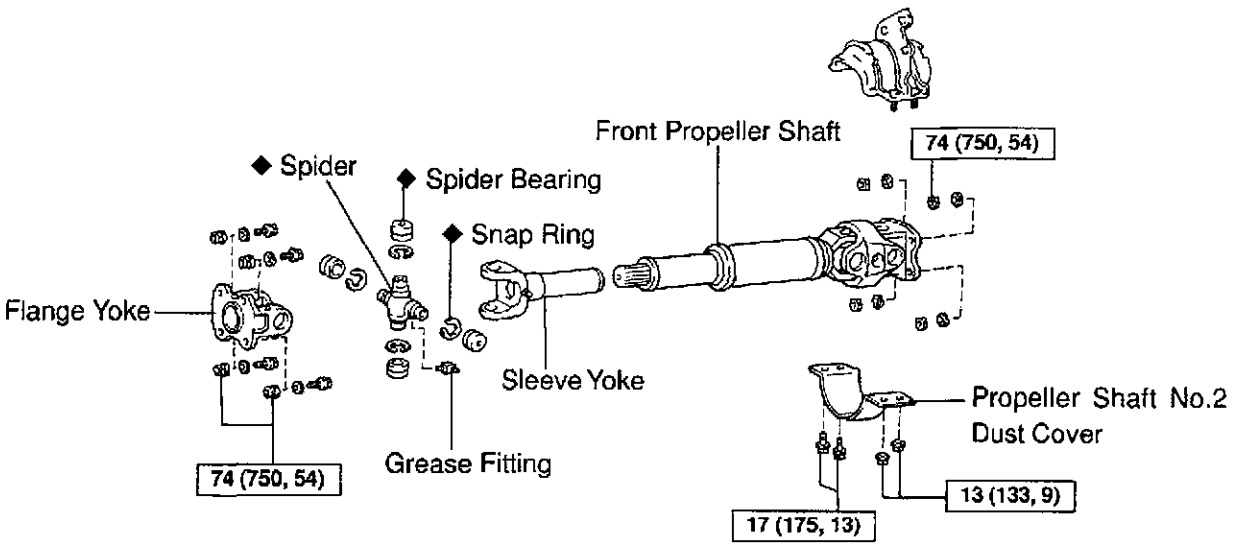
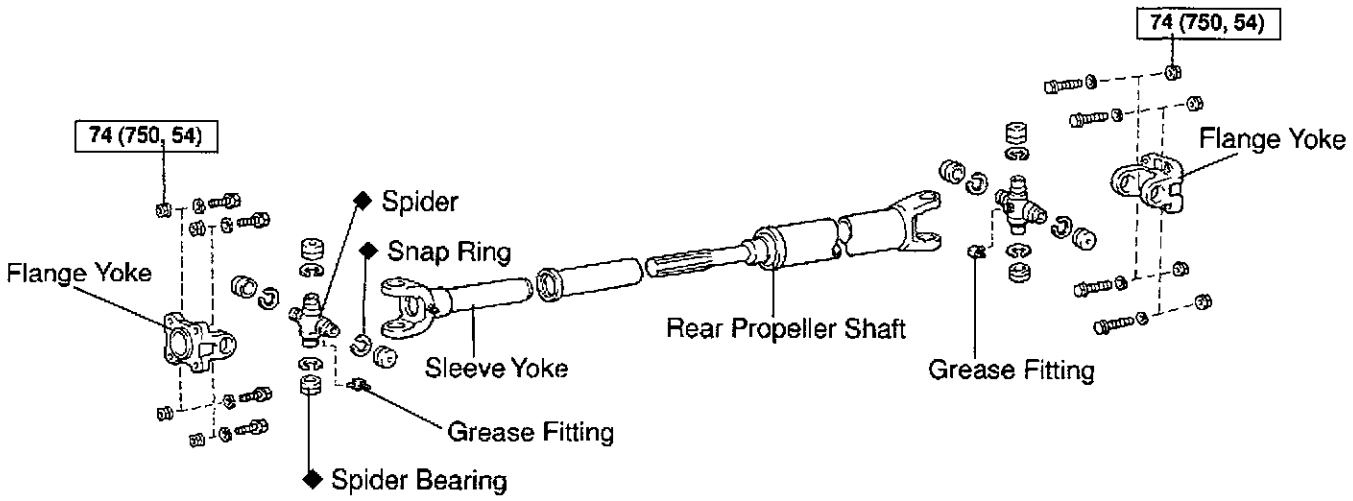
PROPELLER SHAFT ASSEMBLY (4WD)

