

SECTION **FAX**
FRONT AXLE

A
B
C

FAX

CONTENTS

E

SERVICE INFORMATION 2

PRECAUTIONS 2

 Precaution for Supplemental Restraint System (SRS) "AIR BAG" and "SEAT BELT PRE-TENSIONER"2

 Precaution Necessary for Steering Wheel Rotation After Battery Disconnect2

 Caution2

PREPARATION 4

 Special Service Tool4

 Commercial Service Tool4

NOISE, VIBRATION AND HARSHNESS (NVH) TROUBLESHOOTING 5

 NVH Troubleshooting Chart5

FRONT WHEEL HUB AND KNUCKLE 6

 On-Vehicle Inspection and Service 6

 Removal and Installation 6

FRONT DRIVE SHAFT 9

 On-Vehicle Inspection and Service 9

 Removal and Installation (Left Side) 9

 Removal and Installation (Right Side)10

 Disassembly and Assembly (Left Side)13

 Disassembly and Assembly (Right Side)18

SERVICE DATA AND SPECIFICATIONS (SDS)25

 Wheel Bearing25

 Drive Shaft25

 Dynamic Damper25

 Boot Bands25

F

G

H

I

J

K

L

M

N

O

P

PRECAUTIONS

< SERVICE INFORMATION >

SERVICE INFORMATION

PRECAUTIONS

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

INFOID:000000004683901

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. This system includes seat belt switch inputs and dual stage front air bag modules. The SRS system uses the seat belt switches to determine the front air bag deployment, and may only deploy one front air bag, depending on the severity of a collision and whether the front occupants are belted or unbelted. Information necessary to service the system safely is included in the SRS 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, all maintenance must be performed by an authorized NISSAN/INFINITI dealer.
- Improper maintenance, 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 SRS 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.

Precaution Necessary for Steering Wheel Rotation After Battery Disconnect

INFOID:000000004675331

NOTE:

- This Procedure is applied only to models with Intelligent Key system and NATS (NISSAN ANTI-THEFT SYSTEM).
- Remove and install all control units after disconnecting both battery cables with the ignition knob in the "LOCK" position.
- Always use CONSULT-III to perform self-diagnosis as a part of each function inspection after finishing work. If DTC is detected, perform trouble diagnosis according to self-diagnostic results.

For models equipped with the Intelligent Key system and NATS, an electrically controlled steering lock mechanism is adopted on the key cylinder.

For this reason, if the battery is disconnected or if the battery is discharged, the steering wheel will lock and steering wheel rotation will become impossible.

If steering wheel rotation is required when battery power is interrupted, follow the procedure below before starting the repair operation.

OPERATION PROCEDURE

1. Connect both battery cables.

NOTE:

Supply power using jumper cables if battery is discharged.

2. Use the Intelligent Key or mechanical key to turn the ignition switch to the "ACC" position. At this time, the steering lock will be released.
3. Disconnect both battery cables. The steering lock will remain released and the steering wheel can be rotated.
4. Perform the necessary repair operation.
5. When the repair work is completed, return the ignition switch to the "LOCK" position before connecting the battery cables. (At this time, the steering lock mechanism will engage.)
6. Perform a self-diagnosis check of all control units using CONSULT-III.

Caution

INFOID:000000004305839

Observe the following precautions when disassembling and assembling drive shaft.

- Joint sub-assembly does not disassemble because it is non-overhaul parts.
- Perform work in a location which is as dust-free as possible.

PRECAUTIONS

< SERVICE INFORMATION >

- 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. A
- Disassembled parts must be carefully reassembled in the correct order. If work is interrupted, a clean cover must be placed over parts. B
- Paper shop cloths must be used. Fabric shop cloths must not be used because of danger of lint adhering to parts. B
- 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. C

FAX

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PREPARATION

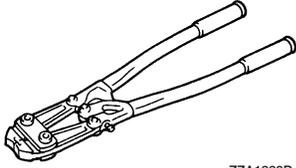
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PREPARATION

Special Service Tool

INFOID:000000004305840

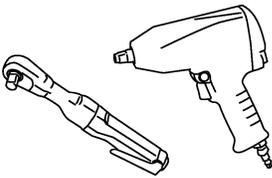
The actual shapes of Kent-Moore tools may differ from those of special service tools illustrated here.

Tool number (Kent-Moore No.) Tool name	Description
KV40107300 (—) Boot Band crimping tool	Installing boot bands  <p style="text-align: right; margin-right: 50px;">ZZA1229D</p>
KV38105500 (J-33904) Differential side oil seal protector	Installing drive shaft LH a: 40 mm (1.57 in) dia.
KV38106700 (J-34296) Differential side oil seal protector	Installing drive shaft RH a: 36 mm (1.42 in) dia.
HT72520000 (J-25730-A) Ball joint remover	Removing tie-rod outer end and lower ball joint

Commercial Service Tool

INFOID:000000004305841

Tool name	Description
Power tool	<ul style="list-style-type: none"> • Removing wheel nuts • Removing torque member bolts • Removing hub lock nut



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NOISE, VIBRATION AND HARSHNESS (NVH) TROUBLESHOOTING

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NOISE, VIBRATION AND HARSHNESS (NVH) TROUBLESHOOTING

NVH Troubleshooting Chart

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

Reference page			—	—	—	FAX-6	—	FAX-6	FSU-6, "NVH Troubleshooting Chart"	Refer to FRONT AXLE in this chart.	WT-5, "NVH Troubleshooting Chart"	WT-5, "NVH Troubleshooting Chart"	Refer to DRIVE SHAFT in this chart.	BR-5, "NVH Troubleshooting Chart"	PS-5, "NVH Troubleshooting Chart"	
Possible cause and SUSPECTED PARTS			Excessive joint angle	Joint sliding resistance	Imbalance	Improper installation, looseness	Parts interference	Wheel bearing damage	FRONT SUSPENSION	FRONT AXLE	TIRES	ROAD WHEELS	DRIVE SHAFT	BRAKES	STEERING	
Symptom	DRIVE SHAFT	Noise	x	x				x	x	x	x	x		x	x	
		Shake	x		x				x	x	x	x		x	x	
	FRONT AXLE	Noise				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				

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FAX

FRONT WHEEL HUB AND KNUCKLE

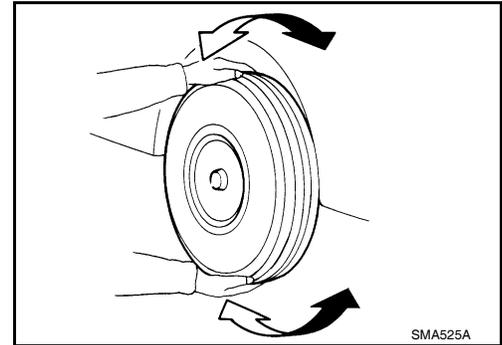
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FRONT WHEEL HUB AND KNUCKLE

On-Vehicle Inspection and Service

INFOID:000000004305843

- Check the axle and suspension parts for excessive play, wear, or damage.
- Shake each front wheel to check for excessive play as shown.



FRONT WHEEL BEARING INSPECTION

- Move wheel hub and bearing assembly in the axial direction by hand. Make sure the axial end play is within specification.

Axial end play : 0.05 mm (0.002 in) or less

- Check that the wheel hub bearing operates smoothly.
- Replace the wheel hub assembly if the axial end play exceeds specification, or if the wheel bearing does not turn smoothly. Refer to [RAX-5, "Removal and Installation"](#).

CAUTION:

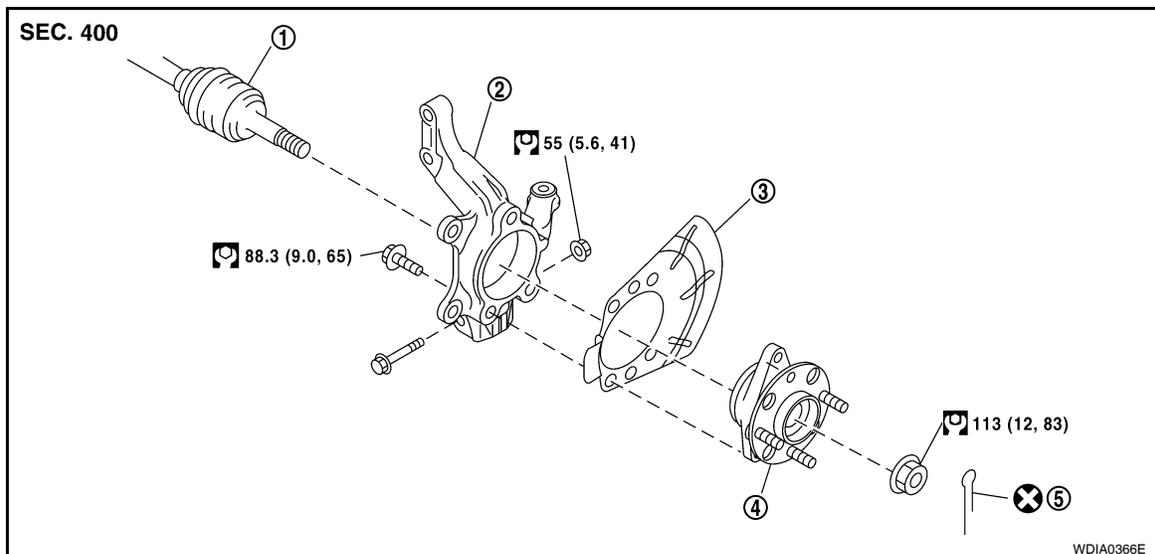
The wheel hub assembly does not require maintenance. If any of the following symptoms are noted, replace the wheel hub assembly.

