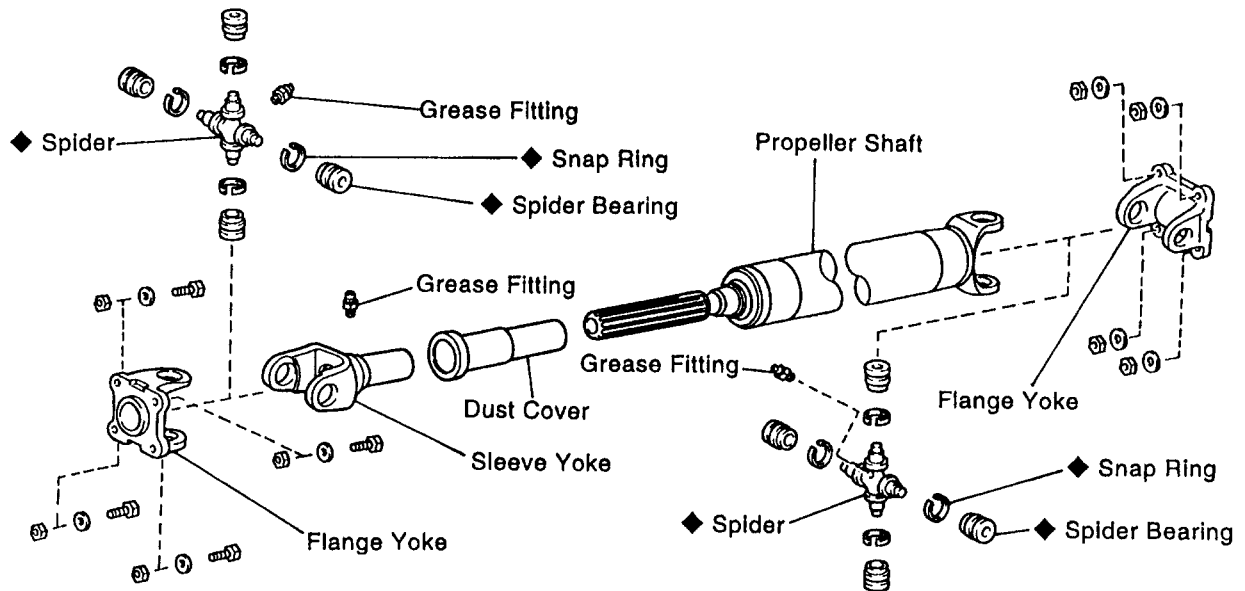
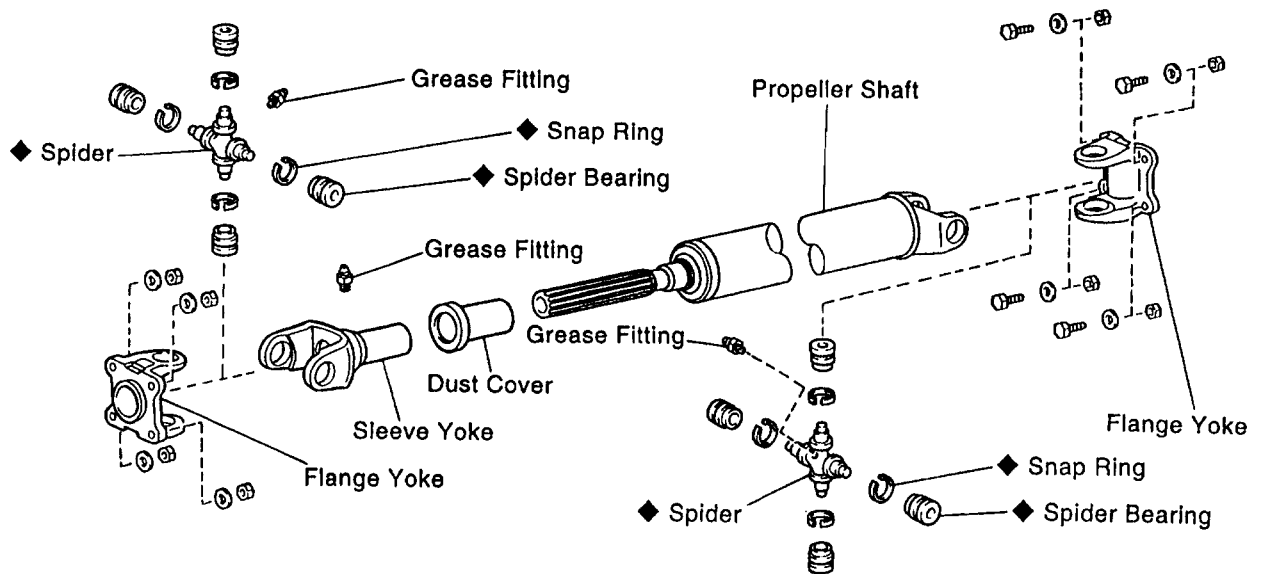


