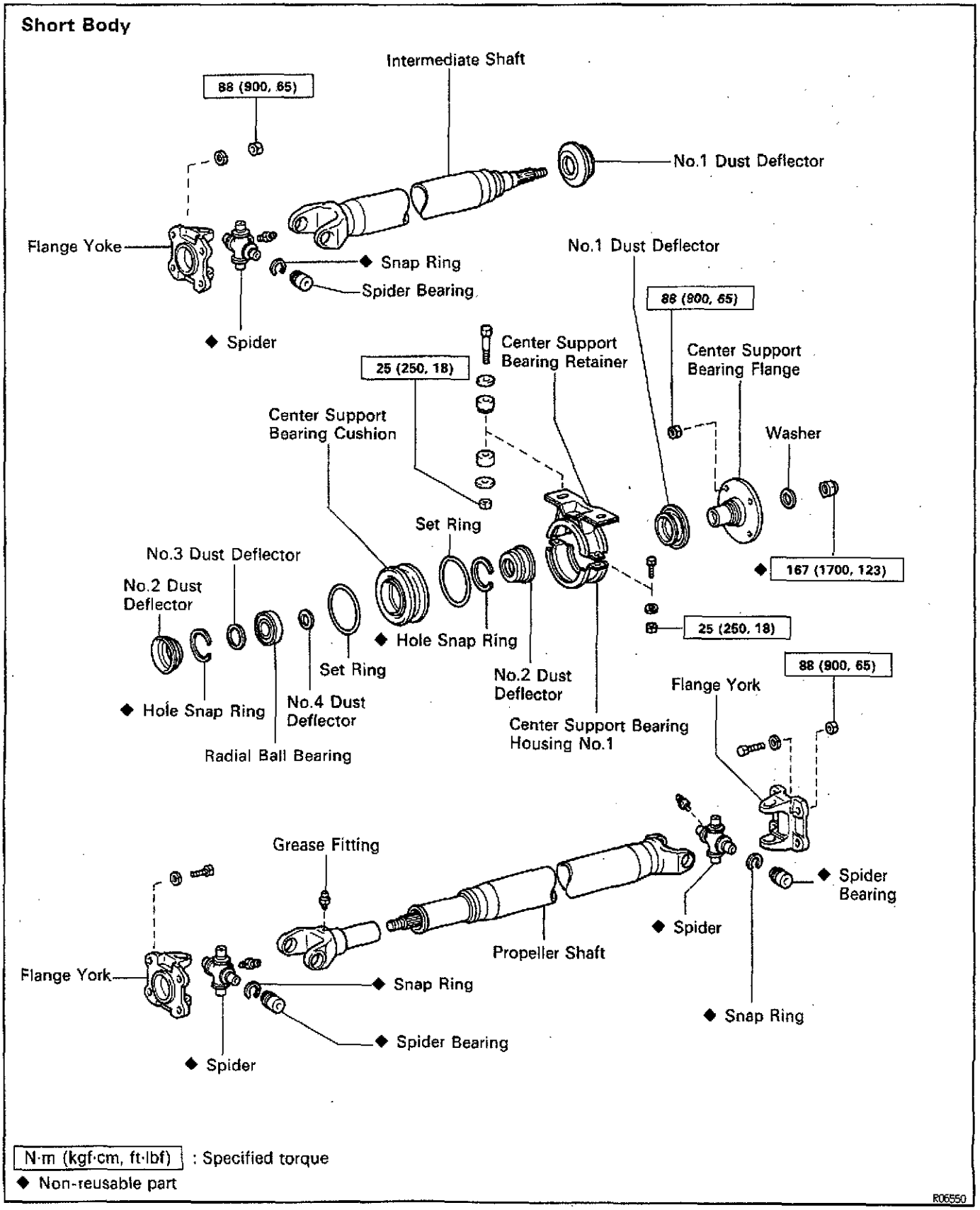
# PROPELLER SHAFT
## COMPONENTS

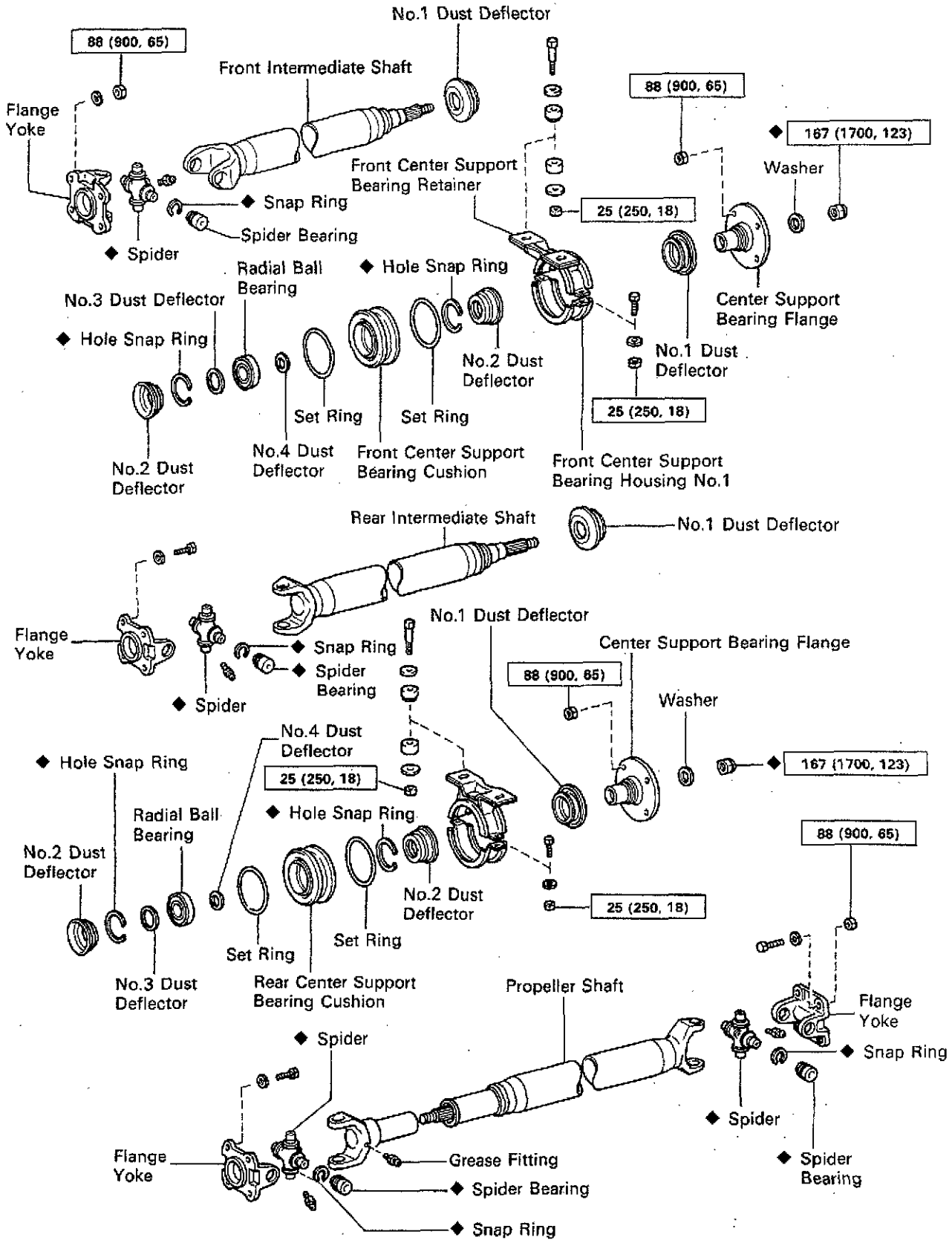
PR03F-01




N·m (kgf·cm, ft·lbf) : Specified torque
◆ Non-reusable part

R06550

## Long Body

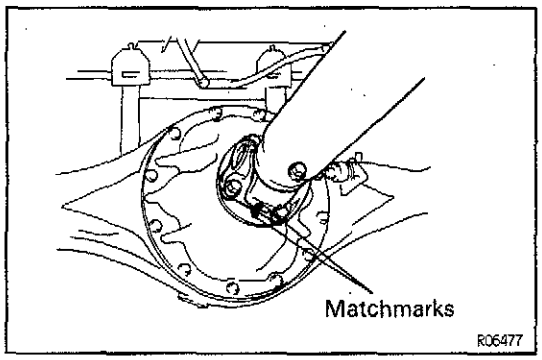



PR

N·m (kgf-cm, ft·lbf) : Specified torque

◆ Non-reusable part

R06551



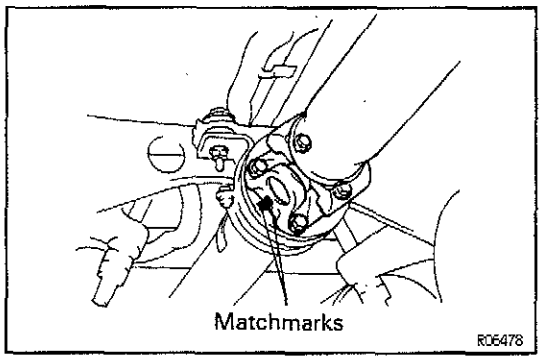

## PROPELLER SHAFT ASSEMBLY REMOVAL PR03G-01

### (Short Body)

**1. REMOVE PROPELLER SHAFT**

(a) Place the matchmarks on the differential companion flange and propeller shaft flange.

