

# SECTION FAX

## FRONT AXLE

FAX

### CONTENTS

<b>PRECAUTION</b> .....	2	Removal and Installation .....	8
<b>PRECAUTIONS</b> .....	2	<b>FRONT DRIVE SHAFT BOOT</b> .....	11
Precaution for Supplemental Restraint System (SRS) "AIR BAG" and "SEAT BELT PRE-TENSIONER" .....	2	Exploded View .....	11
Precautions for Drive Shaft .....	2	<b>WHEEL SIDE</b> .....	11
<b>PREPARATION</b> .....	3	WHEEL SIDE : Removal and Installation .....	11
<b>PREPARATION</b> .....	3	<b>FINAL DRIVE SIDE</b> .....	14
Special Service Tool .....	3	FINAL DRIVE SIDE : Removal and Installation .....	14
Commercial Service Tool .....	4	<b>FRONT DRIVE SHAFT</b> .....	18
<b>SYMPTOM DIAGNOSIS</b> .....	5	Exploded View .....	18
<b>NOISE, VIBRATION, AND HARSHNESS (NVH) TROUBLESHOOTING</b> .....	5	Removal and Installation .....	18
NVH Troubleshooting Chart .....	5	<b>UNIT DISASSEMBLY AND ASSEMBLY</b> ...	21
<b>PERIODIC MAINTENANCE</b> .....	6	<b>FRONT DRIVE SHAFT</b> .....	21
<b>WHEEL HUB</b> .....	6	Exploded View .....	21
On-vehicle Service .....	6	Disassembly and Assembly .....	21
Inspection .....	6	<b>SERVICE DATA AND SPECIFICATIONS (SDS)</b> .....	28
<b>REMOVAL AND INSTALLATION</b> .....	7	<b>SERVICE DATA AND SPECIFICATIONS (SDS)</b> .....	28
<b>WHEEL HUB</b> .....	7	Wheel Hub and Bearing Assembly .....	28
Exploded View .....	7	Drive Shaft .....	28
		Boot Bands .....	29

## PRECAUTIONS

< PRECAUTION >

### PRECAUTION

#### PRECAUTIONS

##### Precaution for Supplemental Restraint System (SRS) "AIR BAG" and "SEAT BELT PRE-TENSIONER"

INFOID:000000014418271

The Supplemental Restraint System such as "AIR BAG" and "SEAT BELT PRE-TENSIONER", used along with a front seat belt, helps to reduce the risk or severity of injury to the driver and front passenger for certain types of collision. Information necessary to service the system safely is included in the SR and SB section of this Service Manual.

**WARNING:**

- To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision which would result in air bag inflation, it is recommended that all maintenance and repair be performed by an authorized NISSAN/INFINITI dealer.
- Improper repair, including incorrect removal and installation of the SRS, can lead to personal injury caused by unintentional activation of the system. For removal of Spiral Cable and Air Bag Module, see the SR section.
- Do not use electrical test equipment on any circuit related to the SRS unless instructed to in this Service Manual. SRS wiring harnesses can be identified by yellow and/or orange harnesses or harness connectors.

##### PRECAUTIONS WHEN USING POWER TOOLS (AIR OR ELECTRIC) AND HAMMERS

**WARNING:**

- When working near the Air Bag Diagnosis Sensor Unit or other Air Bag System sensors with the Ignition ON or engine running, DO NOT use air or electric power tools or strike near the sensor(s) with a hammer. Heavy vibration could activate the sensor(s) and deploy the air bag(s), possibly causing serious injury.
- When using air or electric power tools or hammers, always switch the Ignition OFF, disconnect the battery or batteries, and wait at least three minutes before performing any service.

##### Precautions for Drive Shaft

INFOID:000000014418272

Observe the following precautions when disassembling and assembling drive shaft.

- Wheel side joint sub-assembly does not disassemble because it is non-overhaul parts.
- Perform work in a location which is as dust-free as possible.
- Before disassembling and assembling, clean the outside of parts.
- Prevention of the entry of foreign objects must be taken into account during disassembly of the service location.
- Disassembled parts must be carefully reassembled in the correct order. If work is interrupted, a clean cover must be placed over parts.
- Paper shop cloths must be used. Fabric shop cloths must not be used because of the danger of lint adhering to parts.
- Disassembled parts (except for rubber parts) should be cleaned with kerosene which shall be removed by blowing with air or wiping with paper shop cloths.

# PREPARATION

< PREPARATION >


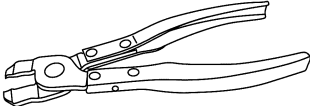
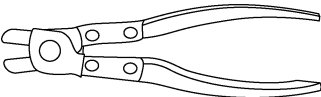
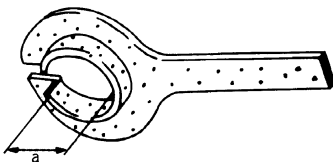
## PREPARATION

### PREPARATION

#### Special Service Tool

INFOID:0000000014418273

The actual shape of the tools may differ from those illustrated here.

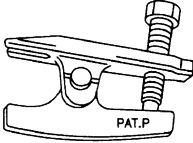
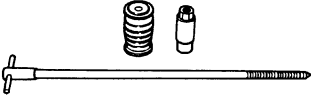
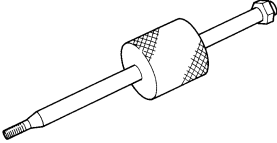

Tool number (TechMate No.) Tool name	Description
KV40107500 ( - ) Drive shaft attachment  ZZA1230D	Removing drive shaft
KV40107310 ( - ) Boot band crimping tool  JSDIA69642Z	Installing boot band Low-profile type
KV40107300 (J-51751) Boot band crimping tool  ALDIA05862Z	Installing boot band
KV38105500 ( - ) Protector  PDIA1183J	Installing drive shaft <b>a: 42 mm (1.65 in)</b>

# PREPARATION

< PREPARATION >

## Commercial Service Tool

INFOID:0000000014418274

Tool name	Description
Ball joint remover  NT146	Removing wheel stud
Drive shaft puller  JPDIG0152ZZ	Removing drive shaft joint sub-assembly
Sliding hammer  ZZA0023D	Removing drive shaft
Power tool  PIIB1407E	Loosening nuts, screws and bolts

# NOISE, VIBRATION, AND HARSHNESS (NVH) TROUBLESHOOTING

< SYMPTOM DIAGNOSIS >

## SYMPTOM DIAGNOSIS

### NOISE, VIBRATION, AND HARSHNESS (NVH) TROUBLESHOOTING

#### NVH Troubleshooting Chart

INFOID:0000000014418275

Use the chart below to help you find the cause of the symptom. If necessary, repair or replace these parts.

Reference page			Possible cause and SUSPECTED PARTS															
Symptom	DRIVE SHAFT	Noise, Vibration	x	x					x	x		x	x		x	x	x	x
		Shake	x		x				x				x	x	x	x	x	x
	WHEEL HUB	Noise				x	x		x	x	x		x	x	x	x	x	x
		Shake				x	x		x		x		x	x	x	x	x	x
		Vibration				x	x		x		x		x	x				x
		Shimmy				x	x							x	x	x	x	x
		Shudder				x								x	x	x	x	x
		Poor quality ride or handling				x	x	x						x	x	x		
Possible cause and SUSPECTED PARTS			Excessive joint angle	Joint sliding resistance	Imbalance	Improper installation, looseness	Parts interference	Wheel bearing damage	PROPELLER SHAFT	FRONT FINAL DRIVE	FRONT AXLE	FRONT WHEEL HUB	FRONT SUSPENSION	TIRES	WHEEL	BRAKES	STEERING	
Reference page			—	—	—	<a href="#">FAX-18</a>	—	<a href="#">FAX-6</a>	<a href="#">DLN-181</a> (Single Cardan) or <a href="#">DLN-145</a> (Double Cardan)	<a href="#">DLN-211</a> (MA210) or <a href="#">FAX-5</a> (MA235)	—	<a href="#">FAX-6</a>	<a href="#">FSU-5</a>	<a href="#">WT-64</a>	<a href="#">WT-64</a>	<a href="#">BR-7</a>	<a href="#">ST-33</a>	

x: Applicable

# WHEEL HUB

< PERIODIC MAINTENANCE >

## PERIODIC MAINTENANCE

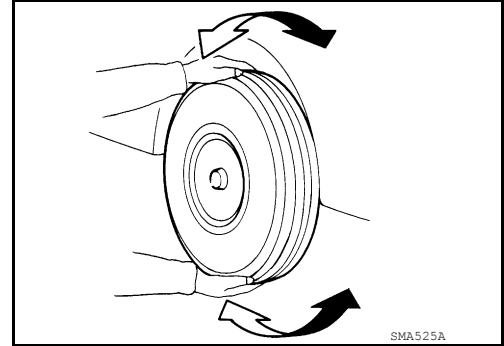
### WHEEL HUB

#### On-vehicle Service

INFOID:0000000014418276

Check axle and suspension parts for excessive play, wear or damage.

- Move the wheel as shown to check for excessive play.



#### Inspection

INFOID:0000000014418277

- Move the wheel hub and bearing in an axial direction by hand to verify if looseness of wheel hub and bearing exists. If axial end play is greater than the specification, replace the wheel hub and bearing.

**Axial end play** : Refer to [FAX-28, "Wheel Hub and Bearing Assembly"](#).

- Rotate wheel hub to verify if unusual noises or other irregular conditions exist. If any irregular conditions exist, replace the wheel hub and bearing.

