SECTION FAX
FRONT AXLE

CONTENTS

MR16DDT

HR16DE

PRECAUTION

PRECAUTIONS

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

INFOID:0000000006752364

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 “SRS AIR BAG” and “SEAT BELT” of this Service Manual.

The vehicle may be equipped with a passenger air bag deactivation switch. Because no rear seat exists where a rear-facing child restraint can be placed, the switch is designed to turn off the passenger air bag so that a rear-facing child restraint can be used in the front passenger seat. The switch is located in the center of the instrument panel, near the ashtray. When the switch is turned to the ON position, the passenger air bag is enabled and could inflate for certain types of collision. When the switch is turned to the OFF position, the passenger air bag is disabled and will not inflate. A passenger air bag OFF indicator on the instrument panel lights up when the passenger air bag is switched OFF. The driver air bag always remains enabled and is not affected by the passenger air bag deactivation switch.

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 AIR BAG”.**
- **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.**
- **The vehicle may be equipped with a passenger air bag deactivation switch which can be operated by the customer. When the passenger air bag is switched OFF, the passenger air bag is disabled and will not inflate. When the passenger air bag is switched ON, the passenger air bag is enabled and could inflate for certain types of collision. After SRS maintenance or repair, make sure the passenger air bag deactivation switch is in the same position (ON or OFF) as when the vehicle arrived for service.**

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, and wait at least 3 minutes before performing any service.**

Precaution Necessary for Steering Wheel Rotation after Battery Disconnect

INFOID:0000000006752372

NOTE:

- Before removing and installing any control units, first turn the ignition switch to the LOCK position, then disconnect both battery cables.
- After finishing work, confirm that all control unit connectors are connected properly, then re-connect both battery cables.
- Always use CONSULT-III to perform self-diagnosis as a part of each function inspection after finishing work. If a DTC is detected, perform trouble diagnosis according to self-diagnosis results.

For vehicle with steering lock unit, if the battery is disconnected or discharged, the steering wheel will lock and cannot be turned.

If turning the steering wheel is required with the battery disconnected or discharged, follow the operation 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. Turn the ignition switch to ACC position.
   (At this time, the steering lock will be released.)
3. Disconnect both battery cables. The steering lock will remain released with both battery cables disconnected and the steering wheel can be turned.
4. Perform the necessary repair operation.
5. When the repair work is completed, re-connect both battery cables. With the brake pedal released, turn the ignition switch from ACC position to ON position, then to LOCK position. (The steering wheel will lock when the ignition switch is turned to LOCK position.)
6. Perform self-diagnosis check of all control units using CONSULT-III.

Precautions for Drive Shaft

INFOID:0000000006543767

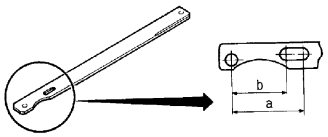
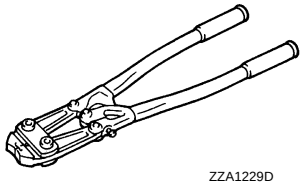
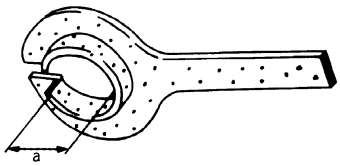
- Observe the following precautions when disassembling and assembling drive shaft.
- Never disassemble joint sub-assembly because it is non-overhaul parts.
- Perform work in a location which is as dust-free as possible.
- Clean the parts, before disassembling and assembling.
- Prevent the entry of foreign objects during disassembly of the service location.
- Reassemble disassembled parts carefully in the correct order. If work is interrupted, a clean cover must be placed over parts.
- Use paper waste. Fabric shop cloths must not be used because of the danger of lint adhering to parts.
- Clean disassembled parts (except for rubber parts) with kerosene which shall be removed by blowing with air or wiping with paper waste.

PREPARATION

PREPARATION

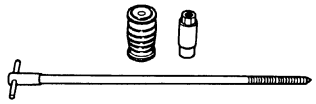
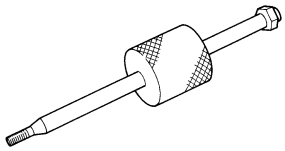
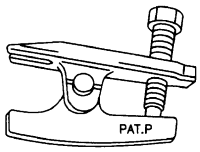
Special Service Tool

INFOID:0000000006588976

Tool number Tool name	Description
KV40104000 Hub lock nut wrench a: 85 mm (3.35 in) b: 65 mm (2.56 in)  ZZA0802D	Removing and Installing wheel hub lock nut.
KV40107300 Boot band crimping tool  ZZA1229D	Installing boot band
KV40107500 Drive shaft attachment  ZZA1230D	Removing drive shaft
KV38107900 Protector a: 32 mm (1.26 in) dia.  PDIA1183J	Installing drive shaft

Commercial Service Tools

INFOID:0000000006543770

Tool name	Description
Drive shaft puller  JPDIG0152ZZ	Remove drive shaft joint sub assembly
Sliding hammer  ZZA0023D	Remove drive shaft
Ball joint remover  NT146	Removing hub bolt

SYMPTOM DIAGNOSIS

NOISE, VIBRATION AND HARSHNESS (NVH) TROUBLESHOOTING

NVH Troubleshooting Chart

INFOID:0000000006543771

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

Reference page			—	FAX-34, "Inspection"	—	FAX-11, "Exploded View"	—	FAX-13, "Inspection"	NVH in FAX and FSU sections	Refer to FRONT AXLE in this chart	NVH in WT section	NVH in WT section	Refer to DRIVE SHAFT in this chart	NVH in BR section	NVH in ST section
Possible cause and SUSPECTED PARTS			Excessive joint angle	Joint sliding resistance	Imbalance	Improper installation, looseness	Parts interference	Wheel bearing damage	FRONT AXLE AND FRONT SUSPENSION	FRONT AXLE	TIRE	ROAD WHEEL	DRIVE SHAFT	BRAKE	STEERING
Symptom	DRIVE SHAFT	Noise	×	×				×	×	×	×	×		×	×
		Shake	×		×			×	×	×	×	×		×	×
	FRONT AXLE	Noise				×	×	×	×		×	×	×	×	×
		Shake				×	×	×	×		×	×	×	×	×
		Vibration				×	×	×	×		×		×		×
		Shimmy				×	×		×		×	×		×	×
		Judder				×			×		×	×		×	×
		Poor quality ride or handling				×	×		×		×	×			

×: Applicable

PERIODIC MAINTENANCE

FRONT WHEEL HUB AND KNUCKLE

Inspection

INFOID:0000000006543772

COMPONENT PART

Check that the mounting conditions (looseness, backlash) of each component and component conditions (wear, damage) are normal.