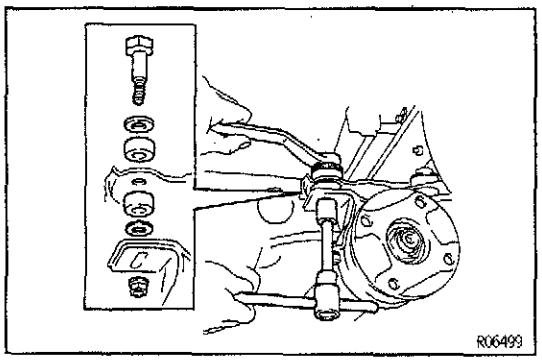
(b) Remove the 4 bolts, washers and nuts.




(c) Place the matchmarks on the propeller shaft flange and intermediate propeller shaft.

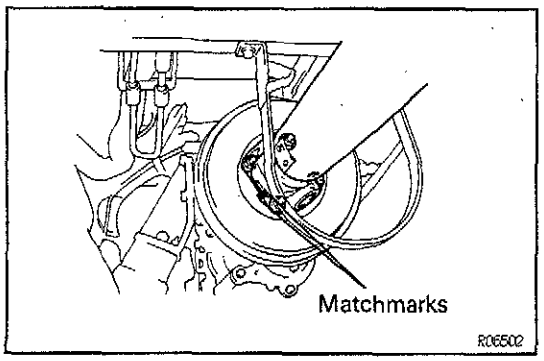
(d) Remove the 4 bolts, washers and nuts.

PR




**2. REMOVE INTERMEDIATE PROPELLER SHAFT**

(a) Remove the center support bearing.




(b) Place the matchmarks on the intermediate propeller shaft flange and parking brake drum.

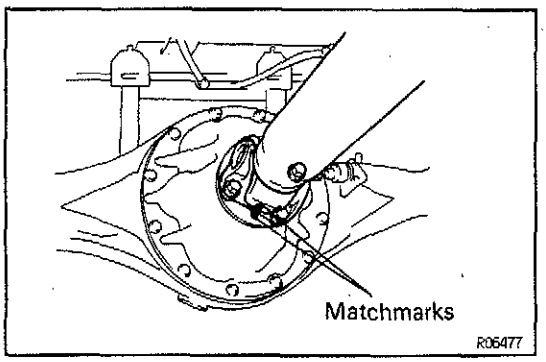
(c) Remove the 4 washers and nuts.

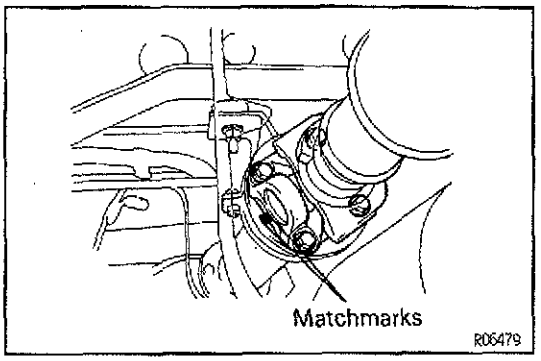
### (Long Body)

**1. REMOVE PROPELLER SHAFT**

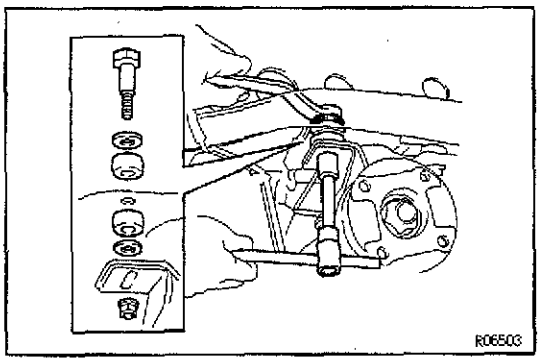
(a) Place the matchmarks on the differential companion flange and propeller shaft flange.

(b) Remove the 4 bolts, washers and nuts.



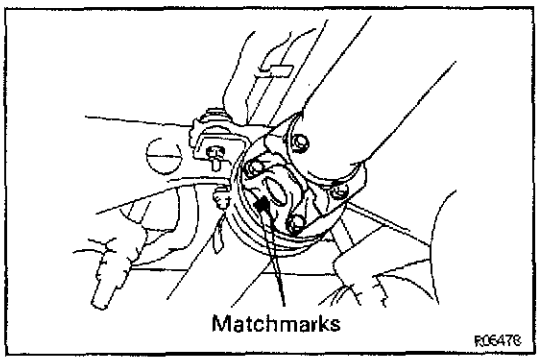



(c) Place the matchmarks on the propeller shaft flange and rear intermediate propeller shaft.
(d) Remove the 4 bolts, washers and nuts.

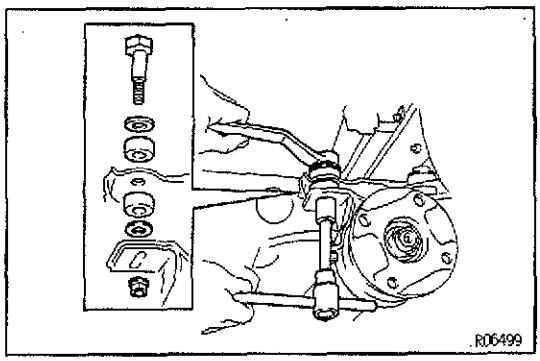



**2. REMOVE REAR INTERMEDIATE PROPELLER SHAFT**

(a) Remove the rear center support bearing.

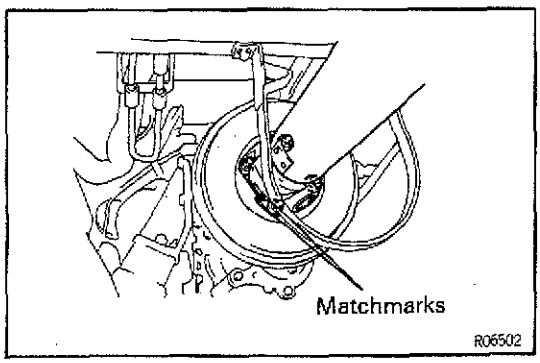



(b) Place the matchmarks on the front intermediate propeller shaft flange and rear intermediate propeller shaft.
(c) Remove the 4 bolts, washers and nuts.




**3. REMOVE FRONT INTERMEDIATE PROPELLER SHAFT**

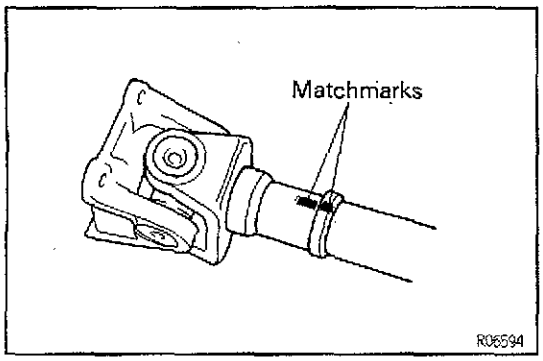
(a) Remove the front center support bearing.




(b) Place the matchmarks on the front intermediate propeller shaft flange and parking brake drum.
(c) Remove the 4 washers and nuts.

