
PROPELLER SHAFT AND UNIVERSAL JOINTS

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N16AA--

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SPECIFICATIONS

GENERAL SPECIFICATIONS

N16CA-

Items	2.6 L Engine	3.0 L Engine			
		2 door vehicles		4 door vehicles	
		M/T	A/T	M/T	A/T
Propeller shaft Type	2-joint type	2-joint type	2-joint type	2-joint type	2-joint type
Length (joint to joint) × O.D. mm (in.)					
Front	665 × 50.8 (26.2 × 2.0)	642 × 50.8 (25.3 × 2.0)	700 × 50.8 (27.6 × 2.0)	642 × 50.8 (25.3 × 2.0)	700 × 50.8 (27.6 × 2.0)
Rear	598 × 75 (23.5 × 3.0)	568 × 75 (22.4 × 3.0)	510 × 75 (20.1 × 3.0)	913 × 75 (35.9 × 3.0)	855 × 75 (33.7 × 3.0)
Universal joint Type	Cross type	Cross type			
Bearing	Oiled needle roller bearing	Oiled needle roller bearing			
Journal O.D. mm (in.)	14.7 (.58) (Type 1)	Front propeller shaft: 14.7 (.58) (Type 1), Rear propeller shaft: 18.3 (.72) (Type 2)			

M/T : Manual transmission

A/T : Automatic transmission

SERVICE SPECIFICATIONS

N16CB-

Items	Specifications
Standard value Journal end play mm (in.)	0.06 (.0024) or less
Limits Propeller shaft runout (Dial indicator reading) mm (in.)	
Front	0.5 (.020)
Rear	0.6 (.024)

TORQUE SPECIFICATION

N16CC-A

Item	Nm	ft.lbs.
Flange yoke attaching bolts	50-60	36-43
Transfer case drain plug	30-35	22-25
Transfer case filler plug	30-35	22-25

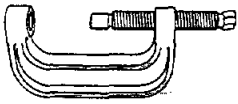
LUBRICANTS

N16CD-B

Items	Specified lubricant	Quantity
Sleeve yoke surface	Hypoid Gear Oil API classification GL-4 or higher SAE viscosity 80W, 75W-85W	As required
Transfer case	Hypoid Gear Oil API classification GL-4 or higher SAE viscosity 80W, 75W-85W	2.2 lit. (4.7 pints)

SPECIAL TOOL

N16DA--

Tool	Number	Name	Use
	MB990840-01	Universal joint remover and installer set	Removal and installation of journal bearing (Except type 2)

TROUBLESHOOTING

N16EAAA*

Symptom	Probable cause	Remedy
Noise at start	Worn journal bearing Worn sleeve yoke spline	Replace
	Loose propeller shaft installation	Retighten
Noise and vibration at high speed	Unbalanced propeller shaft	Replace
	Improper snap ring selection	Adjust the clearance
	Worn journal bearing	Replace