WHEEL HUB ASSEMBLY (BEARING-INTEGRATED TYPE)

Check the following items, and replace the part if necessary.

- Move wheel hub assembly in the axial direction by hand. Check there is no looseness of wheel bearing.

Axial end play : Refer to FAX-35, "Wheel Bearing".

- Rotate wheel hub assembly and check there is no unusual noise or other irregular conditions. If there is any of irregular conditions, replace wheel hub assembly.

FRONT DRIVE SHAFT

Inspection

INFOID:0000000006543773

Check the following items, and replace the part if necessary.

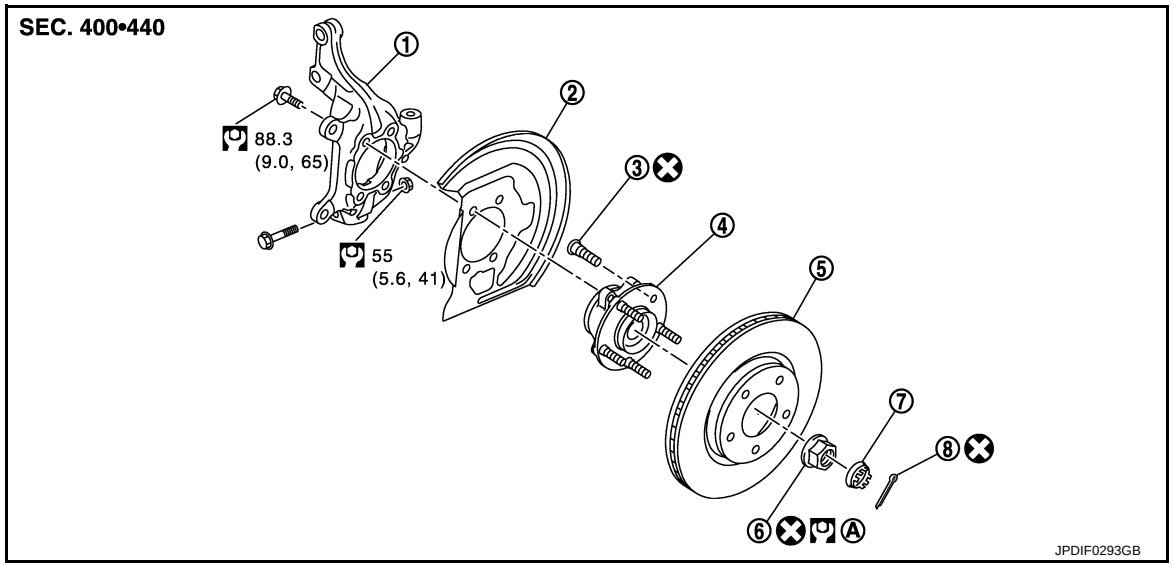
- Check drive shaft mounting point and joint for looseness and other damage.
  CAUTION:
  Replace entire drive shaft assembly when noise or vibration occurs from drive shaft.
- Check boot for cracks and other damage.

REMOVAL AND INSTALLATION

FRONT WHEEL HUB AND KNUCKLE

Exploded View

INFOID:0000000006543774



1. Steering knuckle
2. Splash guard
3. Hub bolt
4. Wheel hub assembly (Bearing-integrated type)
5. Disc rotor
6. Wheel hub lock nut
7. Adjusting cap
8. Cotter pin

A. Tightening must be done following the installation procedure. Refer to FAX-11, "Removal and Installation".

: Always replace after every disassembly.

: N·m (kg-m, ft-lb)

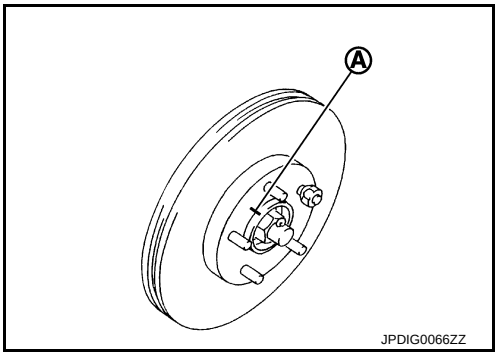
Removal and Installation

INFOID:0000000006543775

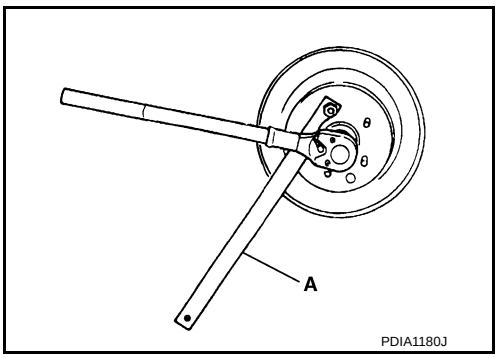
REMOVAL

1. Remove tires. Refer toWT-7, "Removal and Installation".
2. Remove wheel sensor and sensor harness. Refer to BRC-84, "FRONT WHEEL SENSOR : Exploded View" (Without ESP) or BRC-224, "FRONT WHEEL SENSOR : Exploded View" (With ESP).
3. Remove lock plate from strut assembly. Refer to FSU-14, "Removal and Installation".
4. Remove caliper assembly. Hang caliper assembly not to interfere with work. Refer to BR-57, "BRAKE CALIPER ASSEMBLY : Removal and Installation" (LHD) or BR-123, "BRAKE CALIPER ASSEMBLY : Removal and Installation" (RHD).
   CAUTION:
   Never depress brake pedal while brake caliper is removed.
5. Remove disc rotor.
   CAUTION:

- **Put matching marks (A) on the wheel hub assembly and the disc rotor before removing the disc rotor.**
- **Never drop disc rotor.**

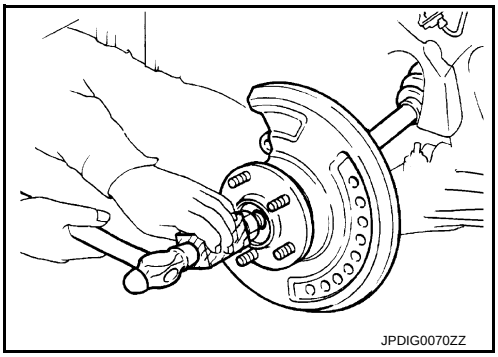


6. Remove cotter pin, and adjusting cap, and then loosen wheel hub lock nut, using a hub lock nut wrench (A) (SST: KV40104000).

