

PROPELLER SHAFT

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OBU0LX-001

OUTLINE

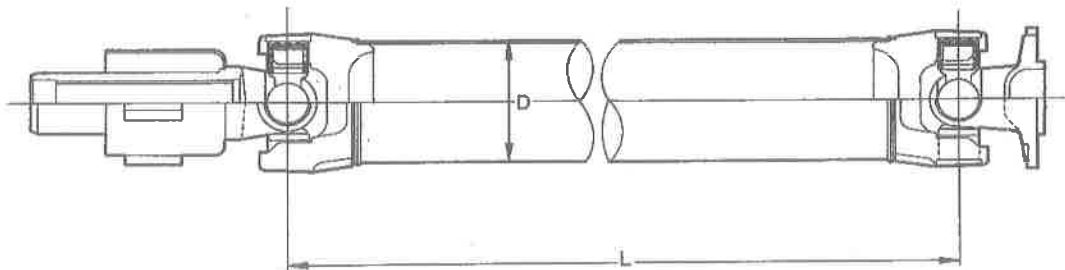
SPECIFICATIONS (4x2)

Model/Transmission		B2200				
		Short bed		Long bed		
		M/T	A/T	M/T	A/T	
Length	mm (in)	L	671.5 (26.44)	1,365 (53.74)	671.5 (26.44)	623.5 (24.55)
		L1	745 (29.33)	—	969 (38.15)	969 (38.15)
Outer diameter	mm (in)	D	57 (2.24)	75 (2.95)	57 (2.24)	65 (2.56)
		D1	65 (2.56)	—	65 (2.56)	65 (2.56)

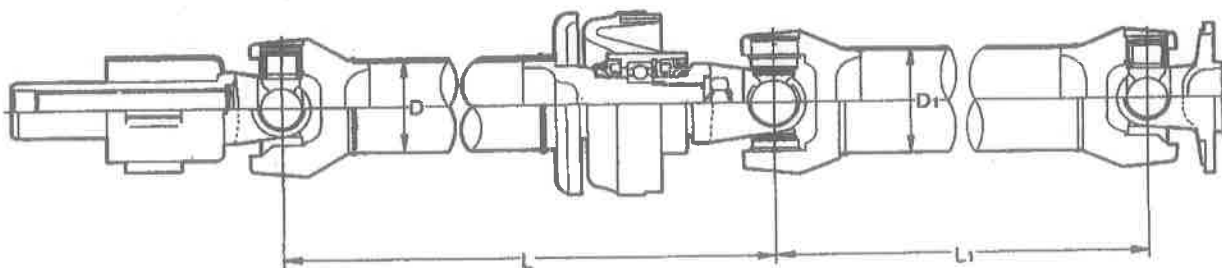
Model/Transmission		B2600I				
		Short bed		Long bed		
		M/T	A/T	M/T	A/T	
Length	mm (in)	L	669.5 (26.36)	1,370 (53.94)	669.5 (26.36)	623.5 (24.55)
		L1	745 (29.33)	—	969 (38.15)	969 (38.15)
Outer diameter	mm (in)	D	65 (2.56)	75 (2.95)	65 (2.56)	65 (2.56)
		D1	65 (2.56)	—	65 (2.56)	65 (2.56)

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SHORT BED A/T



EXCEPT SHORT BED A/T



OUTLINE

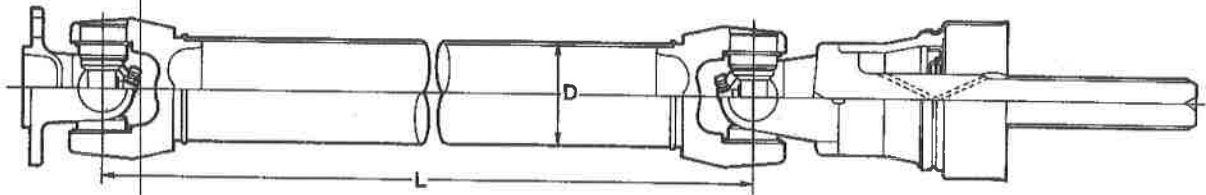
L

SPECIFICATIONS (4x4)

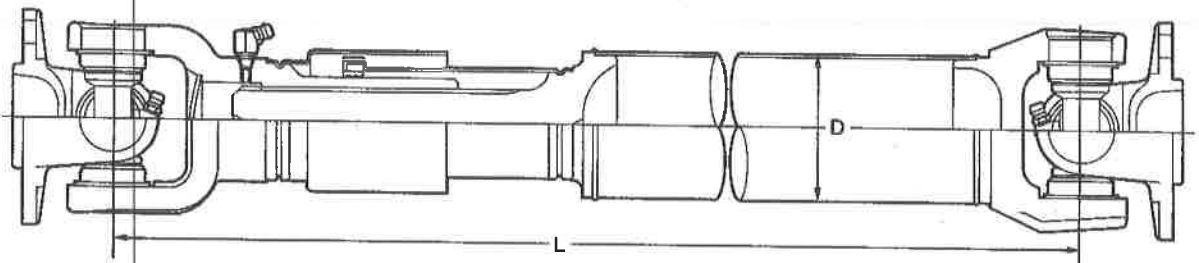
Model/Transmission			B2600I							
			Short bed				Long bed			
			Front propeller shaft		Rear propeller shaft		Front propeller shaft		Rear propeller shaft	
			M/T	A/T	M/T	A/T	M/T	A/T	M/T	A/T
Length	mm (in)	L	470 (18.50)		1,313 (51.69)		470 (18.50)		549 (21.61)	
		L1	—		—		—		990 (38.98)	
Outer diameter	mm (in)	D	57 (2.24)		75 (2.95)		57 (2.24)		75 (2.95)	

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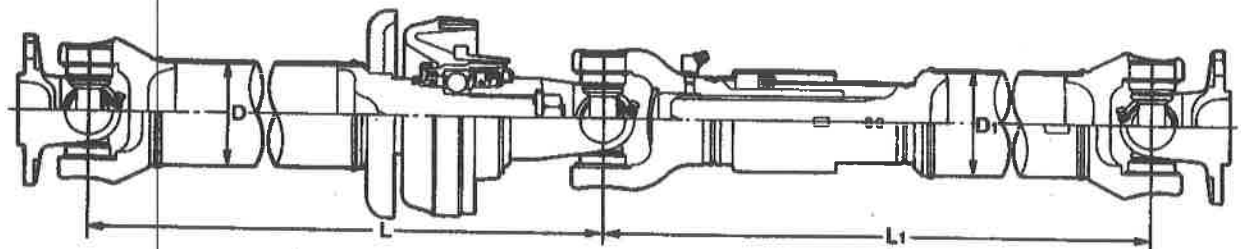
FRONT PROPELLER SHAFT (SHORT AND LONG BED)



REAR PROPELLER SHAFT (SHORT BED)



REAR PROPELLER SHAFT (LONG BED)