PR03H-01

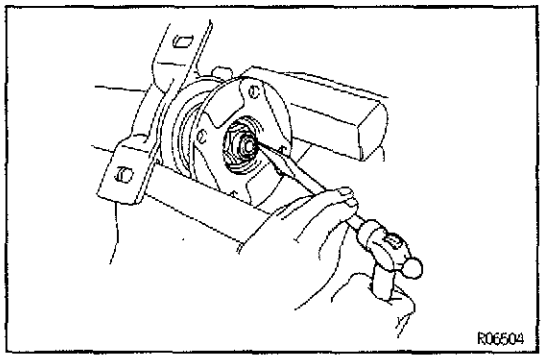
## PROPELLER SHAFT DISASSEMBLY




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

(a) Place matchmarks on the sleeve yoke and propeller shaft.

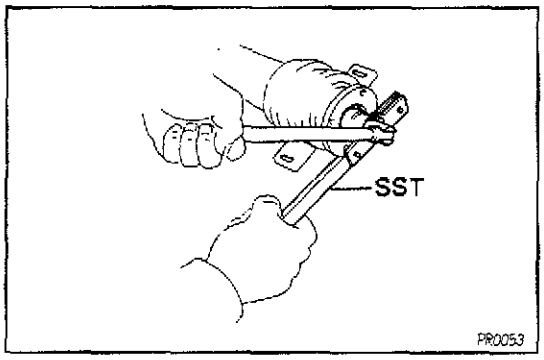
(b) Pull out the sleeve yoke from the propeller shaft.



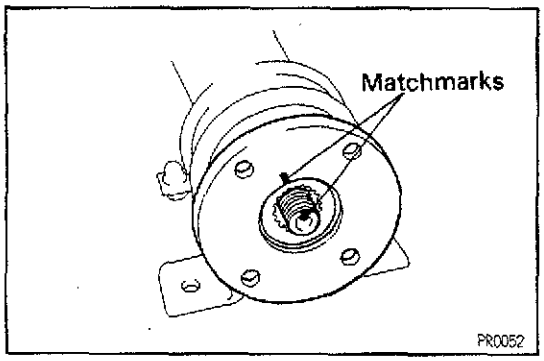

**2. REMOVE CENTER SUPPORT BEARING FLANGE FROM INTERMEDIATE PROPELLER SHAFT**

(a) Using a hammer and chisel, loosen the staked part of the nut.

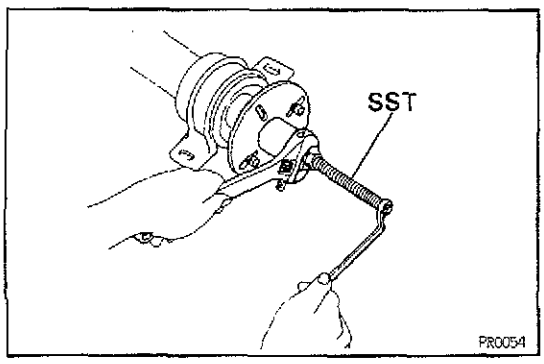
PR



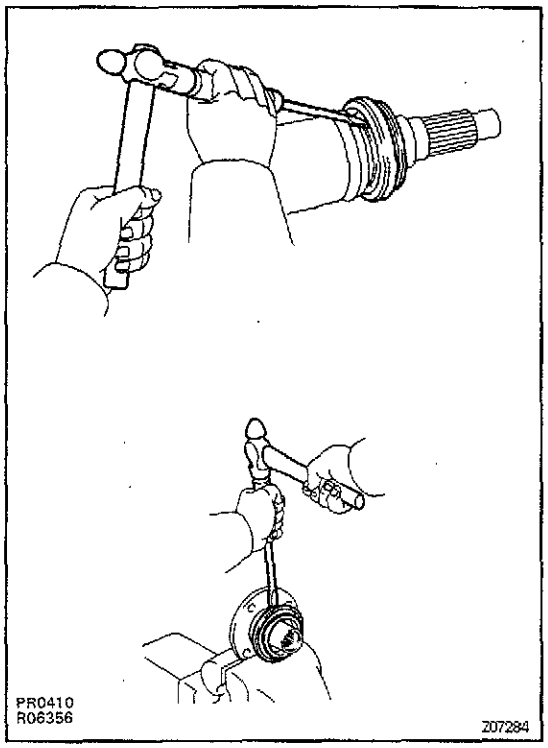

(b) *Using SST to hold flange, remove the nut and washer.*
SST 09330–00021




(c) Place matchmarks on the flange and intermediate propeller shaft.



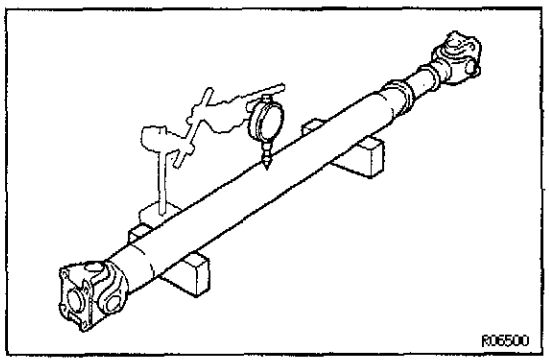

(d) Using SST, remove the flange from the intermediate propeller shaft.
SST 09557–22022 (09557–22050)




### 3. REMOVE NO.1 DUST DEFLECTORS

Using a screwdriver and hammer, remove the No.1 dust deflectors.






## PROPELLER SHAFT INSPECTION

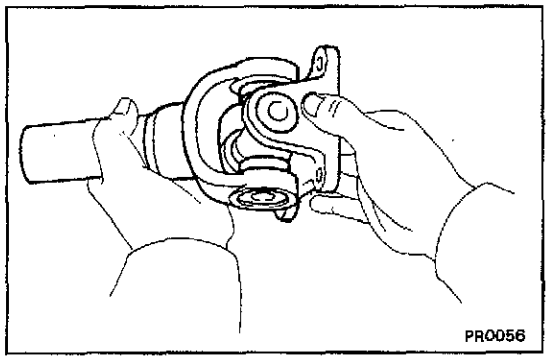
PR03J-01

### 1. INSPECT PROPELLER SHAFT AND INTERMEDIATE PROPELLER SHAFTS FOR DAMAGE AND RUNOUT

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

**Maximum runout:**

**0.8 mm (0.031 in.)**




### 2. INSPECT SPIDER BEARING

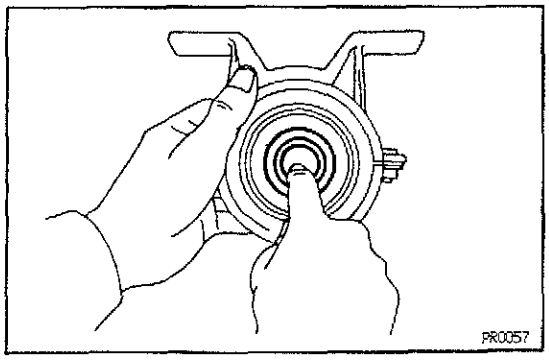
(a) Inspect the spider bearing for wear or damage.

(b) 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.



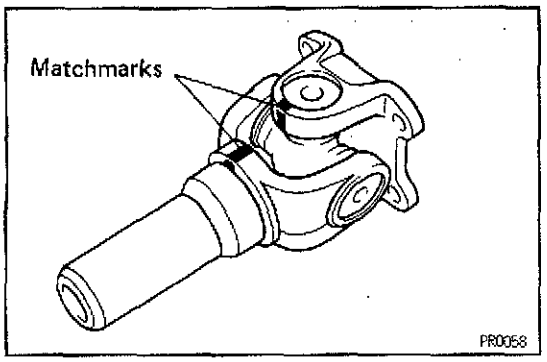

### 3. INSPECT CENTER SUPPORT BEARING FOR WEAR OR DAMAGE

Check that the bearing turns freely.