PROPELLER SHAFT COMPONENTS

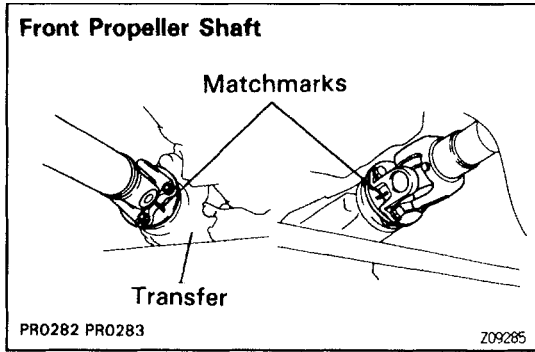
Front Propeller Shaft



Rear Propeller Shaft



◆ Non-reusable part



FRONT AND REAR PROPELLER SHAFTS REMOVAL

Installation is in the reverse order of removal.

INSTALLATION HINT: After installation, pump MP grease into each fitting with a grease gun until the grease begins to flow around the oil seal.

1. DISCONNECT FRONT PROPELLER SHAFT FROM TRANSFER

- (a) Place matchmarks on the propeller shaft flange and transfer.
- (b) Remove the 4 nuts and washers.

Torque: 74 N·m (750 kgf·cm, 54 ft·lbf)

2. DISCONNECT FRONT PROPELLER SHAFT FROM DIFFERENTIAL

- (a) Place matchmarks on the propeller shaft flange and differential.
- (b) Remove the 4 nuts, bolts and washers.

Torque: 74 N·m (750 kgf·cm, 54 ft·lbf)

- (c) Remove the front propeller shaft.

3. DISCONNECT REAR PROPELLER SHAFT FROM TRANSFER

- (a) Place matchmarks on the propeller shaft flange and transfer.
- (b) Remove the 4 nuts and washers.

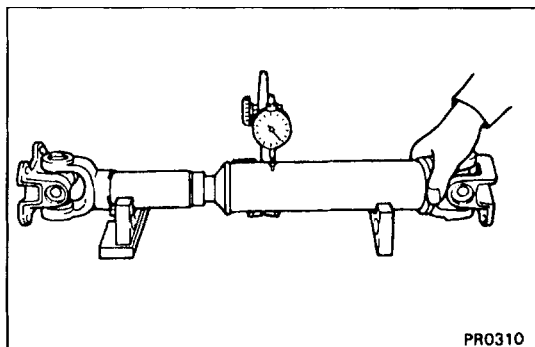
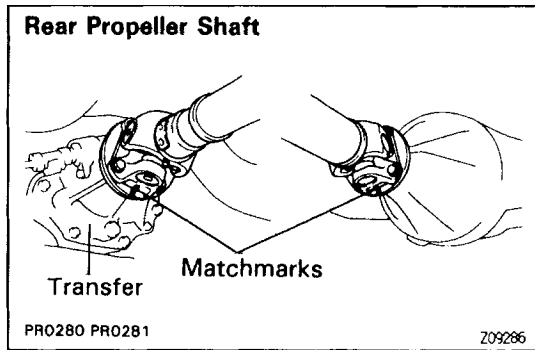
Torque: 88 N·m (900 kgf·cm, 65 ft·lbf)

4. DISCONNECT REAR PROPELLER SHAFT FROM DIFFERENTIAL

- (a) Place matchmarks on the propeller shaft flange and differential.
- (b) Remove the 4 nuts, bolts and washers.