COMPONENTS

Front Propeller Shaft:



Rear Propeller Shaft (2–joint Type):



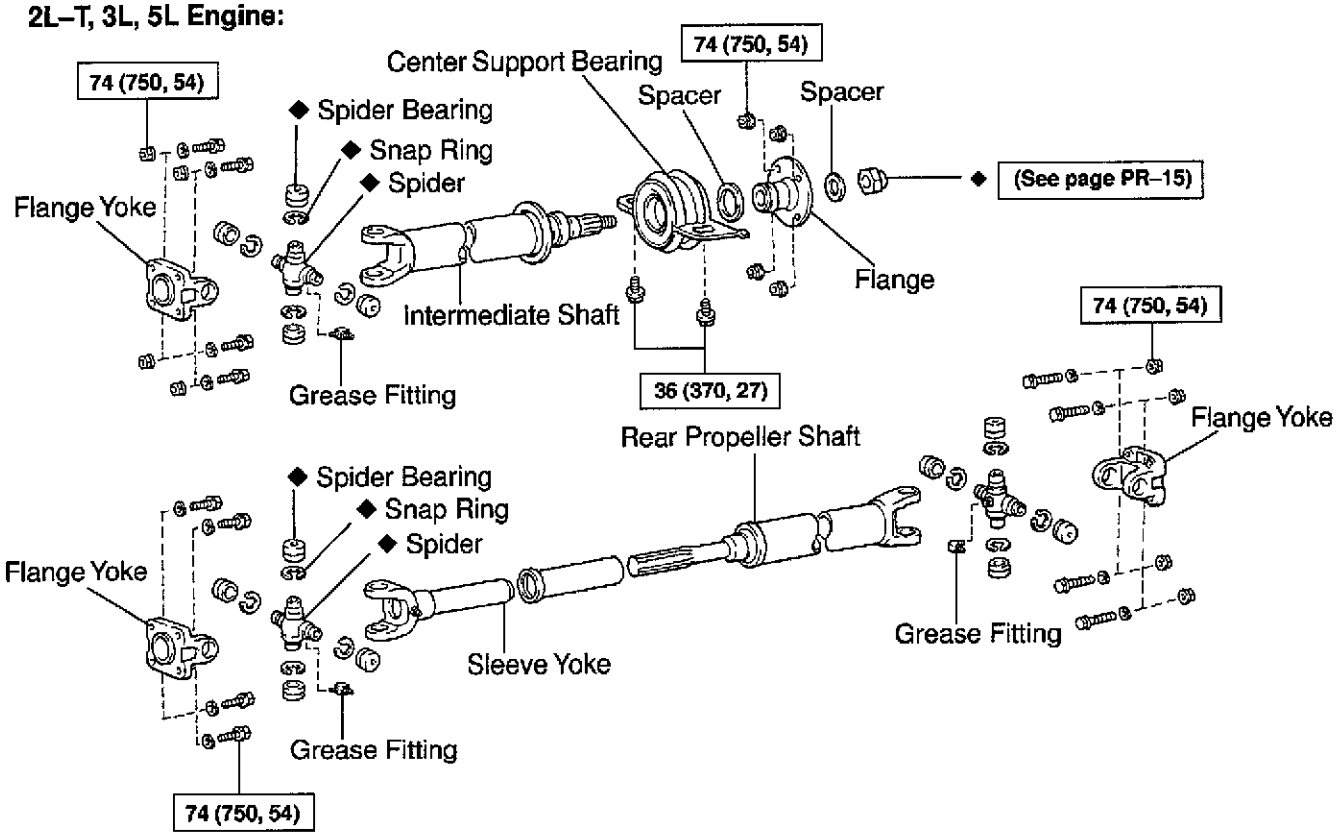
N·m (kgf·cm, ft·lbf) : Specified torque
◆ Non–reusable part

