

PROPELLER SHAFT

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SPECIFICATIONS

Table 3-1 Propeller Shaft Specifications

| | | |
|--|---|--|
| | 1194 x 75 x 71.5 mm (46.01 x 2.95 x 2.81 in) | |
| Length x Outside Dia. x Inside Dia. | 501.5 x 65 x 61.8 mm (19.88 x 2.56 x 2.43 in) (Intermediate Shaft) 694.5 x 65 x 61.8 mm (27.34 x 2.56 x 2.43 in) (Propeller Shaft) | (for vehicles equipped with 2T-B or 8R-C engine.) |

COMPONENT PARTS

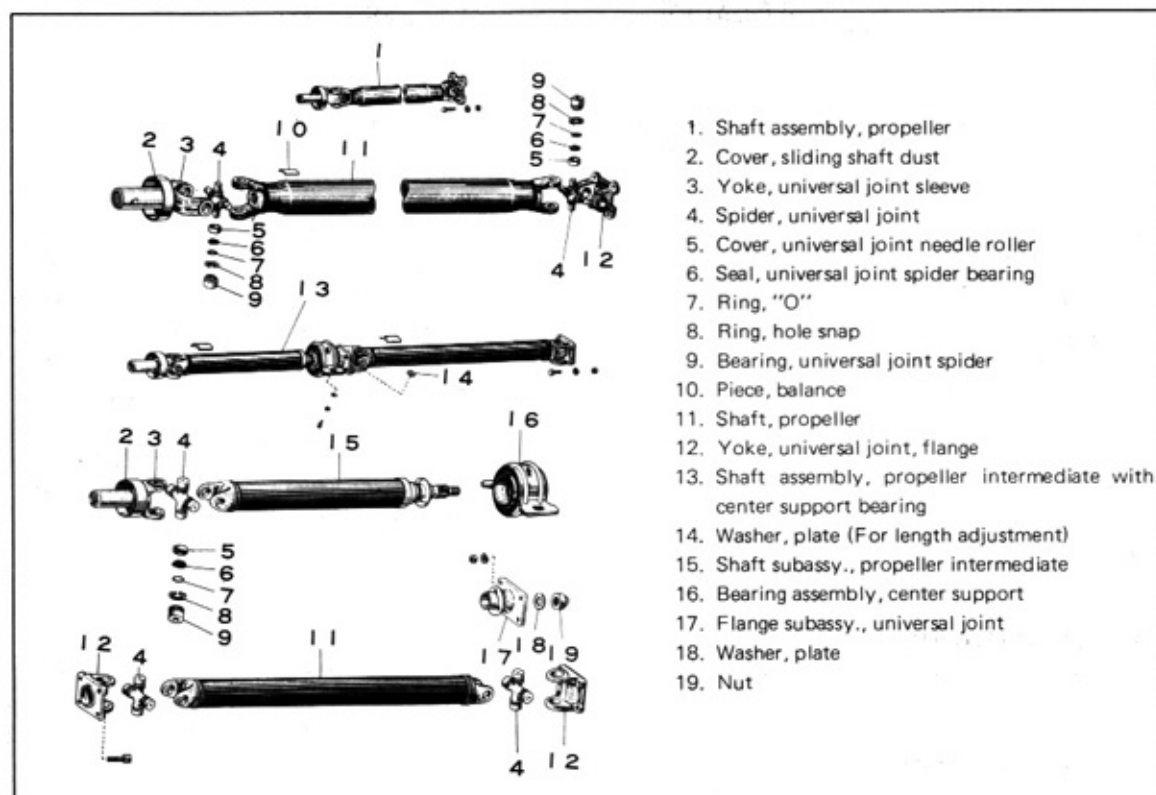


Fig. 3-2 Propeller Shaft Component Parts

REMOVAL

1. Remove the four bolts mounting the propeller shaft universal joint flange yoke to the differential drive pinion companion flange.
2. Remove the propeller shaft and insert Transmission Oil Plug [09325-12010] into the rear end of extension housing.