L

L TROUBLESHOOTING GUIDE, PROPELLER SHAFT

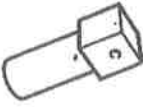
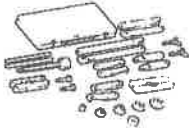
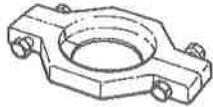
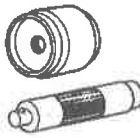
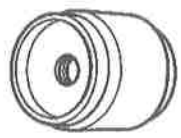
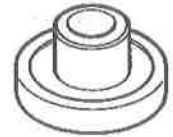






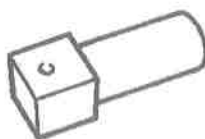
TROUBLESHOOTING GUIDE

Problem	Possible Cause	Remedy	Page
Deflection	Faulty assembly of universal joint	Repair	L-8, 9
	Bent propeller shaft	Replace	L-8, 9
	Worn center support and bearing	Replace	L-8
	Loose center support and bearing mounting bolts	Tighten	L-6
	Loose yoke mounting nut	Tighten	L-8
	Worn splines of sliding joint	Replace	—
	Faulty assembly of yoke of center bearing	Repair	L-8
Abnormal noise	Worn or damaged universal joint bearing	Replace	L-8, 9
	Worn or damaged center support and bearing	Replace	L-8
	Loose yoke mounting nut	Tighten	L-8
	Worn splines of sliding joint	Replace	—

2BU0LX-001

PROPELLER SHAFT

PREPARATION SST

49 0259 440 Holder, main shaft 	49 0839 425C Puller set, bearing 	49 0636 145 Puller, fan pulley boss 
49 B025 0A0 Installer, dust seal 	49 B025 001 Body (Part of 49 B025 0A0) 	49 H025 001 Installer, bearing 
49 F026 102 Installer, bearing 	49 H025 002 Installer, dust seal 	49 H025 004 Installer, bearing 
49 F401 331 Body 	49 H025 003 Installer, bearing 	49 H033 101 Remover, bearing 
49 S120 440 Holder, mainshaft 		

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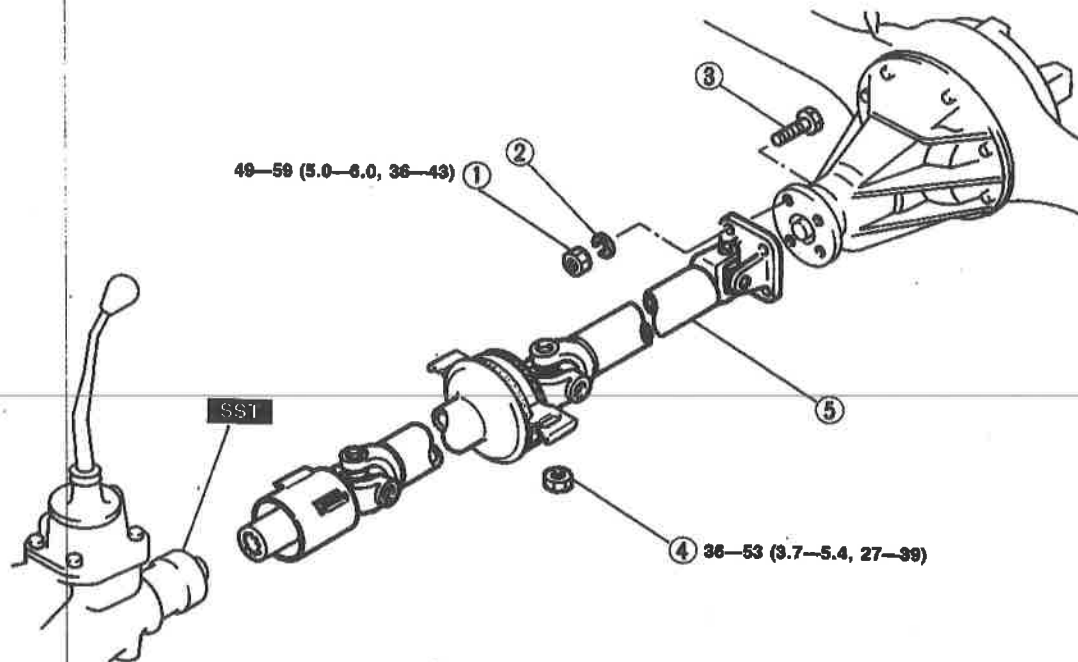
PROPELLER SHAFT

L

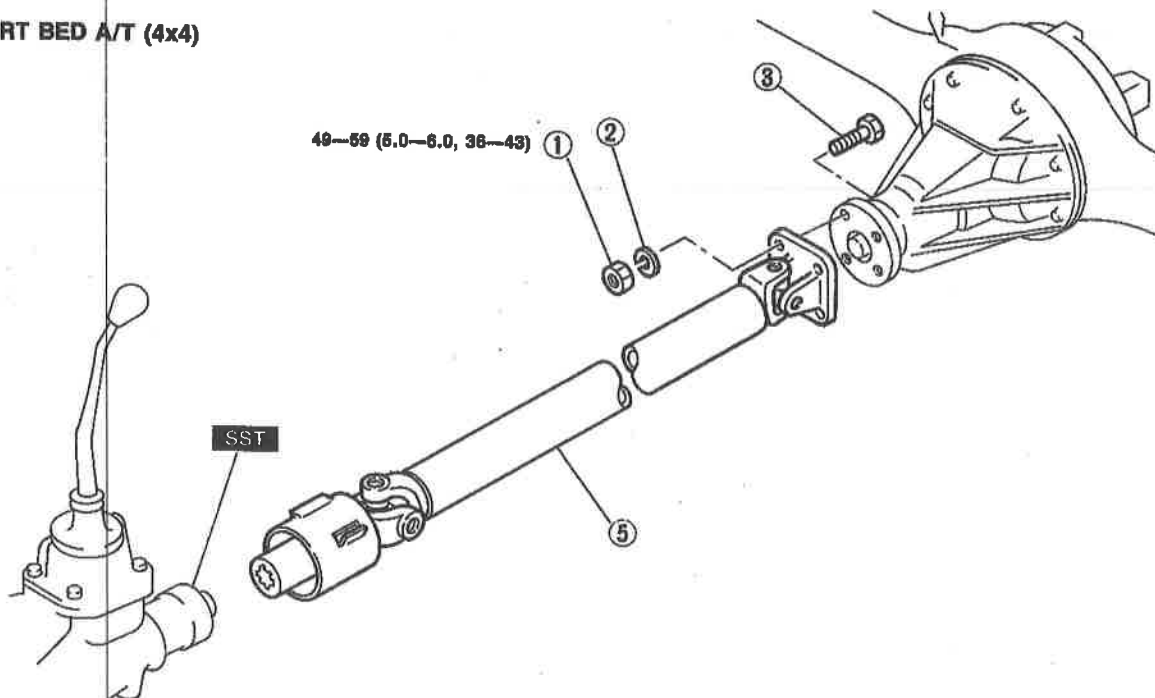
REMOVAL AND INSTALLATION

Remove in the order shown in the figure, referring to **Removal note**.
Install in the reverse order of removal, referring to **Installation note**.