F02349

PR

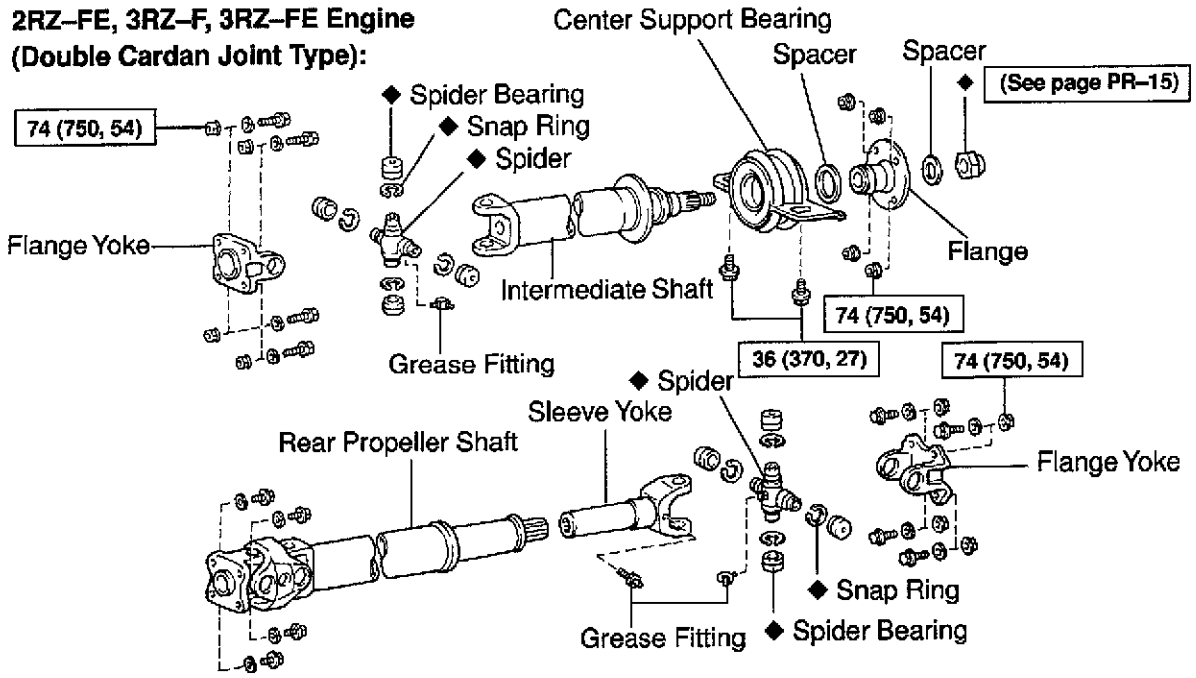
REAR PROPELLER SHAFT (3–Joint Type)

2L–T, 3L, 5L Engine:



PR

2RZ–FE, 3RZ–F, 3RZ–FE Engine
(Double Cardan Joint Type):