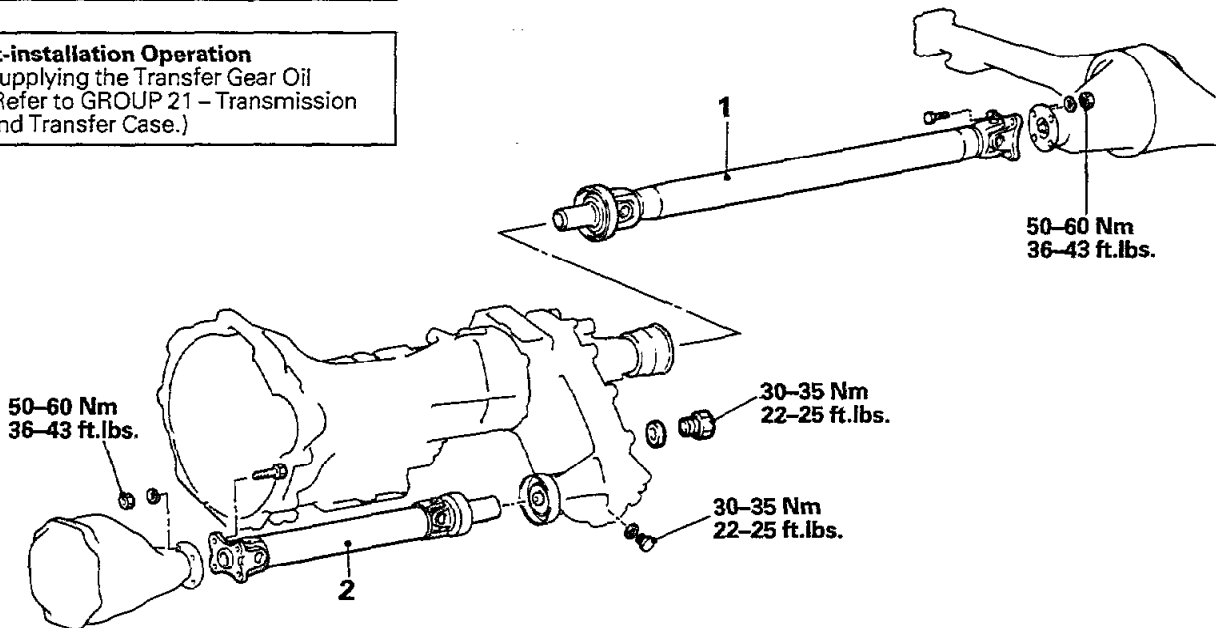
PROPELLER SHAFT

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REMOVAL AND INSTALLATION

Pre-removal Operation
 • Draining of the Transfer Gear Oil

Post-installation Operation
 • Supplying the Transfer Gear Oil
 (Refer to GROUP 21 - Transmission and Transfer Case.)



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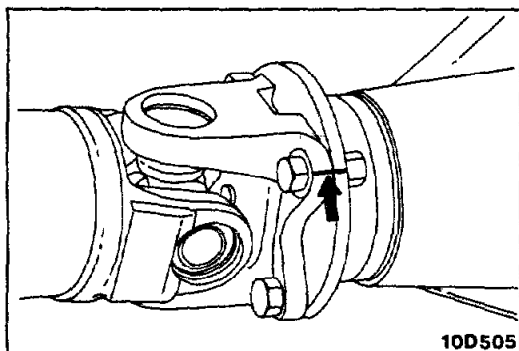
Removal steps

- ◄◄ ◄◄ 1. Rear propeller shaft
- ◄◄ ◄◄ 2. Front propeller shaft

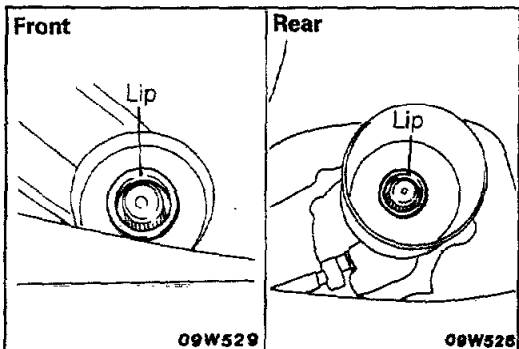
NOTE

- (1) Reverse the removal procedures to reinstall.
- (2) ◄◄ : Refer to "Service Points of Removal".
- (3) ◄◄ : Refer to "Service Points of Installation".

TSB Revision

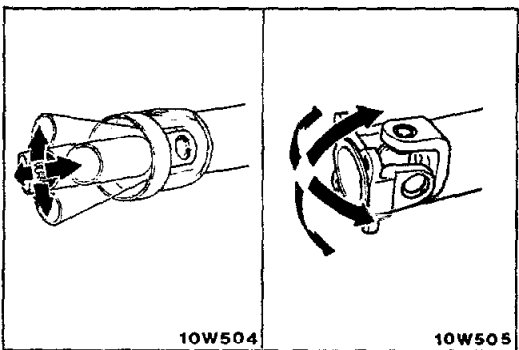


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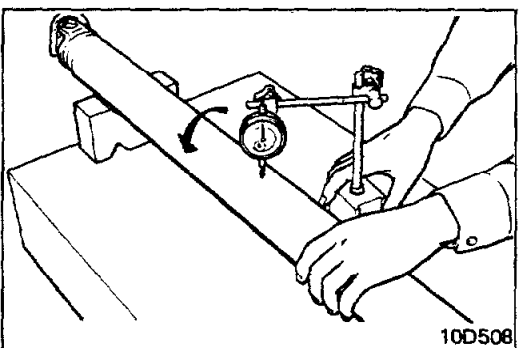
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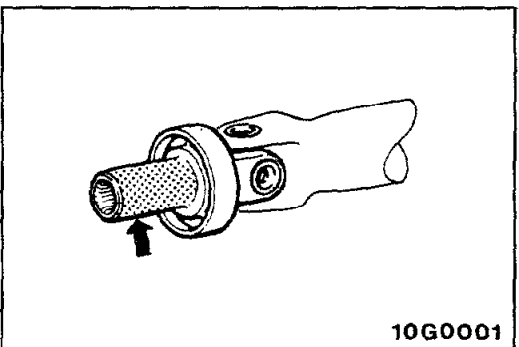


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SERVICE POINTS OF REMOVAL

N16GBAB

1. REMOVAL OF REAR PROPELLER SHAFT/2. FRONT PROPELLER SHAFT

- (1) Place the free wheel hubs in the FREE position and set the transfer lever to "2H".
- (2) Make mating marks on the flange yoke and the differential companion flange.