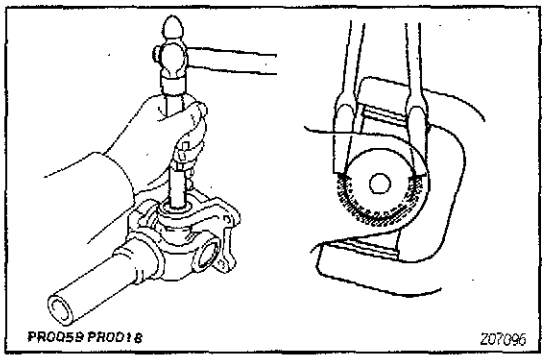
If the bearing is damaged, worn, or does not turn freely, replace it.

PR03K-01

## SPIDER BEARING REPLACEMENT



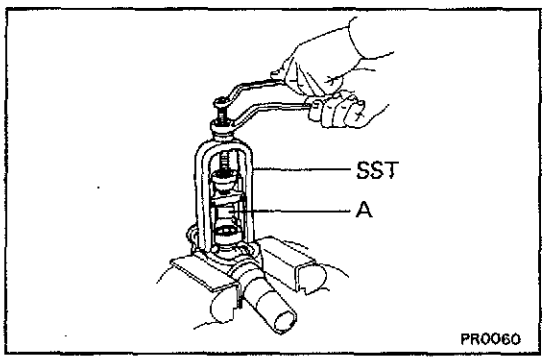

1. **PLACE MATCHMARKS ON FLANGE AND YOKE**
2. **REMOVE GREASE FITTINGS**




3. **REMOVE SNAP RINGS**

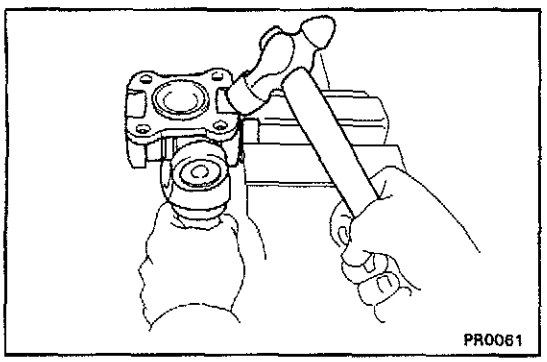
(a) Slightly tap in the bearing outer races.

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

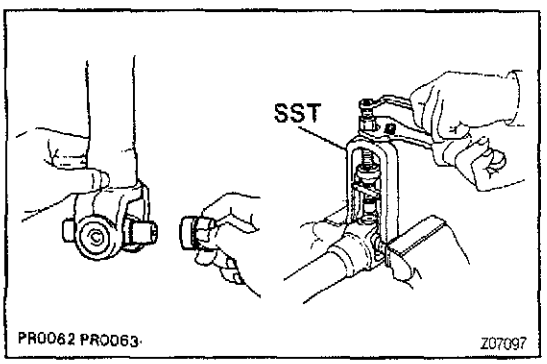



4. **REMOVE SPIDER BEARING**

(a) 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.

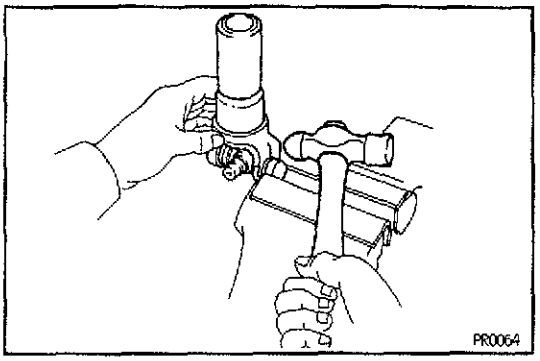



(b) Clamp the bearing outer race in a vise and tap off the flange with a hammer.
HINT: Remove the bearing on the opposite side by the same procedure.

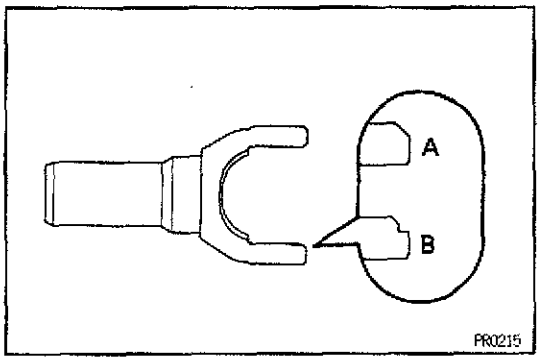



(c) Install the 2 removed bearing outer races to the spider.

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




(e) 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.




**5. SELECT SPIDER BEARING**

Select the bearings according to the sleeve yoke end processing.

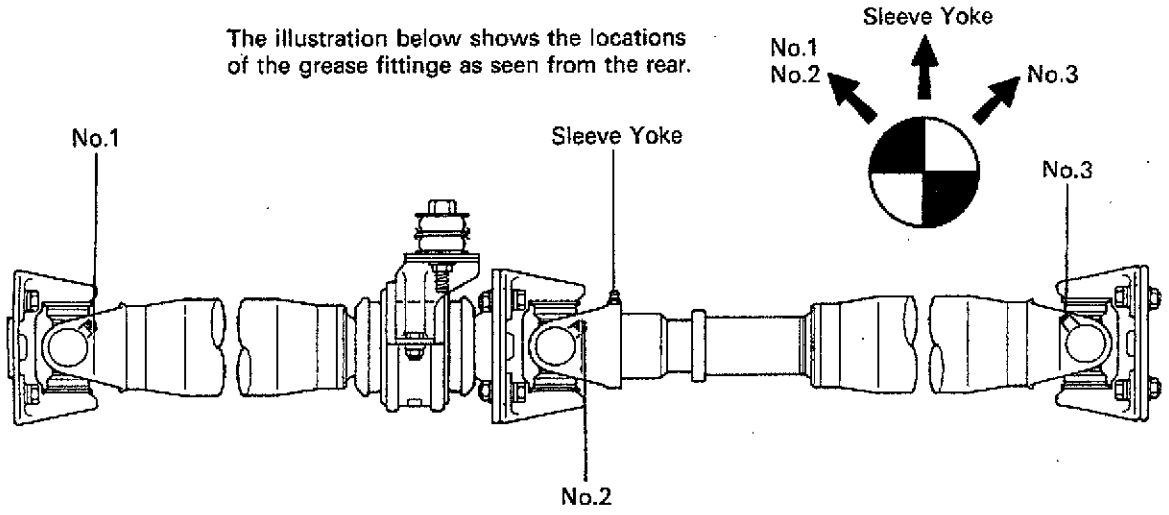
| End Processing | Bearing color |
|---|---|
| A | None |
| B | White |

### 6. INSTALL SPIDER BEARING

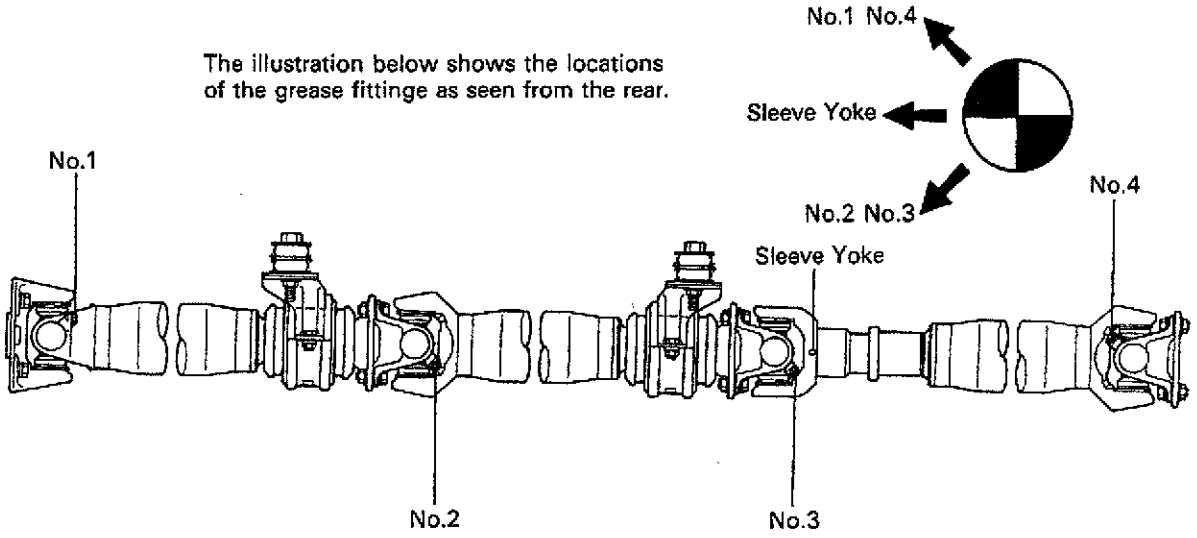
HINT: When replacing the spider, be sure that the grease nipple assembly hole is facing in the direction shown in the illustration.