# WHEEL HUB

< REMOVAL AND INSTALLATION >

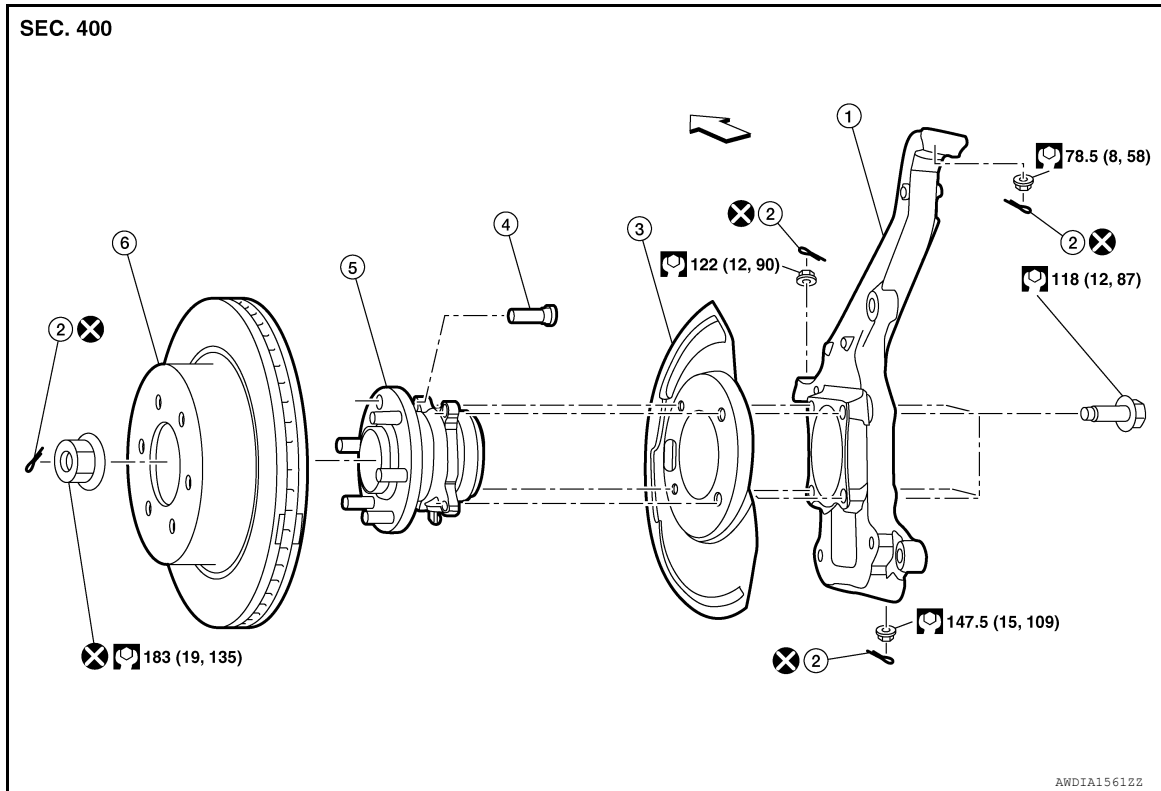
## REMOVAL AND INSTALLATION

### WHEEL HUB

#### Exploded View

INFOID:0000000014418278

XD Models



1. Steering knuckle

4. Wheel stud

⇐ Front

2. Cotter pin

5. Wheel hub and bearing

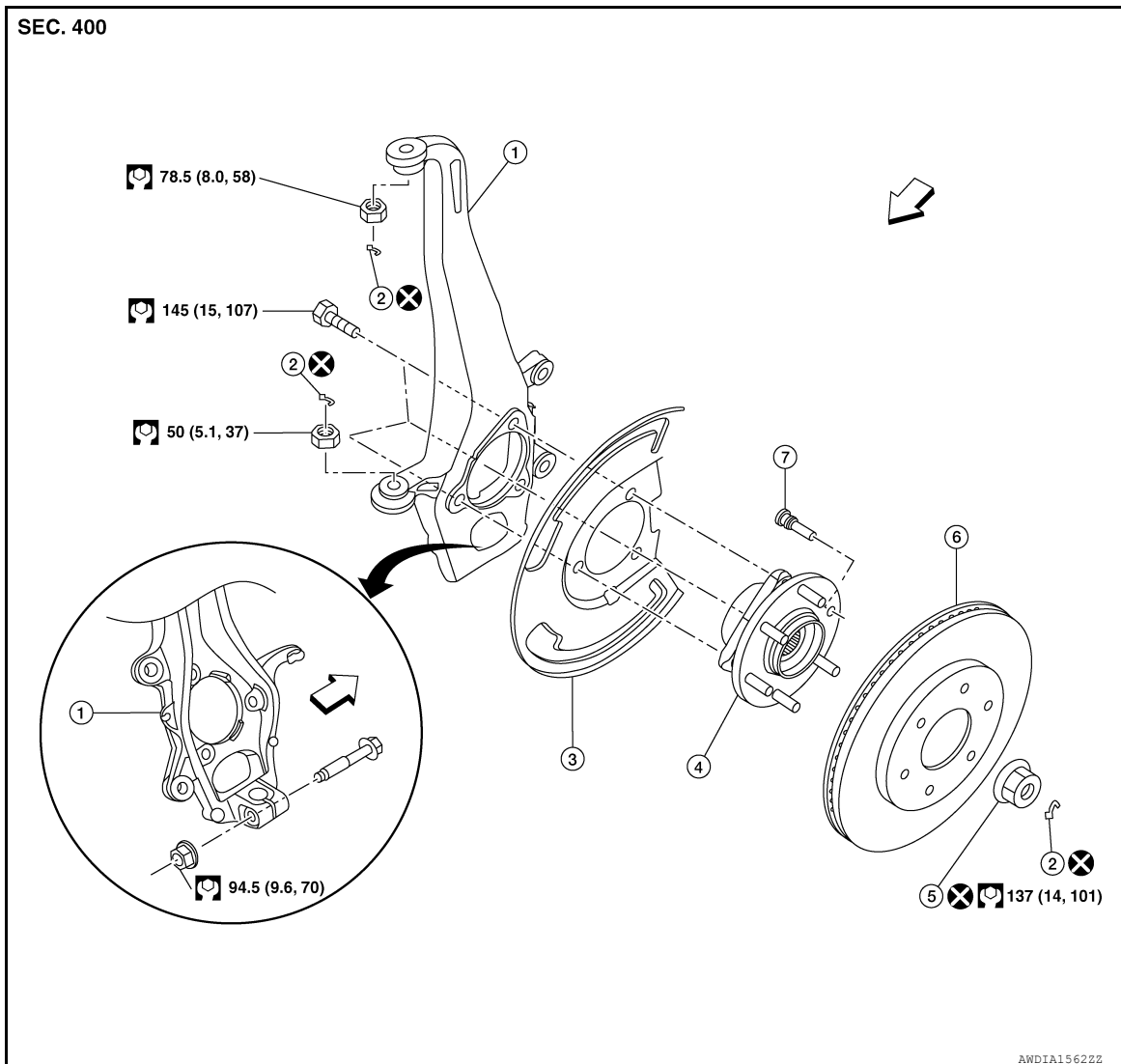
3. Splash guard

6. Front disc brake rotor

# WHEEL HUB

## < REMOVAL AND INSTALLATION >

Non-XD Models



- |                          |                             |                           |
|--------------------------|-----------------------------|---------------------------|
| 1. Steering knuckle      | 2. Cotter pin               | 3. Splash guard           |
| 4. Wheel hub and bearing | 5. Wheel hub lock nut (4WD) | 6. Front disc brake rotor |
| 7. Wheel stud            | ⇐ Front                     |                           |

## Removal and Installation

INFOID:000000014418279

### REMOVAL

1. Remove the front disc brake rotor. Refer to [BR-43, "DISC BRAKE ROTOR : Removal and Installation"](#).
2. Remove the brake hose from bracket on steering knuckle.
3. Remove the front wheel sensor. Refer to [BRC-160, "FRONT WHEEL SENSOR : Removal and Installation"](#).
4. Remove the harness from the retaining brackets.
5. On 4WD models:
  - a. Remove cotter pin from wheel hub lock nut.  
**CAUTION:**  
**Do not reuse cotter pin.**
  - b. Loosen wheel hub lock nut using power tool.



## WHEEL HUB

### < REMOVAL AND INSTALLATION >

- c. Using a piece of wood and a suitable tool, tap on wheel hub lock nut to disengage front drive shaft.

**CAUTION:**

- Do not place drive shaft joint to an extreme angle. Also be careful not to overextend slide joint.
- Do not allow drive shaft to hang down without support.

**NOTE:**

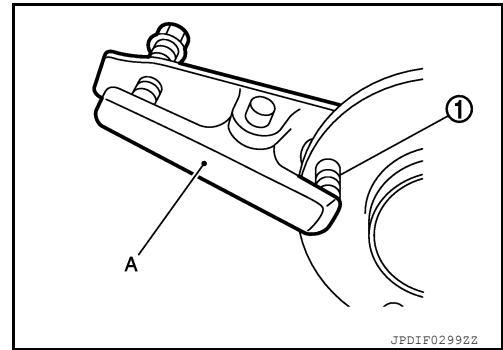
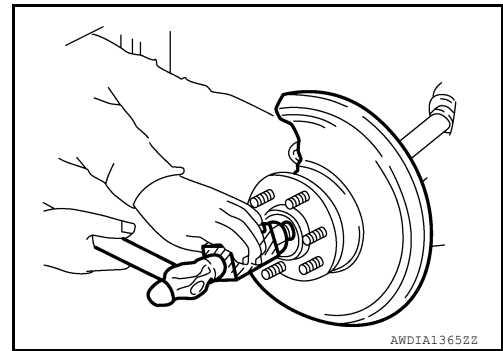
Use a suitable puller if drive shaft cannot be separated from wheel hub and bearing.

- d. Remove wheel hub lock nut

**CAUTION:**

**Do not reuse wheel hub lock nut.**

6. Remove wheel hub and bearing bolts using power tool.  
7. Remove the wheel hub and bearing.  
8. If necessary, remove wheel studs (1) using a suitable tool (A).