EXCEPT SHORT BED A/T (4x2)



SHORT BED A/T (4x4)



N-m (m-kg, ft-lb)

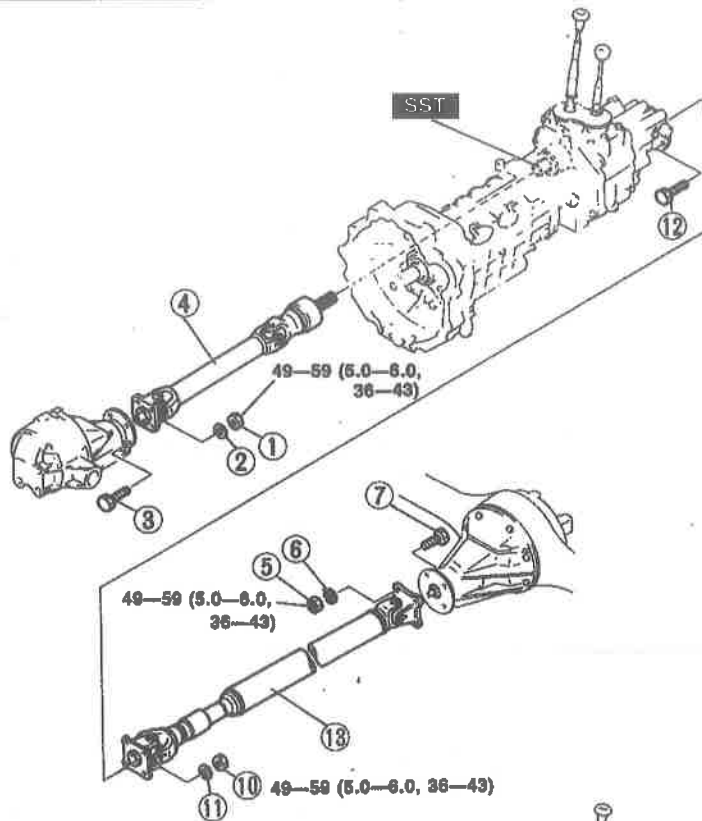
1BU0LX-001

- 1. Nut
- 2. Lock washer
- 3. Bolt
- 4. Nut

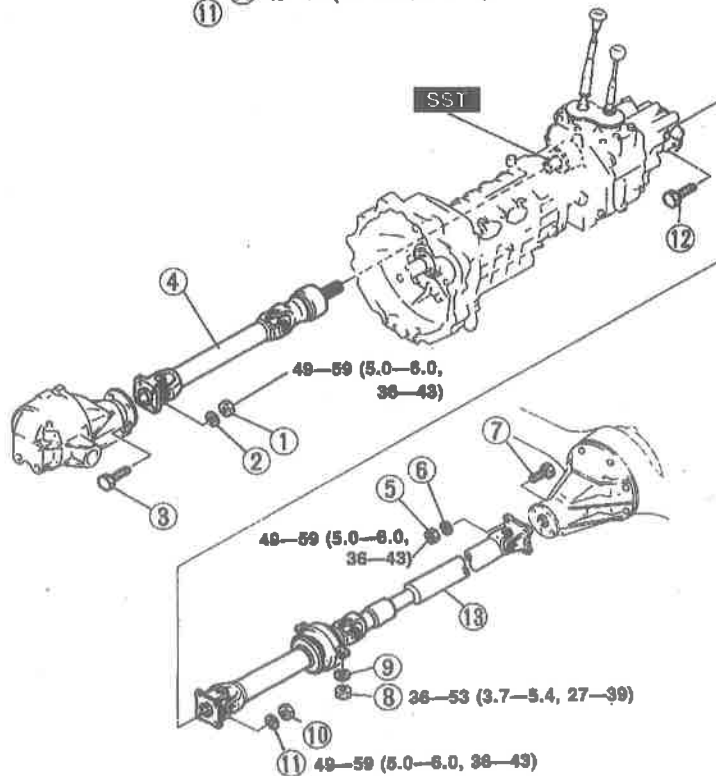
- 5. Propeller shaft
- Removal..... page L-7
- Installation..... page L-7

PROPELLER SHAFT

SHORT BED (4x4)



LONG BED (4x4)



N-m (m-kg, ft-lb)

1BUQLX-002

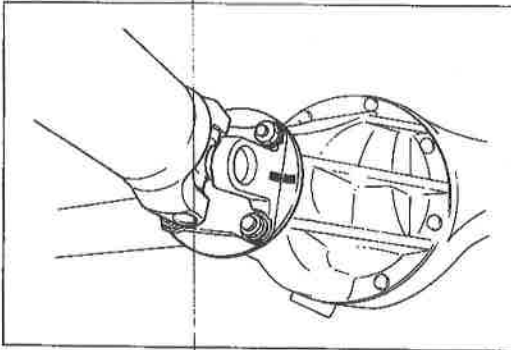
- 1. Nut
- 2. Lock washer
- 3. Bolt
- 4. Front propeller shaft
- Removal page L-7
- Installation page L-7

- 5. Nut
- 6. Lock washer
- 7. Bolt
- 8. Nut
- 9. Washer

- 10. Nut
- 11. Lock washer
- 12. Bolt
- 13. Rear propeller shaft
- Removal page L-7
- Installation page L-7

PROPELLER SHAFT

L



9BU0LX-008

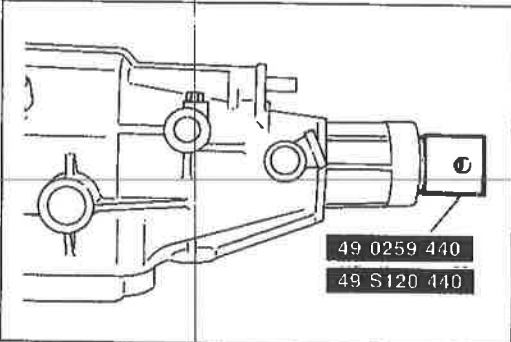
Removal note

Propeller shaft (4x2)

Before removing the propeller shaft, mark the flanges for correct installation.

Propeller shaft (4x4)

Before removing the propeller shaft mark on the front, and rear side flanges for correct installation.



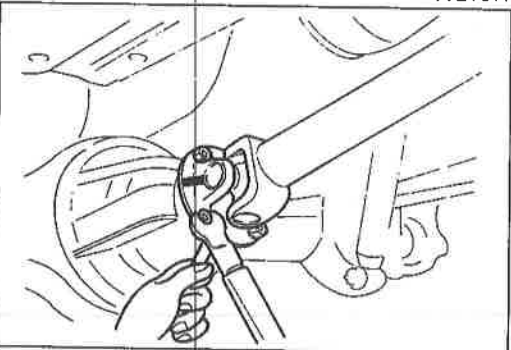
0BU0LX-011

(4x2 Model)

When the propeller shaft is removed from the extension housing, immediately install the **SST** into the extension housing to prevent oil leakage.

