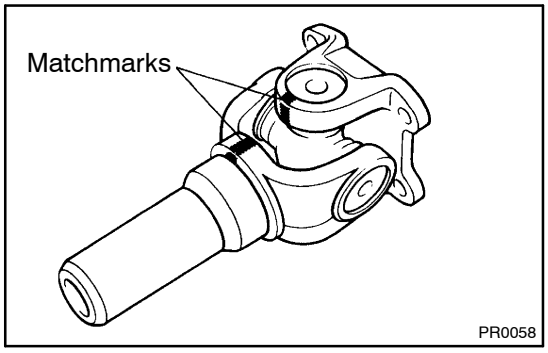



# PROPELLER SHAFT ASSEMBLY

PR089–01

## INSPECTION REQUIREMENT

**NOTICE:**

**Be careful not to grip the propeller shaft tube too tightly in a vise as this will cause deformation.**

**1. REMOVE PROPELLER SHAFT**

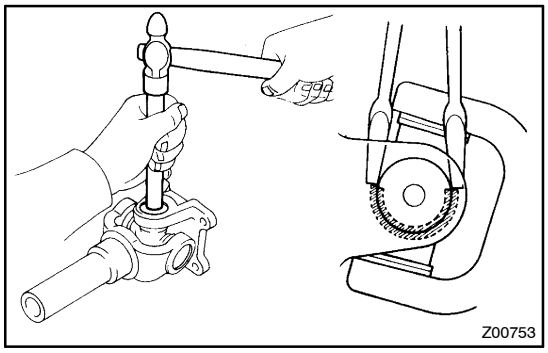
**2. PLACE MATCHMARKS ON SHAFT AND FLANGE YOKE OR FLANGE YOKE AND SLEEVE YOKE**

**3. REMOVE SLEEVE YOKE FROM PROPELLER SHAFT**

**4. REMOVE SNAP RINGS**

(a) Using a brass bar and hammer, slightly tap in the bearing outer races.

(b) Using 2 screwdrivers, remove the 4 snap rings from the grooves.

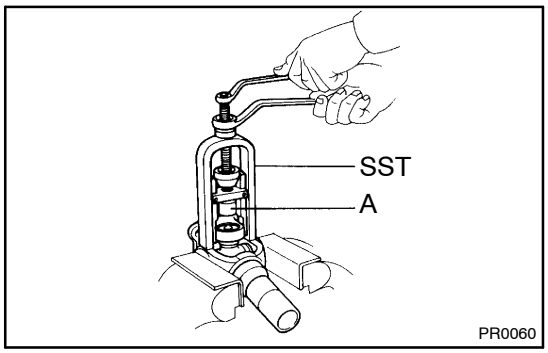



**5. REMOVE SPIDER BEARINGS**

(a) Using SST, push out the bearing from the flange.
SST 09332–25010

HINT:

Sufficiently raise the part indicated by ”A” so that it can not come into contact with the bearing.

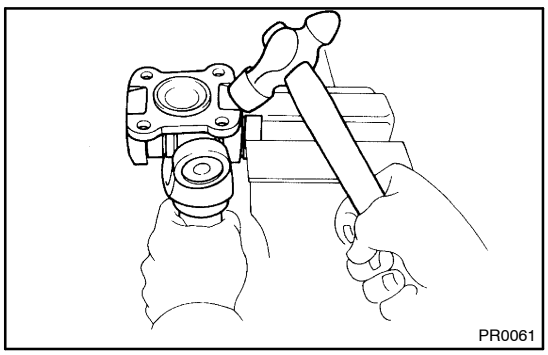



(b) Clamp the bearing outer race in a vise and tap off the flange with a hammer.

HINT:

Remove the bearing on the opposite side in the same procedure.

(c) Remove the flange yoke from the sleeve yoke (or propeller shaft).



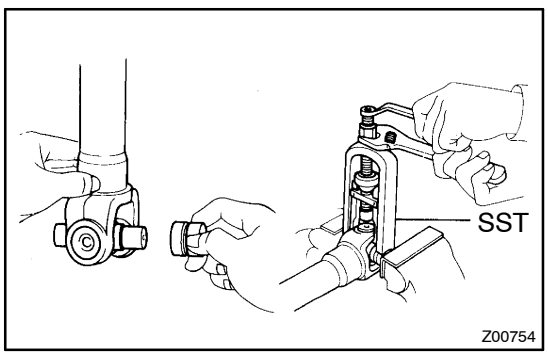

(d) Install the 2 removed bearing outer races to the spider.

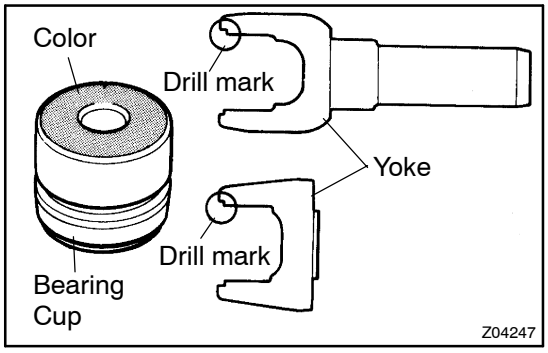
(e) Using SST, push out the bearing from the yoke.
SST 09332–25010

(f) 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.