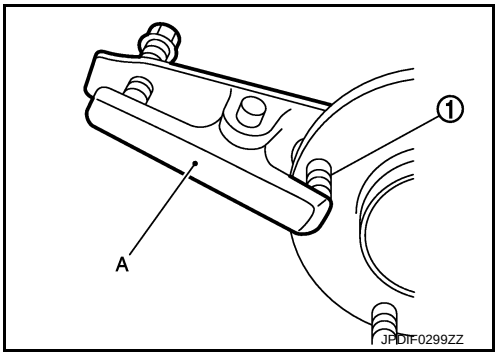


7. Patch wheel hub lock nut with a piece of wood. Hammer the wood to disengage wheel hub assembly from drive shaft.
   CAUTION:
   - **Never place drive shaft joint at an extreme angle. Also be careful not to overextend slide joint.**
   - **Never allow drive shaft to hang down without support for joint sub-assembly, shaft and the other parts.**

   NOTE:
   Use suitable puller, if wheel hub assembly and drive shaft cannot be separated even after performing the above procedure.
8. Remove wheel hub lock nut.
9. Remove steering outer socket from steering knuckle. Refer to ST-19, "Removal and Installation".



10. Remove strut assembly from steering knuckle. Refer to FSU-10, "Removal and Installation".
11. Suspend the drive shaft with suitable wire.
12. Remove steering knuckle from transverse link.
13. Remove splash guard from steering knuckle.
14. Remove hub bolts (1) from wheel hub assembly, using the ball joint remover (A) (commercial service tool).
    CAUTION:
    - **Remove hub bolt only when necessary.**
    - **Never hammer the hub bolt to avoid impact to the wheel hub assembly.**
    - **Pull out the hub bolt in a direction perpendicular to the wheel hub assembly.**
15. Perform inspection after removal. Refer to FAX-13, "Inspection".



INSTALLATION

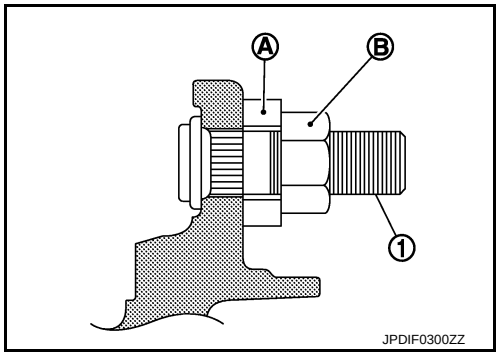
Note the following, and install in the reverse order of the removal.

- Place a washer (A) as shown in the figure to install the hub bolts (1) by using the tightening force of the nut (B).

CAUTION:
- **Check that there is no clearance between wheel hub assembly, and hub bolt.**
- **Never reuse hub bolt.**

- Never reuse steering knuckle and transverse link fixing nut.
- Clean the matching surface of wheel hub lock nut and wheel hub assembly.

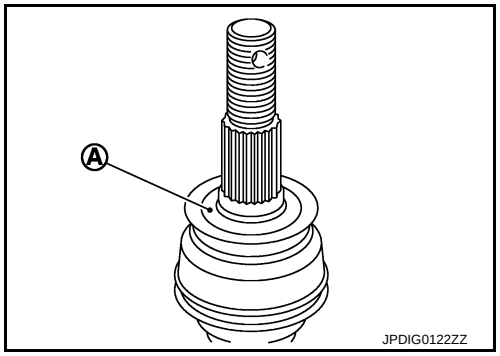
CAUTION:
Never apply lubricating oil to these matching surface.



- Clean the matching surface of drive shaft, wheel hub assembly. And then apply paste [service parts (440037S000)] to surface (A) of joint sub-assembly of drive shaft.

CAUTION:
Apply paste to cover entire flat surface of joint sub-assembly of drive shaft.

Amount paste : 1.0 – 3.0 g (0.04 – 0.10 oz)



- Use the following torque range for tightening the wheel hub lock nut.

: 180 – 185 N·m (18.4 – 18.8 kg-m, 133 – 136 ft-lb)

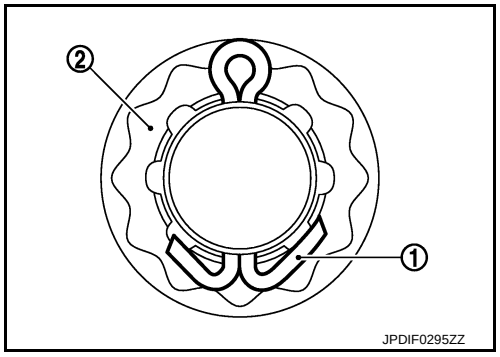
CAUTION:
- **Since the drive shaft is assembled by press-fitting, use the tightening torque range for the wheel hub lock nut.**
- **Be sure to use torque wrench to tighten the wheel hub lock nut. Never use a power tool.**
- **Never reuse wheel hub lock nut.**

NOTE:
Wheel hub lock nut tightening torque does not over torque for avoiding axle noise, and does not less than torque for avoiding looseness.

- Align the matching marks that have been made during removal when reusing the disc rotor.
- When installing a cotter pin (1) and adjusting cap (2), securely bend the basal portion to prevent rattles.

CAUTION:
Never reuse cotter pin.

- Perform the final tightening of each of parts under unladen conditions, which were removed when removing wheel hub assembly and axle housing.
- Perform inspection after installation. Refer to FAX-13, "Inspection".