Torque: 88 N·m (900 kgf·cm, 65 ft·lbf).

- (c) Remove the rear propeller shaft.



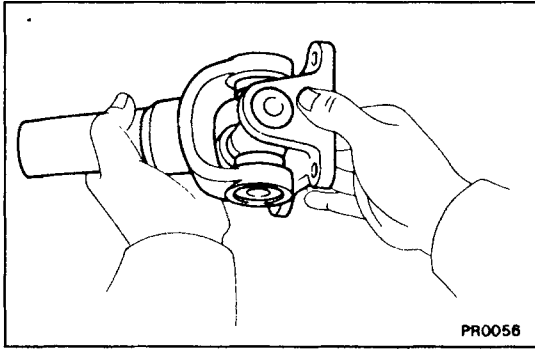
PROPELLER SHAFT INSPECTION

1. INSPECT FRONT AND REAR PROPELLER SHAFTS FOR DAMAGE OR RUNOUT

If shaft runout is greater than maximum, replace the shaft.

Maximum runout:

0.8 mm (0.031 in.)



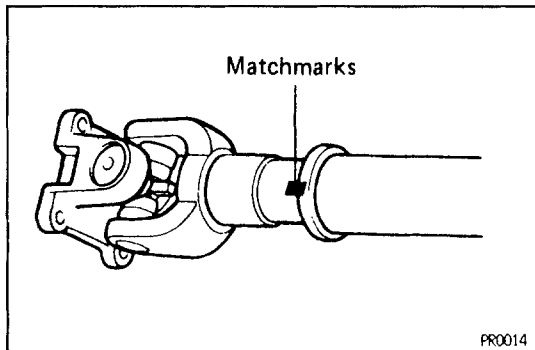
2. INSPECT SPIDER BEARING

- Check the spider bearings for wear or damage.
- Check the spider bearing axial play by turning the yoke while holding the shaft tightly.

Bearing axial play:

Less than 0.05 mm (0.0020 in.)

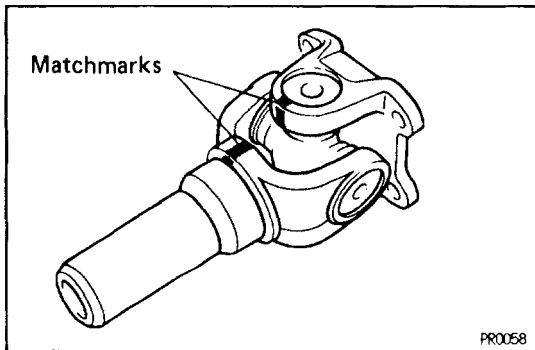
If necessary, replace the spider bearing.



PROPELLER SHAFT DISASSEMBLY

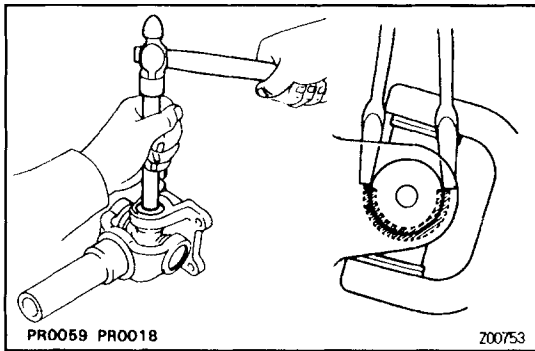
1. REMOVE SLEEVE YOKE FROM PROPELLER SHAFT

- Place matchmarks on the sleeve yoke and shaft.
- Pull out the sleeve yoke from the shaft.

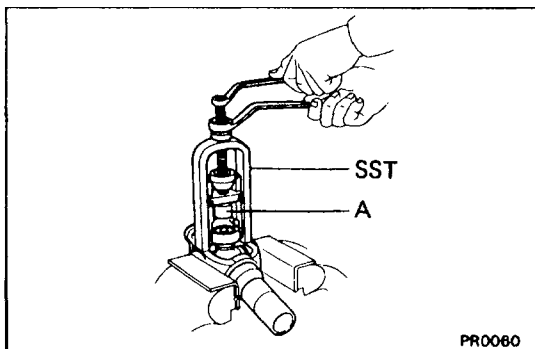


2. REMOVE SPIDER BEARING

- Place matchmarks on the sleeve yoke and flange.