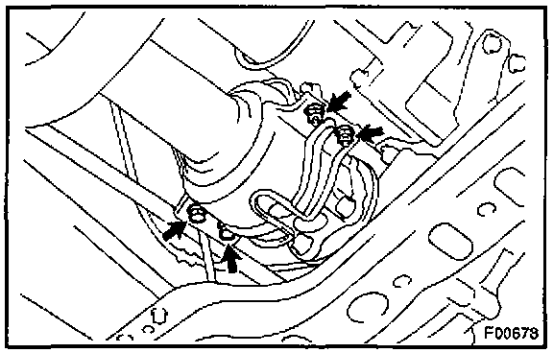
N·m (kgf·cm, ft·lbf): Specified torque

◆ Non–reusable part

F06653

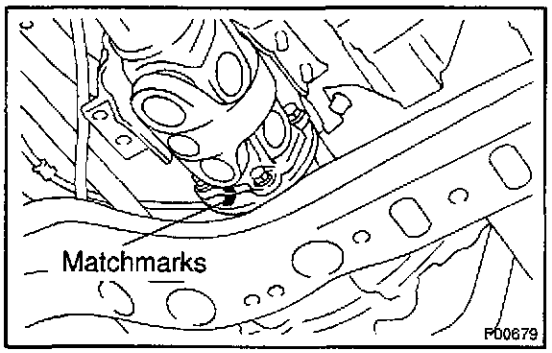
PR022-01

REMOVAL

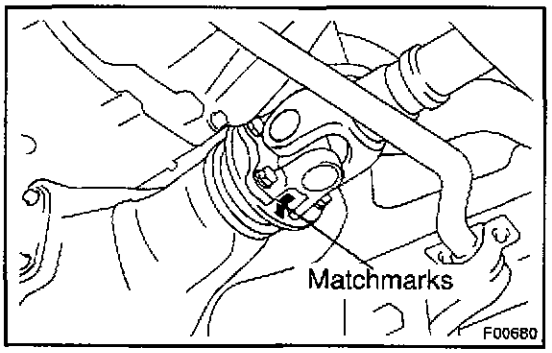


1. REMOVE FRONT PROPELLER SHAFT

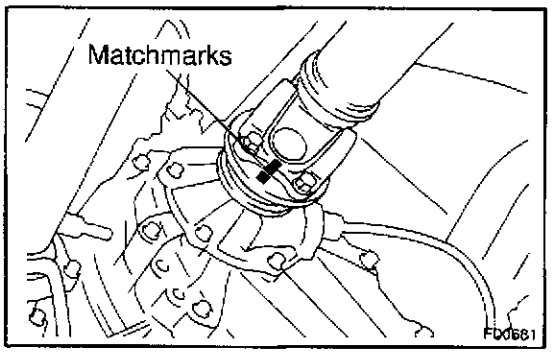
(a) Remove the 2 nuts, bolts and propeller shaft No.2 dust cover.
Torque:
Bolt: 17 N·m (175 kgf·cm, 13 ft·lbf)
Nut: 13 N·m (133 kgf·cm, 9 ft·lbf)



(b) Place matchmarks on the propeller shaft and transfer flanges.
(c) Remove the 4 nuts, bolts and washers.
Torque: 74 N·m (750 kgf·cm, 54 ft·lbf)
(d) Suspend the rear side of the propeller shaft.

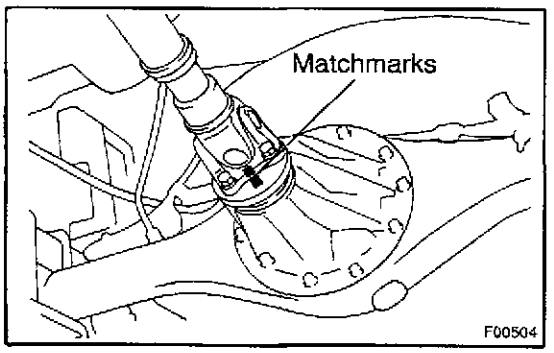


(e) Place matchmarks on the propeller shaft and differential flanges.
(f) Remove the 4 nuts and washers.
Torque: 74 N·m (750 kgf·cm, 54 ft·lbf)
(g) Remove the front propeller shaft.

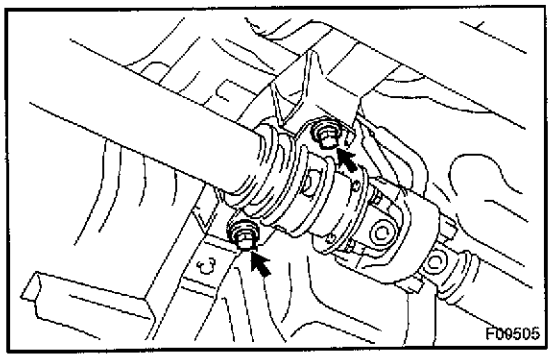


2. REMOVE REAR PROPELLER SHAFT

(a) Place matchmarks on the propeller shaft and transfer flanges.
(b) Remove the 4 nuts and washers.
Torque: 74 N·m (750 kgf·cm, 54 ft·lbf)



(c) Place matchmarks on the propeller shaft and differential flanges.
(d) Remove the 4 nuts, bolts and washers.
Torque: 74 N·m (750 kgf·cm, 54 ft·lbf)



(e) 3–joint type:
Remove the 2 bolts and center support bearing from the frame crossmember.
Torque: 36 N·m (370 kgf·cm, 27 ft·lbf)

