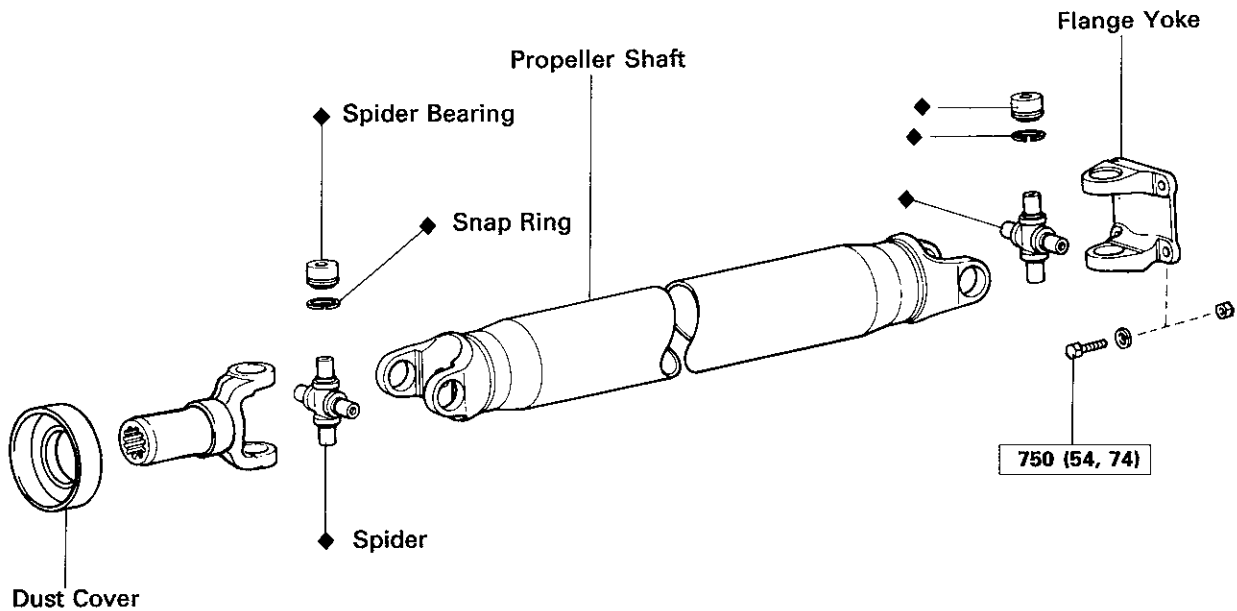


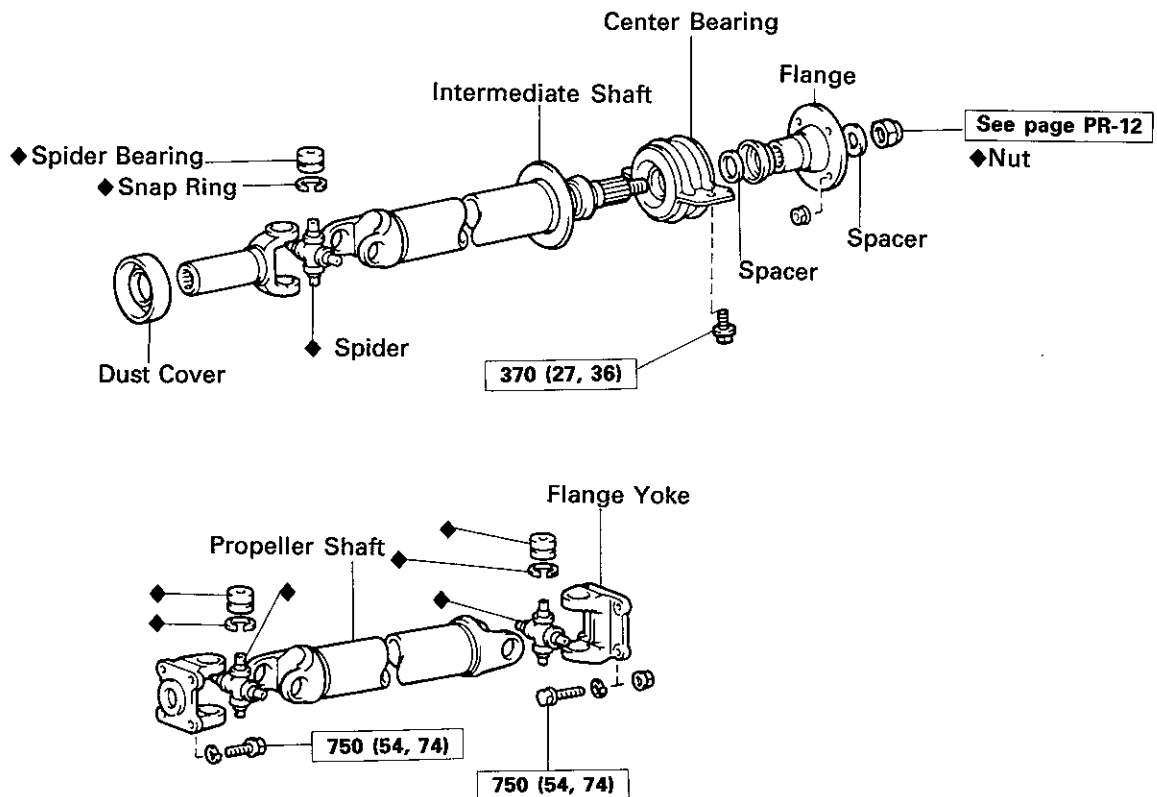
PROPELLER SHAFT COMPONENTS

[2WD]