- Growling noise is emitted from the wheel hub bearing during operation.
- Wheel hub bearing drags or turns roughly.

Removal and Installation

INFOID:000000004305844

COMPONENT



- | | | |
|-----------------------------------|---------------------|-----------------|
| 1. Drive shaft | 2. Steering knuckle | 3. Splash guard |
| 4. Wheel hub and bearing assembly | 5. Cotter pin | |

REMOVAL

1. Remove wheel and tire using power tool. Refer to [WT-7, "Rotation"](#).

FRONT WHEEL HUB AND KNUCKLE

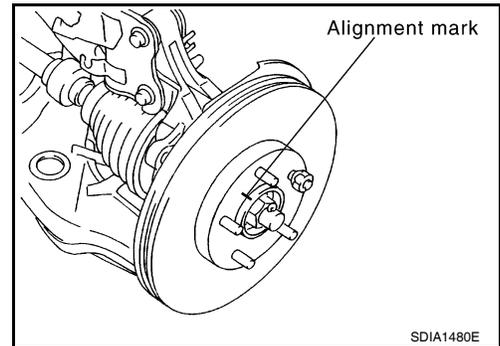
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- Without disassembling the hydraulic lines, remove the torque member bolts using power tool. Then reposition the torque member and brake caliper assembly aside with wire. Refer to [BR-25](#).

CAUTION:

Do not depress brake pedal while brake caliper is removed.

- Put alignment marks on disc rotor and wheel hub and bearing assembly, then remove disc rotor.



- Remove wheel sensor from steering knuckle. Refer to [BRC-32](#).

CAUTION:

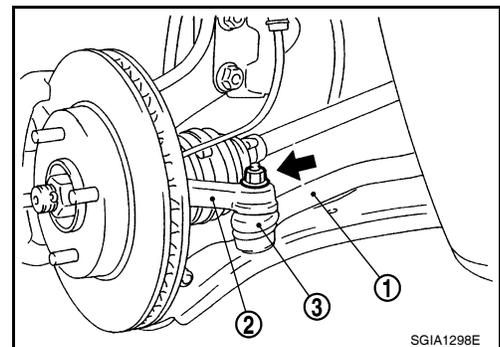
Do not pull on wheel sensor harness.

- Loosen steering outer socket (1) nut.
- Remove steering outer socket (1) from steering knuckle (2) so as not to damage ball joint (3) boot using Tool.

CAUTION:

Temporarily leave the outer socket nut installed to prevent damage to threads and to prevent the ball joint remover or suitable tool from suddenly coming off.

Tool number : HT72520000 (J-25730-A)



- Remove transverse link ball joint nut and bolt. Then, remove transverse link from steering knuckle.
- Remove cotter pin, then loosen hub lock nut using power tool.

CAUTION:

Temporarily leave the hub lock nut installed to prevent damage to threads.

- Separate the drive shaft from the wheel hub and bearing assembly by lightly tapping the end of the drive shaft using a hammer or suitable tool, and then remove hub lock nut.

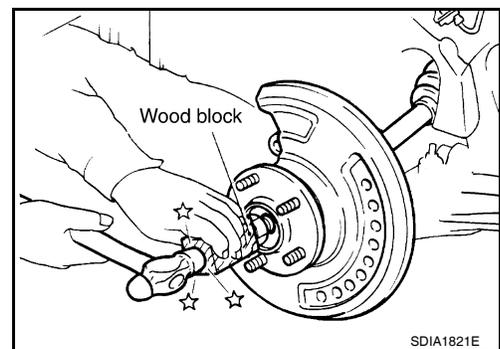
NOTE:

Use a suitable puller if wheel hub and bearing assembly and drive shaft cannot be separated after performing the above procedure.

- Remove the drive shaft from the wheel hub and bearing assembly and support the drive shaft.

CAUTION:

- Do not apply an excessive angle to drive shaft joint when removing from the wheel hub and bearing assembly,**
- Do not excessively extend slide joint.**
- Do not allow drive shaft to hang down. Support the entire drive shaft.**

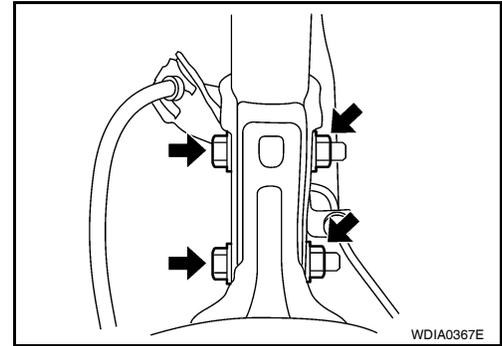


- Remove wheel hub and bearing assembly bolts, and then remove splash guard and wheel hub and bearing assembly from steering knuckle.

FRONT WHEEL HUB AND KNUCKLE

< SERVICE INFORMATION >

12. Remove nuts and bolts, and then remove steering knuckle from strut assembly. Refer to [FSU-10, "Component"](#).



INSPECTION AFTER REMOVAL

Wheel Hub and Knuckle Inspection

Check for any deformity, cracks, or other damage on the wheel hub assembly and knuckle, replace if necessary.

CAUTION:

The wheel hub assembly does not require maintenance. If any of the following symptoms are noted, replace the wheel hub assembly.

- Growling noise is emitted from the wheel hub bearing during operation.
- Wheel hub bearing drags or turns roughly.

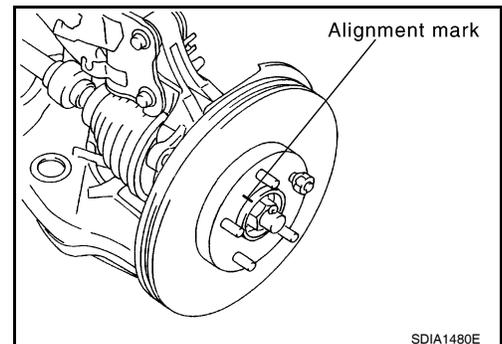
Ball Joint Inspection

Check boots of transverse link and steering outer socket ball joint for breakage, axial play, and torque. Refer to [FSU-15, "Removal and Installation"](#) transverse link and [PS-13, "Disassembly and Assembly"](#) steering outer socket ball joint.

INSTALLATION

Installation is the reverse order of removal. Note the following:

- Perform the final tightening of each of parts under unladen conditions, which were removed when removing wheel hub and bearing assembly and steering knuckle. Check the wheel alignment. Refer to [FSU-7, "Wheel Alignment Inspection"](#).
- When installing disc rotor on wheel hub and bearing assembly, align the marks.
(When not using the alignment mark, refer to [BR-29, "Disassembly and Assembly of Brake Caliper Assembly"](#) .)



FRONT DRIVE SHAFT

< SERVICE INFORMATION >

FRONT DRIVE SHAFT

On-Vehicle Inspection and Service

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- Check drive shaft mounting point and joint for looseness and other damage.
- Check boot for cracks and other damage.

Replace or repair components as necessary. Refer to [FAX-9, "Removal and Installation \(Left Side\)"](#) , [FAX-10, "Removal and Installation \(Right Side\)"](#) , [FAX-13, "Disassembly and Assembly \(Left Side\)"](#) or [FAX-18, "Disassembly and Assembly \(Right Side\)"](#) .

CAUTION:

Replace entire drive shaft assembly when noise or vibration occur from drive shaft.