**SPIDER GREASE FITTING ASSEMBLY DIRECTION**

**Short Body**

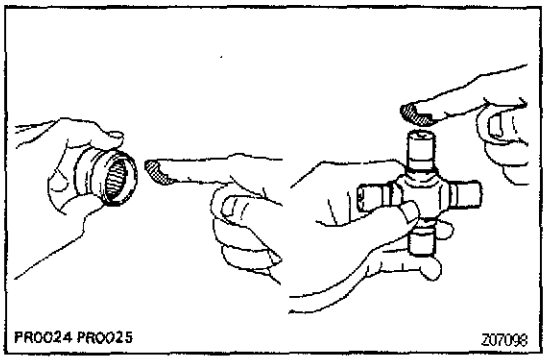



**Long Body**



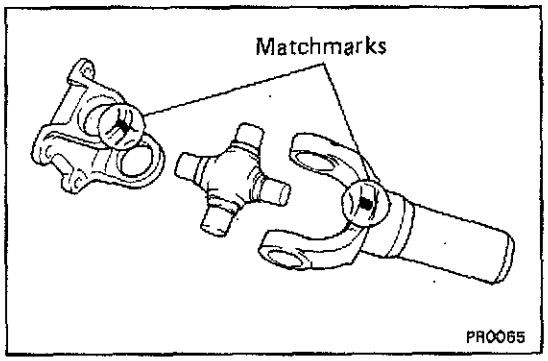

R06507
R06508

207289

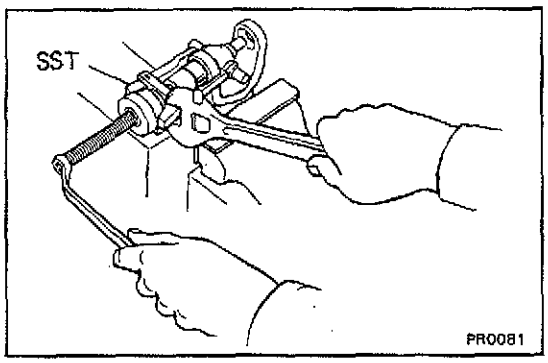



(a) Apply MP grease to the new spider and new bearings.

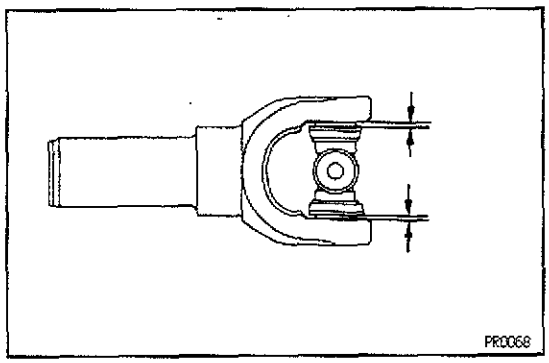
HINT: Be careful not to apply too much grease.



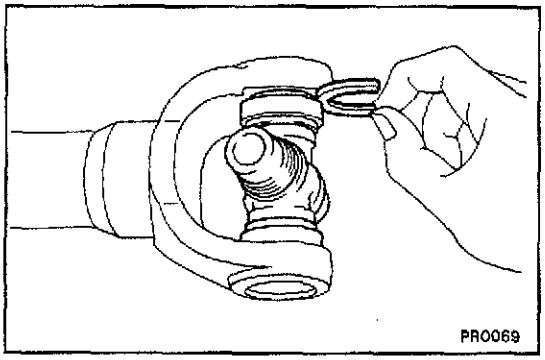

(b) Align the matchmarks on the yoke and shaft.




(c) Fit the new spider into the yoke.
(d) Using SST, install the new bearing on the spider.
SST 09332–25010




HINT: Adjust both bearings so that the snap ring grooves are at maximum and equal widths.

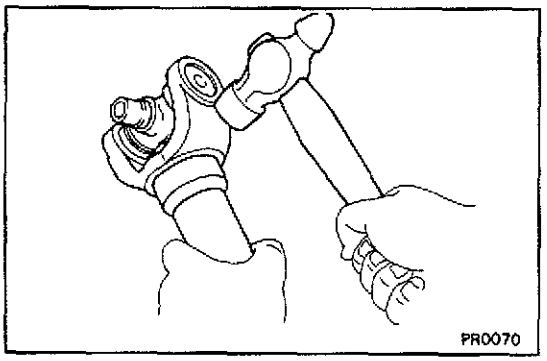



### 7. INSTALL SNAP RINGS

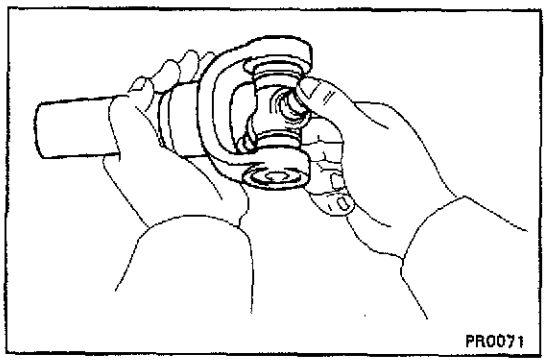
(a) Install new snap rings of the same thickness which will allow 0 – 0.05 mm (0–0.0020 in.) axial play.
HINT: Do not reuse the snap rings.
***Snap ring sizes***

| Color | Thickness mm (in.) |
|---|---|
| None | 1.985 – 2.015 (0.0781 – 0.0793) |
| Brown | 2.015 – 2.045 (0.0793 – 0.0805) |
| Blue | 2.045 – 2.075 (0.0805 – 0.0817) |
| None | 2.075 – 2.105 (0.0817 – 0.0829) |

PR



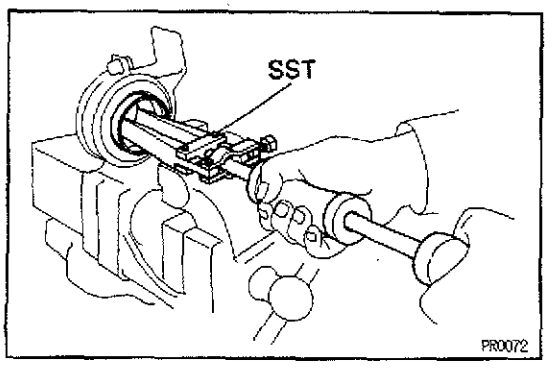

(b) Using a hammer, tap the yoke until there is no clearance between the bearing outer race and snap ring.




### 8. CHECK SPIDER BEARING

(a) Check that the spider bearing moves smoothly.
(b) Check the spider bearing axial play.
**Bearing axial play:**
**Less than 0.05 mm (0.0020 in.)**
HINT: Install new spider bearings on the flange side in the procedure described above.