B2200 : 49 0259 440

B2600i: 49 S120 440



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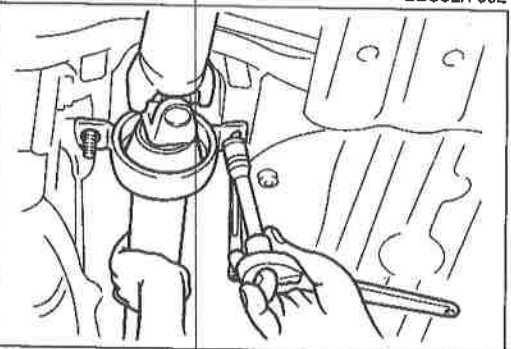
Installation note

Propeller shaft

1. Align the marks, and install the rear propeller shaft.

Tightening torque:

49—59 N·m (5.0—6.0 m·kg, 36—43 ft·lb)

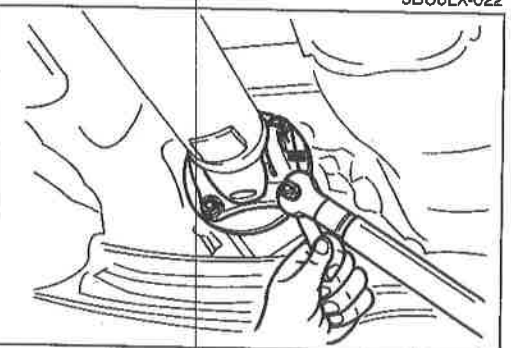


9BU0LX-022

2. Install the center bearing support assembly.

Tightening torque:

36—53 N·m (3.7—5.4 m·kg, 27—39 ft·lb)



2BU0LX-003

3. Align the marks, and install the front propeller shaft.

Tightening torque:

49—59 N·m (5.0—6.0 m·kg, 36—43 ft·lb)

4. Check that there is no abnormal noise or vibration when driving the vehicle.

L

PROPELLER SHAFT

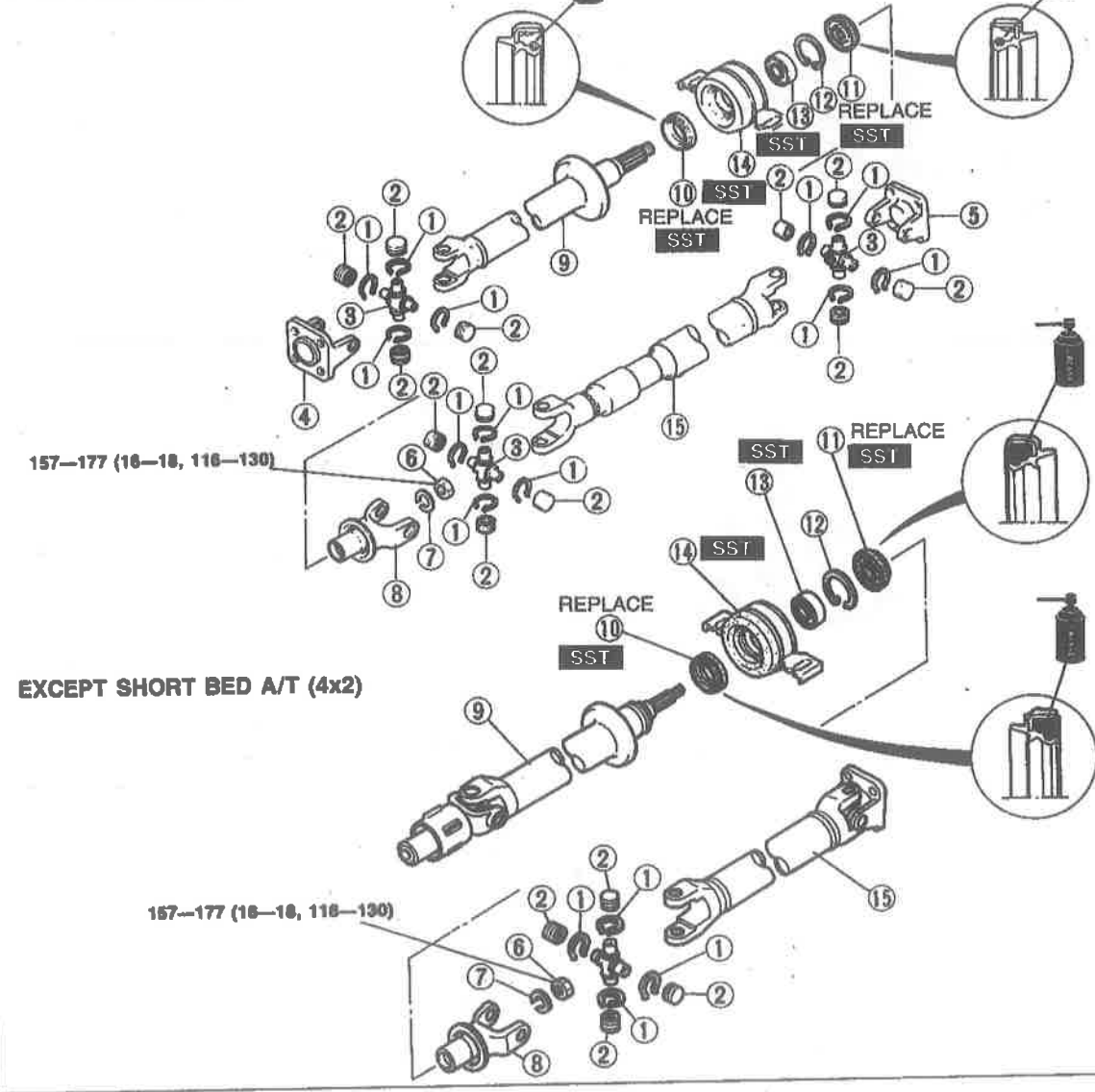
OVERHAUL

Disassemble in the order shown in the figure, referring to **Disassembly note**.
 Inspect all parts and repair or replace as necessary.
 Assemble in the reverse order of disassembly, referring to **Assembly note**.

Caution

Before assembly, make sure all parts are completely clean.