Removal and Installation (Left Side)

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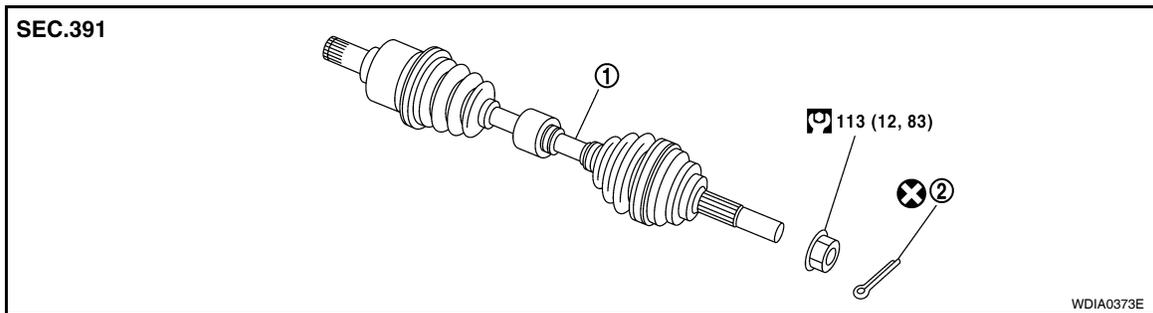
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COMPONENTS



1. Drive shaft

2. Cotter pin

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REMOVAL

1. Remove wheel and tire using power tool. Refer to [WT-7, "Rotation"](#) .
2. Remove wheel sensor from steering knuckle. Refer to [BRC-32, "Removal and Installation"](#) .
CAUTION:
Do not pull on wheel sensor harness.
3. Remove transverse link ball joint nut and bolt. Then, remove transverse link from steering knuckle.
4. Remove cotter pin, then loosen hub lock nut using power tool.

CAUTION:

Temporarily leave the hub lock nut installed to prevent damage to threads.

5. Separate the drive shaft from the wheel hub and bearing assembly by lightly tapping the end of the drive shaft using a hammer or suitable tool and wood block, and then remove hub lock nut.

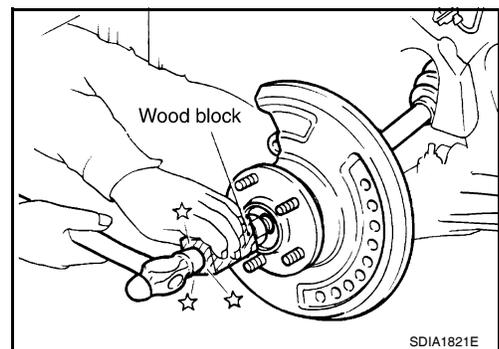
NOTE:

Use a suitable puller if wheel hub and bearing assembly and drive shaft cannot be separated after performing the above procedure.

6. Remove the drive shaft from the wheel hub and bearing assembly.

CAUTION:

- Do not apply an excessive angle to drive shaft joint when removing from the wheel hub and bearing assembly,
- Do not excessively extend slide joint.
- Do not allow drive shaft to hang down. Support the entire drive shaft.



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FRONT DRIVE SHAFT

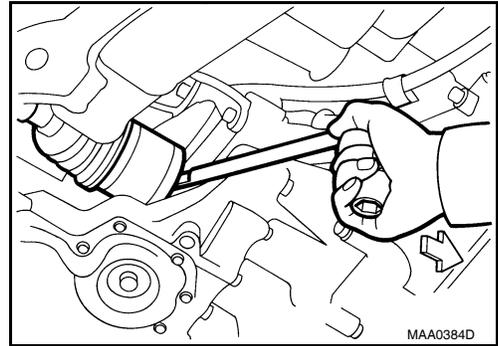
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7. Pry off drive shaft from transaxle assembly side as shown.

- Make sure that circlip is attached on the edge.

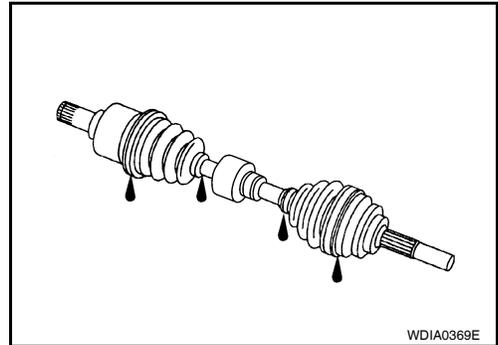
CAUTION:

- Do not apply an excessive angle to drive shaft joint when removing from the transaxle.
- Do not excessively extend slide joint.
- Do not allow drive shaft to hang down. Support the entire drive shaft.



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

Installation is in the reverse order of removal. Note the following:

- Tighten to specifications.

CAUTION:

Do not reuse non-reusable parts.

- In order to prevent damage to differential side oil seal, place Tool onto oil seal before inserting drive shaft as shown. Slide drive shaft into slide joint and tap with a hammer to install securely.

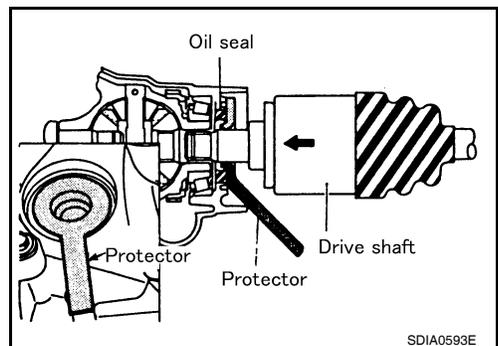
Tool number : KV38105500 (J-33904)

- Install new circlip on drive shaft in the circlip groove on transaxle side. Refer to [FAX-13. "Disassembly and Assembly \(Left Side\)"](#).

CAUTION:

Make sure the new circlip on the drive shaft is securely fastened.

- After its insertion, try to pull the flange out of the slide joint by hand. If it pulls out, the circlip is not properly meshed with the transaxle side gear.



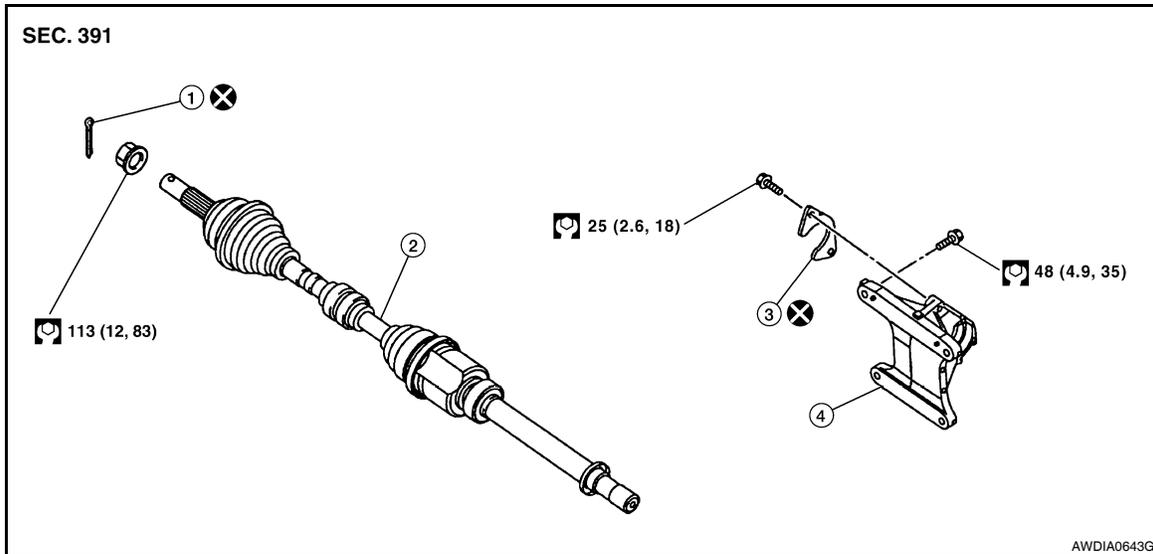
Removal and Installation (Right Side)

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COMPONENTS

FRONT DRIVE SHAFT

< SERVICE INFORMATION >



1. Cotter pin
2. Drive shaft
3. Plate
4. Support bearing bracket

REMOVAL

1. Remove wheel and tire using power tool. Refer to [WT-7, "Rotation"](#).
2. Remove wheel sensor from steering knuckle. Refer to [BRC-32, "Removal and Installation"](#).
3. Remove transverse link ball joint nut and bolt. Then, remove transverse link from steering knuckle.
4. Remove cotter pin, then loosen hub lock nut using power tool.

CAUTION:

Temporarily leave the hub lock nut installed to prevent damage to threads.

5. Separate the drive shaft from the wheel hub and bearing assembly by lightly tapping the end of the drive shaft using a hammer or suitable tool and wood block, and then remove hub lock nut.

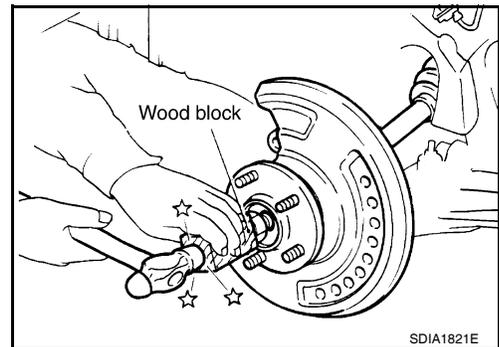
NOTE:

Use a suitable puller if wheel hub and bearing assembly and drive shaft cannot be separated after performing the above procedure.