### 9. INSTALL GREASE FITTING



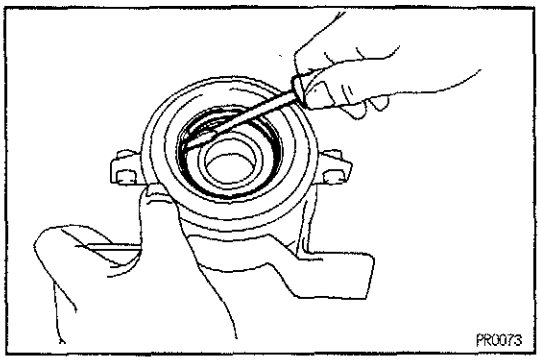

## CENTER SUPPORT BEARING FLANGE REPLACEMENT

PR03L-01

### 1. REMOVE NO.2 DUST DEFLECTORS

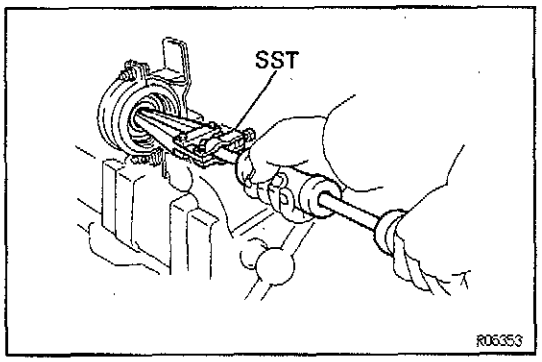
Using SST, remove the No.2 dust deflectors.
SST 09308–00010

### 2. REMOVE NO.3 AND NO.4 DUST DEFLECTOR



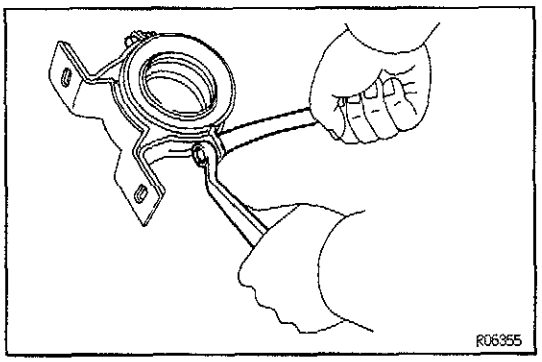

**3. REMOVE SNAP RINGS**

Using a screwdriver, remove the 2 snap rings.



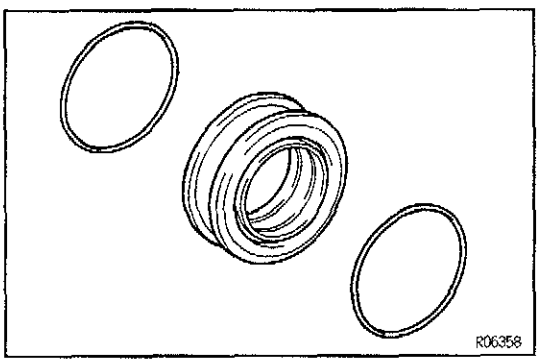

**4. REMOVE BEARING**

Using SST, remove the bearing.
SST 09308–00010

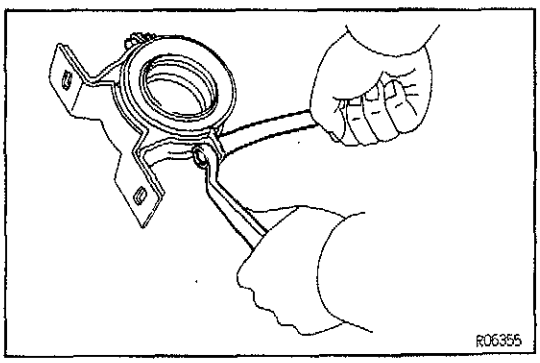



**5. REMOVE CENTER SUPPORT BEARING RETAINER AND CENTER SUPPORT BEARING HOUSING NO.1**

Remove the 2 bolts.

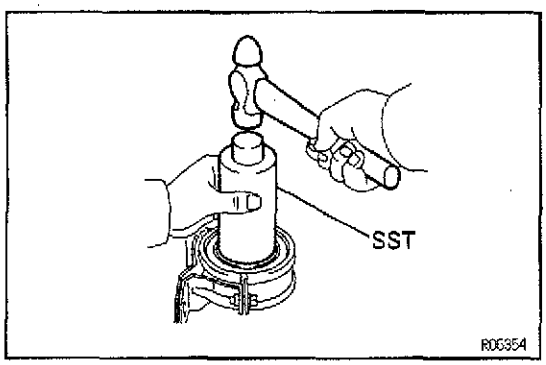



**6. REPLACE 2 SET RINGS**




**7. INSTALL CENTER SUPPORT BEARING RETAINER AND CENTER SUPPORT BEARING HOUSING NO.1**

Install the 2 bolts.

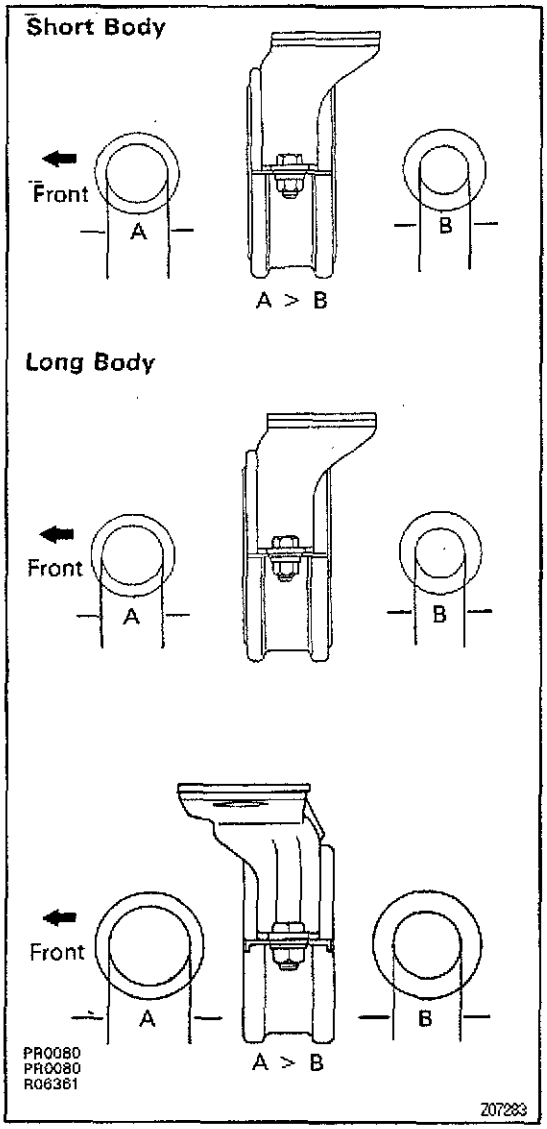



**8. INSTALL BEARING**

Using SST, install the bearing.

SST 09226–10010

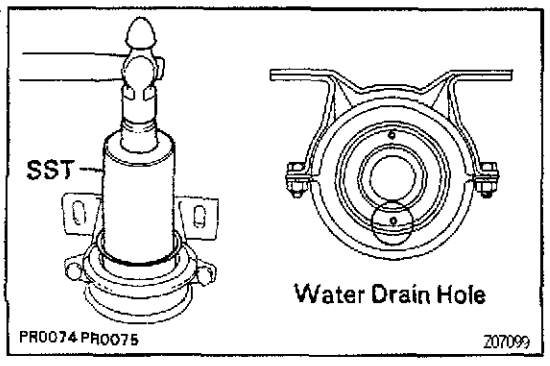
**9. INSTALL NEW SNAP RINGS**




**10. INSTALL NO.3 AND NO.4 DUST DEFLECTORS**

**NOTICE: Be sure that the No.3 and No.4 dust deflectors are facing in the direction, as shown.**

PR




**11. INSTALL NO.2 DUST DEFLECTORS**

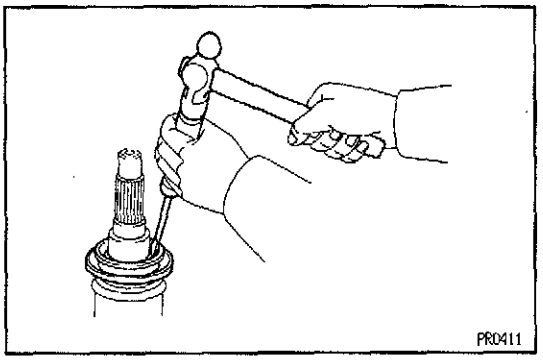
Using SST, install the dust deflectors.

HINT: Face the water drain hole toward the bottom.