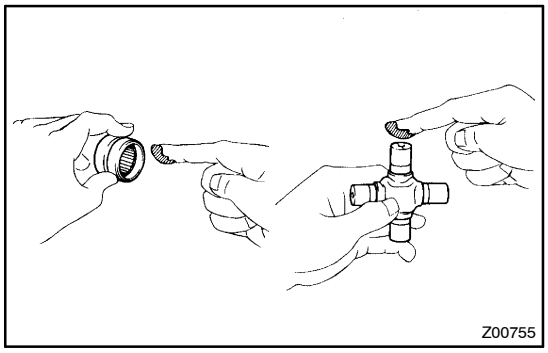





### 6. SELECT SPIDER BEARING

Select the bearing according to a drill mark on the yoke section.

| Yoke | Bearing |
|---|---|
| w/ drill mark | w/ color mark<br>Fr: red<br>Rr: white |
| No drill mark | No color mark |

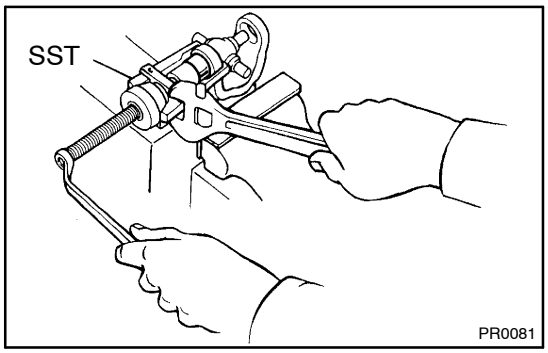



### 7. INSTALL SPIDER BEARING

(a) Apply MP grease to a new spider and bearings.

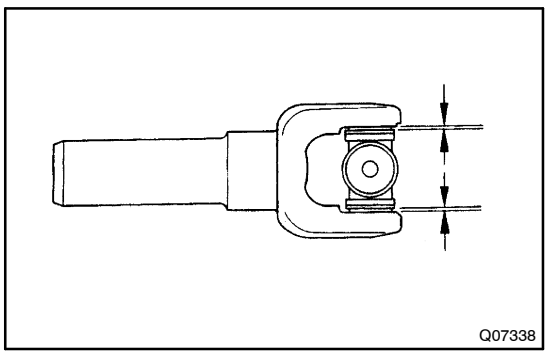
**NOTICE:**

**Be careful not to apply too much grease.**

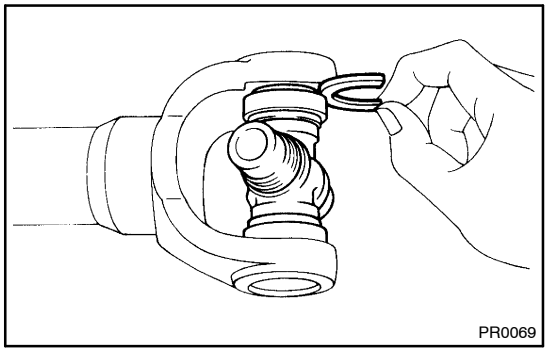



(b) Fit the spider into the yoke.

(c) Using SST, install the bearings on the spider.
SST 09332–25010




(d) Using SST, adjust both bearings so that the snap ring grooves can be maximum and equal in width.


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**8. INSTALL SNAP RING**

(a) Install 2 new snap rings of equal thickness which will allow 0 mm (0 in.) axial play.

HINT:

Do not reuse the snap rings.

**Thickness of snap ring:**

**Front Propeller Shaft**

| Color | Mark | Thickness mm (in. ) |
|---|---|---|
| – | 1 | 2.29(0.09016) |
| – | 2 | 2.31(0.09094) |
| – | – | 2.33(0.09173) |
| Brown | – | 2.35(0.09252) |
| Blue | – | 2.37(0.09331) |
| – | 6 | 2.39(0.09409) |
| – | 7 | 2.41(0.09488) |
| – | 8 | 2.43(0.09567) |
| – | 9 | 2.45(0.09646) |
| – | 10 | 2.47(0.09724) |
| – | A | 2.49(0.09803) |
| – | B | 2.51(0.09882) |
| – | C | 2.53(0.09961) |
| – | D | 2.55(0.10039) |
| – | E | 2.57(0.10118) |
| – | J | 2.19(0.08622) |
| – | K | 2.21(0.08701) |
| – | F | 2.23(0.08780) |
| – | G | 2.25(0.08858) |
| – | H | 2.27(0.08937) |

**Rear Propeller Shaft:**

| Color | Mark | Thickness mm (in. ) |
|---|---|---|
| – | – | 2.00(0.07874) |
| Brown | – | 2.03(0.07992) |
| Blue | – | 2.06(0.08110) |
| – | – | 2.09(0.08228) |

(b) Using a hammer, tap the yoke until there can be no clearance between the bearing outer race and snap ring.