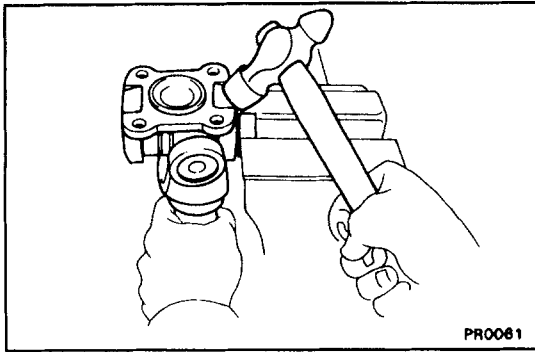
- Using a brass bar and hammer, slightly tap in the bearing outer races.
- Using 2 screwdrivers, remove the 4 snap rings from the grooves.



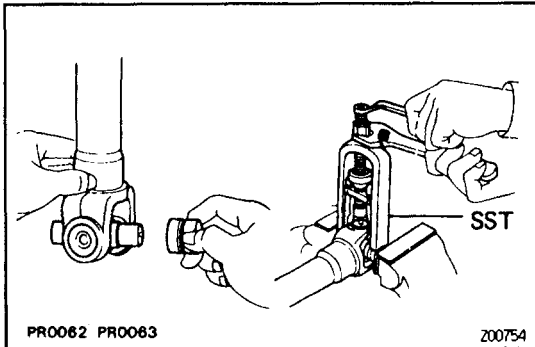
- Using SST, push out the bearing from the flange.

SST 09332-25010

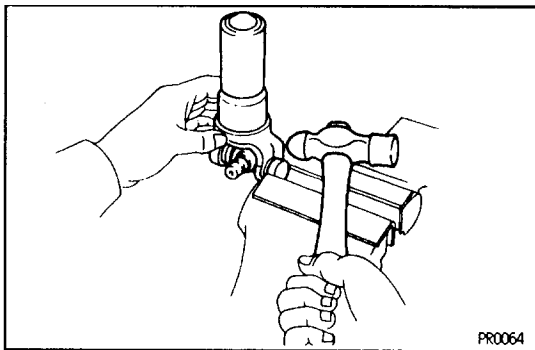
HINT: Sufficiently raise the part indicated by A so that it does not come into contact with the bearing.



- (e) Clamp the bearing outer race in a vise and tap off the flange with a hammer.
HINT: Remove the bearing on the opposite side by the same procedure.



- (f) Install the 2 removed bearing outer races to the spider.
(g) Using SST, push out the bearing from the yoke.
SST 09332-25010

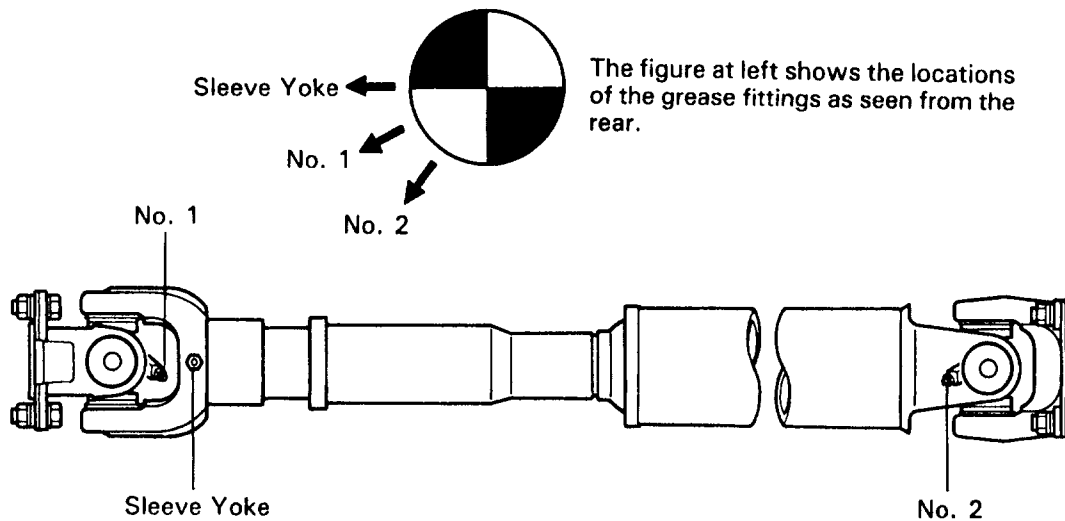


- (h) Clamp the outer bearing race in a vise and tap off the yoke with a hammer.
HINT: Remove the bearing on the opposite side in the same procedure.