SST 09226–10010

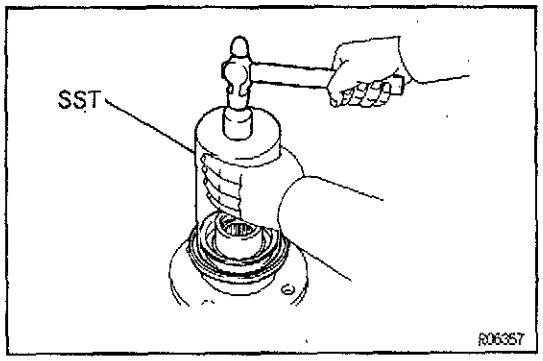
PR03M-01

## PROPELLER SHAFT ASSEMBLY



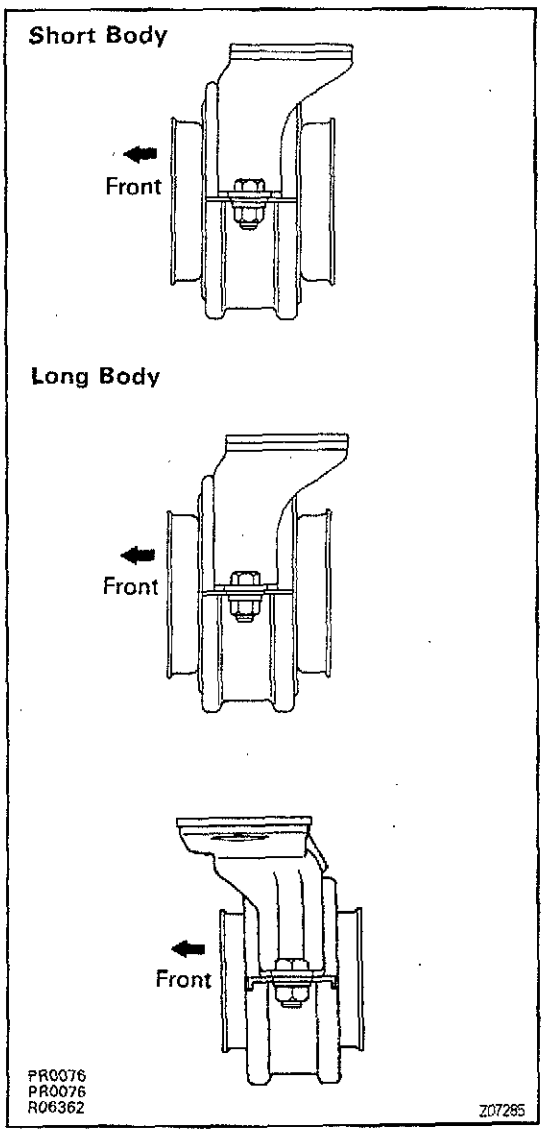

**1. INSTALL NO.1 DUST DEFLECTOR**
**(Shaft Sied)**

(a) Using a hammer and screwdriver, install a new No.1 dust deflector.



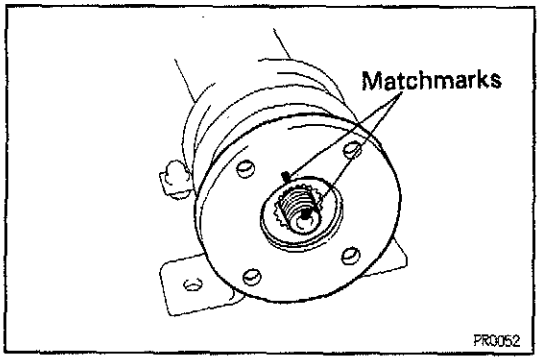

**(Center Support Sied)**

(b) Using SST, install a new No.1 dust deflector.
SST 09226–10010




**2. INSTALL CENTER SUPPORT BEARING ON INTERMEDIATE SHAFT**

HINT: Install the center support bearing in the direction, as shown.

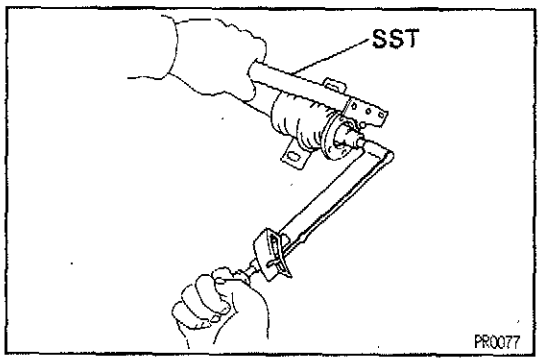



**3. INSTALL CENTER SUPPORT BEARING FLANGE ON INTERMEDIATE SHAFT**

(a) Coat the splines of the intermediate shaft with MP grease.

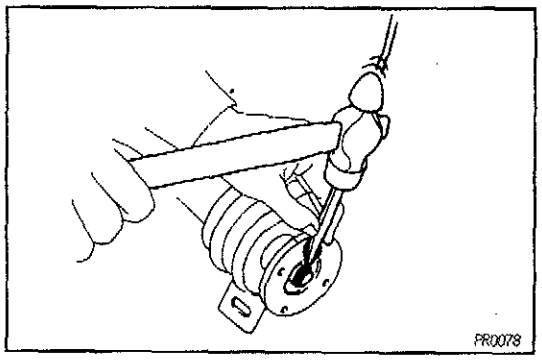
(b) Align the matchmarks on the center flange and intermediate shaft.

(c) Install the washer.

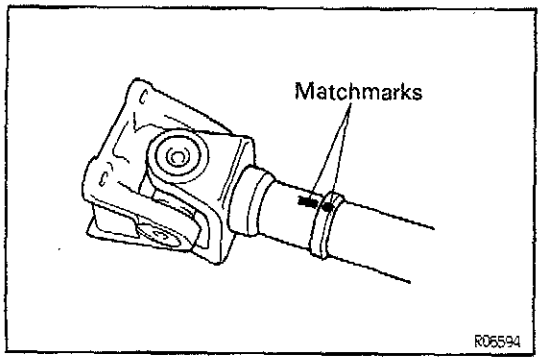



(d) Using SST to hold the flange, torque a new nut to press the bearing into position.
SST 09330–00021
**Torque: 167 N·m (1,700 kgf·cm, 123 ft·lbf)**

PR




(e) Using a hammer and punch, stake the nut.

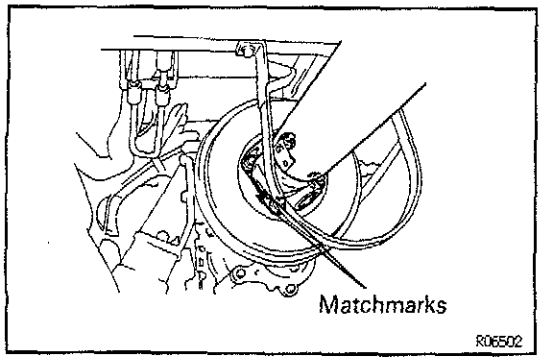



**4. INSERT SLEEVE YOKE INTO PROPELLER SHAFT**

(a) Apply MP grease to the propeller shaft spline and sleeve yoke sliding surface.

(b) Align the matchmarks in the sleeve yoke and propeller shaft.

(c) Install the sleeve yoke into the propeller shaft.



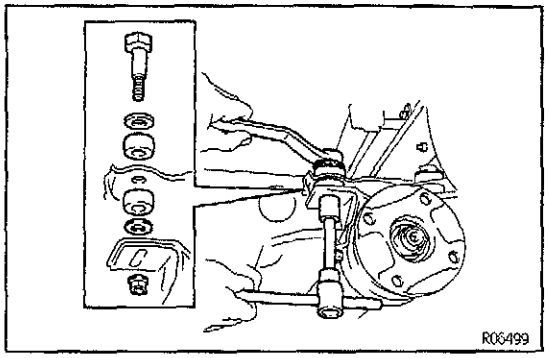

## PROPELLER SHAFT INSTALLATION (Short Body)

PR03N–01

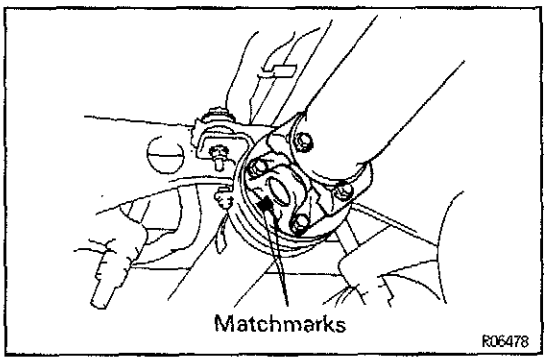
**1. INSTALL INTERMEDIATE PROPELLER SHAFT**

(a) Align the matchmarks on the intermediate propeller shaft flange and parking brake drum with the 4 washers and nuts.