6. Remove the drive shaft from the wheel hub and bearing assembly.

CAUTION:

- Do not apply an excessive angle to drive shaft joint when removing from the wheel hub and bearing assembly,
- Do not excessively extend slide joint.
- Do not allow drive shaft to hang down. Support the entire drive shaft.



7. Remove the plate bolts and plate.
 8. Remove the drive shaft from the transaxle assembly.
- ### CAUTION:
- Do not apply an excessive angle to drive shaft joint when removing from the transaxle.
 - Do not excessively extend slide joint.
 - Do not allow drive shaft to hang down. Support the entire drive shaft.
9. If necessary, remove the support bearing bracket bolts and the support bearing bracket.

INSPECTION AFTER REMOVAL

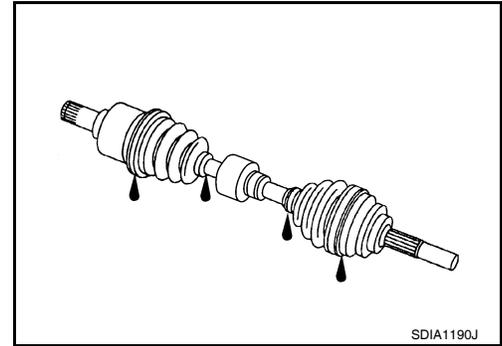
- Move joint up/down, left/right, and in axial direction. Check for any rough movement or significant looseness.

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FAX
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FRONT DRIVE SHAFT

< SERVICE INFORMATION >

- 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.
- Check for cracks or other damage to the support bearing bracket, replace as necessary.



INSTALLATION

Installation is in the reverse order of removal. Note the following:

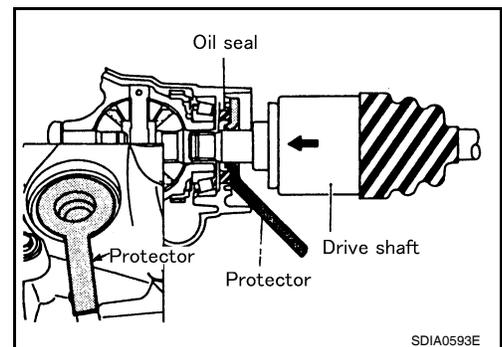
- Tighten to specifications.

CAUTION:

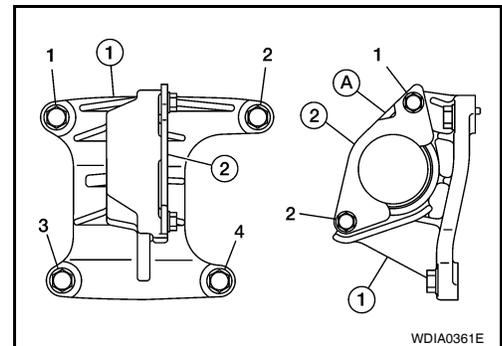
Do not reuse non-reusable parts.

- In order to prevent damage to differential side oil seal, place Tool onto oil seal before inserting drive shaft as shown. Slide drive shaft into slide joint and tap with a hammer to install securely.

Tool number : KV38106700 (J-34296)



- When installing the support bearing bracket (1), note the following:
 - a. Tighten the support bearing bracket bolts in two stages, in the order as shown.
 - b. Install the plate (2) with the notch (A) upward. Tighten the plate bolts in two stages, in the order as shown.

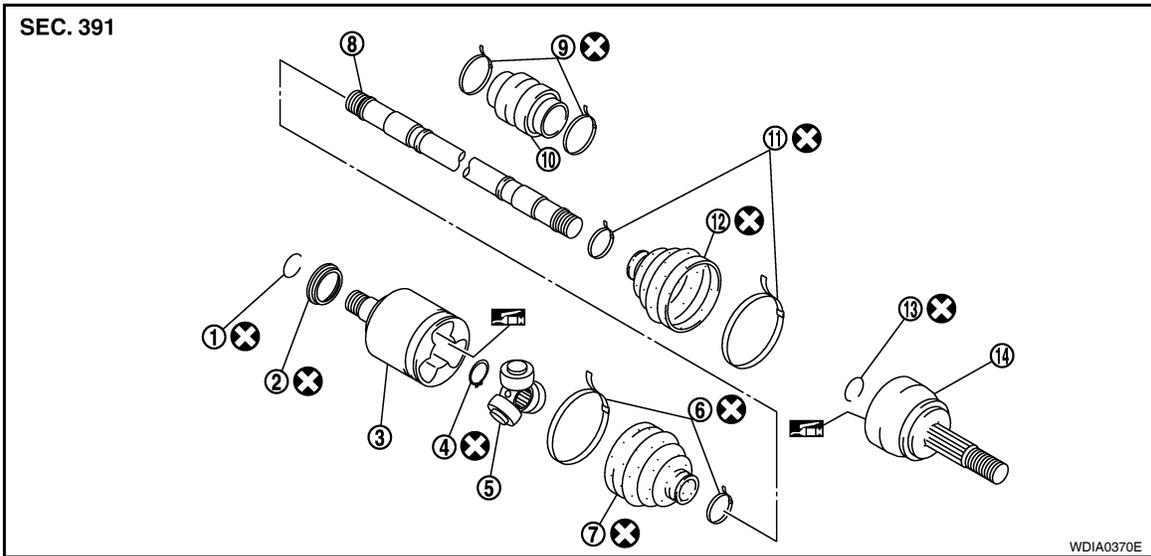


FRONT DRIVE SHAFT

< SERVICE INFORMATION >

Disassembly and Assembly (Left Side)

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- | | | |
|--------------|------------------------|------------------------|
| 1. Circlip | 2. Dust shield | 3. Slide joint housing |
| 4. Snap ring | 5. Spider assembly | 6. Boot band |
| 7. Boot | 8. Shaft | 9. Damper band |
| 10. Damper | 11. Boot band | 12. Boot |
| 13. Circlip | 14. Joint sub-assembly | |

DISASSEMBLY

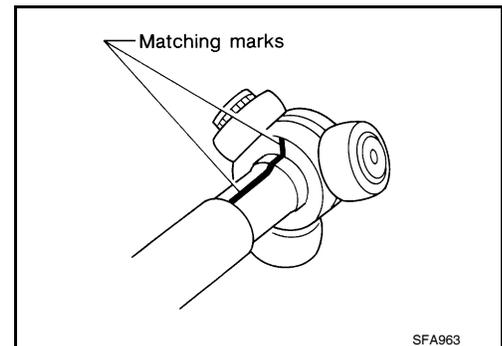
Transaxle Side

1. Mount drive shaft in a vise.

CAUTION:

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

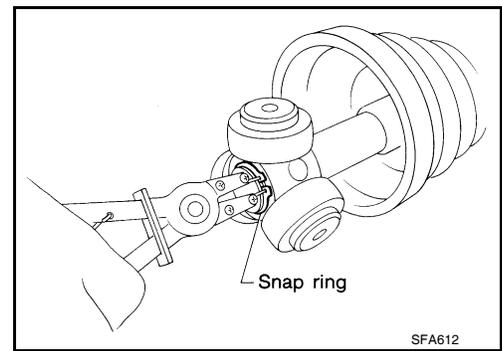
2. Remove boot bands and slide the boot back.
3. Remove circlip and dust shield from slide joint housing.
4. Put matching marks on slide joint housing and shaft, then pull out shaft from slide joint housing.
5. Put matching marks on spider assembly and shaft.



FRONT DRIVE SHAFT

< SERVICE INFORMATION >

6. Remove snap ring using a suitable tool, then remove spider assembly from shaft.
7. Remove boot from shaft.
8. Clean the old grease off of the slide joint assembly.



Wheel Side

1. Mount the front drive shaft in a vise.

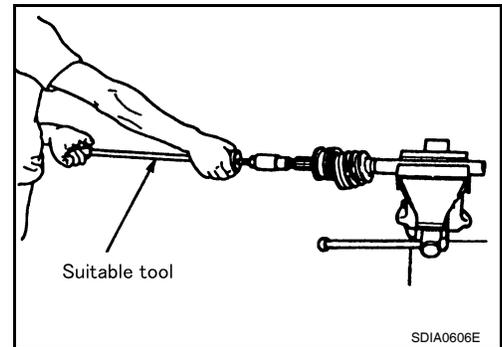
CAUTION:

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

2. Remove boot bands and slide the boot back.
3. Screw a sliding hammer or suitable tool 30 mm (1.18 in) or more into threaded part of joint sub-assembly. Pull joint sub-assembly out of shaft.

CAUTION:

- Align sliding hammer or suitable tool 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 assembly.



4. Remove circlip from shaft.
5. Remove boot from shaft.
6. While rotating ball cage, clean the old grease off of the joint sub-assembly.

Damper

- Remove damper bands, then remove damper from shaft.