**LONG BED (4x4)
 REAR PROPELLER SHAFT**



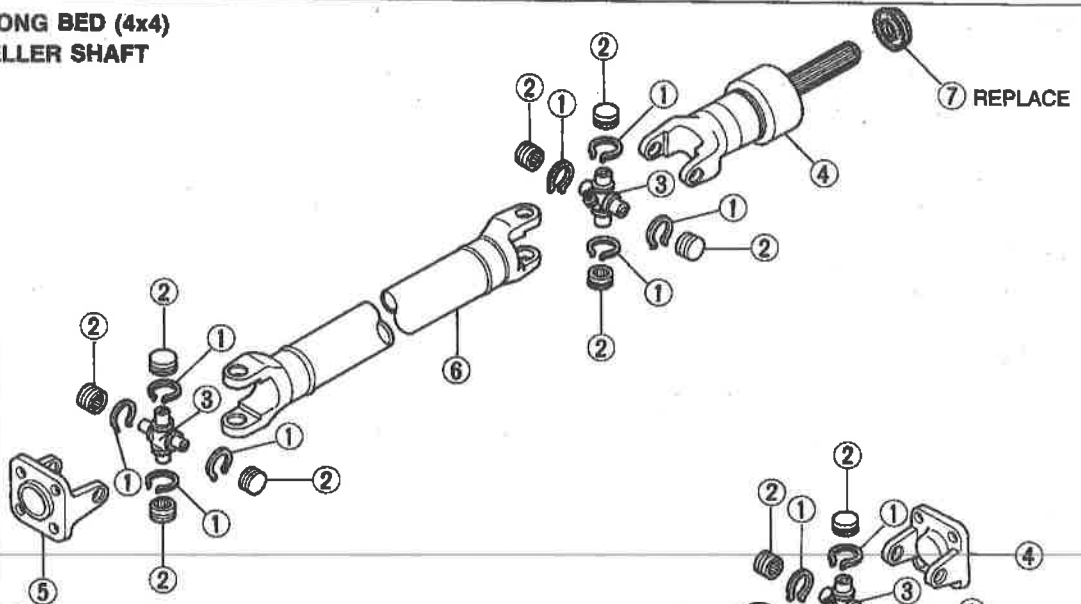
2BU0LX-004

- | | | |
|--|--|--|
| 1. Snap ring | 7. Lock washer | 12. Snap ring |
| 2. Bearing cup
Inspect for damage or rough rotation | 8. Center yoke
Removal page L- 9
Installation page L-14 | 13. Bearing
Removal page L-11
Inspection page L-12
Installation page L-12 |
| 3. Spider
Removal page L- 9
Installation page L-14 | 9. Front propeller shaft
Inspection page L-11 | 14. Center bearing support assembly
Removal page L-11
Installation page L-13 |
| 4. Front yoke
Removal page L- 9
Installation page L-14 | 10. Front dust seal
Removal page L-11
Installation page L-13 | 15. Rear propeller shaft
Inspection page L-11 |
| 5. Rear yoke | 11. Rear dust seal
Removal page L-11
Installation page L-12 | |
| 6. Locknut | | |

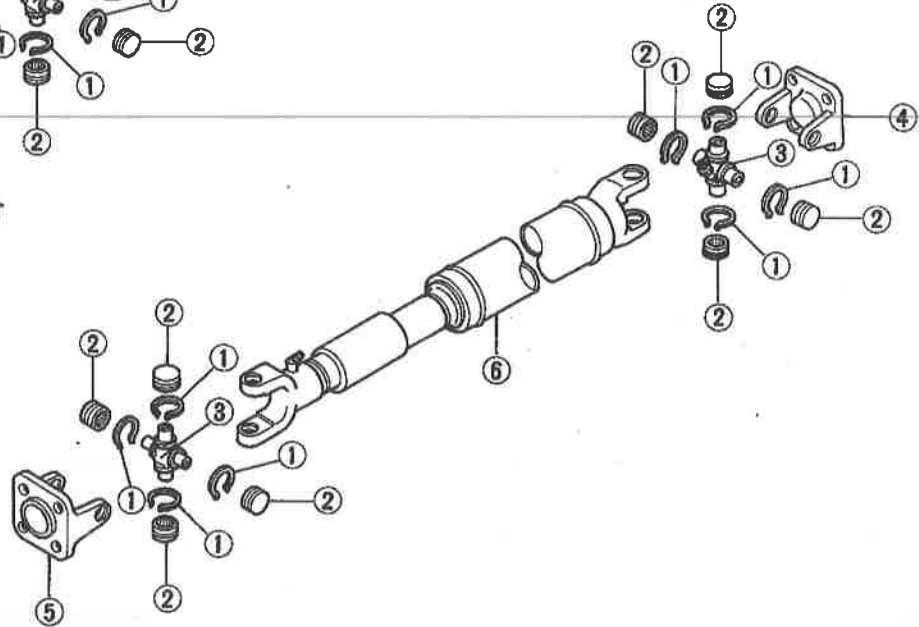
PROPELLER SHAFT

L

SHORT AND LONG BED (4x4) FRONT PROPELLER SHAFT



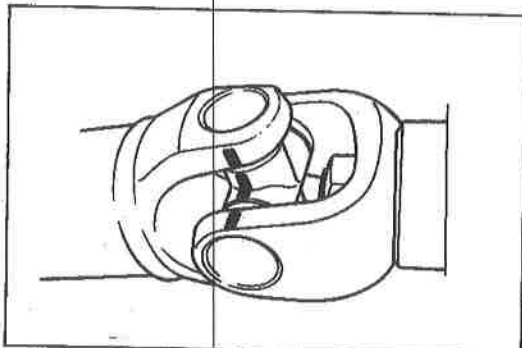
SHORT BED (4x4) REAR PROPELLER SHAFT



- 1. Snap ring
- 2. Bearing cup
Inspect for damage or rough rotation
- 3. Spider
Removal..... page L- 9
Installation..... page L-14
- 4. Front yoke
Removal..... page L- 9
Inspect splines for damage, wear or cracks
Installation..... page L-14

- 5. Rear yoke
Removal..... page L- 9
Installation..... page L-14
- 6. Propeller shaft
Inspection..... page L-11
- 7. Oil seal
Installation..... page L-14

2BU0LX-005



2BU0LX-006

Disassembly note

Snap ring, spider, front yoke, rear yoke, center yoke

Note

Use pads in the vice to prevent damage to the propeller shaft.

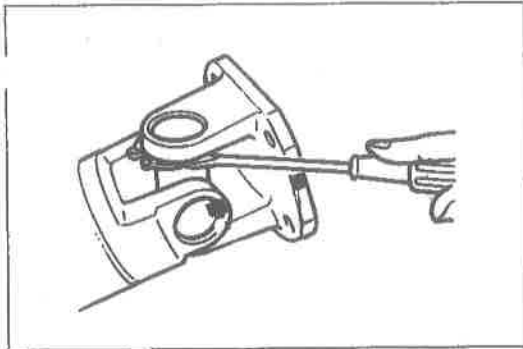
1. Place the propeller shaft in a vice.

Note

If the propeller shaft, spider, and yoke are not correctly combined when assembled, vibration may result.

2. Align the marks on the propeller shaft, spider, and yoke.

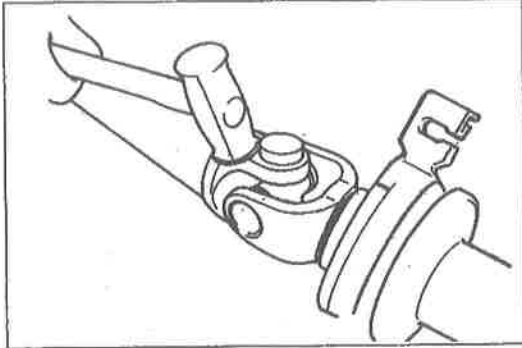
PROPELLER SHAFT



9BU0LX-014

Note
The snap rings cannot be reused.