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



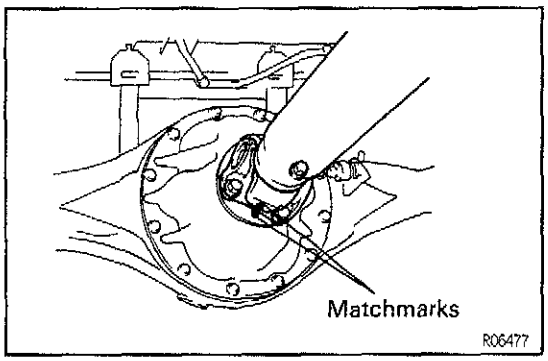

(c) Temporarily install the center support bearing bracket.




**2. INSTALL PROPELLER SHAFT**

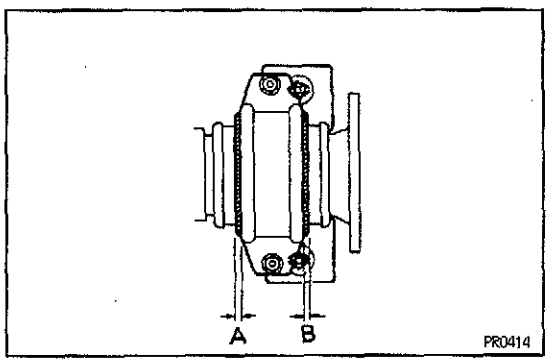
(a) Align the matchmarks on the propeller shaft flange and intermediate propeller shaft with the 4 bolts, washers and nuts.

(b) Torque the bolts and nuts.
**Torque: 88 N·m (900 kgf·cm, 65 ft·lbf)**




(c) Align the matchmarks on the propeller shaft flange and differential companion flange with the 4 bolts, washers and nuts.

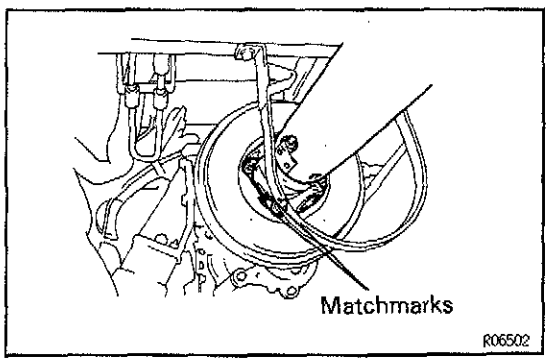
(d) Torque the bolts and nuts.
**Torque: 88 N·m (900 kgf·cm, 65 ft·lbf)**




**3. INSTALL CENTER SUPPORT BEARING**

(a) With the vehicle unloaded, adjust and torque the center support bearing bracket so that the cushion rubber of the center support bearing is equal before and behind the housing (A and B).
**Torque: 25 N·m (250 kgf·cm, 18 ft·lbf)**

(b) After installation, check that the center of the bracket is at a right angle to intermediate shaft axis.

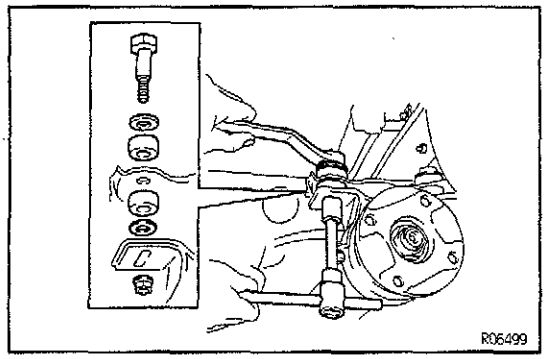



## (Long Body)

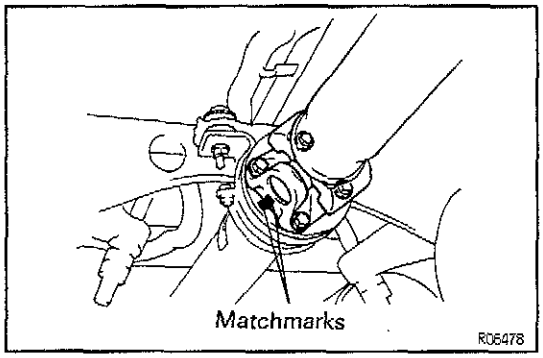
**1. INSTALL FRONT INTERMEDIATE PROPELLER SHAFT**

(a) Align the matchmarks in the front intermediate propeller shaft flange and parking brake drum with the 4 washers and nuts.

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



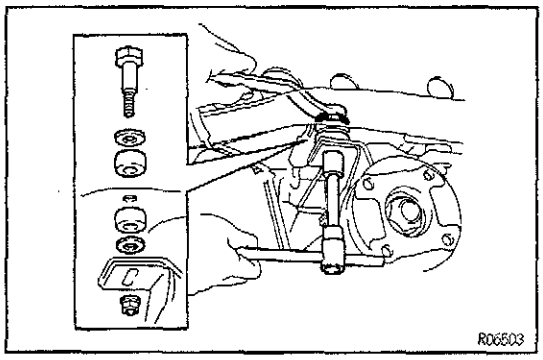

(c) Temporarily install the front center support bearing bracket.



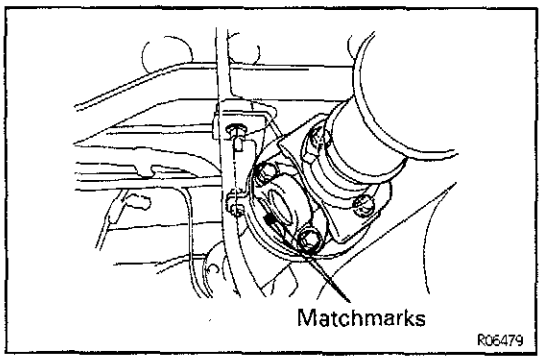

**2. INSTALL REAR INTERMEDIATE PROPELLER SHAFT**

(a) Align the matchmarks on the front intermediate propeller shaft and rear intermediate propeller shaft flange with the 4 bolts, washers and nuts.

(b) Torque the bolts and nuts.
**Torque: 88 N·m (900 kgf·cm, 65 ft·lbf)**



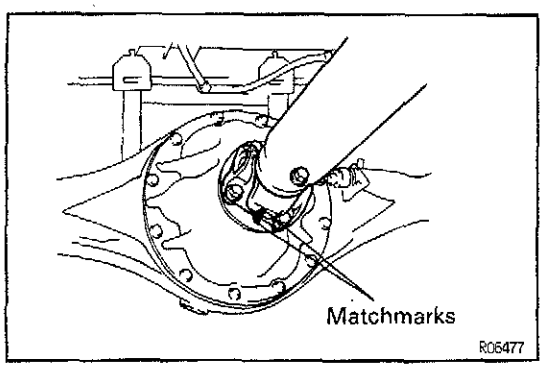

(c) Temporarily install the rear center support bearing bracket.




**3. INSTALL PROPELLER SHAFT**

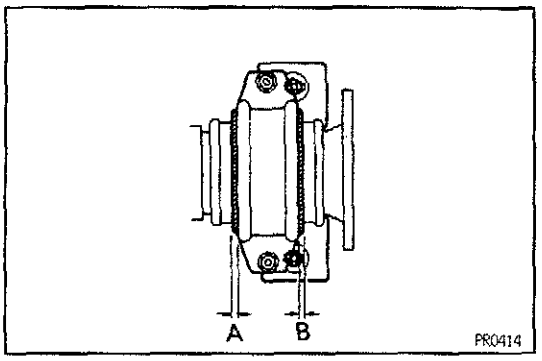
(a) Align the matchmarks in the rear intermediate propeller shaft and propeller shaft flange with the 4 bolts, washers and nuts.

(b) Torque the bolts and nuts.
**Torque: 88 N·m (900 kgf·cm, 65 ft·lbf)**




(c) Align the matchmarks in the propeller shaft flange and differential companion flange with the 4 bolts, washers and nuts.

(d) Torque the bolts and nuts.
**Torque: 88 N·m (900 kgf·cm, 65 ft·lbf)**




**4. INSTALL CENTER SUPPORT BEARING**

(a) With the vehicle unloaded, adjust and torque the center support bearing bracket so that the cushion rubber of the center support bearing is equal before and behind the housing (A and B).
**Torque: 25 N·m (250 kgf·cm, 18 ft·lbf)**

(b) After installation, check that the center of the bracket is at a right angle to the intermediate shaft axis.