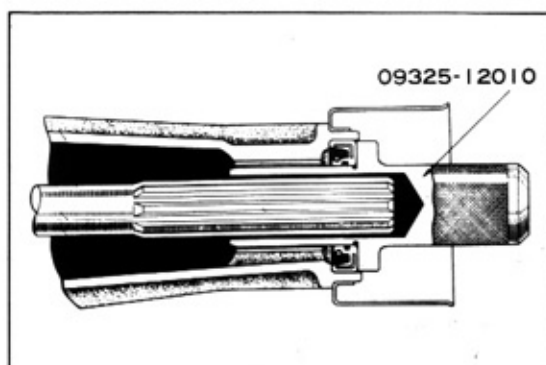


Fig. 3-3 Transmission Oil Plug

UNIVERSAL JOINT DISASSEMBLY

1. Punch matching marks on the sleeve yoke (flange yoke) and propeller shaft, and remove the snap rings.

Note : Since balance weights are welded on the flange yoke and propeller shaft body, these matching marks are used to allow reassembling the parts with their balance weights in the same position they were before disassembly.

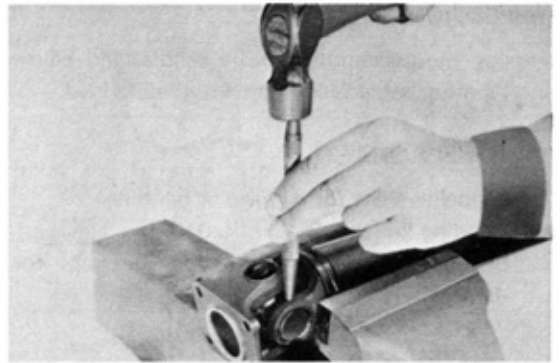


Fig. 3-4 Punching Matching Marks

2. Using Universal Joint Bearing Adapter [09332-30010], press out the spider bearings with a press or vise.

Caution : Sleeve yoke and spider will be deformed if pressed excessively.

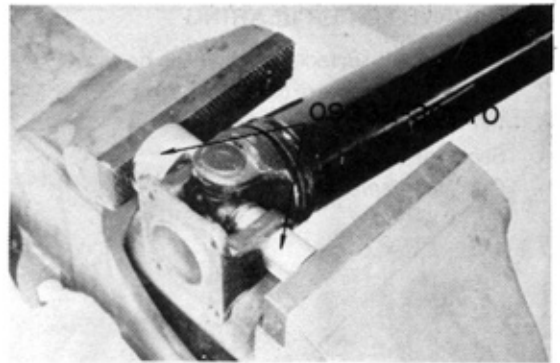


Fig. 3-5 Pressing Out Bearing Cup

3. Lightly tap the joint yoke welded part with a hammer. The rebounding force will allow removing the spider bearings at the pressed-out side from out of the joint yoke.
4. Remove the bearings from the opposite side and the other two ends by following procedures (1)-(3).

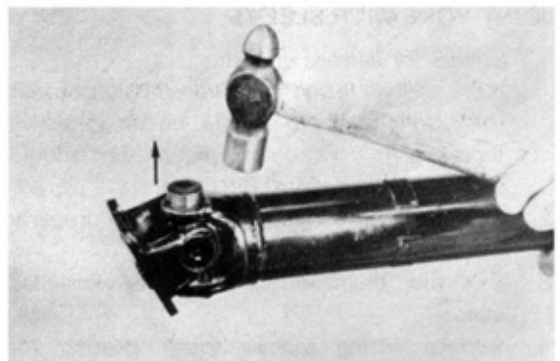


Fig. 3-6 Bearing Removal

CENTER BEARING REMOVAL (Vehicles equipped with 2T-B and 8R-C engine.)