2-Joint Type



3-Joint Type



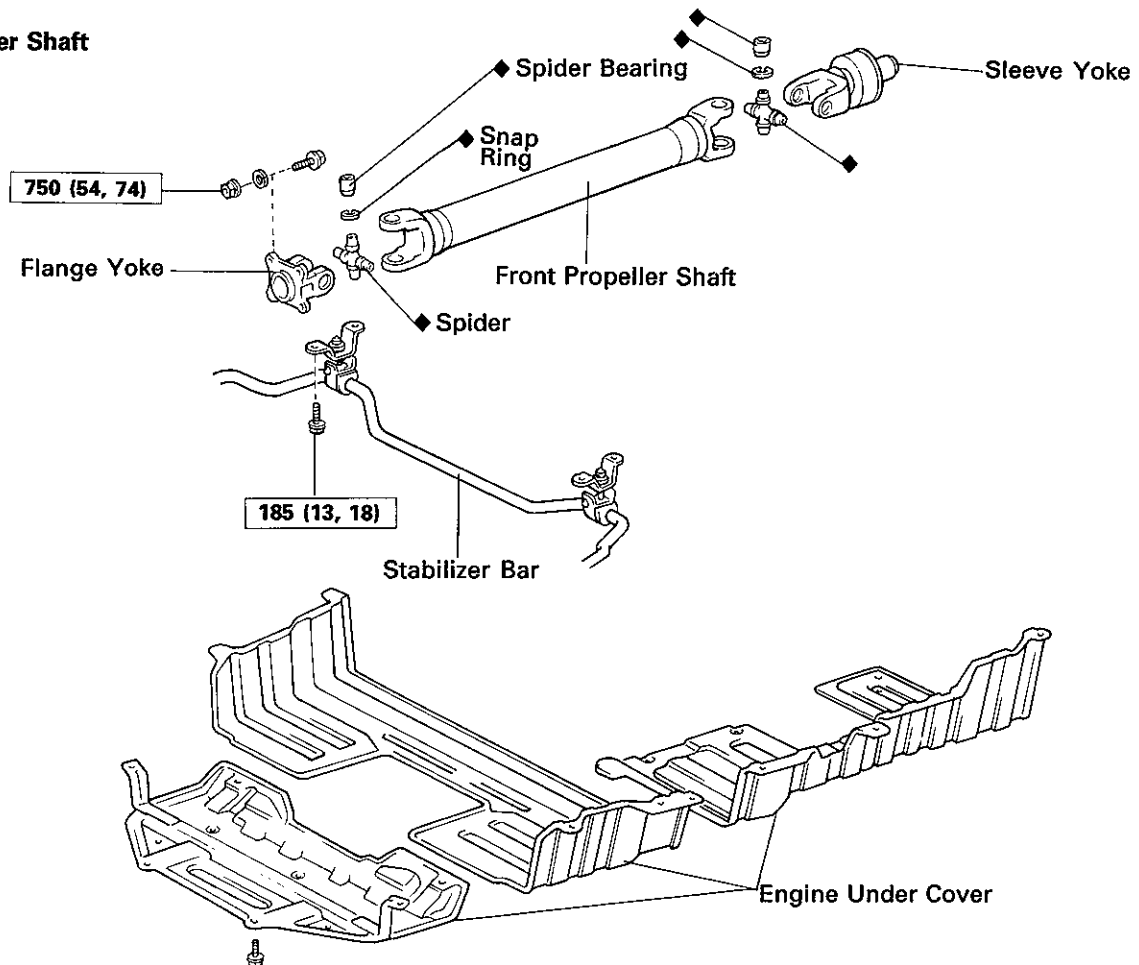
[kg-cm (ft-lb, N-m)] : Specified torque

◆ Non-reusable part

COMPONENT (Cont'd)

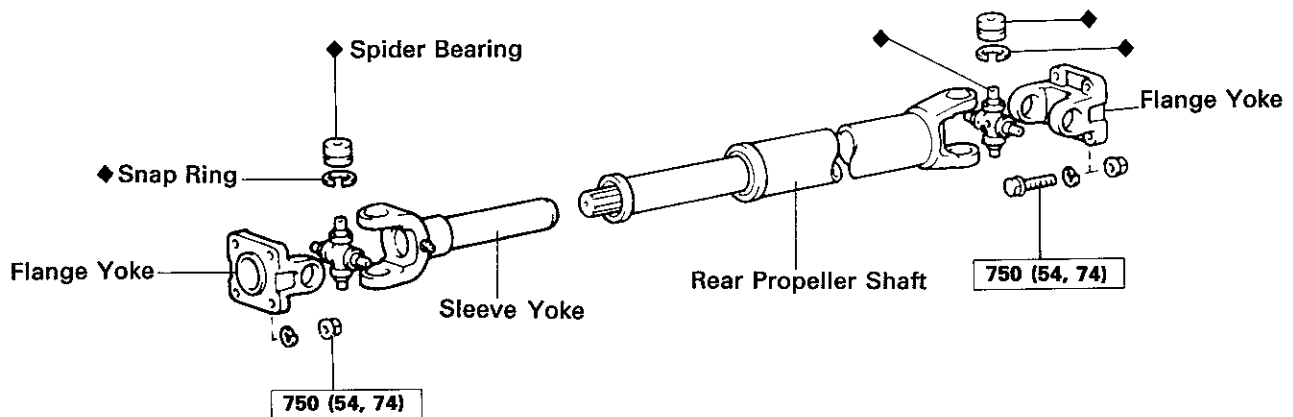
[4WD]

Front Propeller Shaft



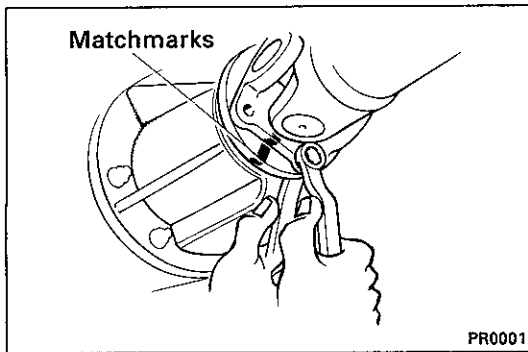
[4WD]

