# **PROPELLER SHAFT**

#### DRIVE SHAFT SYSTEM

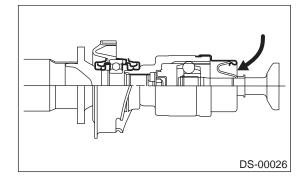
## 2. Propeller Shaft

## A: REMOVAL

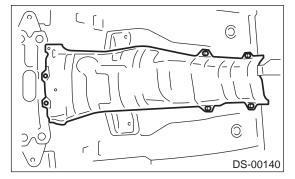
## NOTE:

• Before removing propeller shaft, wrap metal parts with a cloth or rubber material.

• In case of DOJ type, before removing propeller shaft, wrap metal parts (installed at the rubber boot of center DOJ) with a cloth or rubber material, as shown in the figure. Rubber boot may be damaged due to interference with adjacent metal parts while bending the DOJ during removal.



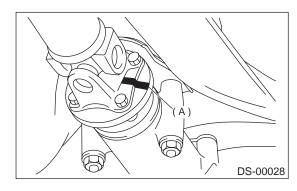
- 1) Disconnect ground cable from battery.
- 2) Move select lever or gear shift lever to "N".
- 3) Release the parking brake.
- 4) Jack-up vehicle and support it with sturdy racks.
- 5) Remove center exhaust pipes.
- 6) Remove rear exhaust pipe and muffler.
- 7) Remove heat shield cover.



8) Put matching marks on propeller shaft and rear differential.

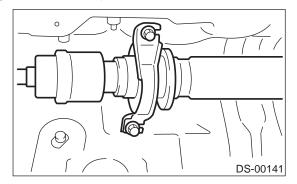
9) Remove the four bolts which hold propeller shaft to rear differential.NOTE:

Remove all but one bolt.



## (A) Matching mark

10) Remove the two bolts which hold center bearing to vehicle body.



11) Remove propeller shaft from transmission.

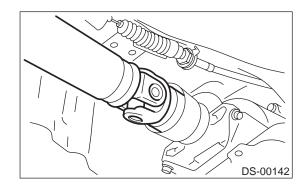
### CAUTION:

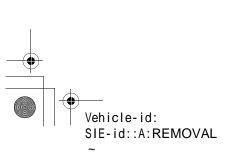
#### Be sure not to damage oil seals and the frictional surface of sleeve yoke.

NOTE:

• Be sure to use an empty oil can to catch oil flowing out when removing propeller shaft.

• Be sure to plug the opening in transmission after removal of propeller shaft.



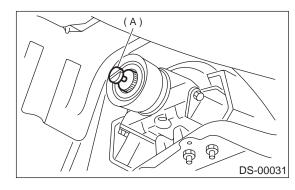


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# **PROPELLER SHAFT**

12) Install the extension cap to transmission. NOTE:

If extension cap is not available, cover the opening with a vinyl bag in order to prevent gear oil or ATF leakage.



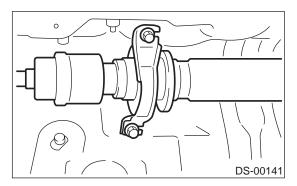
(A) Extension cap

## **B: INSTALLATION**

1) Insert sleeve yoke into transmission and attach center bearing to vehicle body.

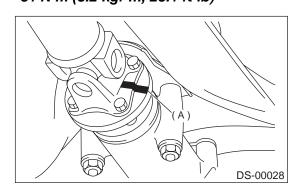
## Tightening torque:

52 N·m (5.3 kgf-m, 38.3 ft-lb)



2) Align matching marks and connect flange yoke and rear differential.

### Tightening torque: 31 N⋅m (3.2 kgf-m, 23.1 ft-lb)



(A) Matching mark

- 3) Install heat shield cover.
- 4) Install center exhaust pipes.



5) Install rear exhaust pipe and muffler.

## **C: INSPECTION**

#### NOTE:

Do not disassemble propeller shaft. Check the following and replace if necessary.

1) Tube surfaces for dents or cracks

2) Splines for deformation or abnormal wear

3) Joints for non-smooth operation or abnormal noise

4) Center bearing for free play, noise or nonsmooth operation

5) Oil seals for abnormal wear or damage

6) Center bearing for breakage

Check the following points with propeller shaft installed in vehicle.

#### 1. JOINTS AND CONNECTIONS

1) Remove center exhaust pipes.

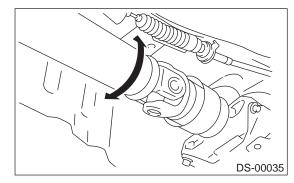
2) Remove heat shield cover.

3) Check for any looseness of yoke flange connecting bolts and center bearing retaining bolts.

## 2. SPLINES AND BEARING LOCATIONS

- 1) Remove center exhaust pipes.
- 2) Remove rear exhaust pipe and muffler.
- 3) Remove heat shield cover.

4) Turn propeller shaft by hand to see if abnormal free play exists at splines. Also move yokes to see if abnormal free play exists at spiders and bearings.



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## **PROPELLER SHAFT**

#### DRIVE SHAFT SYSTEM

## 3. RUNOUT OF PROPELLER SHAFT

- 1) Remove center exhaust pipes.
- 2) Remove rear exhaust pipe and muffler.
- 3) Remove heat shield cover.

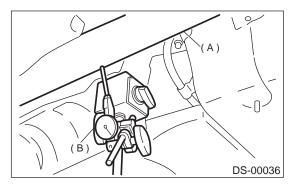
4) Turn rear wheels by hand to check for "runout" of propeller shaft.

#### NOTE:

Measure runout with a dial gauge at the center of front and rear propeller shaft tubes.

#### Runout:

## Limit 0.6 mm (0.024 in)



- (A) Propeller shaft
- (B) Dial gauge

## 4. CENTER BEARING FREE PLAY

- 1) Remove front and center exhaust pipes.
- 2) Remove rear exhaust pipe and muffler.
- 3) Remove heat shield cover.

4) While holding propeller shaft near center bearing with your hand, move it up and down, and left and right to check for any abnormal bearing free play.