### INSPECTION AFTER REMOVAL

Check components for deformation, cracks, and other damage. Replace if necessary.

### INSTALLATION

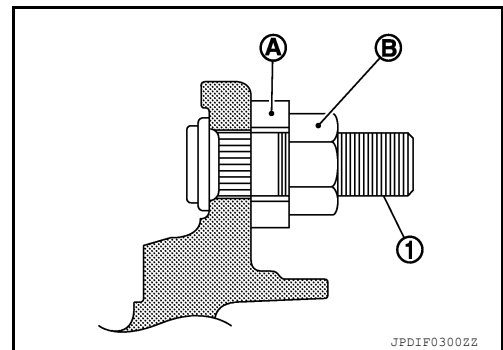
**CAUTION:**

**When installing wheel hub and bearing assembly to steering knuckle, align cutout in sensor rotor cover with wheel sensor mounting hole in steering knuckle.**

1. If necessary, place a washer (A) as shown to install wheel studs (1) by using tightening force of nut (B).

**CAUTION:**

- Do not reuse wheel stud.
- Check that there is no clearance between wheel stud and wheel hub and bearing.



2. On 4WD models:

- a. Clean mating surfaces of wheel hub lock nut and wheel hub and bearing.

**CAUTION:**

**Do not apply lubricating oil to these mating surfaces.**

- b. Hold wheel hub and bearing using suitable tool. Tighten wheel hub lock nut. Refer to [FAX-18, "Exploded View"](#).

**CAUTION:**

- Do not reuse wheel hub lock nut.
- Since drive shaft is assembled by press-fitting, use a torque wrench to tighten wheel hub lock nut. Do not use a power tool.
- Too much torque causes axle noise. Too little torque causes wheel bearing looseness.

- c. Install cotter pin. Securely bend cotter pin to prevent rattles.

**CAUTION:**

## WHEEL HUB

### < REMOVAL AND INSTALLATION >

---

**Do not reuse cotter pin.**

3. Installation of remaining components is in the reverse order of removal.

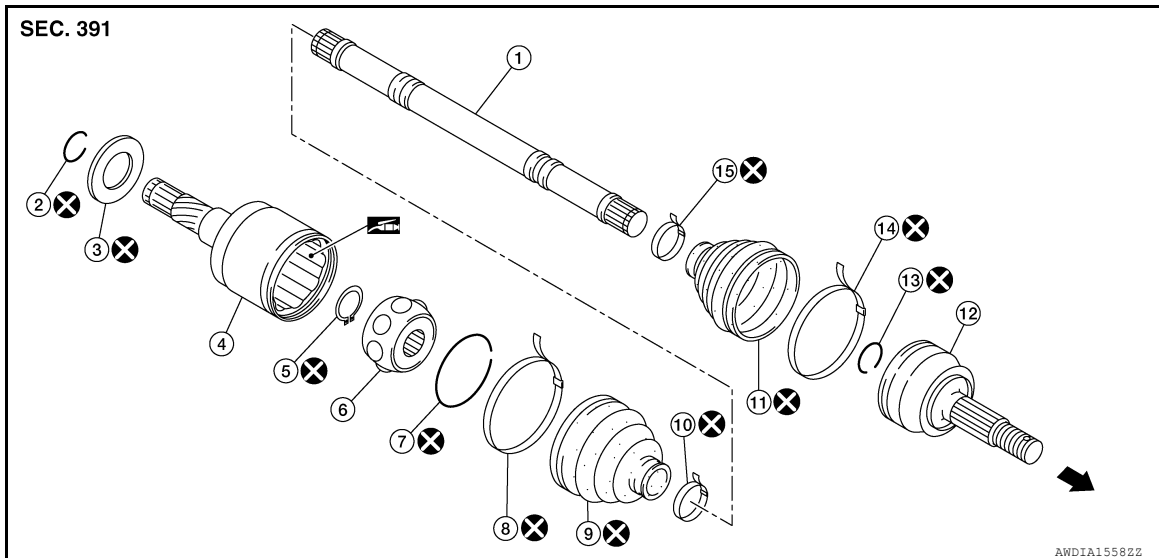
# FRONT DRIVE SHAFT BOOT

< REMOVAL AND INSTALLATION >

## FRONT DRIVE SHAFT BOOT

### Exploded View

INFOID:000000014418280



- |                       |                       |   |
|-----------------------|-----------------------|---|
| 1. Shaft              | 2. Circular clip      | 3. Dust shield                                  |
| 4. Housing            | 5. Snap ring          | 6. Ball cage / Steel ball / Inner race assembly |
| 7. Stopper ring       | 8. Boot band (large)  | 9. Boot   |
| 10. Boot band (small) | 11. Boot              | 12. Joint sub-assembly                          |
| 13. Circular clip     | 14. Boot band (large) | 15. Boot band (small)                           |
- ← Wheel side

#### NOTE:

Items 2, 5, 8, 9, and 10 are serviced as a kit.  
Items 11, 13, 14, and 15 are serviced as a kit.

### WHEEL SIDE

#### WHEEL SIDE : Removal and Installation

INFOID:000000014418281

##### REMOVAL

1. Remove front drive shaft. Refer to [FAX-18. "Removal and Installation"](#).
2. Secure the front drive shaft in a vise.

#### CAUTION:

**When securing shaft in a vise, always use copper or aluminum plates between vise and shaft.**

3. Remove boot bands and slide the boot back.

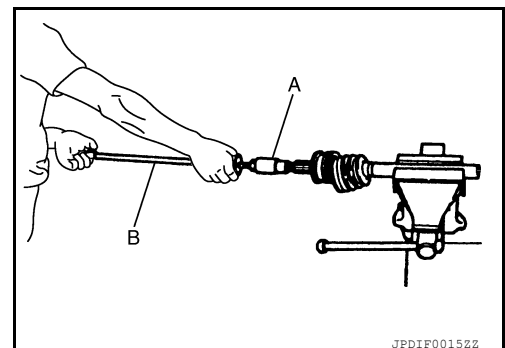
#### CAUTION:

**Do not reuse boot bands.**

4. Using a suitable tool (A), pull joint sub-assembly off of shaft.

#### CAUTION:

- Align suitable tool (B) and drive shaft, then remove joint sub-assembly by pulling directly.
- If joint sub-assembly cannot be removed after five or more unsuccessful attempts, replace the entire drive shaft.



## FRONT DRIVE SHAFT BOOT

### < REMOVAL AND INSTALLATION >

5. Remove boot from shaft.  
**CAUTION:**  
**Do not reuse boot.**
6. Remove circular clip from shaft.  
**CAUTION:**  
**Do not reuse circular clip.**
7. While rotating ball cage, clean the old grease off the joint sub-assembly.

### INSPECTION AFTER REMOVAL

#### Shaft

Check shaft for runout, cracks or other damage. Replace entire drive shaft if necessary.

#### Housing and Ball cage/Steel ball/Inner race assembly

Check housing and ball cage/steel ball/inner race assembly for scratches, wear or looseness. Replace entire drive shaft if necessary.

#### Boot

Check boot for cracks, damage, and leakage of grease. Replace boot if necessary.

### INSTALLATION

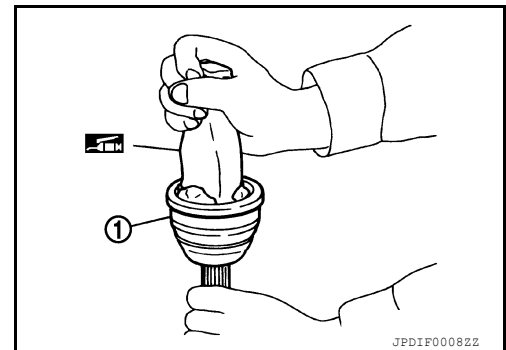
1. Insert Genuine NISSAN Grease into joint sub-assembly (1) serration hole until grease begins to ooze from ball groove and serration hole.

#### **CAUTION:**

**After inserting grease, use a paper shop cloth to wipe off old grease that has oozed out.**

#### **NOTE:**

Always check with the Parts Department for the latest parts information.

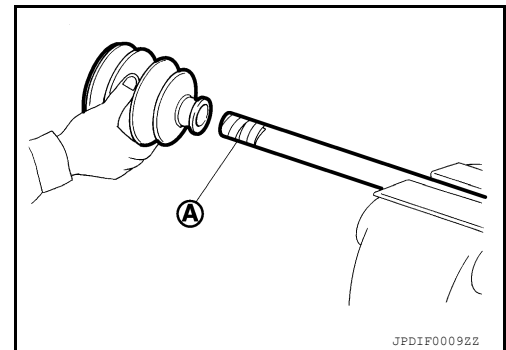


2. Install new boot and new small boot band on shaft.

#### **CAUTION:**

- **Do not reuse the boot and boot bands.**
- **Cover drive shaft serration with protective tape (A) to prevent damage to boot during installation.**

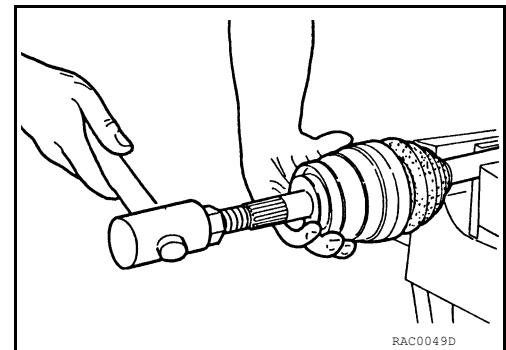
3. Remove protective tape wound around serrated part of shaft.



4. Attach new circular clip to shaft. Circular clip must fit securely into shaft groove. Attach nut to joint sub-assembly. Use a suitable tool to press-fit.