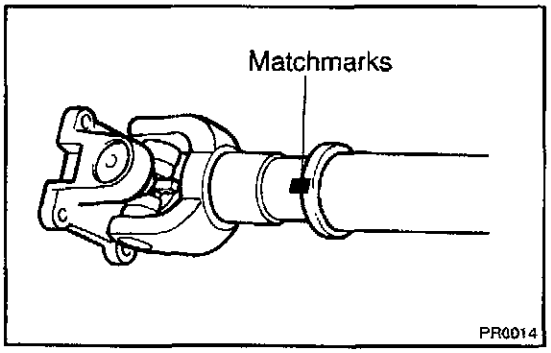
(f) Remove the rear propeller shaft.

PR323-01

DISASSEMBLY

NOTICE:

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

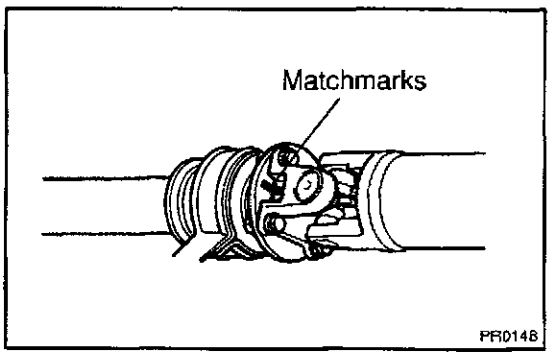


1. REMOVE SLEEVE YOKE FROM PROPELLER SHAFT

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

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

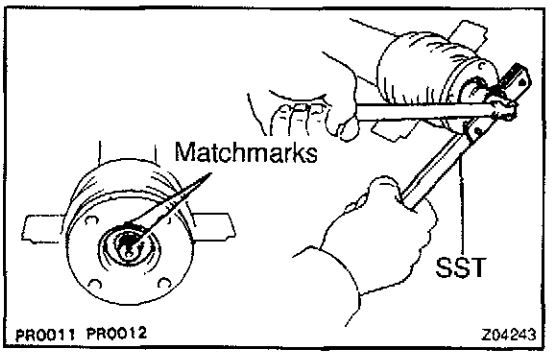
(c) Remove the dust cover from the shaft.



2. 3–JOINT TYPE:
SEPARATE PROPELLER SHAFT AND INTERMEDIATE SHAFT

(a) Place matchmarks on the flanges.

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

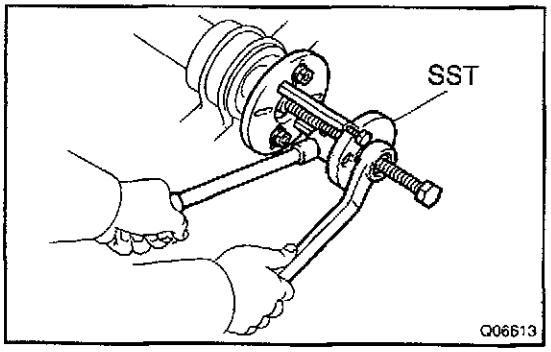


3. 3–JOINT TYPE:
REMOVE CENTER SUPPORT BEARING FROM INTERMEDIATE SHAFT

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

(b) Using SST to hold the flange, remove the nut and spacer.
SST 09930–00021

(c) Place matchmarks on the flange and shaft.



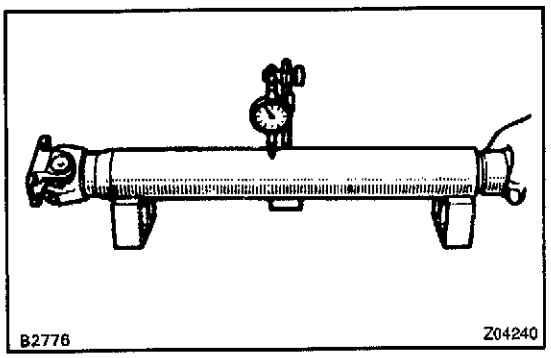
(d) Using SST, remove the flange from the intermediate shaft.
SST 09950–30010 (09951–03010, 09953–03010, 09954–03010, 09955–03030, 09956–03020)

(e) Remove the spacer.