INSPECTION AFTER DISASSEMBLY

Shaft

Replace shaft if there is bending, cracking, or other damage.

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.

CAUTION:

If there are any irregular conditions of joint sub-assembly components, replace the entire joint sub-assembly.

Slide Joint Housing and Spider Assembly

Make sure there are no compression scars, cracks, fractures or unusual wear of housing or spider roller contact surface.

CAUTION:

If there are any irregular conditions of the slide joint housing and spider assembly components, replace them as a set.

Damper

Check damper for cracks or wear. Replace as necessary.

ASSEMBLY

Transaxle Side

FRONT DRIVE SHAFT

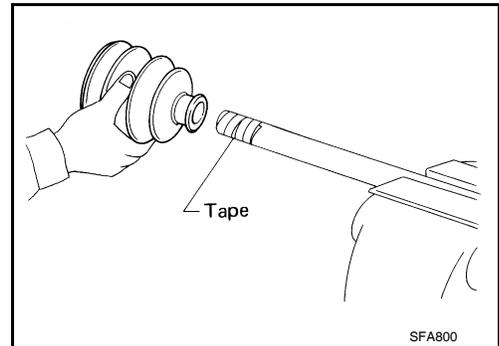
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1. Install new boot and new small boot band on shaft.

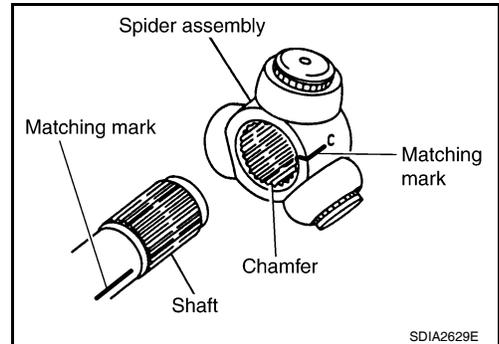
CAUTION:

- Do not reuse boot or boot band.
- Cover drive shaft serration with tape to prevent damage to boot during installation.

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



3. Align matching mark on spider assembly with matching mark on shaft and install spider assembly with chamfer facing shaft.

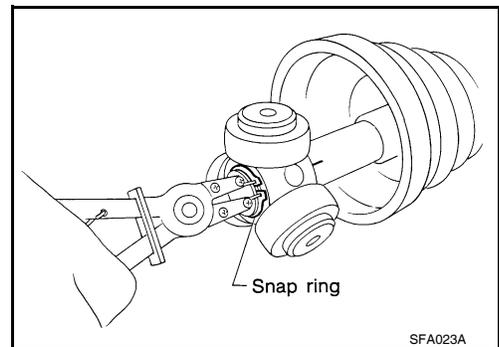


4. Install new snap ring using a suitable tool.

CAUTION:

Do not reuse snap ring.

5. Apply recommended grease (Genuine NISSAN Grease or equivalent) to spider assembly and sliding surface.
6. Install the slide joint housing onto the spider assembly and pack with the balance of recommended grease (Genuine NISSAN Grease or equivalent).



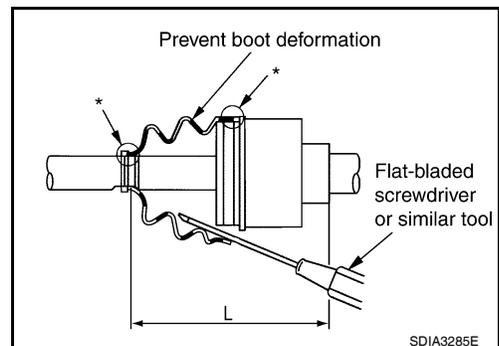
Grease amount : 130 – 140 g (4.6 – 4.9 oz)

7. 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. Clean all grease from surfaces.

8. Make sure boot installation length (L) is the length specified below. Insert a flat-bladed screwdriver or similar tool into the large end of boot. Bleed air from boot to prevent boot deformation.



Boot installation length (L)

M/T models : 181.2 mm (7.13 in)

Except for M/T models : 176.0 mm (6.93 in)

CAUTION:

- Boot may break if boot installation length is outside the standard value.
- Be careful that screwdriver tip does not contact inside surface of boot.

9. Secure large end of boot with new boot band.

1. Set boot band onto boot and insert first pawl on boot band into the first groove on opposite end of boot band.

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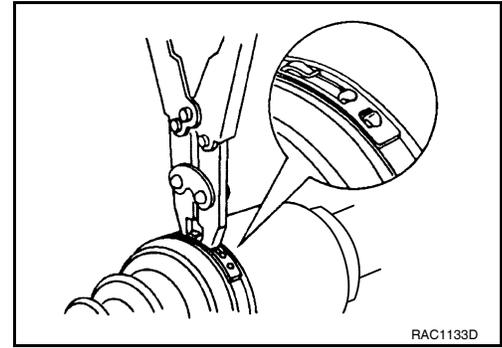
FRONT DRIVE SHAFT

< SERVICE INFORMATION >

2. Pull and tighten the boot band using suitable tool until both pawls of boot band are secured in the boot band grooves.

CAUTION:

Do not reuse boot band.



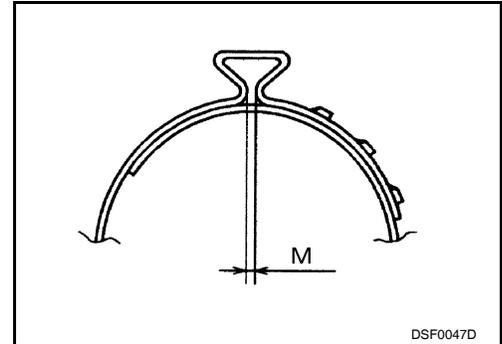
10. Install new small boot band securely using Tool.

Tool number : KV40107300 (—)

CAUTION:

- Do not reuse boot band.
- Secure boot band so that dimension (M) meets specification as shown.

Dimension (M) : 1.0 – 4.0 mm (0.039 – 0.157 in)



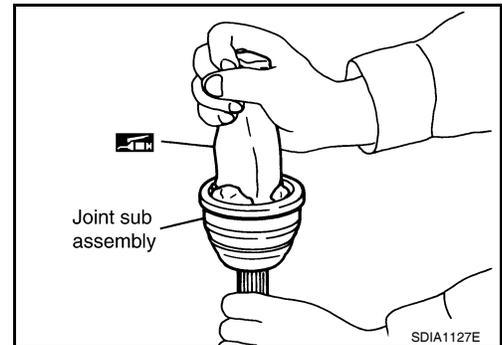
11. Rotate the slide joint and confirm that the boot position is correct. If boot position is not correct, remove the boot bands, reposition the boot and install new boot bands.
12. Install new dust shield to slide joint housing.

CAUTION:

Do not reuse dust shield.

Wheel Side

1. Insert recommended grease (Genuine NISSAN Grease or equivalent) into joint sub-assembly serration hole until grease begins to ooze from ball groove and serration hole. After inserting grease, use a shop cloth to wipe off old grease that has oozed out.

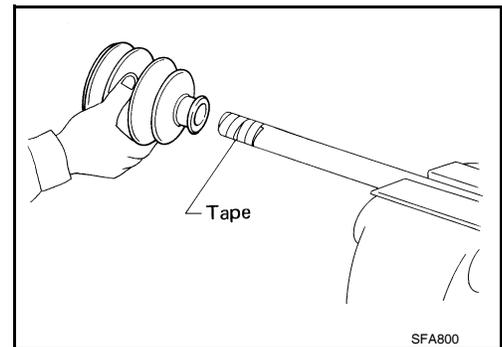


2. Cover serrated part of shaft with tape. Install new boot band and new boot to shaft.

CAUTION:

Do not reuse boot or boot band.

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



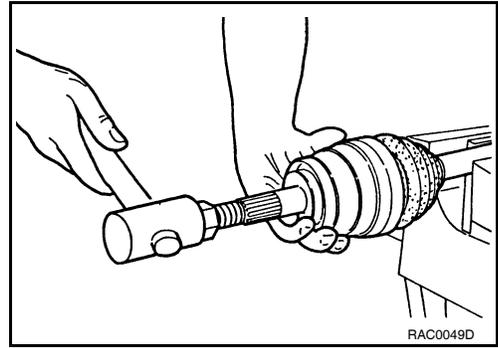
FRONT DRIVE SHAFT

< SERVICE INFORMATION >

- Attach new circlip to shaft. Thread nut onto end of joint sub-assembly and press fit using suitable tool.

CAUTION:

- Do not reuse circlip.
- Circlip must fit securely into shaft groove.



- Insert the balance of new grease (Genuine NISSAN Grease or equivalent) listed below into housing from large end of boot.

Grease amount : 70 – 90 g (2.5 – 3.2 oz)

- 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.

