the tip of the indicator is on one tooth of the bevel gear (7).

3. Move the bevel gear backward and forward. The free movement (backlash) is the difference in the measurement which is read on the indicator.

4. Measure the free movement (backlash) at four places around the bevel gear to find the location of smallest free movement (backlash).

5. The correct free movement (backlash) is015 in. +.004 or -.003 in. (0.38 mm +0.10 or -0.08 mm)

6. If the smallest amount of free movement (backlash) is too large, remove some of shims (4) from behind bearing cage (5). Install the shims (that were removed) behind bearing cage (1).

7. If the smallest amount of free movement (backlash) is too small, remove some of shims (2) from behind bearing cage (1). Install the shims (that were removed) behind bearing cage (5).

NOTE: The adjustment of the bearings for the bevel gear shaft will not change by the movement of the shims from one side to the other if the total thickness of the shims does not change.