Inspection

INFOID:0000000006589055

INSPECTION AFTER REMOVAL

Check the following items, and replace the part if necessary.
- Check components for deformation, cracks, and other damage.
- Check boots of transverse link and steering outer socket ball joint for breakage, axial end play, and swing torque. Refer to FSU-14, "Inspection" and ST-21, "Inspection".

INSPECTION AFTER INSTALLATION

1. Check wheel sensor harness for proper connection. Refer to BRC-84, "FRONT WHEEL SENSOR : Exploded View" (Without ESP) or BRC-224, "FRONT WHEEL SENSOR : Exploded View" (With ESP).
2. Check the wheel alignment. Refer to FSU-7, "Inspection".

FRONT DRIVE SHAFT BOOT

Exploded View

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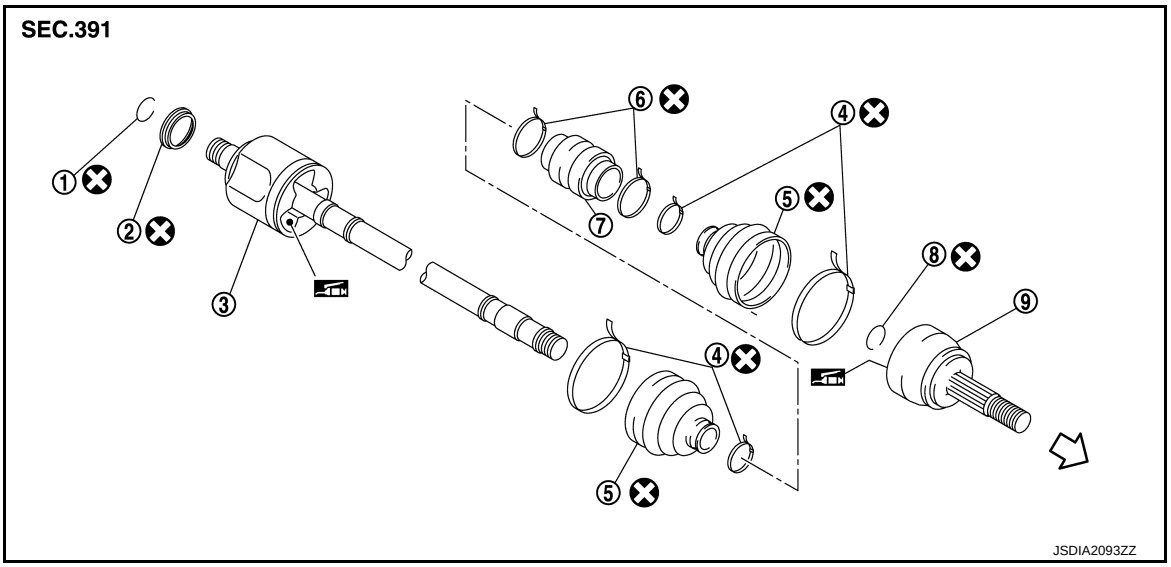
LEFT SIDE



1. Circular clip
2. Dust shield
3. Housing assembly
4. Boot band
5. Boot
6. Damper band
7. Dynamic damper
8. Circular clip
9. Joint sub-assembly

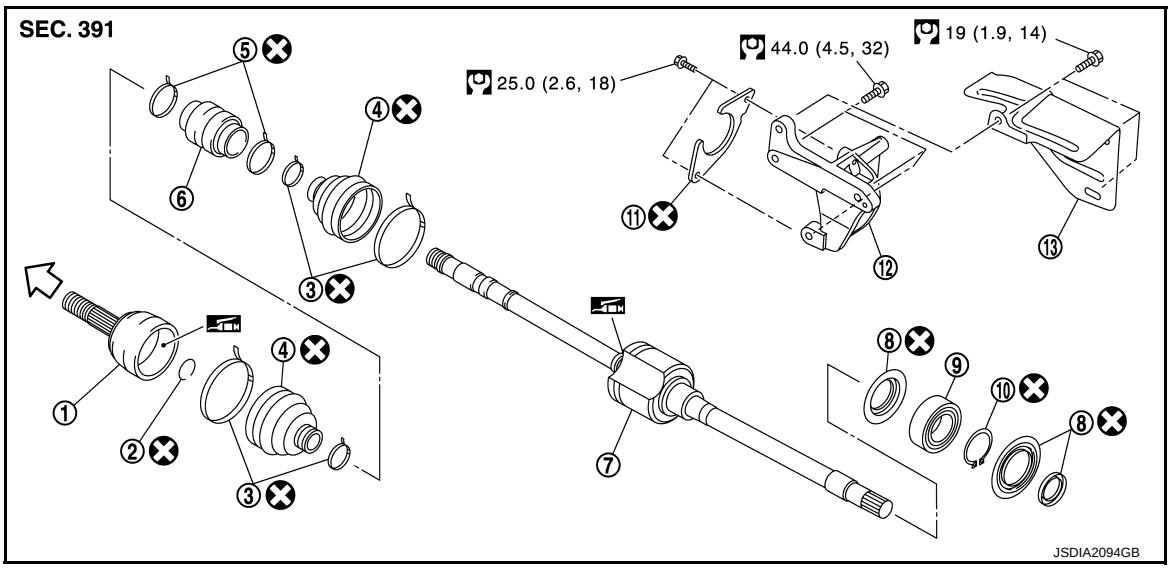
⇦ : Wheel side

: Fill NISSAN Genuine grease or equivalent.

⊗: Always replace after every disassembly.