- Make sure boot installation length (L) is the specified length indicated below. Insert a flat-bladed screwdriver or similar tool into the large end of boot. Bleed air from boot to prevent boot deformation.

Boot installation length (L) : 142 mm (5.59 in)

CAUTION:

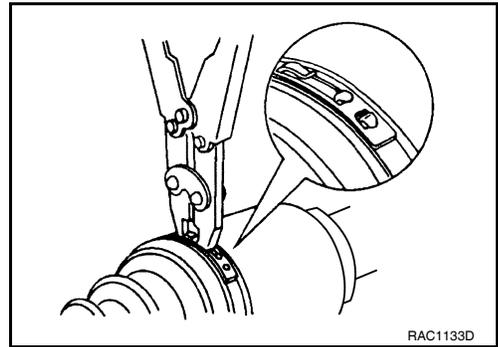
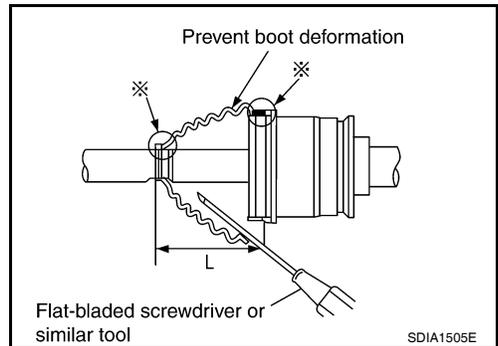
- Boot may break if boot installation length is outside the standard value.
- Be careful that screwdriver tip does not contact inside surface of boot.

- Install new large and small boot bands securely using Tool.

Tool number : KV40107300 (—)

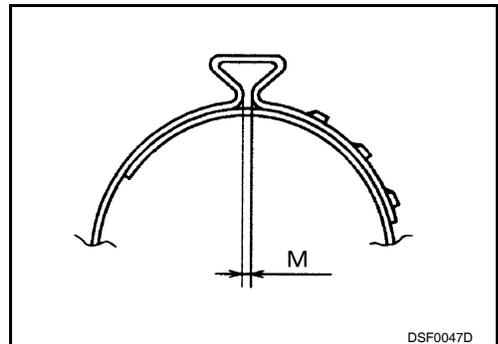
CAUTION:

- Do not reuse boot bands.



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

Dimension (M) : 1.0 – 4.0 mm (0.039 – 0.157 in)



- Rotate the joint sub assembly and confirm that the boot position is correct. If boot position is not correct, remove the boot bands, reposition the boot and install new boot bands.

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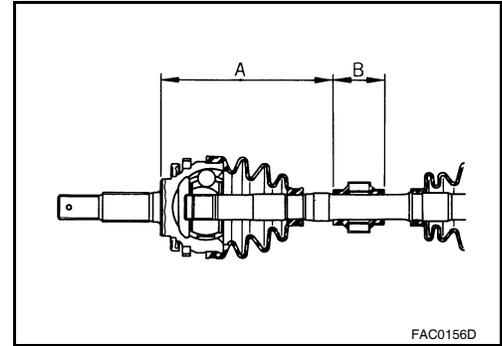
< SERVICE INFORMATION >

Damper

- Secure damper with new damper bands.

(A)	Except for CVT models	: 230 – 236 mm (9.06 – 9.29 in)
	CVT models	: 225 – 231 mm (8.86 – 9.09 in)
(B)		: 70 mm (2.76 in)

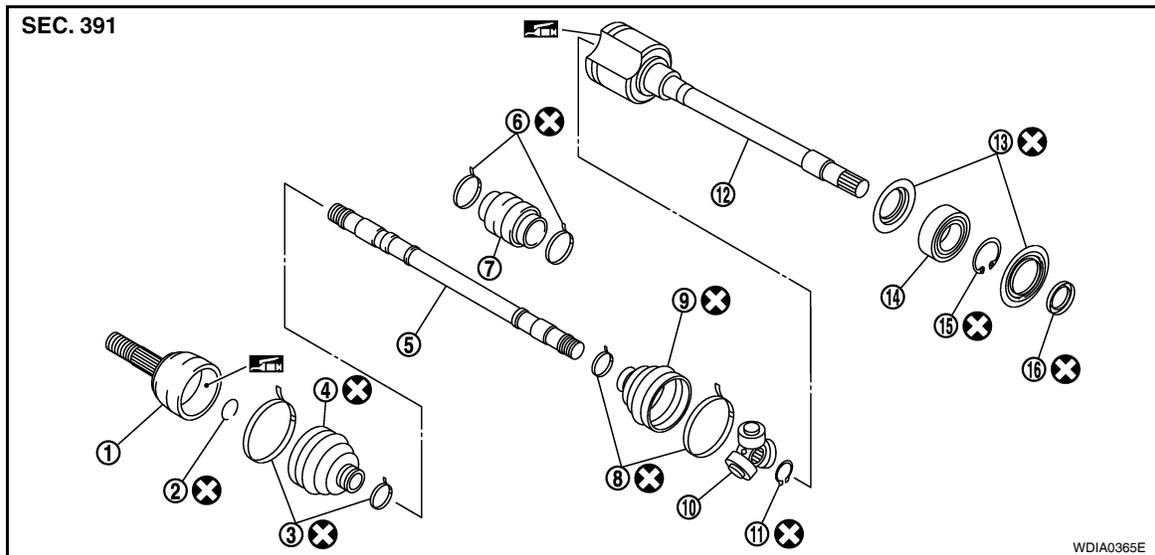
CAUTION:
Do not reuse damper bands.



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Disassembly and Assembly (Right Side)

INFOID:000000004305849



WDIA0365E

- | | | |
|-----------------------|---------------|-------------------------|
| 1. Joint sub-assembly | 2. Circlip | 3. Boot bands |
| 4. Boot | 5. Shaft | 6. Damper bands |
| 7. Damper | 8. Boot band | 9. Boot |
| 10. Spider assembly | 11. Snap ring | 12. Slide joint housing |
| 13. Dust shield | 14. Bearing | 15. Snap ring |
| 16. Dust shield | | |

DISASSEMBLY

Transaxle Side

- Mount drive shaft in a vise.

CAUTION:

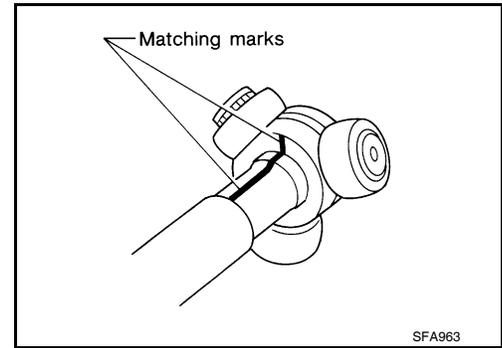
When mounting shaft in a vise, always use copper or aluminum plates between vise and shaft.

- Remove boot bands and slide the boot back.
- Put matching marks on slide joint housing and shaft, then pull out shaft from slide joint housing.

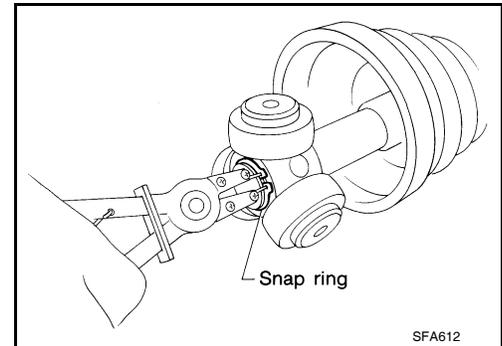
FRONT DRIVE SHAFT

< SERVICE INFORMATION >

- Put matching marks on spider assembly and shaft.



- Remove snap ring using a suitable tool, then remove spider assembly from shaft.
- Remove boot from shaft.
- Clean the old grease off of the slide joint assembly.



Wheel Side

- Mount the front drive shaft in a vise.

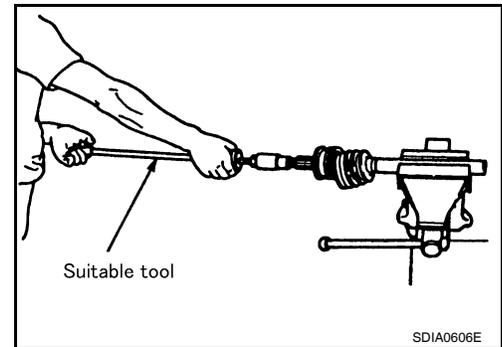
CAUTION:

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

- Remove boot bands and slide the boot back.
- Screw a sliding hammer or suitable tool 30 mm (1.18 in) or more into threaded part of joint sub-assembly. Pull joint sub-assembly out of shaft.