1. Remove the parts (1) and separate the intermediate shaft from the propeller shaft.
2. Remove the part (2) and take off the joint flange (3).
3. Remove the parts (4) and take off the center bearing assembly (5).

Note : Do not disassemble the center bearing assembly. If defective, replace the entire assembly.

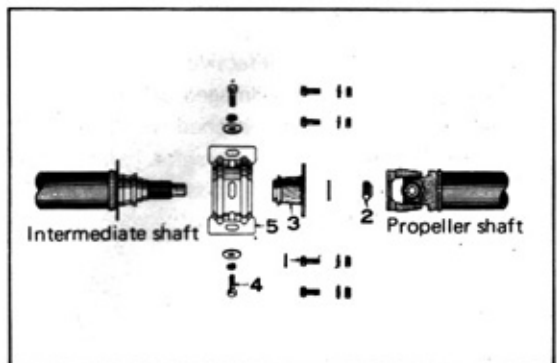


Fig. 3-7 Center Bearing Removal

INSPECTION

Inspect all disassembled parts as directed below and repair or replace any part found defective.

PROPELLER SHAFT

1. Propeller shaft for damage or bending
Bending limit 0.25 mm (0.010")
2. Surfaces fitting against spider bearings for damage.

Bend limit 0.25mm (0.01")



Fig. 3-8 Propeller Shaft Deflection Inspection

SPIDER AND SPIDER BEARING

1. Spider shaft surfaces for damage or wear.
2. Snap rings for deformation or wear.
3. "O" rings for damage or wear.
4. Seals for deterioration.
5. Cups for damage or wear.

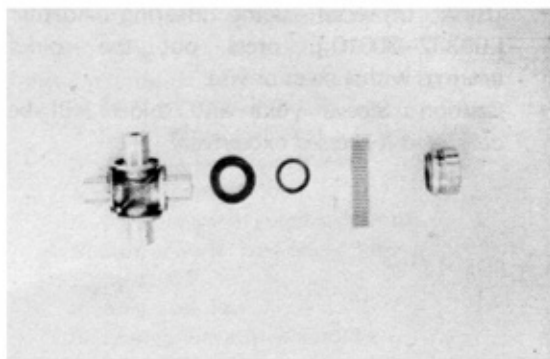


Fig. 3-9 Spider and Bearing Inspection

JOINT YOKE WITH SLEEVE

1. Splines for damage or wear.
Note: When fitted over transmission output shaft splines, there should be no excessive looseness in rotational direction but should slide smoothly in axial direction.
2. Sliding shaft dust cover should be in properly installed state.
3. Extension plug should be in properly installed state.
4. Surface fitting against spider bearing for damage.

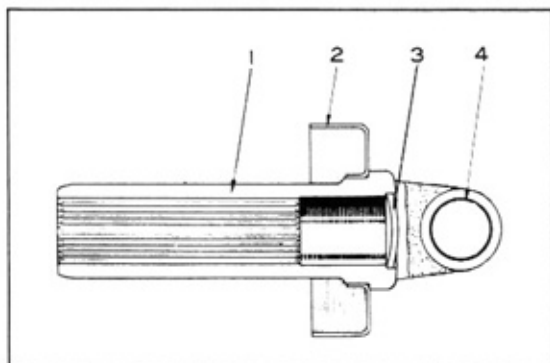


Fig. 3-10 Yoke with Sleeve Inspection

CENTER BEARING

1. Center bearing for defective rotation, faulty seal, deteriorated or damaged cushion rubber.
Caution: The three peened parts on the circumferences of the cushion rubber and housing must never be loosened. Loosening these parts will cause noise to develop.