RIGHT SIDE

2WD



1. Joint sub-assembly
2. Circular clip
3. Boot band
4. Boot
5. Damper band
6. Dynamic damper
7. Housing assembly
8. Dust shield
9. Support bearing
10. Snap ring
11. Plate
12. Support bearing bracket

13. Heat insulator

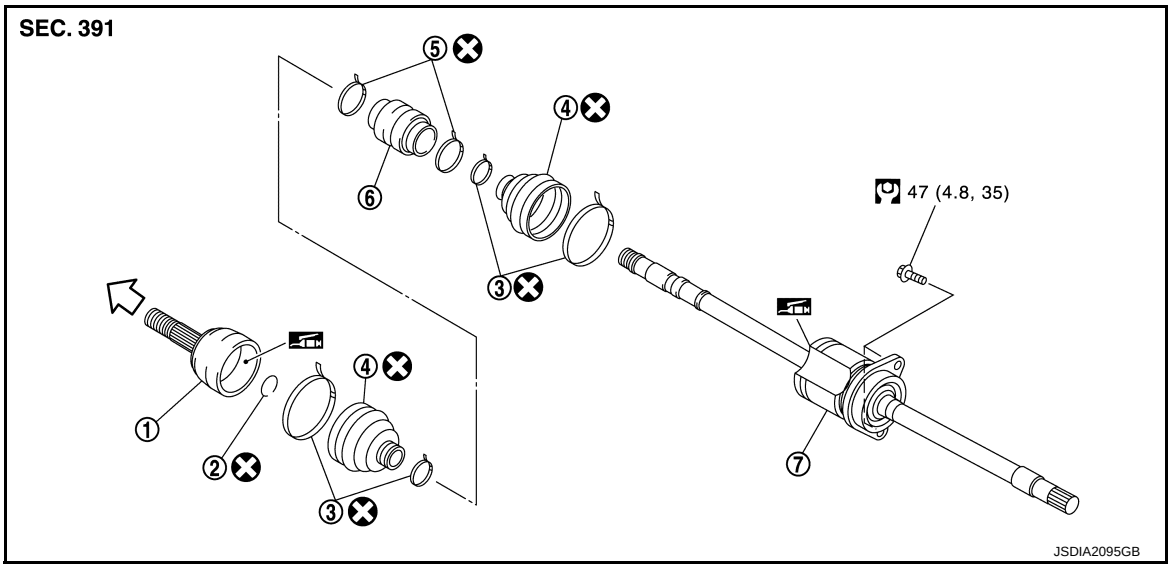
⇦ : Wheel side

: Fill NISSAN Genuine grease or equivalent.

: Always replace after every disassembly.

: N·m (kg-m, ft-lb)

4WD



1. Joint sub-assembly
2. Circular clip
3. Boot band
4. Boot
5. Damper band
6. Dynamic damper
7. Housing assembly

⇦ : Wheel side

: Fill NISSAN Genuine grease or equivalent.

: Always replace after every disassembly.

: N·m (kg-m, ft-lb)

WHEEL SIDE

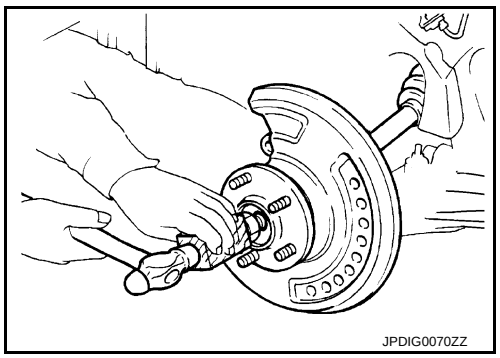
WHEEL SIDE : Removal and Installation

INFOID:0000000006543779

REMOVAL

1. Remove tires. Refer to WT-7, "Removal and Installation".
2. Remove wheel sensor and sensor harness. Refer to BRC-84, "FRONT WHEEL SENSOR : Exploded View" (Without ESP) or BRC-224, "FRONT WHEEL SENSOR : Exploded View" (With ESP).
3. Remove lock plate from strut assembly. Refer to FSU-14, "Removal and Installation".
4. Remove caliper assembly. Hang caliper assembly not to interfere with work. Refer to BR-57, "BRAKE CALIPER ASSEMBLY : Removal and Installation" (LHD) or BR-123, "BRAKE CALIPER ASSEMBLY : Removal and Installation" (RHD).
   CAUTION:
   Never depress brake pedal while brake caliper is removed.
5. Remove disc rotor. Refer to FAX-11, "Removal and Installation".
6. Remove cotter pin, and then loosen wheel hub lock nut. Refer to FAX-11, "Removal and Installation".

7. Patch wheel hub lock nut with a piece of wood. Hammer the wood to disengage wheel hub assembly from drive shaft.
NOTE:
Use suitable puller, if wheel hub assembly and drive shaft cannot be separated even after performing the above procedure.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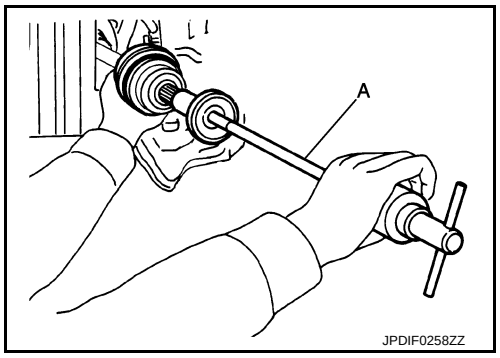
8. Remove wheel hub lock nut. Refer to FAX-11, "Removal and Installation".
9. Remove strut assembly from steering knuckle. Refer to FSU-10, "Removal and Installation".
10. Remove drive shaft from wheel hub assembly.
CAUTION:
- **Never place drive shaft joint at an extreme angle. Also be careful not to overextend slide joint.**
- **Never allow drive shaft to hang down without support for joint sub-assembly, shaft and the other parts.**
11. Remove boot bands, and then remove boot from joint sub-assembly.
12. Screw drive shaft puller (A) (commercial service tool) into joint sub-assembly screw part to a length of 30 mm (1.18 in) or more. Support drive shaft with one hand and pull out joint sub-assembly from shaft.
CAUTION:
- **Align drive shaft puller and drive shaft and remove them by pulling firmly and uniformly.**
- **If joint sub-assembly cannot be pulled out, try after removing drive shaft from vehicle. Refer to FAX-26, "WHEEL SIDE : Disassembly and Assembly".**



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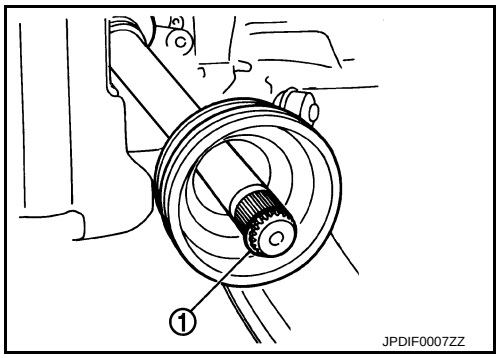
13. Remove circular clip (1) from shaft.
14. Remove boot from shaft.