PROPELLER SHAFT ASSEMBLY

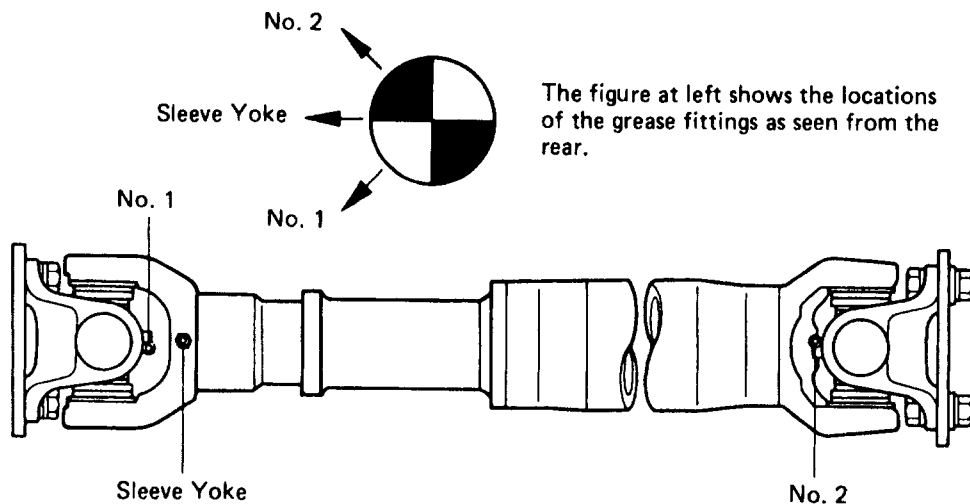
HINT: When replacing the spider, be sure that the grease fitting assembly hole is facing in the direction shown in the illustration.

SPIDER GREASE FITTING ASSEMBLY DIRECTION Front Propeller Shaft

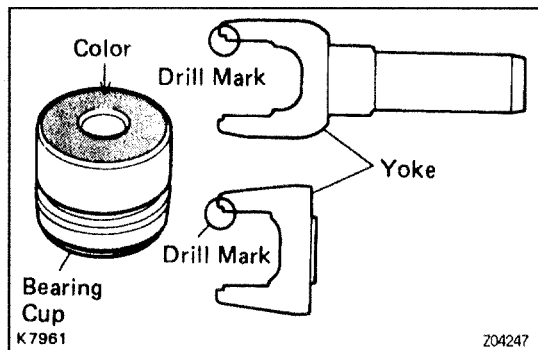


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SPIDER GREASE FITTING ASSEMBLY DIRECTION Rear Propeller Shaft



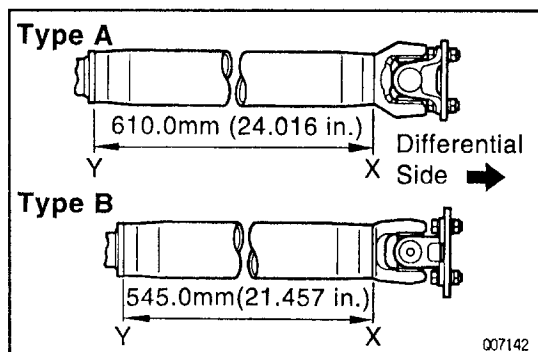
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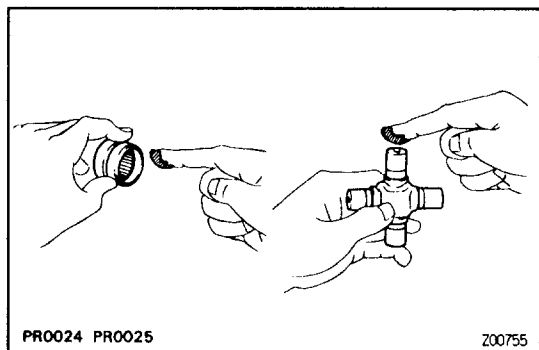
1. SELECT SPIDER BEARING

Select the bearing according to whether or not there is a drill mark on the yoke section.