#### **CAUTION:**

**Do not reuse circular clip.**



5. Apply specified amount of Genuine NISSAN Grease into large diameter side opening of boot.

**Grease quantity : Refer to [FAX-28, "Drive Shaft"](#).**

#### **NOTE:**

# FRONT DRIVE SHAFT BOOT

## < REMOVAL AND INSTALLATION >

Always check with the Parts Department for the latest parts information.

6. Install boot securely into grooves (indicated by \* marks) as shown.

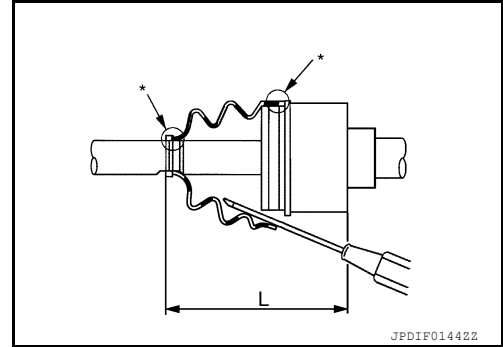
**CAUTION:**

If there is grease on boot mounting surfaces (indicated by \* marks) of shaft and housing, boot may come off. Remove all grease from surfaces.

7. Make sure boot installation length (L) is the specified length indicated below. Insert a suitable tool into the large end of boot. Bleed air from boot to prevent boot deformation.

**Boot installation  
length (L)**

**: Refer to FAX-28, "Drive  
Shaft".**



**CAUTION:**

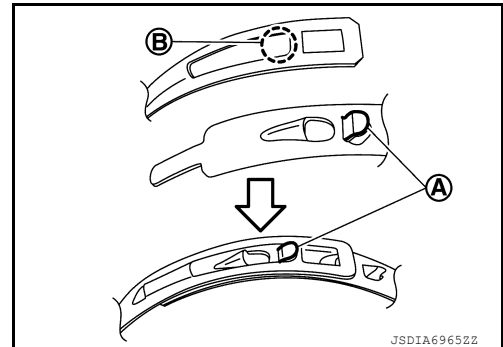
- Boot may break if boot installation length is less than standard value.
- Be careful that suitable tool does not contact inside surface of boot.

8. Install new large boot band securely.

**CAUTION:**

**Do not reuse boot band.**

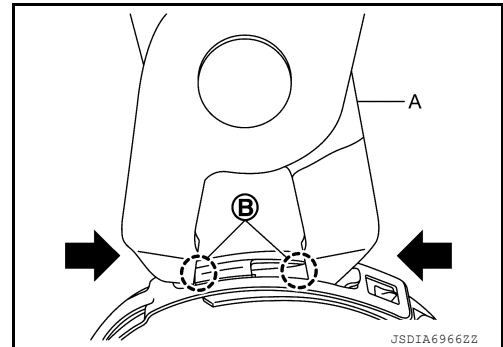
- a. Install new large boot band in groove of boot and install boot band pawl (A) into hole (B). Then install pawl temporarily.



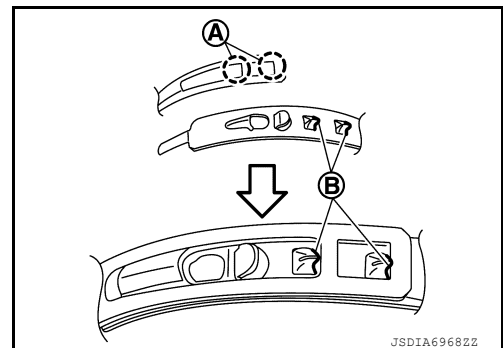
- b. Pinch projections (B) on the band with Tool (A).

**Tool**

**: KV40107310 ( - )**



- c. Inspect to make sure boot band pawls (A) are secured in holes (B).



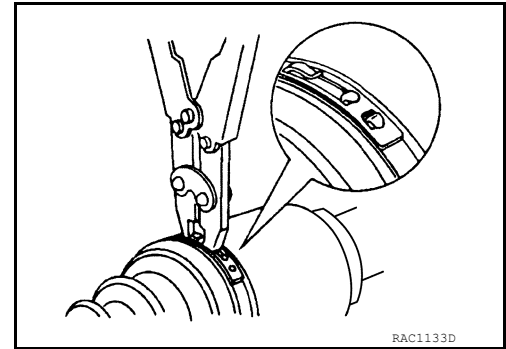
## FRONT DRIVE SHAFT BOOT

### < REMOVAL AND INSTALLATION >

9. Install new small boot band securely using Tool.

**Tool** : KV40107300 (J-51751)

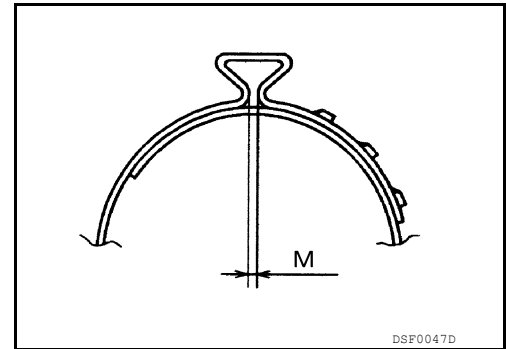
**CAUTION:**  
Do not reuse boot bands.



**NOTE:**

Secure boot band so that dimension (M) meets specification as shown.

**Dimension (M)** : Refer to [FAX-29, "Boot Bands"](#).



10. Attempt to rotate boot to check whether or not boot bands are securing it. If boot is not secure, remove boot bands, reposition boot, and install new boot bands.

**CAUTION:**  
Do not reuse boot bands.

11. Install front drive shaft. Refer to [FAX-18, "Removal and Installation"](#).

## FINAL DRIVE SIDE

### FINAL DRIVE SIDE : Removal and Installation

INFOID:0000000014418282

#### REMOVAL

1. Remove front drive shaft. Refer to [FAX-18, "Removal and Installation"](#).

2. Secure front drive shaft in a vise.

**CAUTION:**  
When securing shaft in a vise, always use copper or aluminum plates between vise and shaft.

3. Remove circular clip from housing.

**CAUTION:**  
Do not reuse circular clip.

4. Remove dust shield from housing.

**CAUTION:**  
Do not reuse dust shield.

5. Remove boot bands and slide boot back.

**CAUTION:**  
Do not reuse boot bands.

6. Put matching marks on housing and shaft.

**CAUTION:**  
Use paint or an equivalent for matching marks. Do not scratch surfaces.

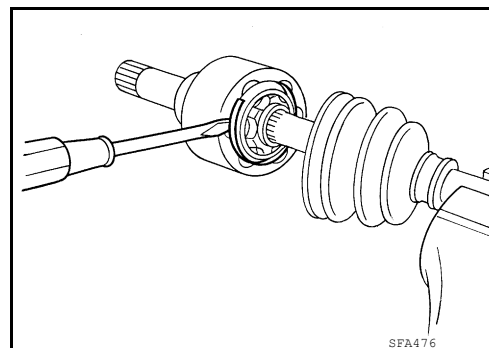
## FRONT DRIVE SHAFT BOOT

### < REMOVAL AND INSTALLATION >

7. Remove stopper ring using a suitable tool.

**CAUTION:**

**Do not reuse stopper ring.**



8. Pull out housing.

9. Put matching marks on ball cage/steel ball/inner race assembly and shaft.

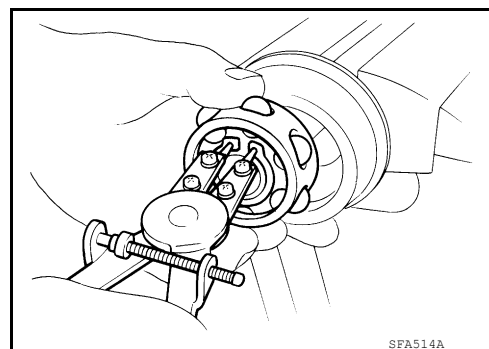
**CAUTION:**

**Use paint or an equivalent for matching marks. Do not scratch surfaces.**

10. Remove snap ring using a suitable tool.

**CAUTION:**

**Do not reuse snap ring.**



11. Remove ball cage/steel ball/inner race assembly from shaft.

12. Remove boot from shaft.

**CAUTION:**

**Do not reuse boot.**

13. Remove old grease from housing.

### INSPECTION AFTER REMOVAL

#### Shaft

Check shaft for bends, cracks or other damage. Replace entire drive shaft if necessary.

#### Housing and Ball cage/Steel ball/Inner race assembly

Check housing and ball cage/steel ball/inner race assembly for scratches, wear or looseness. Replace entire drive shaft if necessary.

#### Boot

Check boot for cracks, damage, and leakage of grease. Replace boot if necessary.

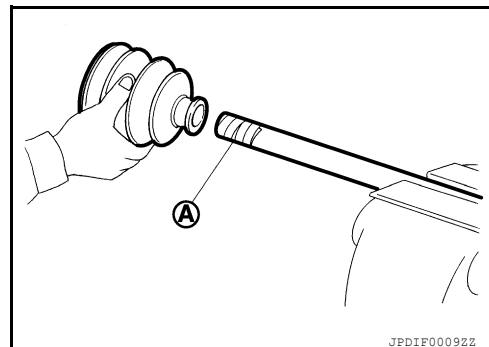
### INSTALLATION

1. Install new small boot band and new boot on shaft.

**CAUTION:**

- **Do not reuse boot and boot bands.**
- **Cover drive shaft serration with protective tape (A) to prevent damage to boot during installation.**

2. Remove protective tape wound around serrated part of shaft.



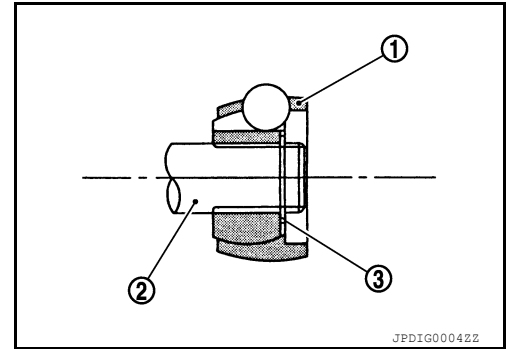
## FRONT DRIVE SHAFT BOOT

### < REMOVAL AND INSTALLATION >

3. Install ball cage/steel ball/inner race assembly (1) aligned with matching mark applied during removal on shaft (2).
4. Install snap ring (3) using suitable tool.