Rear Propeller Shaft



kg-cm (ft-lb, N-m) : Specified torque

◆ Non-reusable part

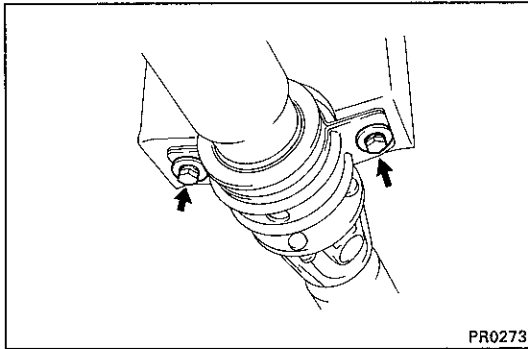


REMOVAL OF PROPELLER SHAFT

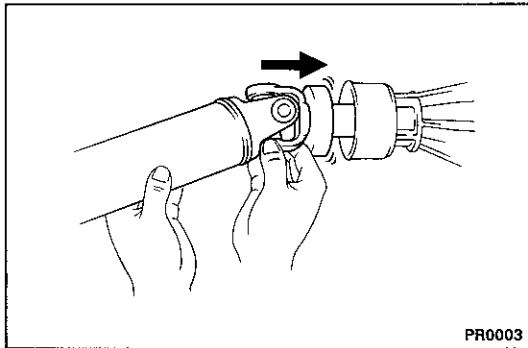
(2WD)

1. DISCONNECT PROPELLER SHAFT FLANGE FROM COMPANION FLANGE ON DIFFERENTIAL

- (a) Put matchmarks on the flanges.
- (b) Remove the four bolts and nuts.

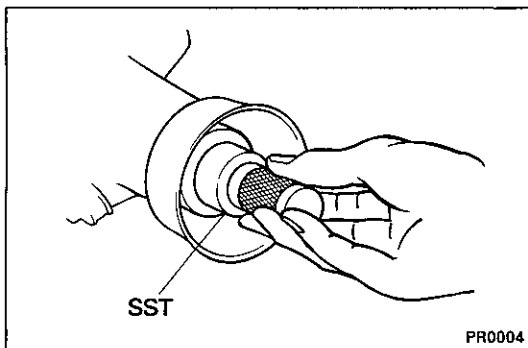


2. REMOVE CENTER SUPPORT BEARING (3-JOINT TYPE)



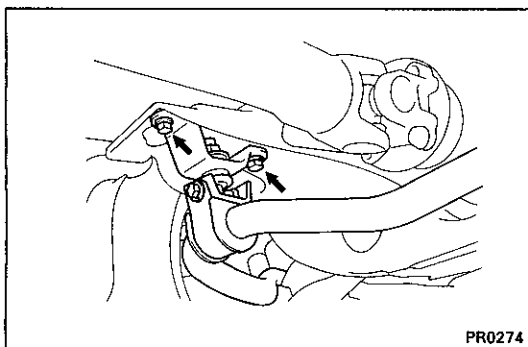
3. REMOVE PROPELLER SHAFT FROM TRANSMISSION

- (a) Pull the yoke from the transmission.



- (b) Insert SST in the transmission to prevent oil leakage.

SST 09325-20010

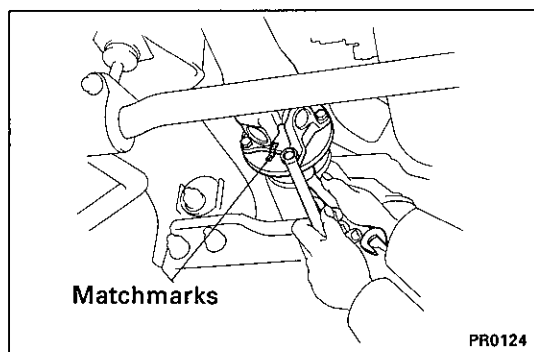


(4WD)

1. REMOVE ENGINE UNDER COVERS (See page PR-4)

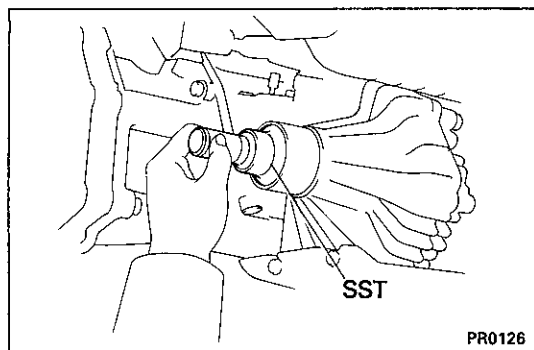
2. REMOVE STABILIZER BAR BRACKET

- Remove the four bolts.



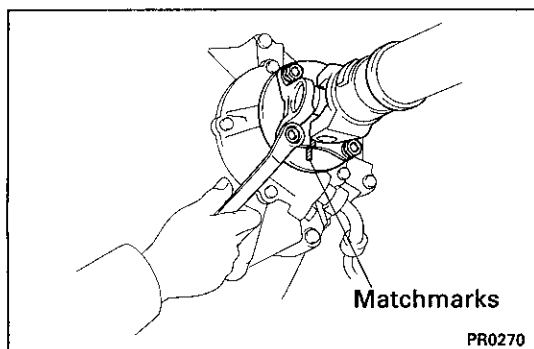
1. DISCONNECT PROPELLER SHAFT FLANGE FROM COMPANION FLANGE ON FRONT DIFFERENTIAL

- (a) Put matchmarks on the flanges.
- (b) Remove the four bolts and nuts.



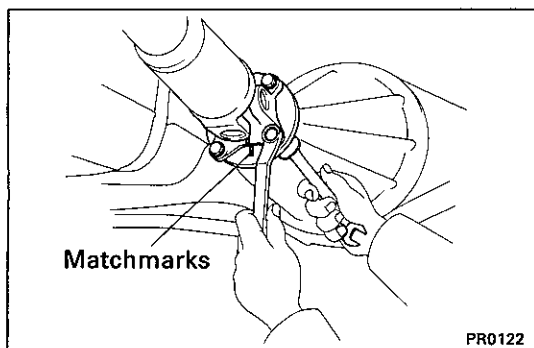
2. REMOVE FRONT PROPELLER SHAFT

- (a) Pull the yoke from the transfer.
 - (b) Insert SST in the transfer to prevent oil leakage.
- SST 09325-20010



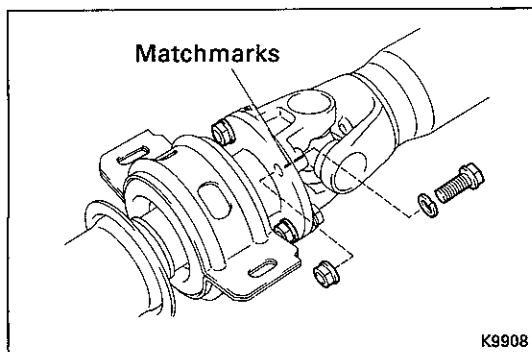
3. DISCONNECT PROPELLER SHAFT FLANGE FROM COMPANION FLANGE ON TRANSFER

- (a) Put matchmarks on the flanges.
- (b) Remove the four bolts and nuts.