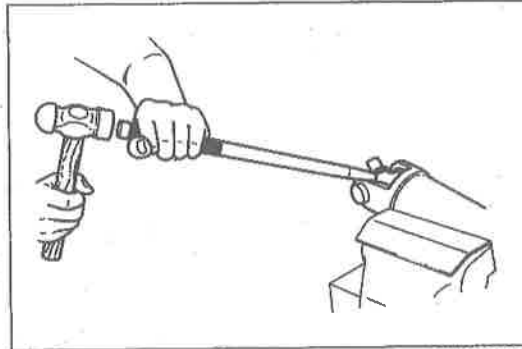
3. Remove all snap-rings with a flat-tip flattipped screwdriver.



7BU08X-015

4. Remove the bearings on the propeller shaft side by lightly tapping with a hammer.

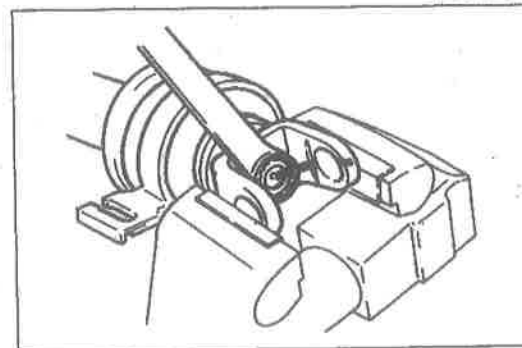
5. Remove the bearings and spider by lightly tapping the spider.



2BU0LX-007

6. Remove the bearings as shown.

7. Remove the spider.

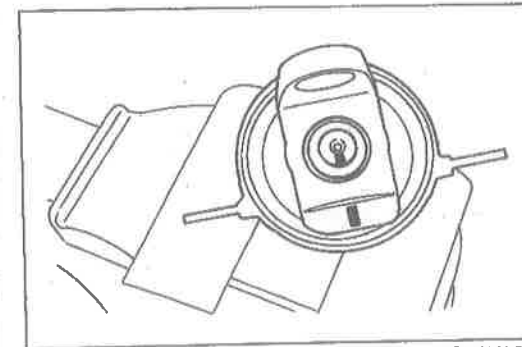


1BU0LX-006

Locknut

1. Align the marks on the yoke and shaft.

2. Remove the locknut.

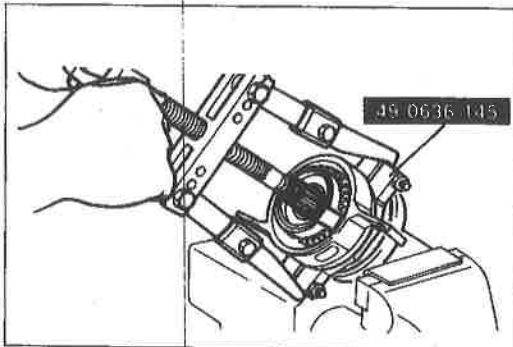


9BU0LX-026

3. Align the marks on the yoke and propeller shaft.

PROPELLER SHAFT

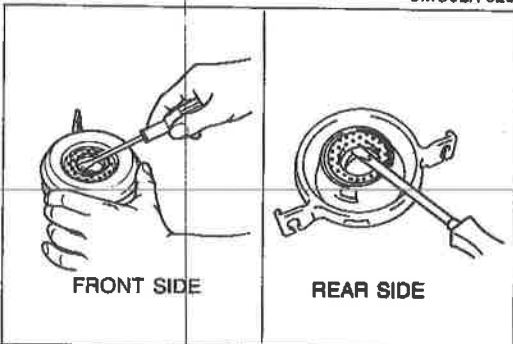
L



9MU0LX-020

Center bearing support assembly

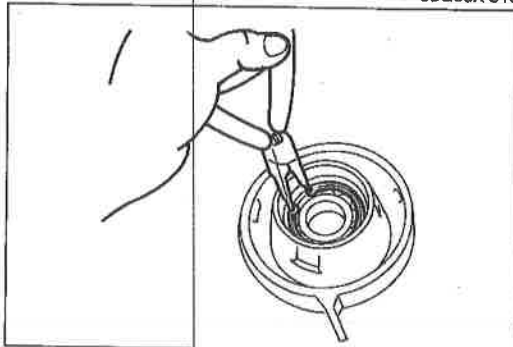
Remove the center bearing support assembly with the **SST**.



63G08X-318

Dust seal

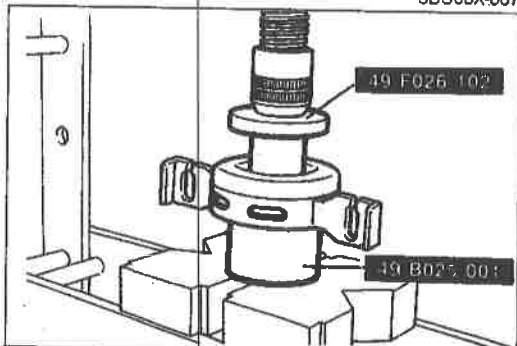
Remove the dust seals as shown.



6BU08X-007

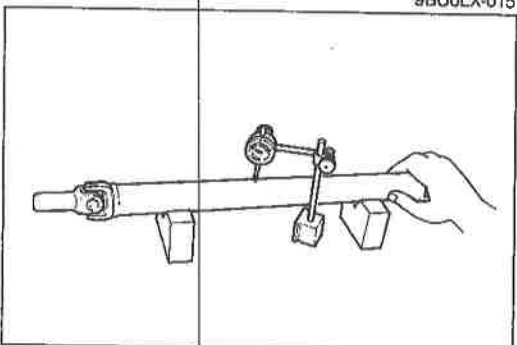
Bearing

1. Remove the snap-ring with snap-ring pliers.



9BU0LX-015

2. Press the bearing from the support assembly toward front side with the **SST**.



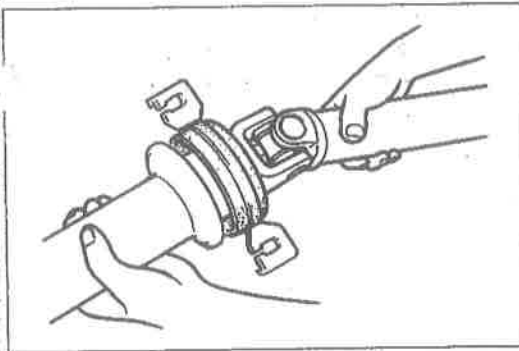
9BU0LX-016

Inspection Propeller shaft

1. Measure the front and rear propeller shaft runout with a dial indicator.
Replace the front and rear propeller shaft assembly if runout is excessive.