4. 3–JOINT TYPE:
REMOVE CENTER SUPPORT BEARING

PR024–01

INSPECTION

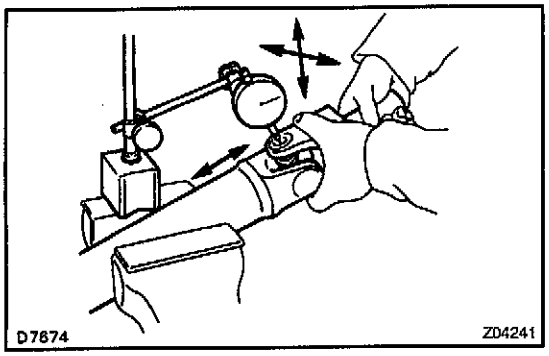


1. INSPECT PROPELLER SHAFT AND INTERMEDIATE SHAFT FOR DAMAGE OR RUNOUT

Using a dial indicator, check the runout of shafts.

Maximum runout: 0.8 mm (0.031 in.)

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



2. INSPECT SPIDER BEARINGS

NOTICE:

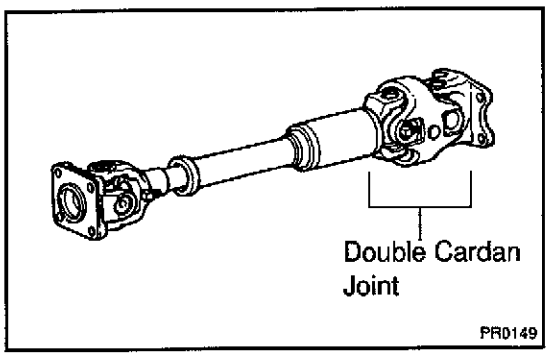
Be careful not to grip the propeller shaft tube too tightly in a vise as this will cause deformation.

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

(b) Using a dial indicator, check the spider bearing axial play by turning the yoke with holding the shaft tightly.

Bearing axial play: Maximum 0.05 mm (0.0020 in.)

If necessary, replace the spider bearing.

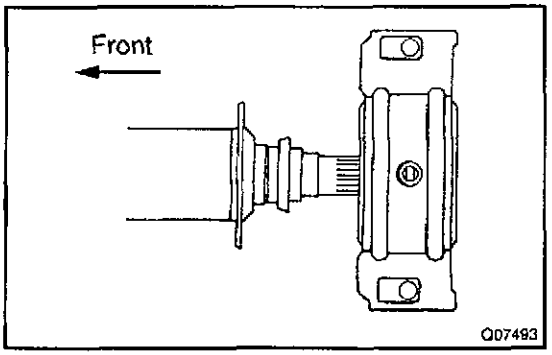


3. 2RZ–FE, 3RZ–F, 3RZ–FE engine: INSPECT WITH DOUBLE CARDAN JOINT PROPELLER SHAFT

(a) Inspect the shaft for wear or damage.

(b) Inspect the double cardan joint for wear or damage.

If any problem is found, replace the propeller shaft assembly.



REASSEMBLY

1. 3–JOINT TYPE:
INSTALL CENTER SUPPORT BEARING ON INTERMEDIATE SHAFT

Install the center support bearing and spacer.

HINT:

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

2. 3–JOINT TYPE:
INSTALL FLANGE ON INTERMEDIATE SHAFT

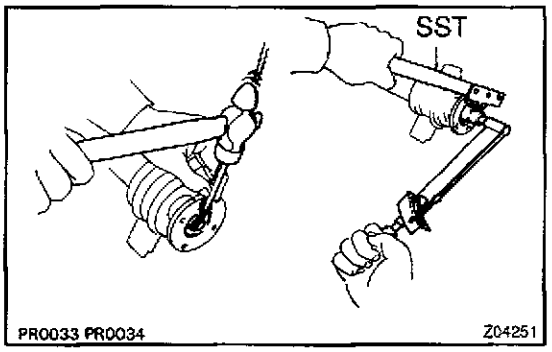
(a) Coat the splines of the intermediate shaft with MP grease.

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

HINT:

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

(c) Install the spacer.