CAUTION:

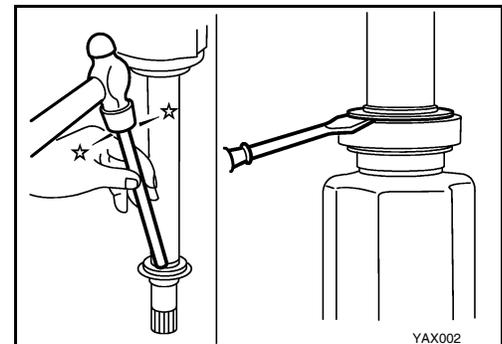
- Align sliding hammer or suitable tool and drive shaft then remove joint sub-assembly by pulling directly.
- If joint sub-assembly cannot be removed after five or more unsuccessful attempts, replace the entire drive shaft assembly.



- Remove circlip from shaft.
- Remove boot from shaft.
- While rotating ball cage, clean the old grease off of the joint sub-assembly.

Support Bearing

- Remove dust shield from slide joint assembly using a suitable tool.

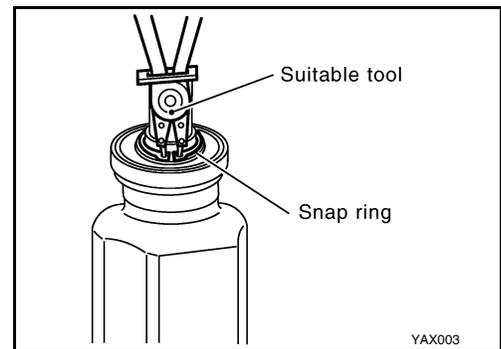


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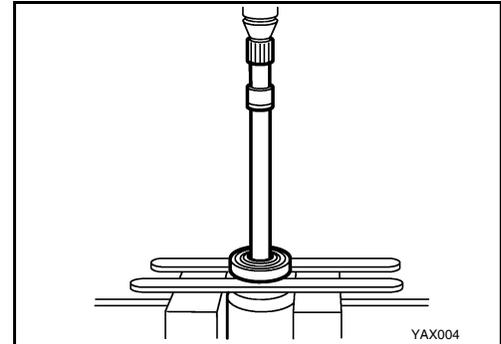
FRONT DRIVE SHAFT

< SERVICE INFORMATION >

2. Remove dust shield, then remove snap ring using a suitable tool.



3. Press support bearing assembly off slide joint assembly using a suitable tool.
4. Remove dust shield.



Damper

- Remove damper bands, then remove damper from shaft.

INSPECTION AFTER DISASSEMBLY

Shaft

Replace shaft if there is bending, cracking, or other damage.

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.

CAUTION:

If there are any irregular conditions of joint sub-assembly components, replace the entire joint sub-assembly.

Slide Joint Housing and Spider Assembly

Make sure there are no compression scars, cracks, fractures or unusual wear of housing or spider roller contact surface.

CAUTION:

If there are any irregular conditions of the slide joint housing and spider assembly components, replace them as a set.

Support Bearing

Make sure wheel bearing rolls freely and is free from noise, cracks, pitting or wear.

Support Bearing Bracket

Check for bending, cracks, or damage.

Damper

Check damper for cracks or wear. Replace as necessary.

ASSEMBLY

Transaxle Side

FRONT DRIVE SHAFT

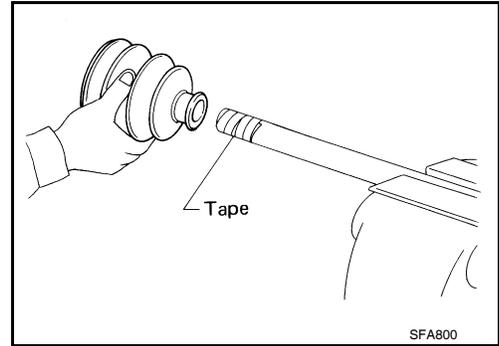
< SERVICE INFORMATION >

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

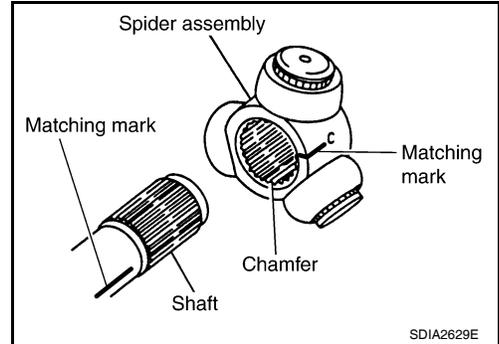
CAUTION:

- Do not reuse boot or boot band.
- Cover drive shaft serration with tape to prevent damage to boot during installation.

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



3. Align matching mark on spider assembly with matching mark on shaft and install spider assembly with chamfer facing shaft.



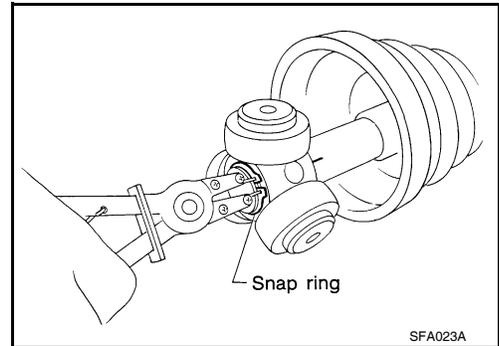
4. Install new snap ring using a suitable tool.

CAUTION:

Do not reuse snap ring.

5. Apply recommended grease (Genuine NISSAN Grease or equivalent) to spider assembly and sliding surface.
6. Install the slide joint housing onto the spider assembly and pack with the balance of recommended grease (Genuine NISSAN Grease or equivalent).

Grease amount : 130 – 140 g (4.6 – 4.9 oz)

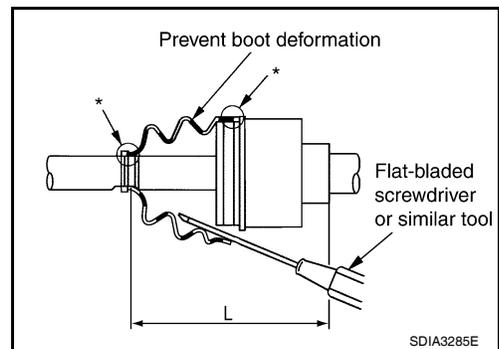


7. Install boot securely into grooves (indicated by * marks) as shown.

CAUTION:

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

8. Make sure boot installation length (L) is the length specified below. Insert a flat-bladed screwdriver or similar tool into the large end of boot. Bleed air from boot to prevent boot deformation.



Boot installation length (L)

A/T models : 178 mm (7.01 in)

Except for A/T models : 168 mm (6.61 in)

CAUTION:

- Boot may break if boot installation length is outside the standard value.
- Be careful that screwdriver tip does not contact inside surface of boot.

9. Secure large end of boot with new boot band.

1. Set boot band onto boot and insert first pawl on boot band into the first groove on opposite end of boot band.

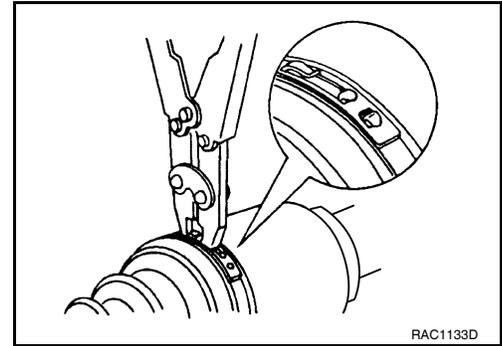
FRONT DRIVE SHAFT

< SERVICE INFORMATION >

2. Pull and tighten the boot band using suitable tool until both pawls of boot band are secured in the boot band grooves.

CAUTION:

Do not reuse boot band.



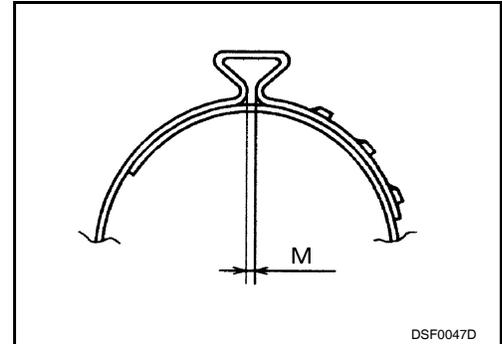
10. Install new small boot band securely using Tool.

Tool number : KV40107300 (—)

CAUTION:

- Do not reuse boot band.
- Secure boot band so that dimension (M) meets specification as shown.

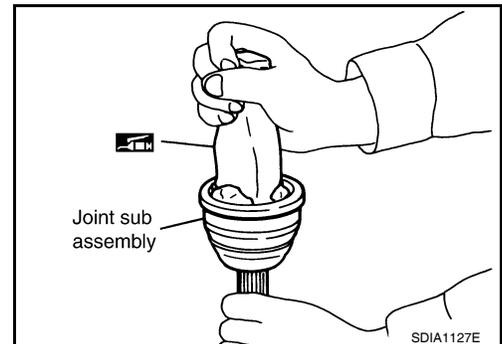
Dimension (M) : 1.0 – 4.0 mm (0.039 – 0.157 in)



11. Rotate the slide joint and confirm that the boot position is correct. If boot position is not correct, remove the boot bands, reposition the boot and install new boot bands.