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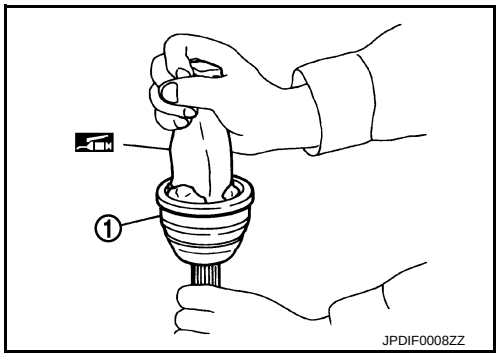
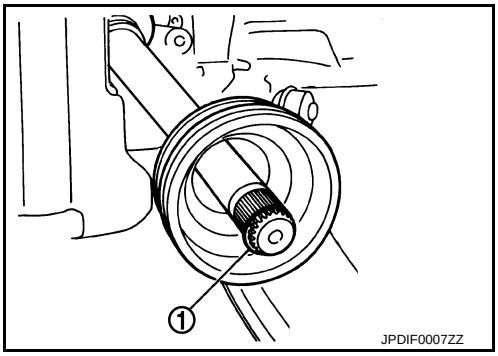
INSTALLATION

1. Clean the old grease on joint sub-assembly with paper waste.
2. Fill serration slot joint sub-assembly (1) with NISSAN genuine grease or equivalent until the serration slot and ball groove become full to the brim.
CAUTION:
After applying grease, use a paper waste to wipe off old grease that has oozed out.
3. Install boot and boot bands to shaft.
CAUTION:
- **Wrap serration on shaft with tape to protect the boot from damage.**
- **Never reuse boot and boot band.**
4. Remove the tape wrapped around the serration on shaft.



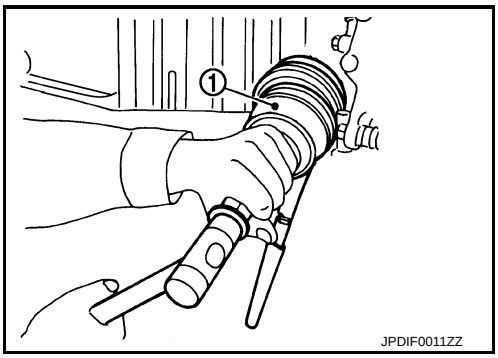
JPDIF0008ZZ

5. Position the circular clip (1) on groove at the shaft edge.
CAUTION:
Never reuse circular clip.
NOTE:
Drive joint inserter is recommended when installing circular clip.
6. Align both center axles of the shaft edge and joint sub-assembly. Then assemble shaft with joint sub-assembly holding circular clip.

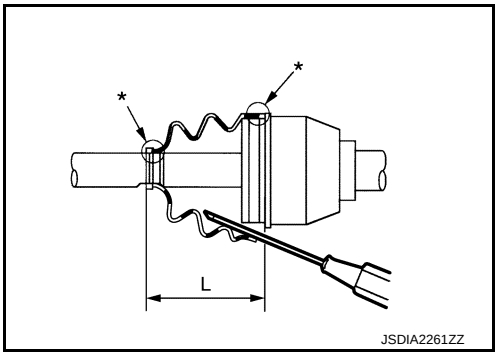


7. Install joint sub-assembly (1) to shaft using plastic hammer.
CAUTION:
- **Check circular clip is properly positioned on groove of the joint sub-assembly.**
- **Confirm that joint sub-assembly is correctly engaged while rotating drive shaft.**
8. Apply the specified amount of grease into the boot inside from large diameter side of boot.

Grease amount : Refer to FAX-35, "Drive Shaft".



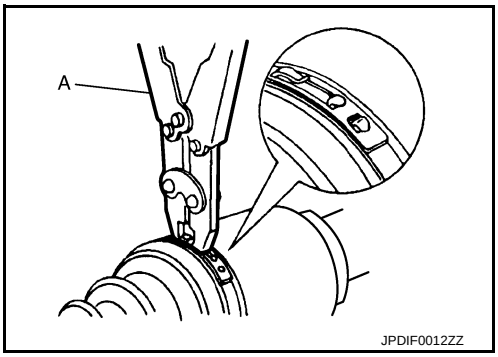
9. Install the boot securely into grooves (indicated by “*” marks) shown in the figure.
CAUTION:
If grease adheres to the boot mounting surface (indicated by “*” marks) on the shaft or joint sub-assembly, boot may be removed. Remove all grease from the boot mounting surface.
10. To prevent the deformation of the boot, adjust the boot installation length (L) to the specified value shown below by inserting the suitable tool into inside of the boot from the large diameter side of the boot and discharging the inside air.



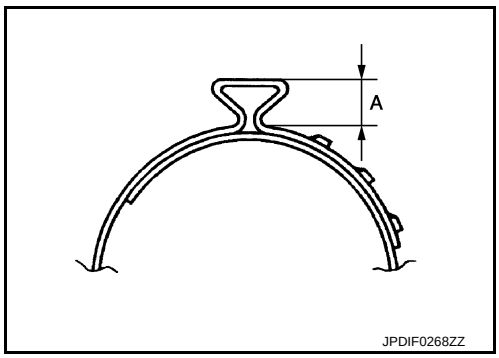
L : Refer to FAX-35, "Drive Shaft".