Caution

1. Be careful not to damage the lip of the transmission oil seal or the lip of the transfer case oil seal.
2. Do not allow foreign matter to enter the transmission or transfer.

INSPECTION

N16GCAB

- Check the sleeve yoke and flange yoke for wear, damage or cracks.
- Check the propeller shaft yokes for wear, damage or cracks.
- Check the propeller shaft for bends, twisting or damage.
- Check the universal joints for smooth operation in all directions.

CHECKING PROPELLER SHAFT RUNOUT

Measure propeller shaft runout with a dial indicator.

Limits

Front propeller shaft	0.5 mm (.020 in.)
Rear propeller shaft	0.6 mm (.024 in.)

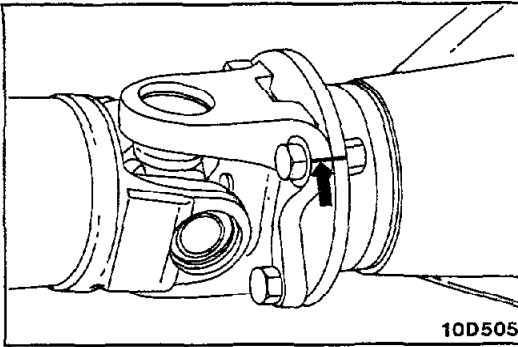
SERVICE POINTS OF INSTALLATION

N16GDAC

2. INSTALLATION OF FRONT PROPELLER SHAFT/1. REAR PROPELLER SHAFT

- (1) Apply the specified hypoid gear oil to the sleeve yoke.

Specified gear oil : Hypoid gear oil API classification
GL-4 or higher/SAE viscosity
80W, 75W-85W



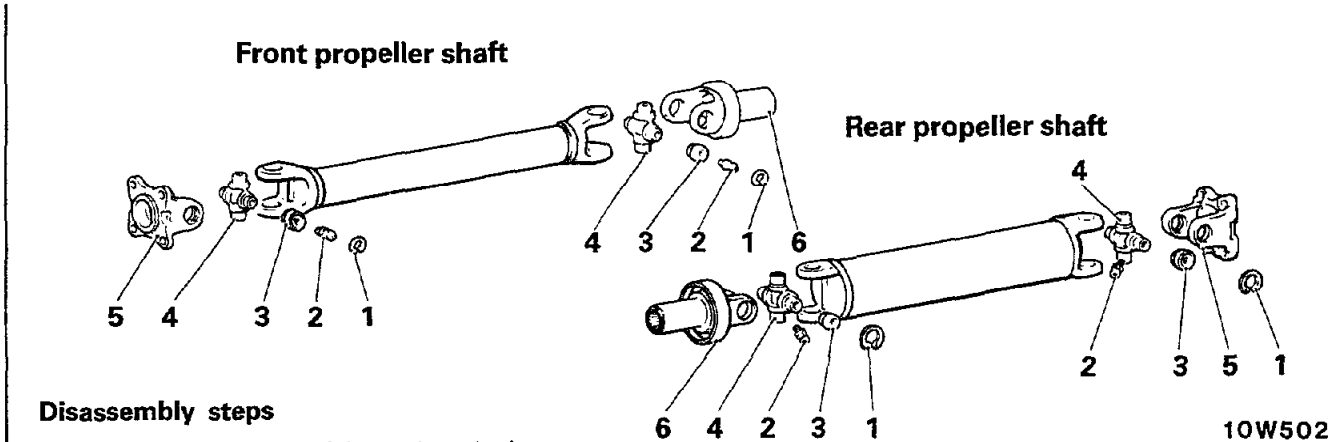
(2) With the mating marks in alignment, install the propeller shaft to the companion flange.

Caution

Decrease the thread of the mounting bolts and nuts before tightening these parts. Otherwise, they could become loose.