Yoke	Bearing (Type A)	Bearing (Type B)
w/ drill mark	w/ color mark (White)	w/ color mark (Red)
No drill mark	No color mark	No color mark

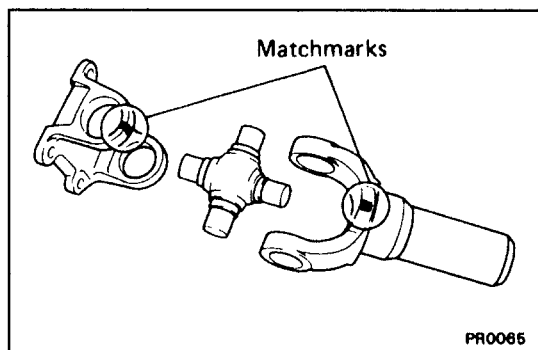


ASSEMBLY HINT: There are 2 types of rear propeller shafts, type A and type B. Referring to the illustration, measure the distance between the welding points X and Y to identify which of the 2 types is used for the vehicle.

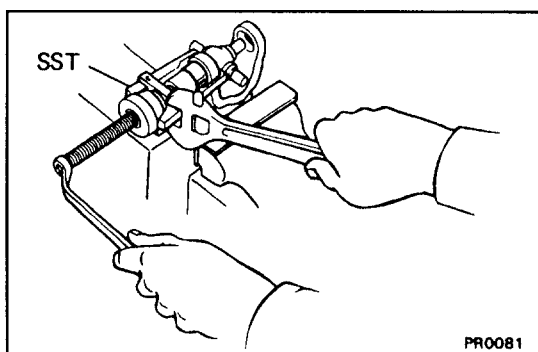


2. INSTALL SPIDER BEARING

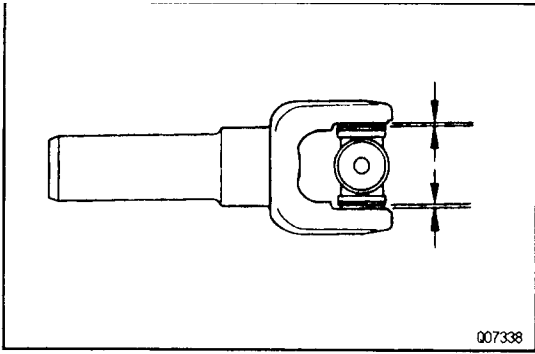
- (a) Apply MP grease to the a new spider and bearings.
HINT: Be careful not to apply too much grease.



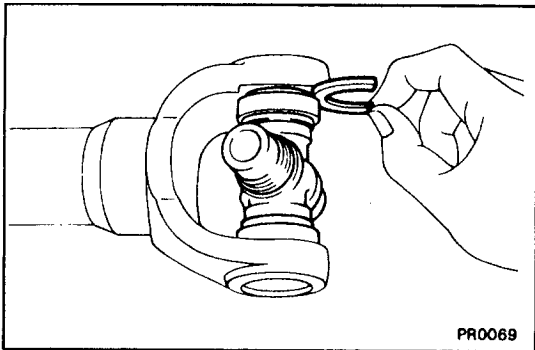
- (b) Align the matchmarks on the yoke and flange.



- (c) Fit the spider into the yoke.
(d) Using SST, install the bearings on the spider.
SST 09332-25010



- (e) Using SST, adjust both bearings so that the snap ring grooves are at maximum and equal widths.



- (f) Install 2 new snap rings of equal thickness which will allow 0–0.05 mm (0–0.0020 in.) axial play.

HINT: Do not reuse the snap rings.