Maximum runout: 0.4mm (0.016 in)

PROPELLER SHAFT

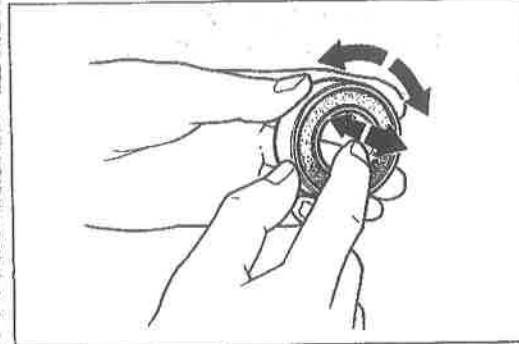


63G08X-322

2. Axial and perpendicular backlash of the universal joint

Backlash limit: 0.05mm (0.0020 In)

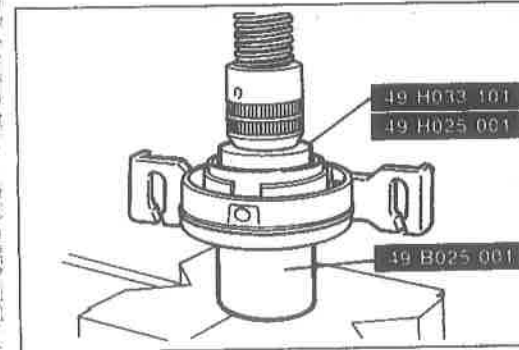
3. Condition of universal joint operation



9MU0LX-025

Bearing

Turn the bearing while applying force in the axial direction. If the bearing sticks or has excessive resistance, replace it.



9BU0LX-017

Assembly note

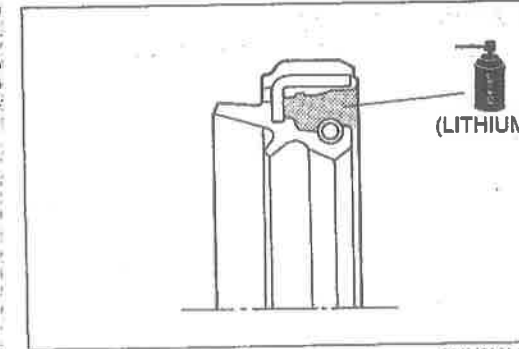
Bearing

1. Install the bearing into the bearing support assembly from the rear side with the **SST**.

B2200 : 49 H033 101

B2600i: 49 H025 001

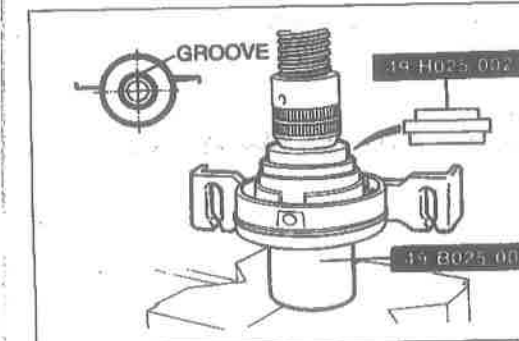
2. Install the snap-ring with the snap-ring pliers.



9MU0LX-027

Rear dust seal

1. Before installing a new rear dust seal into the bearing support assembly, apply lithium based grease to the shaded area.

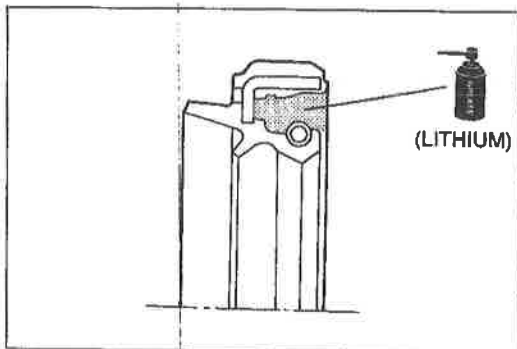


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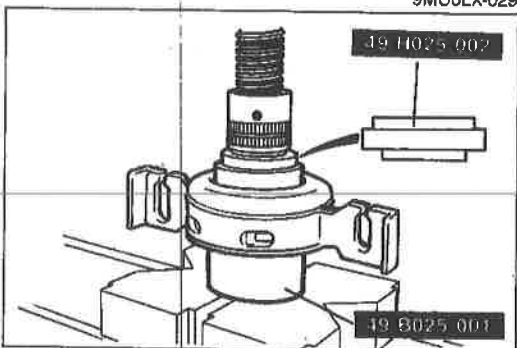
Note

The air bleed groove of the rear dust seal must be installed as shown.

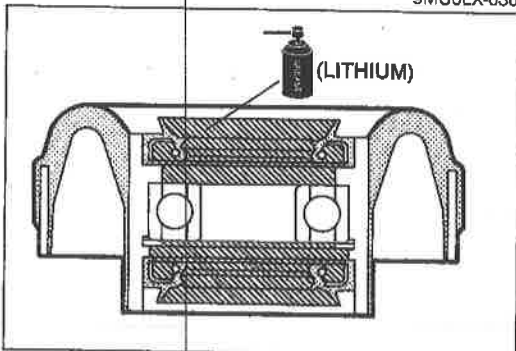
2. Install the rear dust seal into the support assembly from the rear side with the **SST** as shown in the figure.



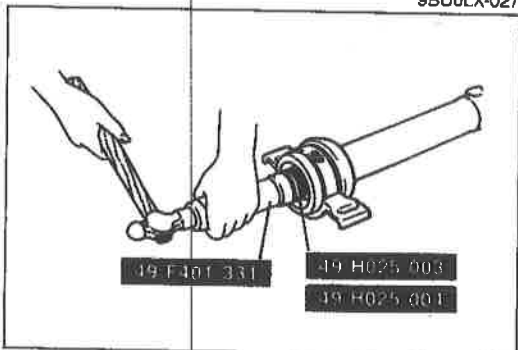
9MU0LX-029



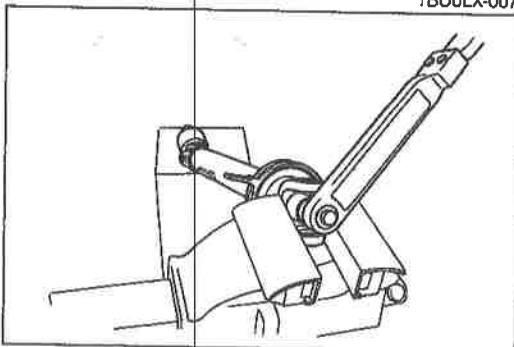
9MU0LX-030



9BU0LX-027



1BU0LX-007



1BU0LX-008

Front dust seal

1. Before installing a new front dust seal into the bearing support assembly, apply lithium based grease to the shade area.