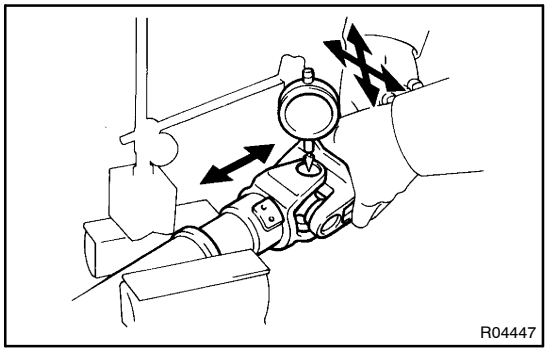
**9. INSTALL FLANGE YOKE TO SLEEVE YOKE (OR PROPELLER SHAFT)**

(a) Align the matchmarks on the propeller shaft and flange yoke or flange yoke and sleeve yoke.

(b) Install the flange yoke to the sleeve yoke (or propeller shaft).

HINT:

Install 2 new spider bearings and snap ring on the flange yoke side in the procedure described above.




**10. CHECK SPIDER BEARING**

(a) Check that the spider bearing moves smoothly.

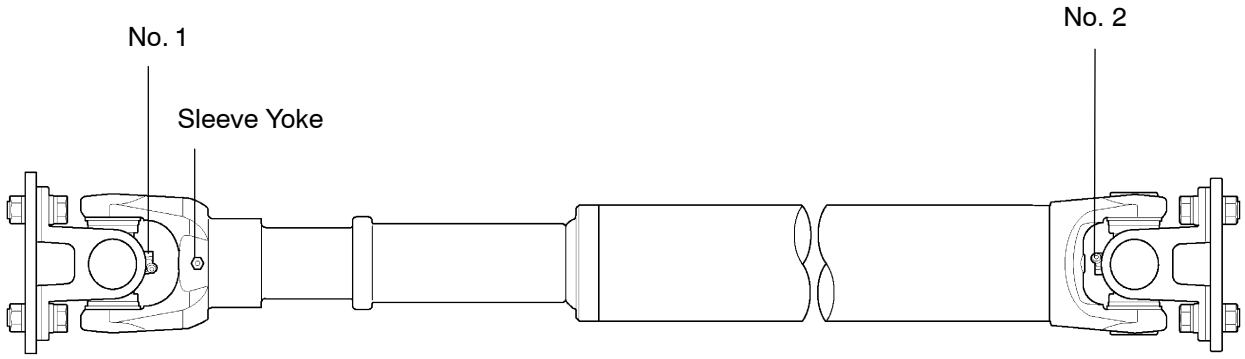
(b) Check the spider bearing axial play.

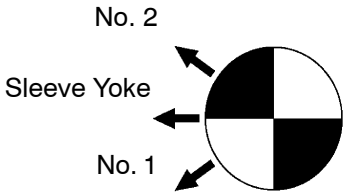
**Maximum bearing axial play:**
**Max 0.05 mm (0.002 in.)**

HINT:

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

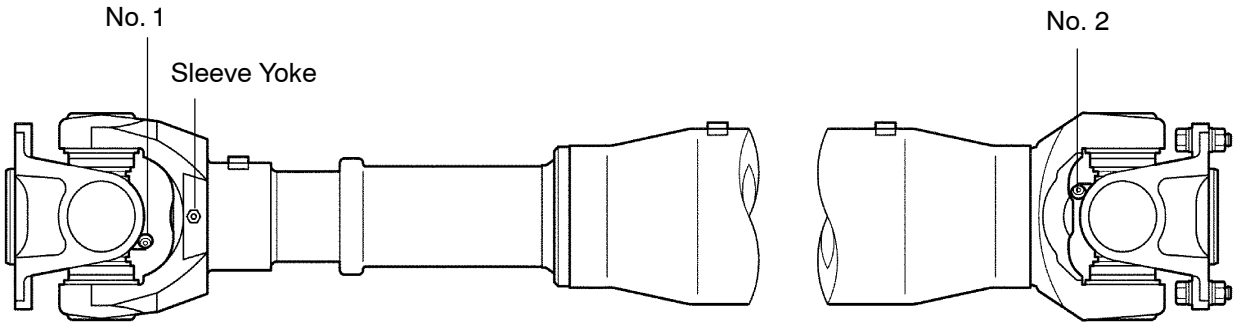
**SPIDER GREASE FITTING ASSEMBLY DIRECTION**
**Front Propeller Shaft**




The figure at left shows the locations of the grease fittings as seen from the rear.

**SPIDER GREASE FITTING ASSEMBLY DIRECTION**
**Rear Propeller Shaft**




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