DISASSEMBLY AND REASSEMBLY

N16GE-

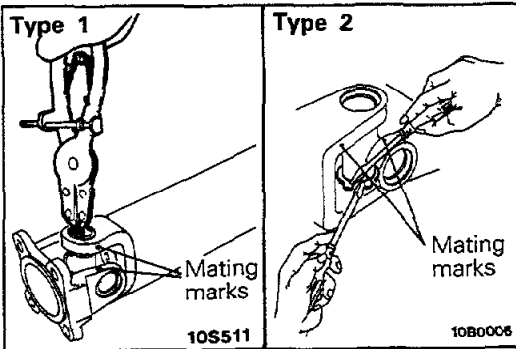


Disassembly steps

- ▶▶ Adjustment of journal end play
- ◀▶ 1. Snap ring
- 2. Grease fitting
- ◀▶▶▶ 3. Journal bearing
- ▶▶ 4. Journal
- 5. Flange yoke
- 6. Sleeve yoke

NOTE

- (1) Reverse the disassembly procedures to reassemble.
- (2) ◀▶ : Refer to "Service Points of Disassembly".
- (3) ▶▶ : Refer to "Service Points of Reassembly".



SERVICE POINTS OF DISASSEMBLY

N16GFAC

1. REMOVAL OF SNAP RING

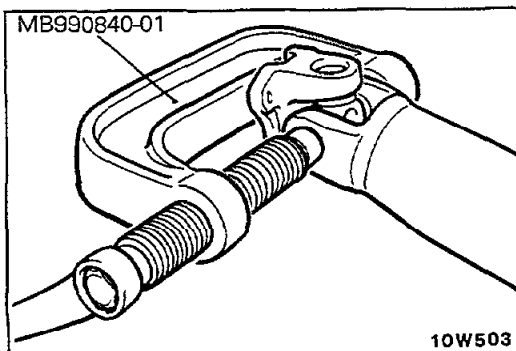
- (1) Make mating marks on the yokes of the universal joint that is to be disassembled.
- (2) Remove the snap rings from the yoke with snap ring pliers or two screwdrivers.

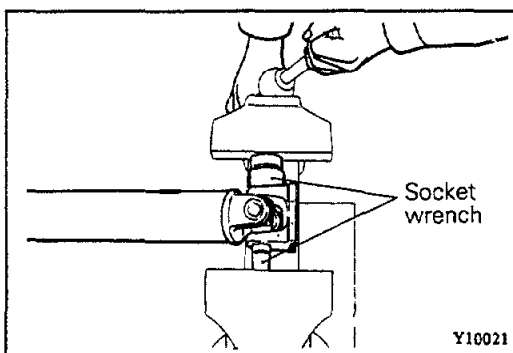
Caution

When disassembling, note the positions of snap rings so that they may be reinstalled in the same positions.

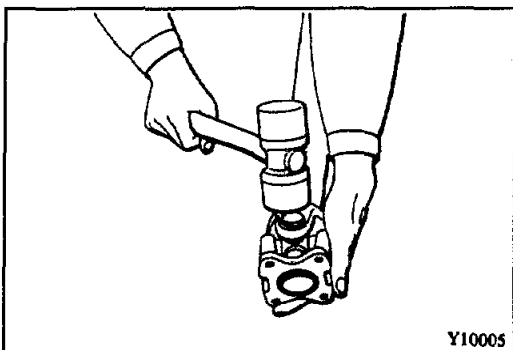
3. REMOVAL OF JOURNAL BEARING

- (1) Type 1 propeller shaft, remove the journal bearing from the propeller shaft yoke with special tool.





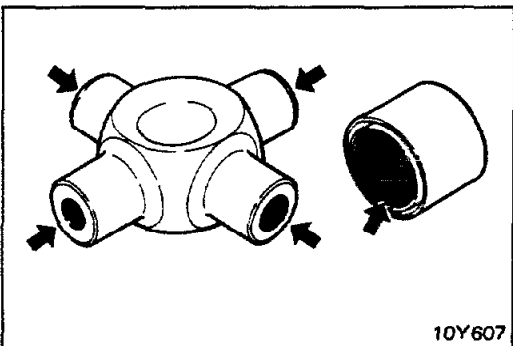
- (2) Type 2 propeller shaft, applying the socket wrench to the outside of the propeller shaft flange yoke force out one journal bearing using a vise as illustrated.
- (3) Pull out the journal bearing from the yoke.



- (4) Remove the other journal bearing in the same manner as described above.