4. REMOVE REAR PROPELLER SHAFT

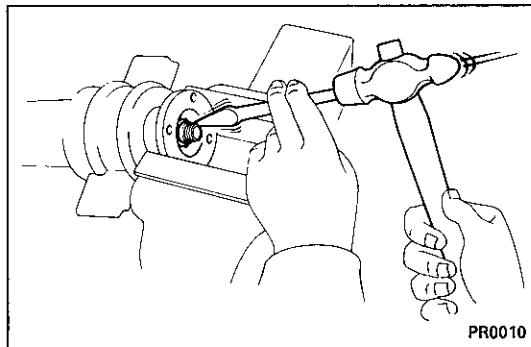
- (a) Put matchmarks on the flanges.
- (b) Remove the four bolts and nuts.
- (c) Remove the rear propeller shaft.



DISASSEMBLY OF PROPELLER SHAFT

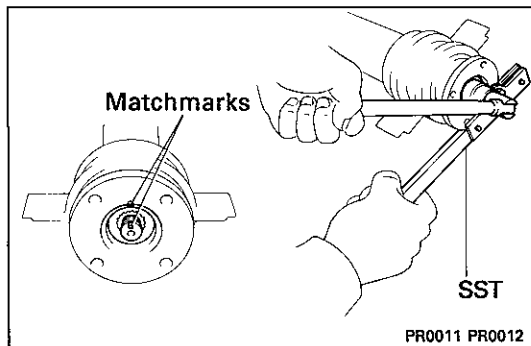
1. SEPARATE PROPELLER SHAFT AND INTERMEDIATE SHAFT

- (a) Put matchmarks on the flanges.
- (b) Remove the four bolts and nuts.



2. REMOVE CENTER SUPPORT BEARING FROM INTERMEDIATE SHAFT

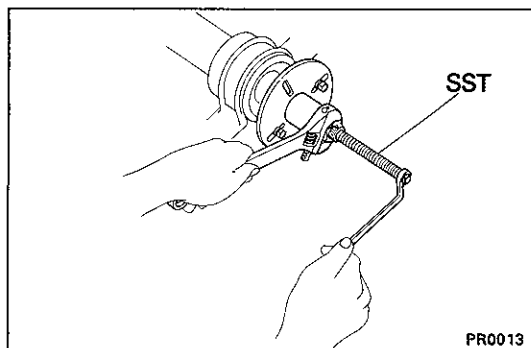
- (a) Using a hammer and chisel, loosen the staked part of the nut.



- (b) Using SST to hold the flange, remove the nut.

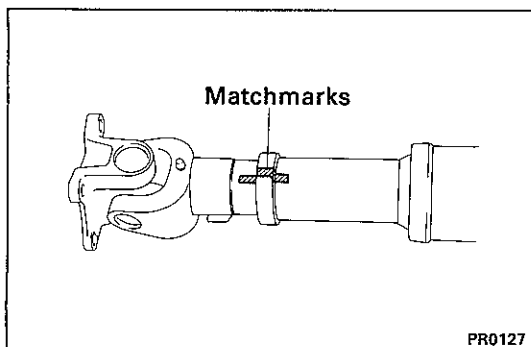
SST 09330-00021

- (c) Put matchmarks on the flange and shaft.



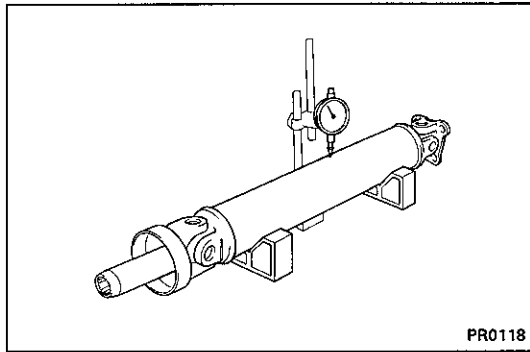
- (d) Using SST, remove the flange from the intermediate shaft.

SST 09557-22022 (09557-22030)



3. REMOVE SLEEVE YOKE FROM PROPELLER SHAFT (4WD)

- (a) Place matchmarks on the sleeve yoke and shaft.
- (b) Pull out the sleeve yoke from the shaft.

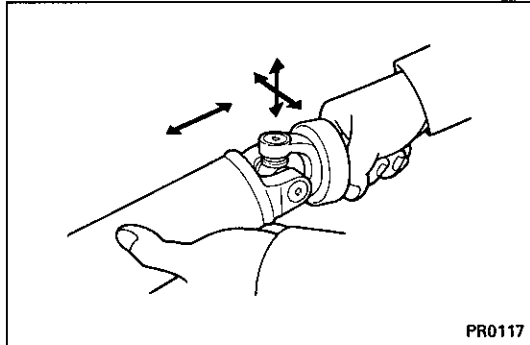


INSPECTION OF PROPELLER SHAFT COMPONENTS

1. INSPECT PROPELLER AND INTERMEDIATE SHAFTS FOR DAMAGE OR RUNOUT

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

Maximum runout: 0.8 mm (0.031 in.)



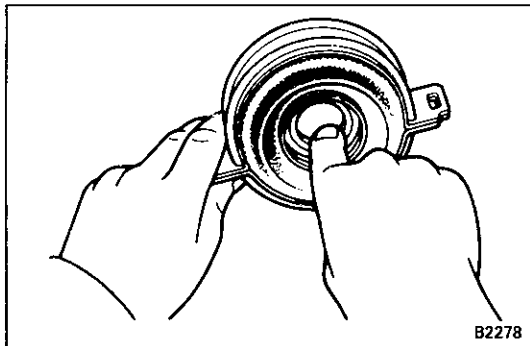
2. INSPECT SPIDER BEARINGS

(a) Inspect the spider bearings 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.)