**CAUTION:**

**Do not reuse snap ring.**



5. Apply specified amount of Genuine NISSAN Grease into large diameter side opening of boot.

**Grease quantity** : Refer to [FAX-28, "Drive Shaft"](#).

#### **NOTE:**

Always check with the Parts Department for the latest parts information.

6. Install housing to shaft.
7. Install new stopper ring to housing.

**CAUTION:**

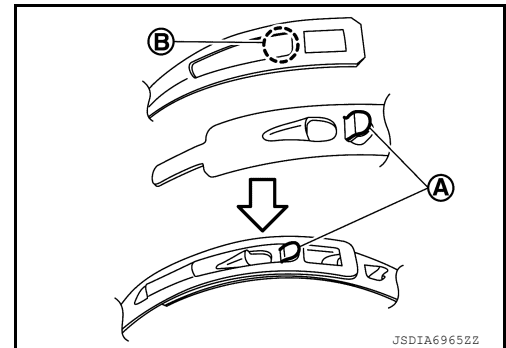
**Do not reuse stopper ring.**

8. Install new boot bands securely.

**CAUTION:**

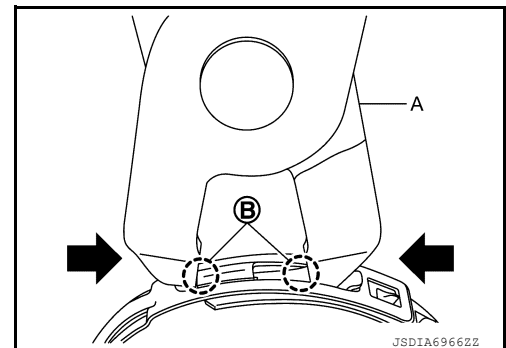
**Do not reuse boot bands.**

- a. Install new large boot band in groove of boot and install boot band pawl (A) into hole (B). Then install pawl temporarily.



- b. Pinch projections (B) on the band with Tool (A).

**Tool** : KV40107310 ( - )

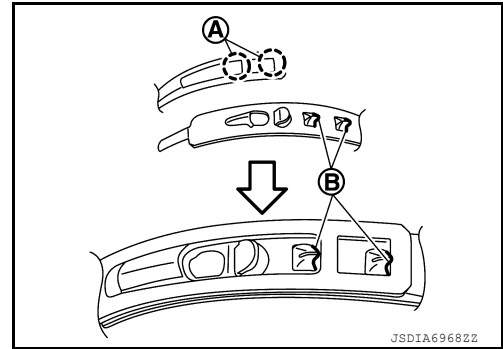




## FRONT DRIVE SHAFT BOOT

### < REMOVAL AND INSTALLATION >

- c. Inspect to make sure boot band pawls (A) are secured in holes (B).



9. After installation, pull shaft to check engagement between housing and stopper ring.

10. Install boot securely into grooves (indicated by \* marks) as shown.

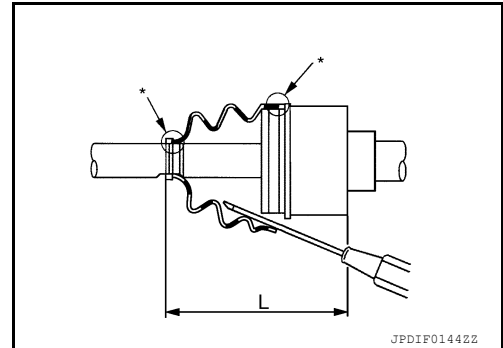
**CAUTION:**

If there is grease on boot mounting surfaces (indicated by \* marks) on shaft or housing, boot may come off. Clean all grease from surfaces.

11. Make sure boot installation length (L) is length specified below. Insert a suitable tool into large end of boot. Bleed air from boot to prevent boot deformation.

**Boot installation  
length (L)**

**: Refer to [FAX-28, "Drive  
Shaft"](#).**



**CAUTION:**

- Boot may break if boot installation length is less than standard value.
- Be careful that suitable tool does not contact inside surface of boot.

12. Install new dust shield to housing.

**CAUTION:**

**Do not reuse dust shield.**

13. Install new circular clip to housing.

**CAUTION:**

**Do not reuse circular clip.**

14. After installing housing and shaft, make sure boot position is correct. If boot position is not correct, remove old boot bands, then reposition boot and secure with new boot bands.

**CAUTION:**

**Do not reuse boot bands.**

15. Install drive shaft. Refer to [FAX-18, "Removal and Installation"](#)

# FRONT DRIVE SHAFT

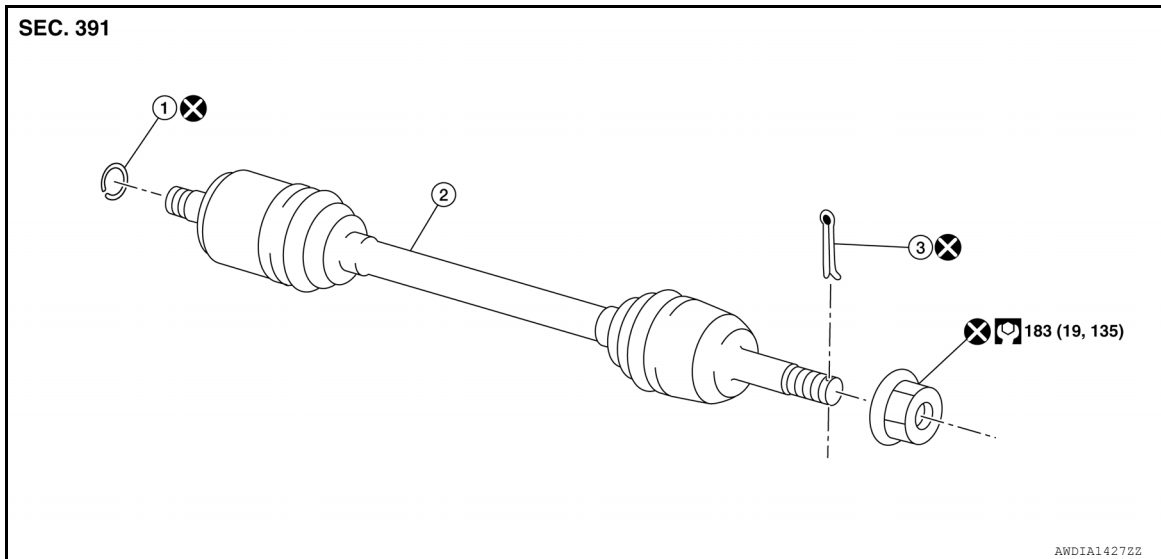
< REMOVAL AND INSTALLATION >

## FRONT DRIVE SHAFT

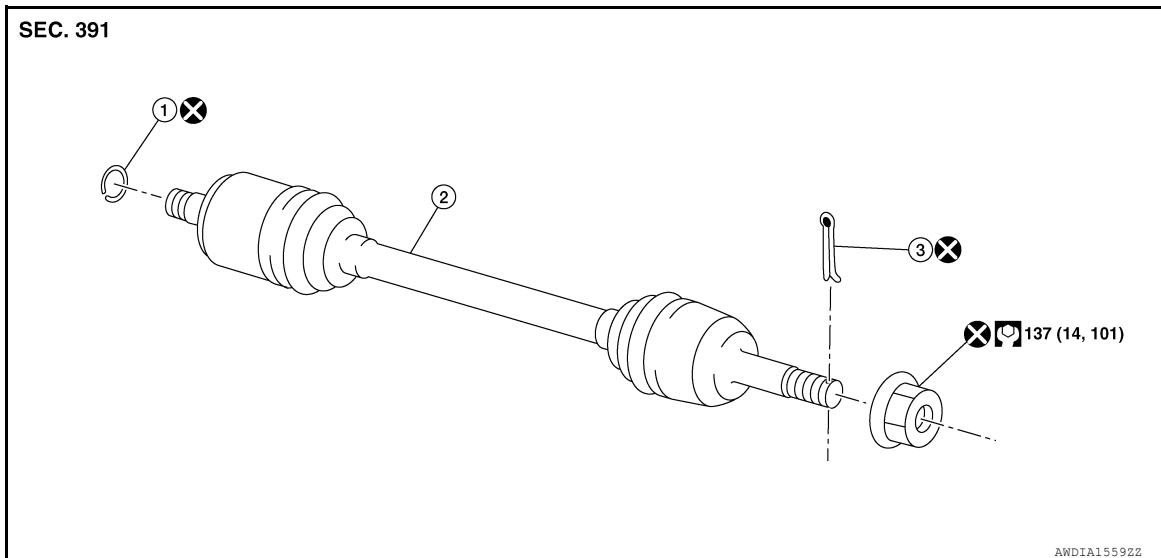
### Exploded View

INFOID:0000000014418283

#### XD Models



#### Non-XD Models



### Removal and Installation

INFOID:0000000014418284

#### REMOVAL

1. Remove nut and separate stabilizer connecting rod from lower link. Refer to [FSU-23, "Exploded View"](#).
2. Remove shock absorber lower bolt from lower link. Refer to [FSU-10, "Exploded View"](#).
3. Remove steering knuckle. Refer to [FSU-29, "Removal and Installation"](#).