2. Install the front dust seal into the support assembly from the front side with the **SST** as shown in the figure.

3. Apply lithium based grease to the area indicated by the oblique lines.

Center bearing support assembly

1. Install the center bearing support assembly with the **SST**.

B2200 : 49 H025 003

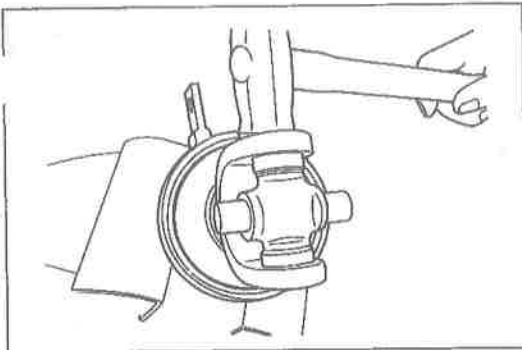
B2600I: 49 H025 004

2. Align the matching marks on the yoke and shaft.
3. Install the center yoke.

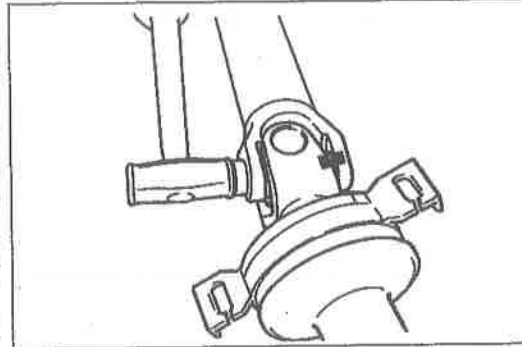
Tightening torque:

157—177 N·m (16—18 m·kg, 116—130 ft·lb)

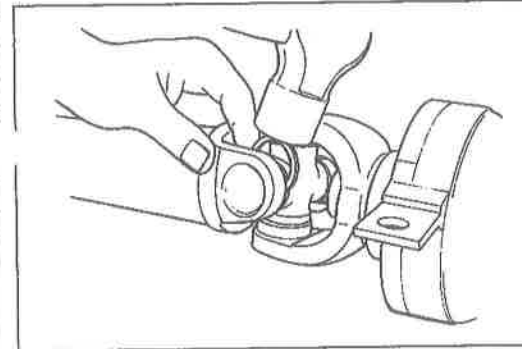
PROPELLER SHAFT



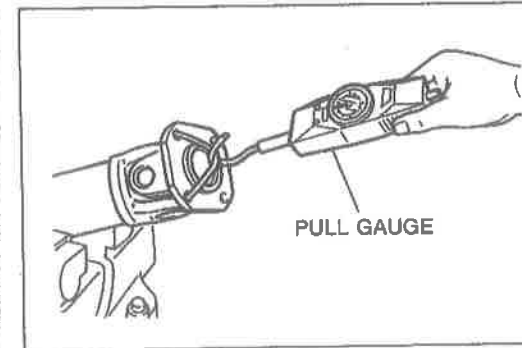
2BU0LX-008



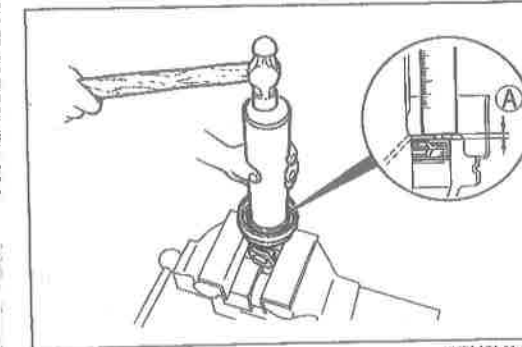
2BU0LX-009



1BU0LX-011



7BU08X-023



9BU0LX-028

Front yoke, rear yoke, center yoke, spider

1. Before assembly, coat the inside of the bearing cup and roller and the grease hole of the spider with lithium based grease.

Note

Align the propeller shaft and spider matching marks.

2. While in a vise, set 2 bearings in the propeller shaft, and tap them in by using a plastic hammer.

Note

Align the spider and yoke matching marks.

3. Place the yoke on the propeller shaft, and tap the bearing into the center yoke with a plastic hammer.

Snap rings

Note

- a) The snap rings cannot be reused.
- b) All 4 snap rings must be the same thickness.
- c) Make sure that each snap ring fits correctly into the groove.
- d) Select the snap rings so that the universal joint starting torque will be as specified.

1. Install new snap rings.

Starting torque:

0.294—0.784 N·m (3—8 cm·kg, 2.6—6.9 in·lb)

Snap-ring thicknesses:

mm (in)

1.45 (0.0571)	1.48 (0.0583)	1.51 (0.0594)	1.54 (0.0606)
1.57 (0.0618)	1.60 (0.0630)	1.63 (0.0642)	

Oil seal

Tap the new oil seal with a suitable pipe until depth **(A)** (between oil seal and front yoke) reaches as specified.

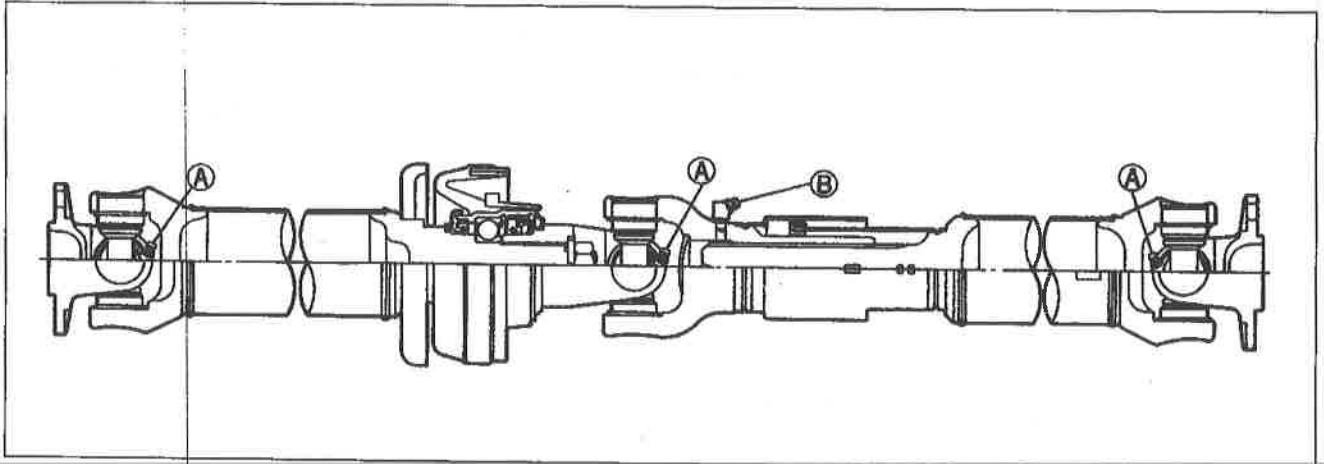
Depth (A): 1.7—2.3mm (0.067—0.091 in)

PROPELLER SHAFT

L

LUBRICATION

The fittings are installed so that regular lubrication is possible. The type of grease used for the universal joints and slip yoke is different.



9BU0LX-029

Lubricant

- For fitting (A) Lithium based grease
- For fitting (B) Disulphide molybdenum grease

Scheduled lubrication of propeller shaft

Number of months or km (miles), whichever comes first
Every 15 months, or 24,000 km (15,000 miles)