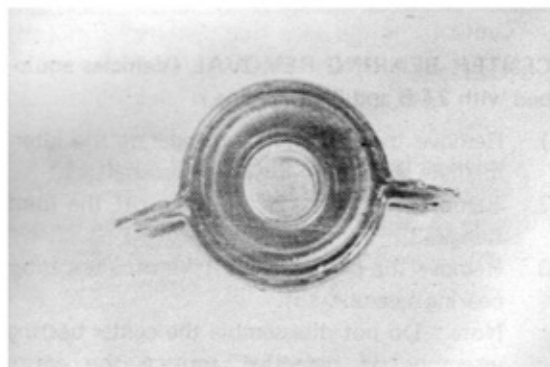


Fig. 3-11 Center Bearing Inspection

UNIVERSAL JOINT REASSEMBLY

1. In Fig. 3-12 and Fig. 3-13 , the presence of “^” mark at position A indicates bore size of hole at punch marked side. Presence of “^” mark at position B indicates bore size of hole at side opposite to that with the punch mark.

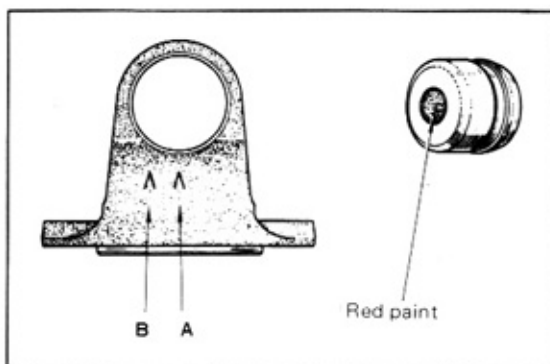


Fig. 3-12 Take In Marks

2. In case of replacing any one of the spider bearings, sleeve yoke, flange yoke, or propeller shaft, make the combination in accordance with the sizes shown in Table 2-2.

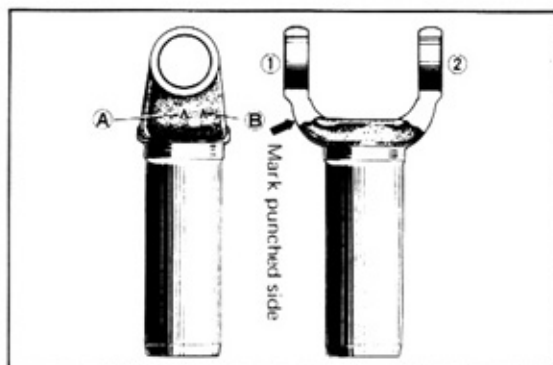


Fig. 3-13 ^ Shape Punched Marks

3. Press the needle roller cover on the spider, grease the spider bearing, insert the needle rollers, and fit on the “O” ring and spider bearing seal.
4. Place the spider in the yoke, and using Universal Joint Adapter [09332–30010], press on the spider bearing at one side with a vise or press. In the same manner, press on the spider bearing at the opposite side.
5. Adjust the play in spider axial direction.

Select and install snap rings that will provide less than 0.05 mm (0.002”) axial play in spider and will be of the same thickness at both sides.

Caution : If the snap ring thicknesses should differ at both sides, the center of propeller shaft yoke will be disturbed and will cause vibration and noise.

6. Install the other ends of the spider by following the procedures 1–5.
7. After reassembling, turn the sleeve and flange yokes in vertical and horizontal directions to see that they turn smoothly.

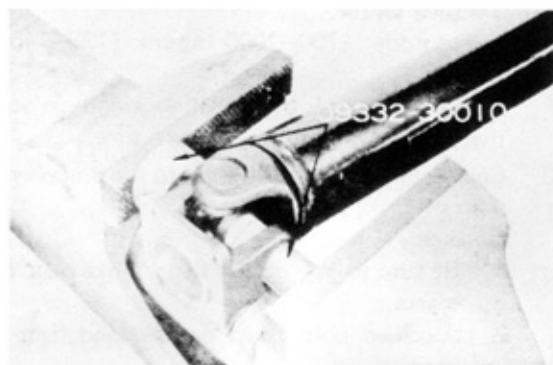


Fig. 3-14 Installing Spider Bearing



Fig. 3-15 Selecting Snap Ring