Wheel Side

1. Insert recommended grease (Genuine NISSAN Grease or equivalent) into joint sub-assembly serration hole until grease begins to ooze from ball groove and serration hole. After inserting grease, use a shop cloth to wipe off old grease that has oozed out.

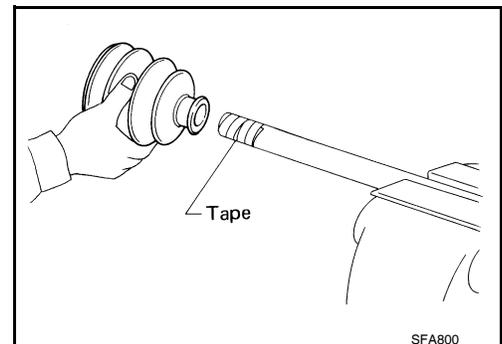


2. Cover serrated part of shaft with tape. Install new boot band and new boot to shaft.

CAUTION:

Do not reuse boot or boot band.

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



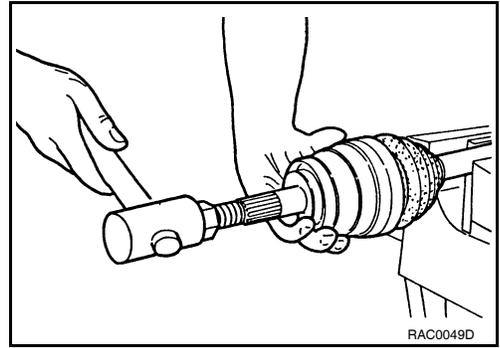
FRONT DRIVE SHAFT

< SERVICE INFORMATION >

- Attach new circlip to shaft. Thread nut onto end of joint sub-assembly and press fit using suitable tool.

CAUTION:

- Do not reuse circlip.
- Circlip must fit securely into shaft groove.



- Insert the balance of new grease (Genuine NISSAN Grease or equivalent) listed below into housing from large end of boot.

Grease amount : 70 – 90 g (2.5 – 3.2 oz)

- 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.

- Make sure boot installation length (L) is the specified length indicated below. Insert a flat-bladed screwdriver or similar tool into the large end of boot. Bleed air from boot to prevent boot deformation.

Boot installation length (L) : 142 mm (5.59 in)

CAUTION:

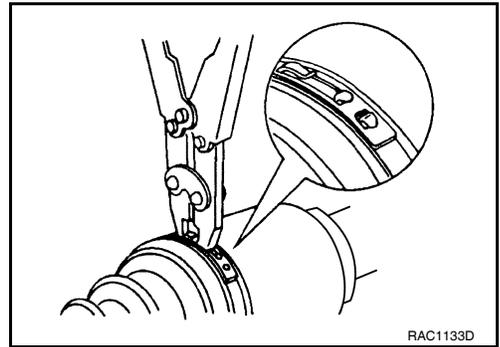
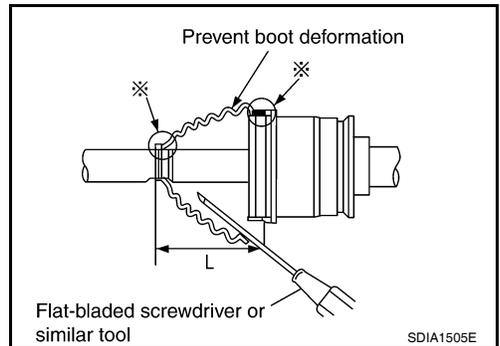
- Boot may break if boot installation length is outside the standard value.
- Be careful that screwdriver tip does not contact inside surface of boot.

- Install new large and small boot bands securely using Tool.

Tool number : KV40107300 (—)

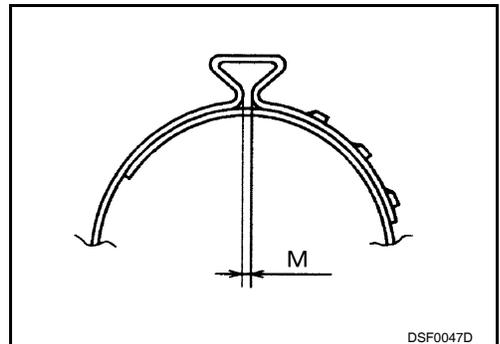
CAUTION:

- Do not reuse boot bands.



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

Dimension (M) : 1.0 – 4.0 mm (0.039 – 0.157 in)



- Rotate the joint sub assembly and confirm that the boot position is correct. If boot position is not correct, remove the boot bands, reposition the boot and install new boot bands.

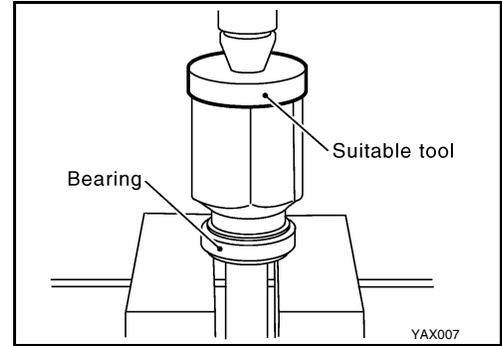
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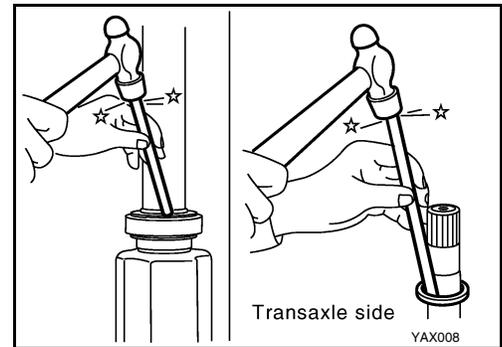
< SERVICE INFORMATION >

Support Bearing

1. Install new dust shield on drive shaft
CAUTION:
Do not reuse dust shield.
2. Press support bearing onto drive shaft.



3. Install new snap ring.
CAUTION:
Do not reuse snap ring.
4. Install new dust shield
CAUTION:
Do not reuse dust shield.

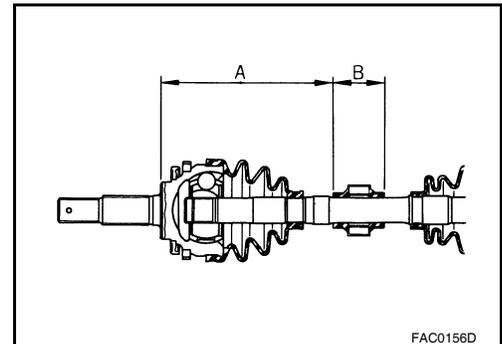


Damper

1. Secure damper with new damper bands.

(A)	Except for CVT models	: 230 – 236 mm (9.06 – 9.29 in)
	CVT models	: 225 – 231 mm (8.86 – 9.09 in)
(B)		: 70 mm (2.76 in)

CAUTION:
Do not reuse damper bands.



SERVICE DATA AND SPECIFICATIONS (SDS)

< SERVICE INFORMATION >

SERVICE DATA AND SPECIFICATIONS (SDS)

Wheel Bearing

INFOID:000000004683860

Axial end play limit	0.05 mm (0.002 in) or less
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Drive Shaft

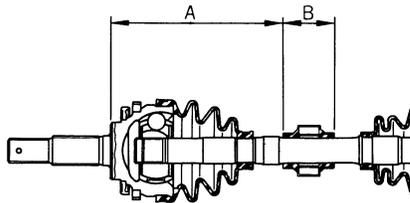
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Joint type		Wheel side	Transaxle side
Grease quantity		70 - 90 g (2.5 - 3.2 oz)	130 - 140 g (4.6 - 4.9 oz)
Boots installed length	Left side	142 mm (5.59 in)	181.2 mm (7.13 in) (M/T models) 176 mm (6.93 in) (Except for M/T models)
	Right side		178 mm (7.01 in) (A/T models) 168 mm (6.61 in) (Except for A/T models)

Dynamic Damper

INFOID:000000004305851

Dimension A	Except for CVT models	230 – 236 mm (9.06 – 9.29 in)
		CVT models
Dimension B		70 mm (2.76 in)

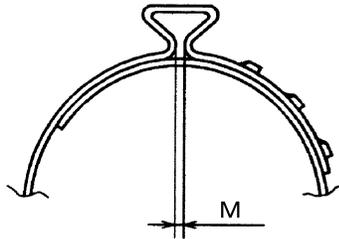


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Boot Bands

INFOID:000000004683861

Unit: mm (in)



DSF0047D

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