CAUTION:
- **If the boot installation length exceeds the standard, it may cause breakage of the boot.**
- **Be careful not to touch the inside of the boot with a tip of tool.**

11. Secure the large and small ends of the boot with boot bands using the boot band crimping tool (A) (SST: KV40107300).
CAUTION:
- **Never reuse boot band.**



- **Secure boot band so that dimension (A) meets the specification as shown in the figure.**

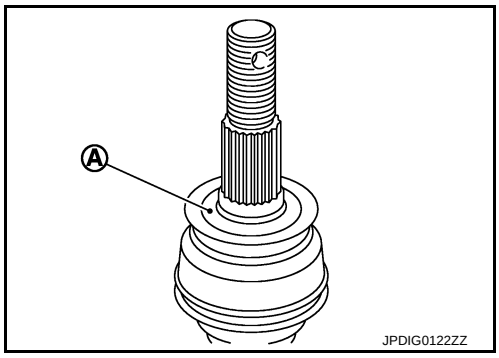


A
2WD : 5.0 mm (0.197 in) or less.
4WD : 7.0 mm (0.276 in) or less.

12. Check that displacement does not occur when boot is rotated with the joint sub-assembly and shaft fixed.
CAUTION:
- **Reinstall them using boot bands when boot installation positions become incorrect.**
- **Never reuse boot band.**

13. Clean the matching surface of wheel hub lock nut and wheel hub assembly.
CAUTION:
Never apply lubricating oil to these matching surface.

14. Clean the matching surface of drive shaft, wheel hub assembly. And then apply paste [service parts (440037S000)] to surface (A) of joint sub-assembly of drive shaft.
CAUTION:
Apply paste to cover entire flat surface of joint sub-assembly of drive shaft.



Amount paste : 1.0 – 3.0 g (0.04 – 0.10 oz)

15. Insert drive shaft to wheel hub assembly, and then temporarily tighten wheel hub lock nut.
CAUTION:
Be sure to use torque wrench to tighten the wheel hub lock nut. Never use a power tool.

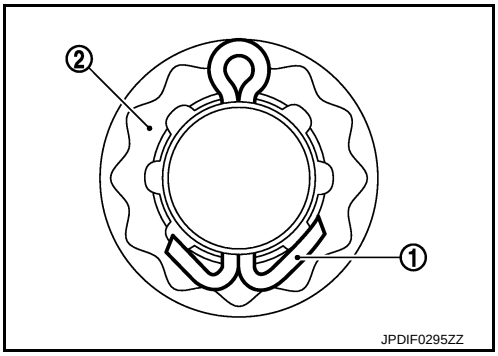
16. Install strut assembly to steering knuckle. Refer to FSU-10, "Removal and Installation".
17. Install disc rotor. Refer to FAX-11, "Removal and Installation".
18. Install caliper assembly to steering knuckle. Refer to BR-57, "BRAKE CALIPER ASSEMBLY : Removal and Installation" (LHD) or BR-123, "BRAKE CALIPER ASSEMBLY : Removal and Installation" (RHD).
19. Install lock plate to strut assembly. Refer to FSU-10, "Removal and Installation".
20. Install wheel sensor and sensor harness. Refer to BRC-84, "FRONT WHEEL SENSOR : Exploded View" (Without ESP) or BRC-224, "FRONT WHEEL SENSOR : Exploded View" (With ESP).
21. Use the following torque range for tightening the wheel hub lock nut.

: 180 – 185 N·m (18.4 – 18.8 kg-m, 133 – 136 ft-lb)

CAUTION:
- **Since the drive shaft is assembled by press-fitting, use the tightening torque range for the wheel hub lock nut.**
- **Be sure to use torque wrench to tighten the wheel hub lock nut. Never use a power tool.**
- **Never reuse wheel hub lock nut.**

NOTE:
Wheel hub lock nut tightening torque does not over torque for avoiding axle noise, and does not less than torque for avoiding looseness.

22. When installing a cotter pin (1) and adjusting cap (2), securely bend the basal portion to prevent rattles.
    CAUTION:
    Never reuse cotter pin.
23. Install tires. Refer to WT-7, "Removal and Installation".
24. Perform inspection after installation. Refer to FAX-20, "Inspection".



TRANSAXLE SIDE

TRANSAXLE SIDE : Removal and Installation

INFOID:0000000006543780

Remove boot after drive shaft is removed from the vehicle.
- For drive shaft removal and installation, refer to FAX-22, "LEFT SIDE : Removal and Installation" (LEFT SIDE) or FAX-24, "RIGHT SIDE : Removal and Installation" (RIGHT SIDE).
- For drive shaft disassembly and assembly, refer to FAX-29, "TRANSAXLE SIDE : Disassembly and Assembly".

Inspection

INFOID:0000000006543781

INSPECTION AFTER INSTALLATION

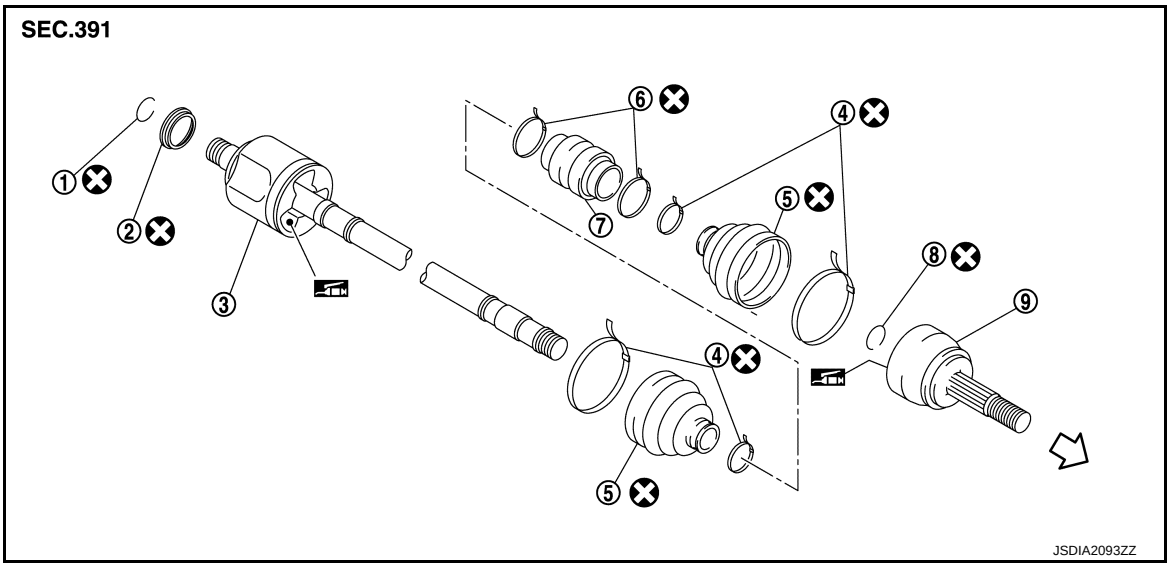
1. Check wheel sensor harness for proper connection. Refer to BRC-84, "FRONT WHEEL SENSOR : Exploded View" (Without ESP) or BRC-224, "FRONT WHEEL SENSOR : Exploded View" (With ESP).
2. Check the wheel alignment. Refer to FSU-7, "Inspection".