## FRONT DRIVE SHAFT

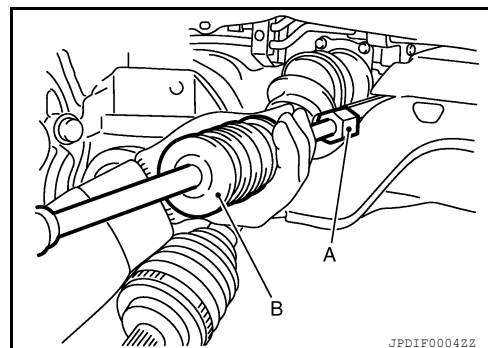
### < REMOVAL AND INSTALLATION >

4. Remove drive shaft from front final drive using Tool (A) and suitable tool (B) by inserting tip of Tool (A) between housing and front final drive.

**CAUTION:**

- Do not place drive shaft at an extreme angle when removing drive shaft. Also be careful not to over-extend slide joint of drive shaft.
- Make sure that the circular clip is attached to the housing.

Tool (A) : KV40107500 ( — )



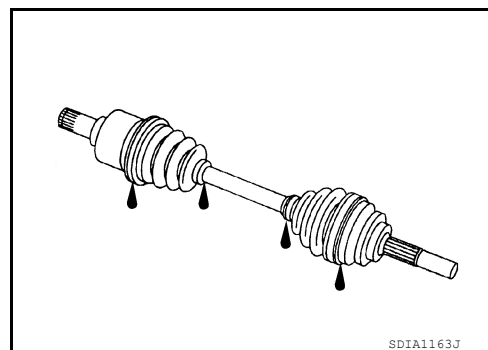
5. Remove front final drive side oil seal. Refer to [DLN-183, "Removal and Installation"](#) (MA235) or [DLN-214, "Removal and Installation"](#) (MA210).

**CAUTION:**

**Do not reuse front final drive side oil seal.**

### INSPECTION AFTER REMOVAL

- Move joint up, down, left, right, and in axial direction. Check for any rough movement or significant looseness.
- Check boot for cracks or other damage, and for grease leakage.
- If damaged, disassemble drive shaft to verify damage, and repair or replace as necessary.



### INSTALLATION

1. Install front final drive side oil seal before installing housing. Refer to [DLN-183, "Removal and Installation"](#) (MA235) or [DLN-214, "Removal and Installation"](#) (MA210).

**CAUTION:**

**Do not reuse front final drive side oil seal.**

2. Install new circular clip on housing. Refer to [FAX-21, "Exploded View"](#).

**CAUTION:**

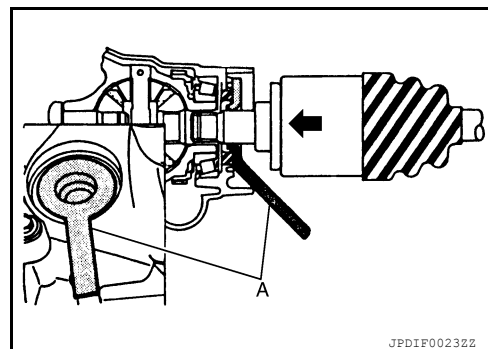
**Do not reuse circular clip.**

3. Place Tool (A) onto front final drive side to prevent damage to front final drive side oil seal while installing drive shaft. Install drive shaft by tapping housing with a suitable tool.

**CAUTION:**

**Check that circular clip is completely engaged.**

Tool (A) : KV40107500 ( — )



4. Install steering knuckle. Refer to [FSU-29, "Removal and Installation"](#).
5. Clean mating surfaces of wheel hub lock nut and wheel hub and bearing.

**CAUTION:**

**Do not apply lubricating oil to these mating surfaces.**

6. Install wheel hub lock nut. Refer to [FAX-18, "Exploded View"](#).

**CAUTION:**

- When tightening wheel hub lock nut, hold wheel hub and bearing using a suitable tool.

## FRONT DRIVE SHAFT

### < REMOVAL AND INSTALLATION >

---

- Drive shaft is assembled by press fitting: Do not use a power tool to tighten wheel hub lock nut, only use a torque wrench.
  - Too much torque causes axle noise. Too little torque causes wheel bearing looseness. Tighten wheel hub lock nut to specification
7. Install cotter pin. Securely bend cotter pin to prevent rattles.  
**CAUTION:**  
**Do not reuse cotter pin.**
  8. Installation of remaining components is in the reverse order of removal.
  9. Check final drive gear oil level. Refer to [DLN-182, "Inspection"](#) (MA235) or [DLN-212, "Inspection"](#) (MA210).
  10. Check wheel alignment. Refer to [FSU-7, "Inspection"](#).
  11. Adjust neutral position of steering angle sensor. Refer to [BRC-70, "Description"](#).

# FRONT DRIVE SHAFT

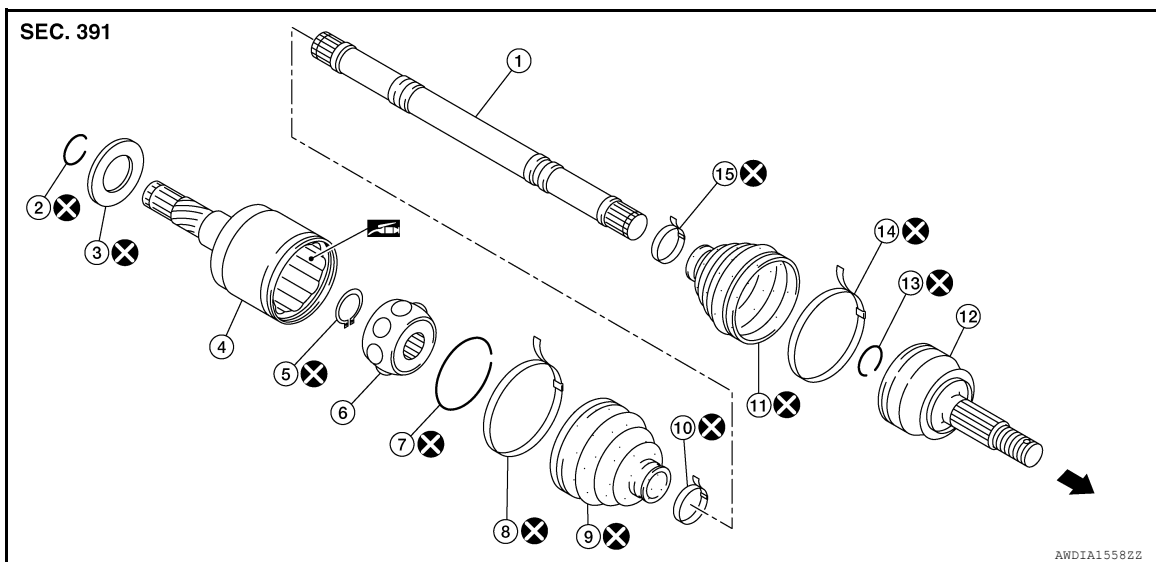
< UNIT DISASSEMBLY AND ASSEMBLY >

## UNIT DISASSEMBLY AND ASSEMBLY

### FRONT DRIVE SHAFT

Exploded View

INFOID:0000000014418285



- |                       |                       |   |
|-----------------------|-----------------------|---|
| 1. Shaft              | 2. Circular clip      | 3. Dust shield                                  |
| 4. Housing            | 5. Snap ring          | 6. Ball cage / Steel ball / Inner race assembly |
| 7. Stopper ring       | 8. Boot band (large)  | 9. Boot   |
| 10. Boot band (small) | 11. Boot              | 12. Joint sub-assembly                          |
| 13. Circular clip     | 14. Boot band (large) | 15. Boot band (small)                           |
- ← Wheel side

#### NOTE:

Items 2, 5, 8, 9, and 10 are serviced as a kit.  
Items 11, 13, 14, and 15 are serviced as a kit.

### Disassembly and Assembly

INFOID:0000000014418286

#### DISASSEMBLY

Final Drive Side

- Secure front drive shaft in a vise.  
**CAUTION:**  
When securing shaft in a vise, always use copper or aluminum plates between vise and shaft.
- Remove circular clip from housing.  
**CAUTION:**  
Do not reuse circular clip.
- Remove dust shield from housing.  
**CAUTION:**  
Do not reuse dust shield.
- Remove boot bands and slide boot back.  
**CAUTION:**  
Do not reuse boot bands.
- Put matching marks on housing and shaft.  
**CAUTION:**  
Use paint or an equivalent for matching marks. Do not scratch surfaces.

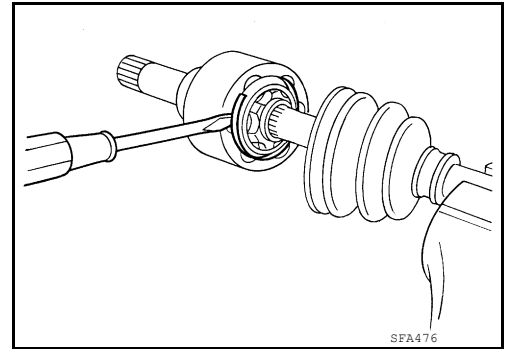
## FRONT DRIVE SHAFT

### < UNIT DISASSEMBLY AND ASSEMBLY >

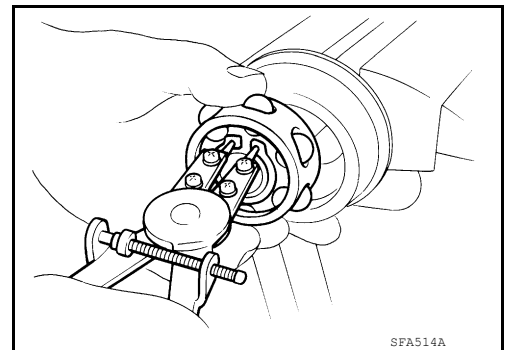
6. Remove stopper ring using a suitable tool.