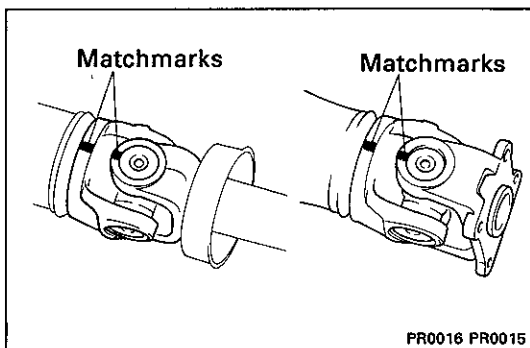
If necessary, replace the spider bearing.



3. INSPECT CENTER SUPPORT BEARING FOR WEAR OR DAMAGE

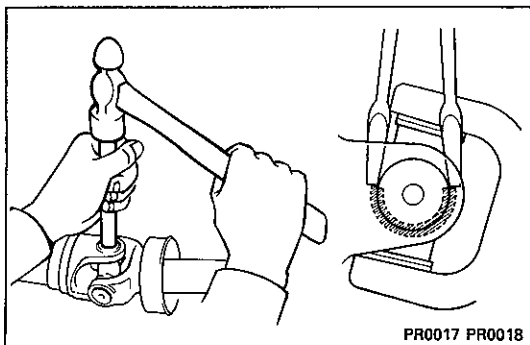
Check that the bearing turns freely.

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



REPLACEMENT OF SPIDER BEARING

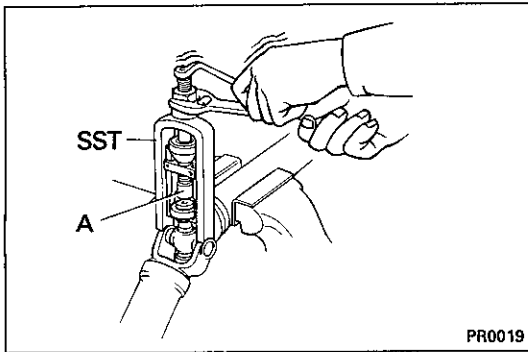
1. PLACE MATCHMARKS ON SHAFT AND YOKE



2. REMOVE SNAP RINGS

(a) Slightly tap in the bearing outer races.

(b) Using two screwdrivers, remove the four snap rings from the grooves.

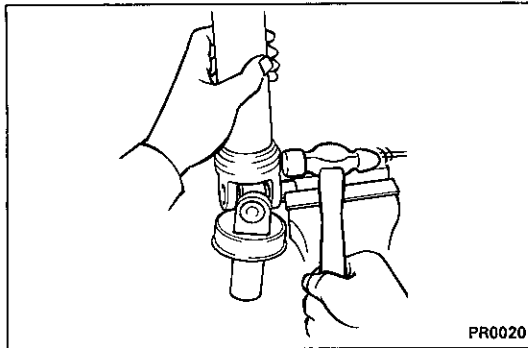


3. REMOVE SPIDER BEARINGS

- (a) Using SST, push out the bearing from the propeller shaft.

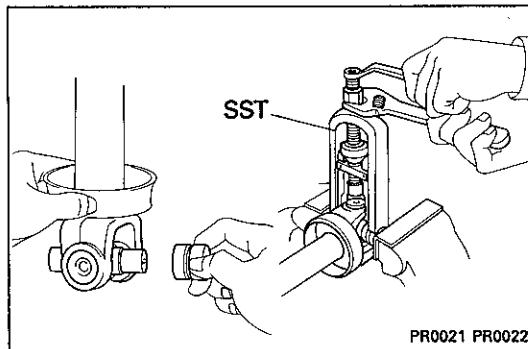
SST 09332-25010

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 propeller shaft with a hammer.

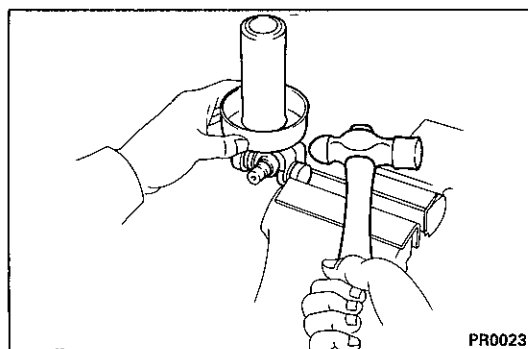
HINT: Remove the bearing on opposite side in the same procedure.



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

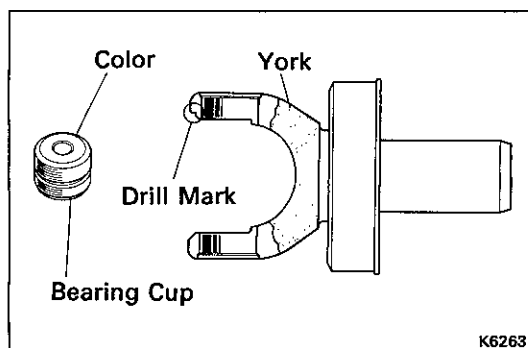
- (d) Using SST, push out the bearing from the yoke.

SST 09332-25010



- (e) Clamp the outer bearing race in a vise and tap off the yoke with a hammer.

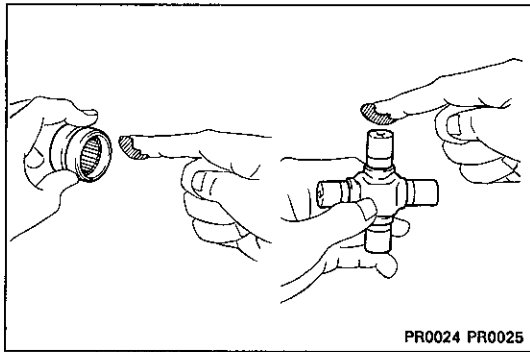
HINT: Remove the bearing on the opposite side in the same procedure.