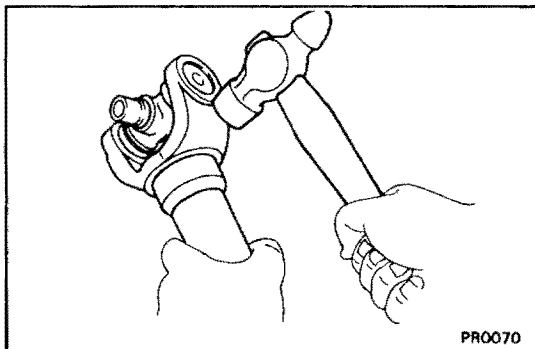
Thickness of snap ring

Front Propeller Shaft and Rear Propeller Shaft (Type B)

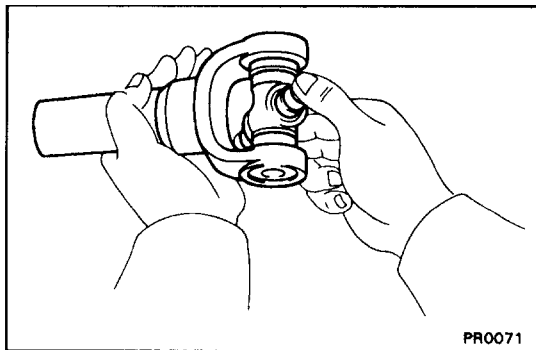
Color	Mark	Thickness mm (in.)
–	1	2.100 – 2.150 (0.0827 – 0.0846)
–	2	2.150 – 2.200 (0.0846 – 0.0866)
–	3	2.200 – 2.250 (0.0866 – 0.0886)
Brown	–	2.250 – 2.300 (0.0886 – 0.0906)
Blue	–	2.300 – 2.350 (0.0906 – 0.0925)
–	6	2.350 – 2.400 (0.0925 – 0.0945)
–	7	2.400 – 2.450 (0.0945 – 0.0965)
–	8	2.450 – 2.500 (0.0965 – 0.0984)

Rear Propeller Shaft (Type A)

Color	Thickness mm (in.)
–	2.00 (0.0787)
Brown	2.03 (0.0799)
Blue	2.06 (0.0811)
–	2.09 (0.0823)



- (g) Using a hammer, tap the yoke until there is no clearance between the bearing outer race and snap ring.

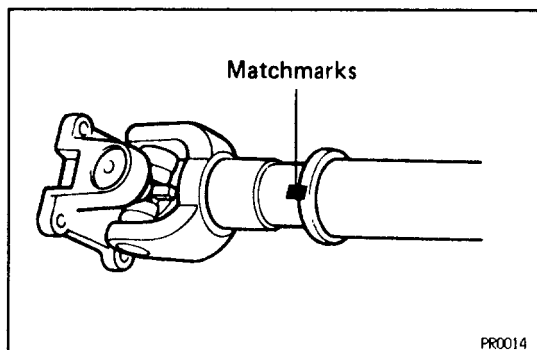


- (h) Check that the spider bearing moves smoothly.
- (i) Check the spider bearing axial play.

Bearing axial play:

Less than 0.05 mm (0.0020 in.)

HINT: Install a new spider bearing on the flange side in the procedure described above.



3. INSERT SLEEVE YOKE INTO PROPELLER SHAFT

- (a) Apply MP grease to the propeller shaft spline and sleeve yoke sliding surface.
- (b) Align the matchmarks on the sleeve yoke propeller shaft.
- (c) Install the propeller shaft into the sleeve yoke.

SERVICE SPECIFICATIONS

SERVICE DATA

Propeller shaft runout	Maximum	0.8 mm (0.031 in.)
Spider bearing axial play		Less than 0.05 mm (0.0020 in.)
Snap ring thickness		
Front propeller shaft and rear propeller shaft (Type B)		
	Mark	Color
	1	–
	2	–
	3	–
	–	Brown
	–	Blue
	6	–
	7	–
	8	–
Rear propeller shaft (Type A)		
	–	–
	–	Brown
	–	Blue
	–	–

TORQUE SPECIFICATIONS

Part tightened	N·m	kgf·cm	ft·lbf
Front propeller shaft x Front differential	74	750	54
Front propeller shaft x Transfer	74	750	54
Rear propeller shaft x Rear differential	88	900	65
Rear propeller shaft x Transfer	88	900	65