**CAUTION:**

**Do not reuse stopper ring.**



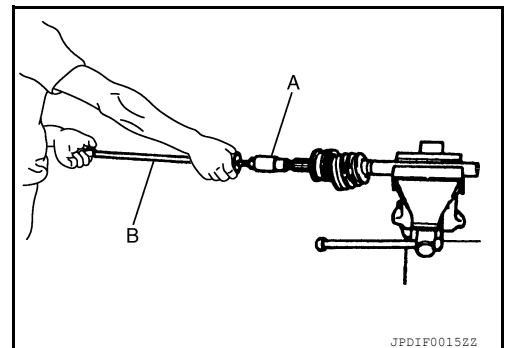
7. Pull out housing.
8. Put matching marks on ball cage/steel ball/inner race assembly and shaft.  
**CAUTION:**  
**Use paint or an equivalent for matching marks. Do not scratch surfaces.**
9. Remove snap ring using a suitable tool.  
**CAUTION:**  
**Do not reuse stopper ring.**



10. Remove ball cage/steel ball/inner race assembly from shaft.
11. Remove boot from shaft.  
**CAUTION:**  
**Do not reuse stopper ring.**
12. Remove old grease from housing.

#### Wheel Side

1. Secure drive shaft in a vise.  
**CAUTION:**  
**When securing shaft in a vise, always use copper or aluminum plates between vise and shaft.**
2. Remove boot bands and slide the boot back.  
**CAUTION:**  
**Do not reuse stopper ring.**
3. Using a suitable tool (A), pull joint sub-assembly off of shaft.  
**CAUTION:**
  - Align suitable tool (B) and drive shaft, then remove joint sub-assembly by pulling directly.
  - If joint sub-assembly cannot be removed after five or more unsuccessful attempts, replace the entire drive shaft.



4. Remove boot from shaft.  
**CAUTION:**  
**Do not reuse boot.**
5. Remove circular clip from shaft.  
**CAUTION:**

# FRONT DRIVE SHAFT

## < UNIT DISASSEMBLY AND ASSEMBLY >

**Do not reuse circular clip.**

6. While rotating ball cage, clean the old grease off the joint sub-assembly.

### INSPECTION AFTER DISASSEMBLY

#### Shaft

- Check shaft for runout, cracks, or other damage. Replace entire drive shaft if necessary.

#### Joint Sub-Assembly

- Make sure there is no rough rotation or unusual axial looseness.
- Make sure there is no foreign material inside joint sub-assembly.
- Check joint sub-assembly for compression scars, cracks or fractures.

#### Housing

- Make sure there are no compression scars, cracks or fractures or unusual wear of ball rolling surface.
- Make sure there is no damage to shaft.
- Make sure there is no deformation of boot installation parts.

#### Ball Cage

- Make sure there are no compression scars, cracks, or fractures of sliding surface.

#### Steel Ball

- Make sure there are no compression scars, cracks, fractures or unusual wear.

#### Inner Race

- Check ball sliding surface for compression scars, cracks or fractures.
- Make sure there is no damage to serrated part.

#### **CAUTION:**

**If there are any irregular conditions in the component, replace entire front drive shaft.**

### ASSEMBLY

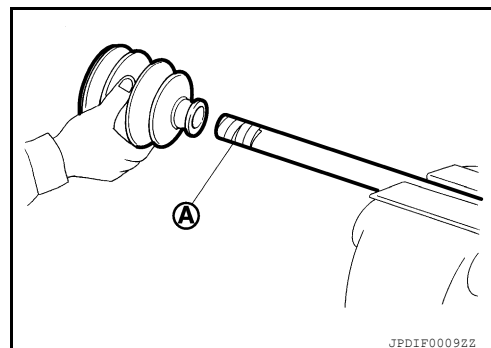
#### Final Drive Side

1. Install new small boot band and new boot on shaft.

#### **CAUTION:**

- **Do not reuse boot and boot bands.**
- **Cover drive shaft serration with protective tape (A) to prevent damage to boot during installation.**

2. Remove protective tape wound around serrated part of shaft.

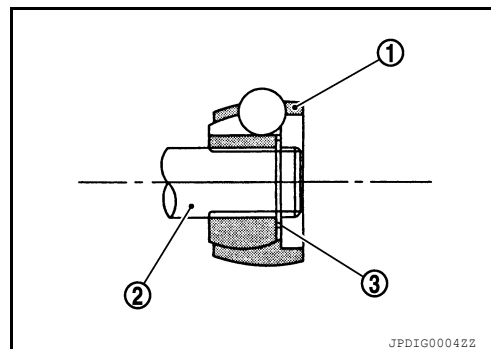


3. Install ball cage/steel ball/inner race assembly (1) aligned with matching mark applied during removal on shaft (2).

4. Install snap ring (3) using suitable tool.

#### **CAUTION:**

**Do not reuse snap ring.**



5. Apply the specified amount of Genuine NISSAN Grease into housing.

**Grease quantity** : Refer to [FAX-28, "Drive Shaft"](#).

#### **NOTE:**

Always check with the Parts Department for the latest parts information.

# FRONT DRIVE SHAFT

## < UNIT DISASSEMBLY AND ASSEMBLY >

6. Install housing to shaft.
7. Install new stopper ring to housing.

**CAUTION:**

**Do not reuse stopper ring.**

8. After installation, pull shaft to check engagement between housing and stopper ring.
9. Install boot securely into grooves (indicated by \* marks) as shown.

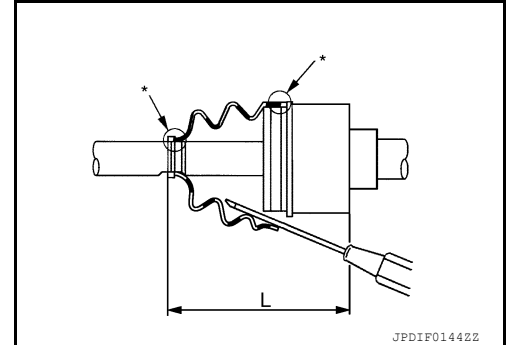
**CAUTION:**

**If there is grease on boot mounting surfaces (indicated by \* marks) on shaft or housing, boot may come off. Clean all grease from surfaces.**

10. Make sure boot installation length (L) is length specified below. Insert a suitable tool into large end of boot. Bleed air from boot to prevent boot deformation.

**Boot installation  
length (L)**

**: Refer to FAX-28, "Drive  
Shaft".**



**CAUTION:**

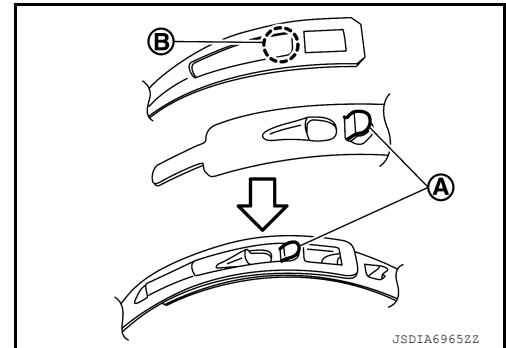
- Boot may break if boot installation length is less than standard value.
- Be careful that suitable tool does not contact inside surface of boot.

11. Install new boot bands.

**CAUTION:**

**Do not reuse boot bands.**

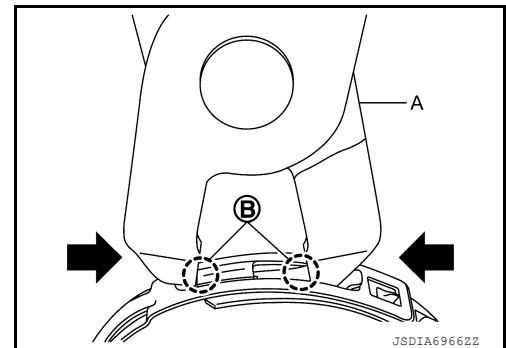
- a. Install new large boot band in groove of boot and install boot band pawl (A) into hole (B). Then install pawl temporarily.



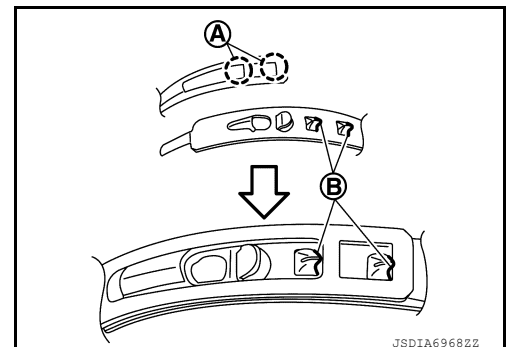
- b. Pinch projections (B) on the band with Tool (A).

**Tool**

**: KV40107310 ( - )**



- c. Inspect to make sure boot band pawls (A) are secured in holes (B).





## FRONT DRIVE SHAFT

### < UNIT DISASSEMBLY AND ASSEMBLY >

12. Install new dust shield to housing.

**CAUTION:**

**Do not reuse dust shield.**

13. Install new circular clip to housing.

**CAUTION:**

**Do not reuse circular clip.**

14. After installing housing and shaft, make sure boot position is correct. If boot position is not correct, remove old boot bands, then reposition boot and secure with new boot bands.

**CAUTION:**

**Do not reuse boot bands.**

#### Wheel Side

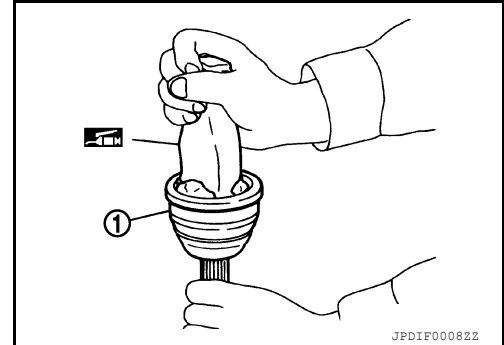
1. Insert Genuine NISSAN Grease into joint sub-assembly (1) serration hole until grease begins to ooze from ball groove and serration hole.

**CAUTION:**

**After inserting grease, use a paper shop cloth to wipe off old grease that has oozed out.**

**NOTE:**

Always check with the Parts Department for the latest parts information.