4. SELECT SPIDER BEARING

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

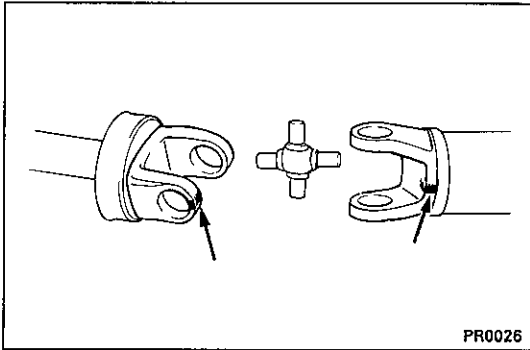
Yoke	Bearing
With drill mark	With color mark (Red)
No drill mark	No color mark



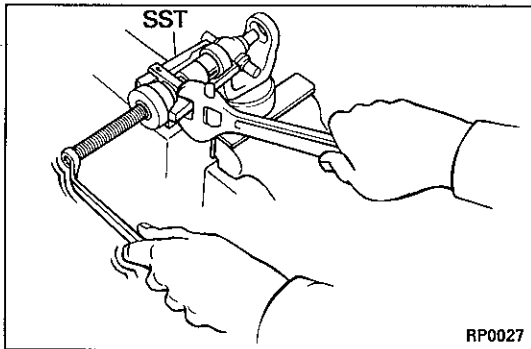
5. INSTALL SPIDER BEARINGS

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

HINT: Be careful not to apply too much grease.



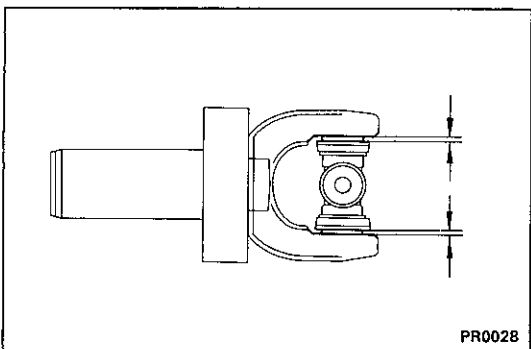
(b) Align the matchmarks on the yoke and shaft.



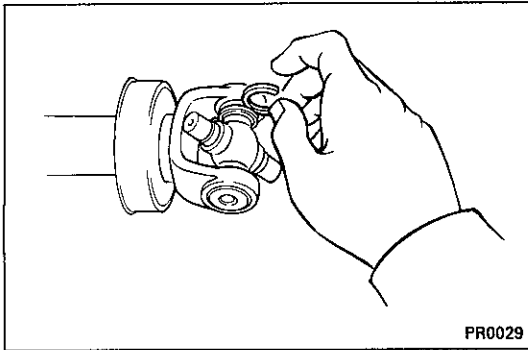
(c) Fit the new spider into the yoke.

(d) Using SST, install the new 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.



6. INSTALL SNAP RINGS

- (a) Install two 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

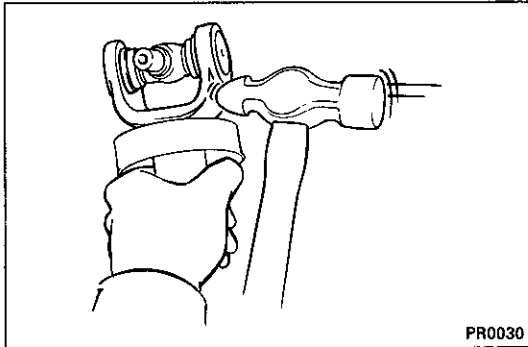
(1RZ engine A/T)

(2L engine A/T)

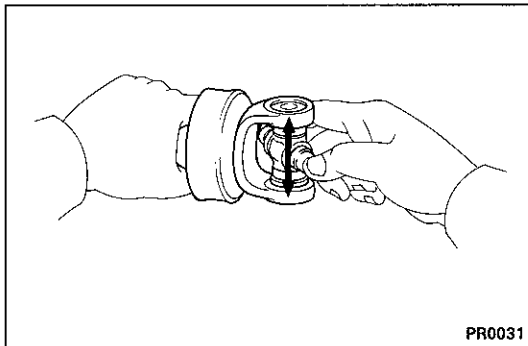
Color	Mark	Thickness mm (in.)
—	—	2.375 – 2.425 (0.0935 – 0.0955)
Brown	—	2.425 – 2.475 (0.0955 – 0.0974)
Blue	—	2.475 – 2.525 (0.0974 – 0.0994)

(Others)

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 – 0.0964)
—	8	2.450 – 2.500 (0.0965 – 0.0984)



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



7. CHECK SPIDER BEARING

- (a) Check that the spider bearing moves smoothly.
(b) Check the spider bearing axial play.

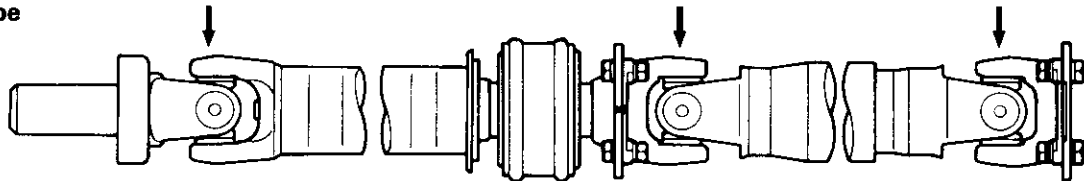
Bearing axial play: Less than 0.05 mm (0.0020 in.)

HINT: Install new spider bearings on the shaft side in the procedure described above.

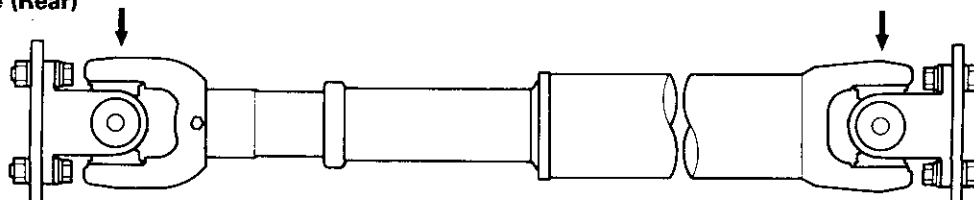
ASSEMBLY OF PROPELLER SHAFT

HINT: When replacing the propeller shaft, install the new parts facing as shown in the illustration.