NOTE

If the journal bearing is hard to remove, strike the yoke with a plastic hammer as illustrated.



SERVICE POINTS OF REASSEMBLY

N16GHA1a

4. INSTALLATION OF JOURNAL/3. JOURNAL BEARING

- (1) Apply the multipurpose grease to the following parts;
 - ① Shafts and grease sumps of journal
 - ② Dust seal lips
 - ③ Needle roller bearings

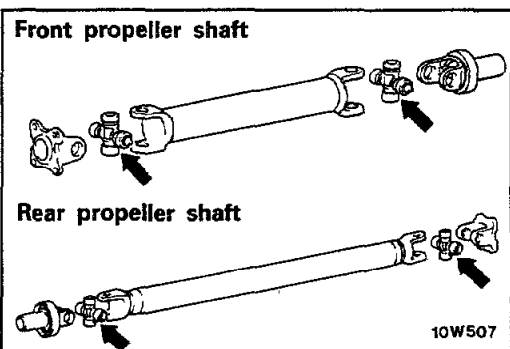
Caution

Use of excessive amounts of grease may result in difficulty in assembling unit and incorrect selection of snap rings.

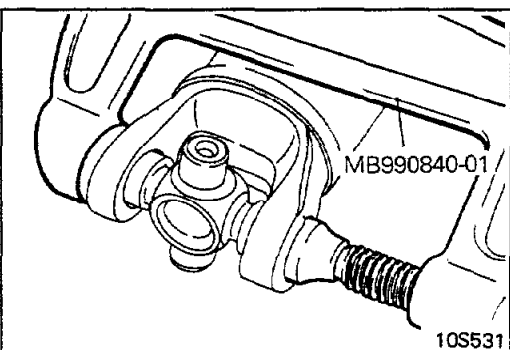
NOTE

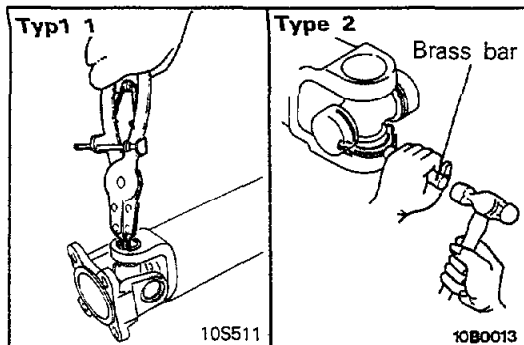
When the journal and journal bearing are replaced, obtain the universal joint kit.

- (2) With the grease fitting directed as shown in the illustration, install it properly.



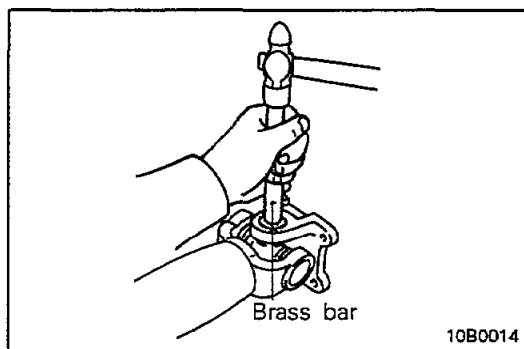
- (3) Type 1 propeller shaft, press the journal bearing to the yoke with special tool as illustrated. Be sure to align the mating marks on the yokes.
- (4) Type 2 propeller shaft, press the journal bearing to the yoke with socket wrench. Be sure to align the mating marks on the yokes.



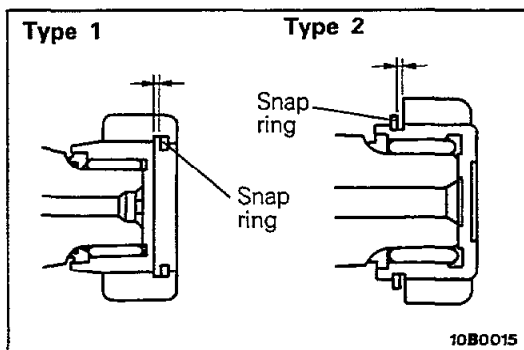


● **ADJUSTMENT OF JOURNAL END PLAY**

(1) Install snap rings of the same thickness onto both sides of each yoke with snap rings pliers or brass bar.



(2) Press the bearing and journal into one side with the brass bar.



(3) Measure the clearance shown in the illustration with a feeler gauge. If the clearance exceeds the standard value, the snap rings should be replaced.

Standard value: 0.06 mm (.0024 in.) or less

NOTE