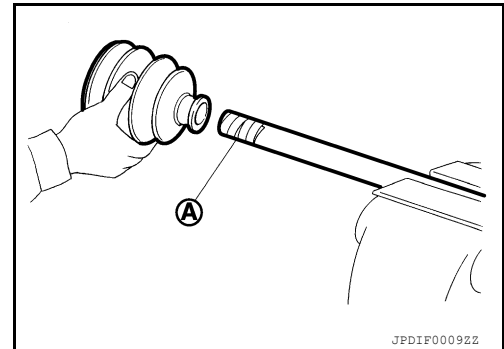


2. Install new boot and new small boot band on shaft.

**CAUTION:**

- **Do not reuse the boot and boot bands.**
- **Cover drive shaft serration with protective tape (A) to prevent damage to boot during installation.**

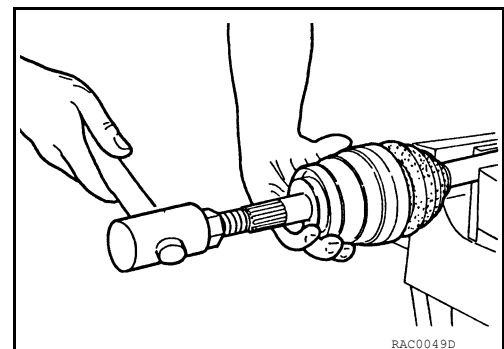
3. Remove protective tape wound around serrated part of shaft.



4. Attach new circular clip to shaft. Circular clip must fit securely into shaft groove. Attach nut to joint sub-assembly. Use a suitable tool to press-fit.

**CAUTION:**

**Do not reuse circular clip.**



5. Apply specified amount of Genuine NISSAN Grease into large diameter side opening of boot.

**Grease quantity : Refer to [FAX-28, "Drive Shaft"](#).**

**NOTE:**

Always check with the Parts Department for the latest parts information.

A

B

C

FAX

E

F

G

H

I

J

K

L

M

N

O

P

# FRONT DRIVE SHAFT

## < UNIT DISASSEMBLY AND ASSEMBLY >

6. Install boot securely into grooves (indicated by \* marks) as shown.

**CAUTION:**

If there is grease on boot mounting surfaces (indicated by \* marks) of shaft and housing, boot may come off. Remove all grease from surfaces.

7. Make sure boot installation length (L) is the specified length indicated below. Insert a suitable tool into the large end of boot. Bleed air from boot to prevent boot deformation.

**Boot installation length (L)** : Refer to [FAX-28, "Drive Shaft"](#).

**CAUTION:**

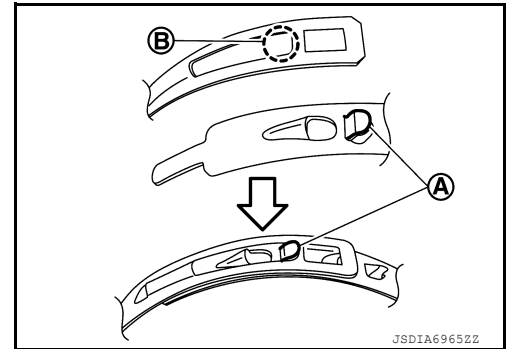
- Boot may break if boot installation length is less than standard value.
- Be careful that suitable tool does not contact inside surface of boot.

8. Install new large boot band securely.

**CAUTION:**

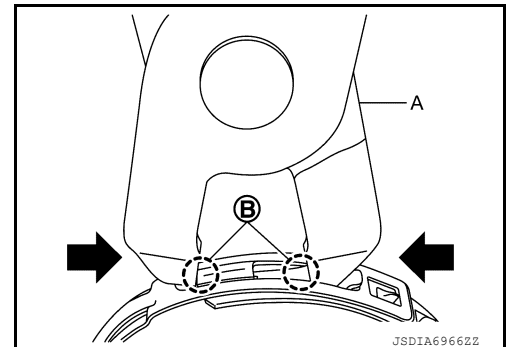
**Do not reuse boot band.**

- a. Install new large boot band in groove of boot and install boot band pawl (A) into hole (B). Then install pawl temporarily.

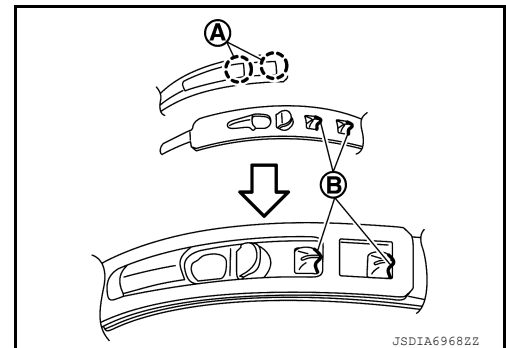


- b. Pinch projections (B) on the band with Tool (A).

**Tool** : KV40107310 ( - )



- c. Inspect to make sure boot band pawls (A) are secured in holes (B).



## FRONT DRIVE SHAFT

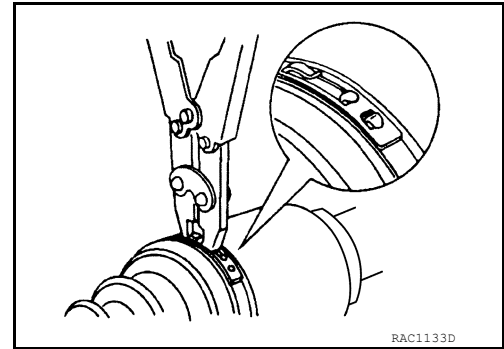
### < UNIT DISASSEMBLY AND ASSEMBLY >

9. Install new small boot bands securely using Tool.

**Tool** : KV40107300 (J-51751)

**CAUTION:**

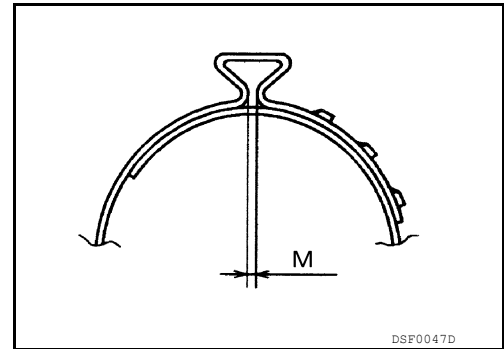
**Do not reuse boot bands.**



**NOTE:**

Secure boot band so that dimension (M) meets specification as shown.

**Dimension (M)** : Refer to [FAX-29, "Boot Bands"](#).



10. Attempt to rotate boot to check whether or not boot bands are securing it. If boot is not secure, remove boot bands, reposition boot, and install new boot bands.

**CAUTION:**

**Do not reuse boot bands.**

# SERVICE DATA AND SPECIFICATIONS (SDS)

< SERVICE DATA AND SPECIFICATIONS (SDS)

## SERVICE DATA AND SPECIFICATIONS (SDS)

### SERVICE DATA AND SPECIFICATIONS (SDS)

#### Wheel Hub and Bearing Assembly

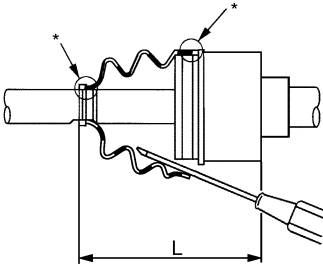
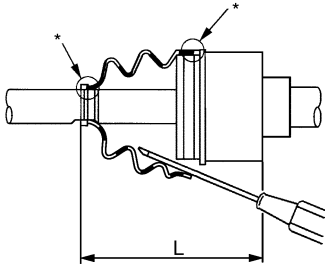
INFOID:0000000014418287

Item	Standard
Axial end play	0.05 mm (0.002 in) or less

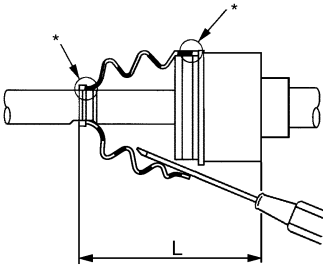
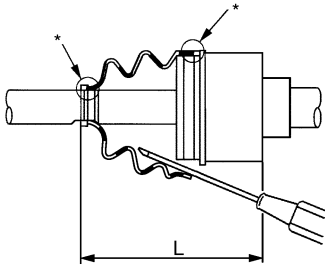
#### Drive Shaft

INFOID:0000000014418288

#### XD Models

	 JPDIF0144ZZ	 JPDIF0144ZZ
Joint type	Wheel side	Final drive side
Grease quantity	$220 \pm 10$ g ( $7.76 \pm 0.35$ oz)	$185 \pm 10$ g ( $6.52 \pm 0.35$ oz)
Boots installed length (L)	157.8 mm (6.21 in)	154.7 mm (6.09 in)

#### Non-XD Models

	 JPDIF0144ZZ	 JPDIF0144ZZ
Joint type	Wheel side	Final drive side
Grease quantity	$175 \pm 10$ g ( $6.17 \pm 0.35$ oz)	$145 \pm 10$ g ( $5.11 \pm 0.35$ oz)
Boots installed length (L)	168.4 mm (6.63 in)	149.7 mm (5.89 in)

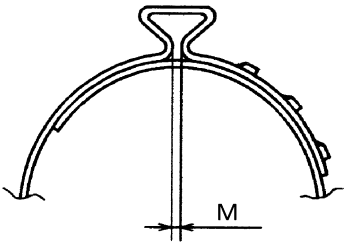
SERVICE DATA AND SPECIFICATIONS (SDS)

< SERVICE DATA AND SPECIFICATIONS (SDS)

Boot Bands

INFOID:0000000014418289

Unit: mm (in)



DSF0047D

Dimension (M)	1.0 - 4.0 (0.039 - 0.157)
---------------	---------------------------

A  
B  
C  
E  
F  
G  
H  
I  
J  
K  
L  
M  
N  
O  
P

FAX