(d) Using SST to hold the flange, press the bearing into position by tightening down a new nut.
SST 09930–00021
Torque: 181 N·m (1,850 kgf·cm, 134 ft·lbf)

(e) Loosen the nut.

(f) Torque the nut again.
Torque: 69 N·m (700 kgf·cm, 51 ft·lbf)

(g) Using a chisel and hammer, stake the nut.

3. 3–JOINT TYPE:
INSTALL PROPELLER SHAFT

(a) Align the matchmarks on the flanges and connect the flanges with 4 bolts, washers and nuts.

HINT:

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

(b) Torque the bolts.
Torque: 74 N·m (750 kgf·cm, 54 ft·lbf)

4. INSERT SLEEVE YOKE INTO PROPELLER SHAFT

(a) Apply grease to the propeller shaft spline and sleeve yoke sliding surface.
Grease:
Molybdenum disulfide lithium base chassis grease, NLGI No.2

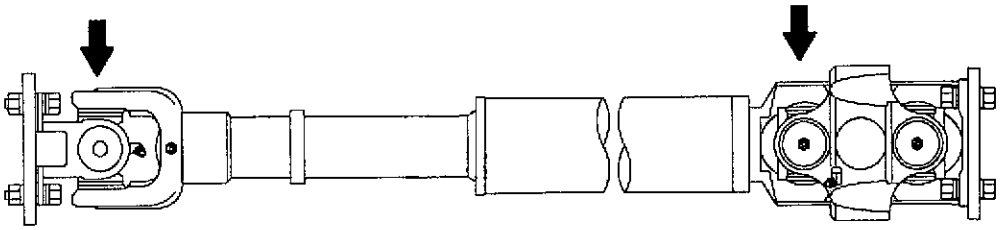
(b) Install the dust cover to the shaft.

(c) Align the matchmarks on the yoke and propeller shaft.

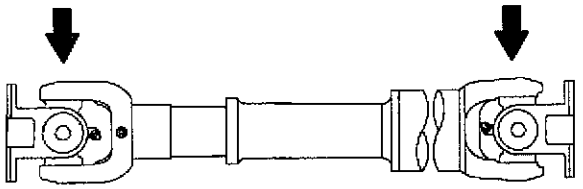
HINT:

When replacing the propeller shaft, make sure that new parts are facing in the correct direction, as shown in the illustration.

FRONT PROPELLER SHAFT

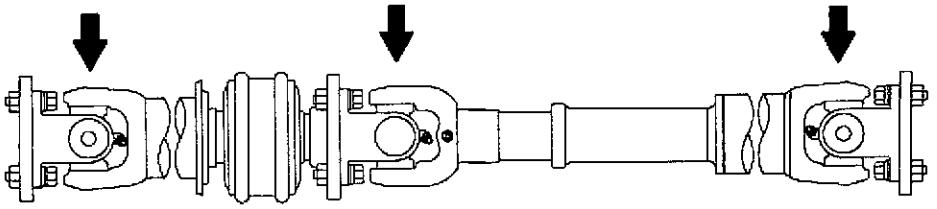


REAR PROPELLER SHAFT (2–Joint Type)

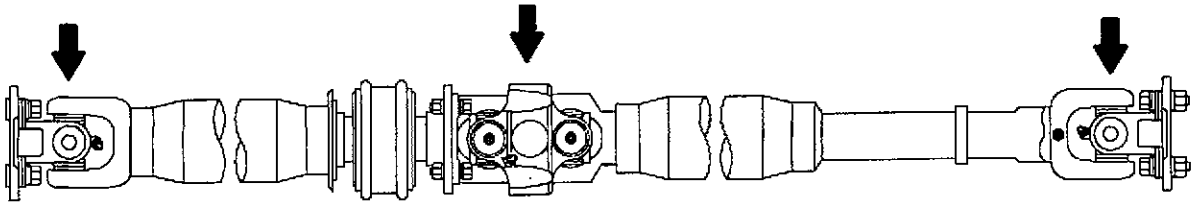


REAR PROPELLER SHAFT (3–Joint Type)

2L–T, 3L, 5L Engine:



2RZ–FE, 3RZ–F, 3RZ–FE Engine (Double Cardan Joint Type):



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PR025-01

INSTALLATION

Installation is in the reverse order of removal (See page PR–11).