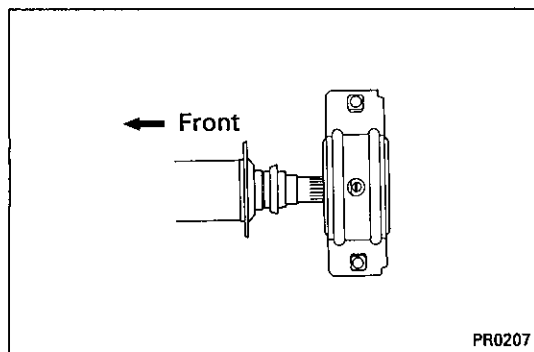
[2WD]
3-Joint Type



[4WD]
2-Joint Type (Rear)

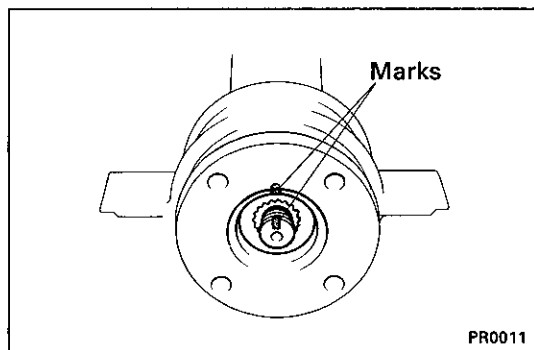


PR0155
PR0271



1. INSTALL CENTER SUPPORT BEARING ON INTERMEDIATE SHAFT

HINT: Install the center support bearing with the cutout toward the rear.

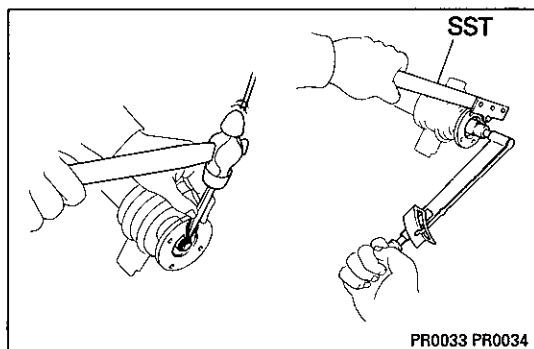


2. INSTALL FLANGE ON INTERMEDIATE SHAFT

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

(b) Place the flange on the shaft and align the marks.

HINT: If replacing either the center flange or intermediate shaft, reassemble them so that the front yoke of the intermediate shaft and the rear yoke of the propeller shaft are facing in the same direction.



(c) Using SST to hold the flange, press the bearing into position by tightening down a new nut.

SST 09330-00021

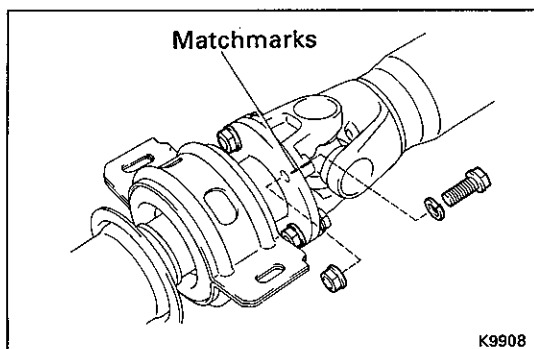
Torque: 1,850 kg-cm (134 ft-lb, 181 N-m)

(d) Loosen the nut.

(e) Torque the nut again.

Torque: 700 kg-cm (51 ft-lb, 69 N-m)

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



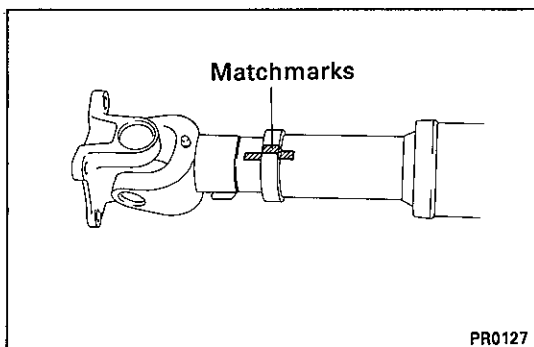
3. INSTALL PROPELLER SHAFT

(a) Align the marks on the flanges and connect the flanges with four bolts and nuts.

HINT: If replacing either the center flange or intermediate shaft, reassemble them so that the front yoke of the intermediate shaft and the rear yoke of the propeller shaft are facing in the same direction.

(b) Torque the bolts and nuts.

Torque: 750 kg-cm (54 ft-lb, 74 N-m)

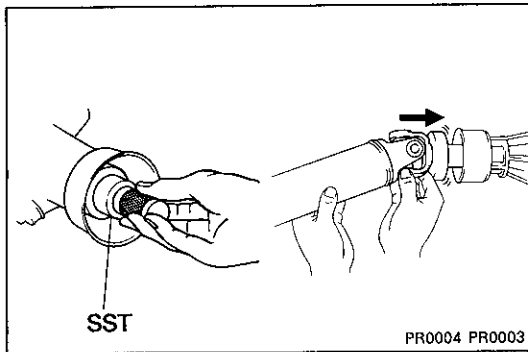


4. INSERT SLEEVE YOKE INTO PROPELLER SHAFT (4WD)

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

(b) Align the marks on the sleeve yoke and propeller shaft.

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



INSTALLATION OF PROPELLER SHAFT

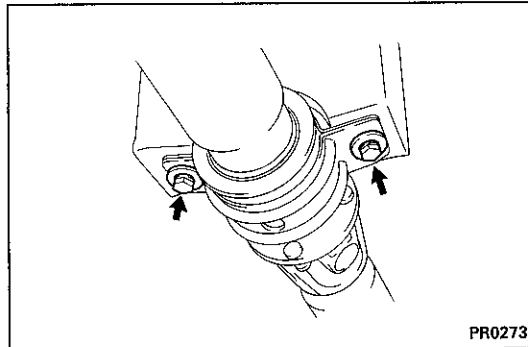
(2WD)

1. INSERT YOKE IN TRANSMISSION

(a) Remove SST.

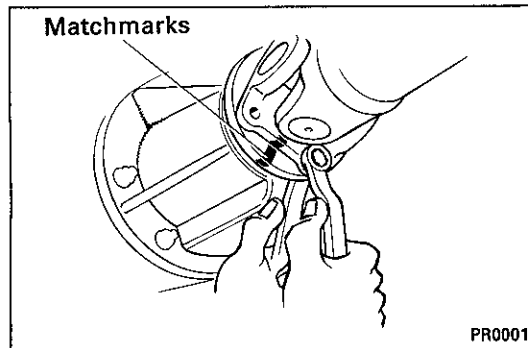
SST 09325-20010

(b) Push the yoke into the transmission.



2. INSTALL CENTER SUPPORT BEARING (3-JOINT TYPE)

Install the center support bearing with two mount bolts finger tight.

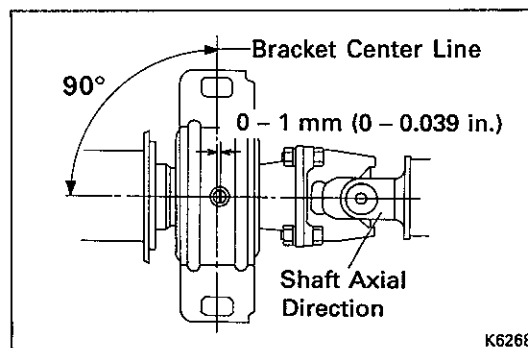


3. CONNECT PROPELLER SHAFT FLANGE TO COMPANION FLANGE ON DIFFERENTIAL

(a) Align the matchmarks on the flanges and connect the flanges with four bolts and nuts.

(b) Torque the bolts and nuts.

Torque: 750 kg-cm (54 ft-lb, 74 N-m)



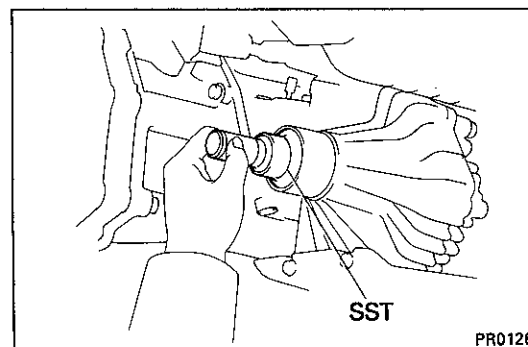
4. ADJUST CENTER SUPPORT BEARING (3-JOINT TYPE)

HINT:

- Adjust the center support bearing to keep the intervals as shown with vehicle unladen condition.
- At the same condition, check that the center line of the center bearing is at right angles at the shaft axial direction. Adjust the bearing if necessary.

Tighten two bolts.

Torque: 370 kg-cm (27 ft-lb, 36 N-m)

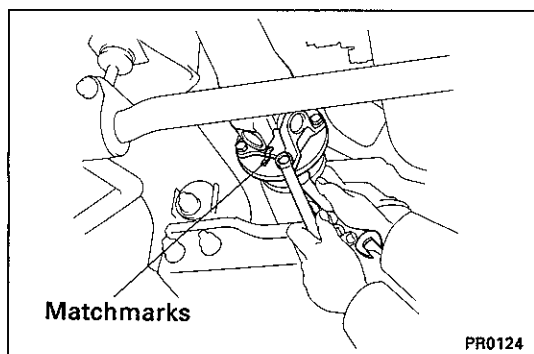


(4WD)

1. INSTALL FRONT PROPELLER SHAFT

(a) Remove SST from transfer.

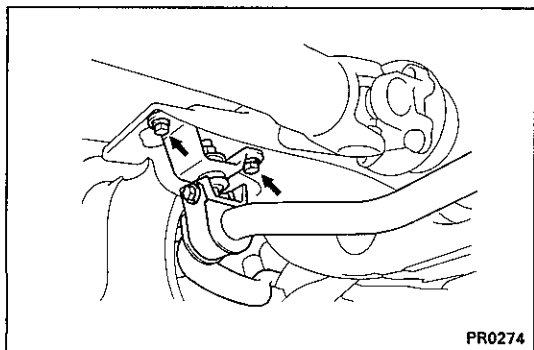
(b) Install front propeller shaft to the transfer.



2. CONNECT PROPELLER SHAFT FLANGE TO COMPANION FLANGE ON FRONT DIFFERENTIAL

- (a) Align the matchmarks on the flanges and connect the flanges with four bolts and nuts.
- (b) Torque the bolts and nuts.

Torque: 750 kg-cm (54 ft-lb, 74 N-m)

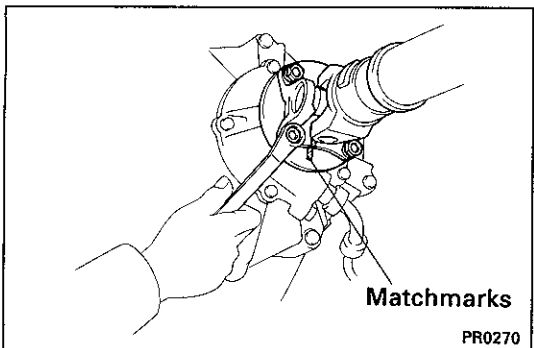


3. INSTALL STABILIZER BAR BRACKET

Install and torque the four bolts.

Torque: 185 kg-cm (13 ft-lb, 18 N-m)

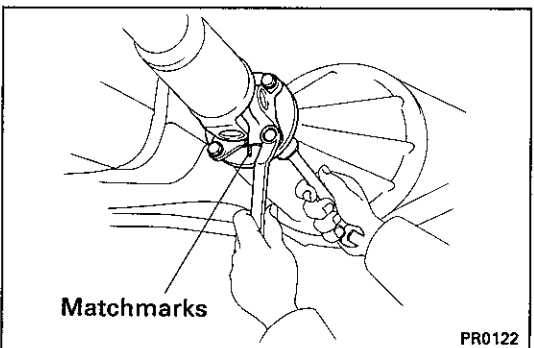
**4. INSTALL ENGINE UNDER COVERS
(See page PR-4)**



5. CONNECT PROPELLER SHAFT FLANGE TO COMPANION FLANGE ON TRANSFER

- (a) Align the matchmarks on the flanges and connect the flanges with four bolts and nuts.
- (b) Torque the bolts and nuts for propeller shaft flange and companion flange.

Torque: 750 kg-cm (54 ft-lb, 74 N-m)



6. CONNECT PROPELLER SHAFT FLANGE TO COMPANION FLANGE ON DIFFERENTIAL

- (a) Align the marks on the flanges and connect the flanges with four bolts and nuts.
- (b) Torque the bolts and nuts.

Torque: 750 kg-cm (54 ft-lb, 74 N-m)