FRONT DRIVE SHAFT

Exploded View

INFOID:0000000006601135

LEFT SIDE



1. Circular clip
2. Dust shield
3. Housing assembly
4. Boot band
5. Boot
6. Damper band
7. Dynamic damper
8. Circular clip
9. Joint sub-assembly

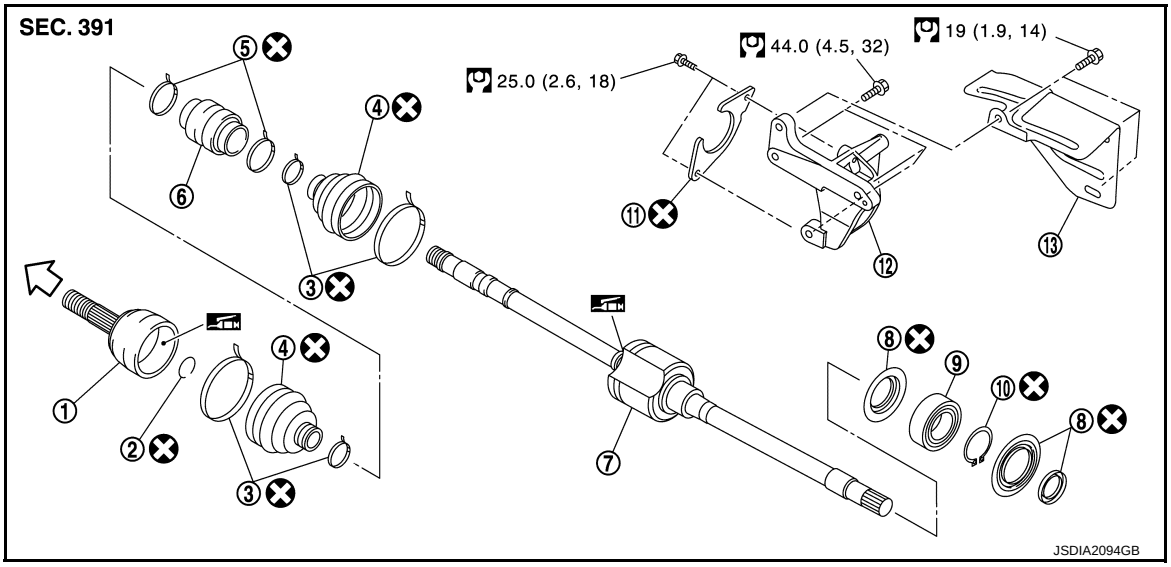
⇦ : Wheel side

: Fill NISSAN Genuine grease or equivalent.

⊗: Always replace after every disassembly.

RIGHT SIDE

2WD



1. Joint sub-assembly
2. Circular clip
3. Boot band
4. Boot
5. Damper band
6. Dynamic damper
7. Housing assembly
8. Dust shield
9. Support bearing
10. Snap ring
11. Plate
12. Support bearing bracket

13. Heat insulator

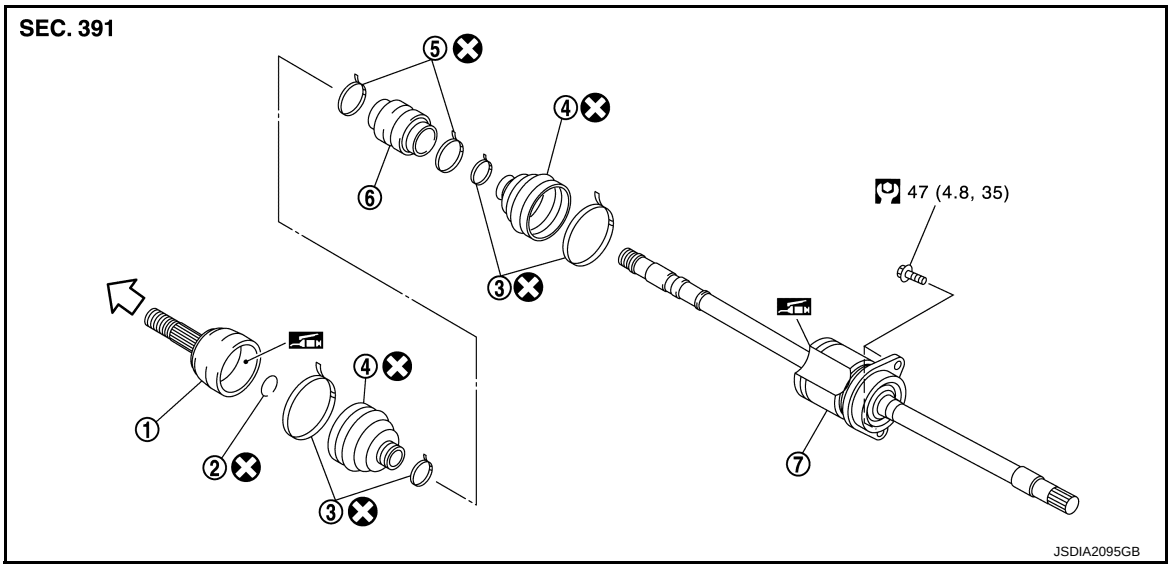
⇦ : Wheel side

: Fill NISSAN Genuine grease or equivalent.

: Always replace after every disassembly.

: N·m (kg-m, ft-lb)

4WD



1. Joint sub-assembly
2. Circular clip
3. Boot band
4. Boot
5. Damper band
6. Dynamic damper
7. Housing assembly

⇦ : Wheel side

: Fill NISSAN Genuine grease or equivalent.

: Always replace after every disassembly.

: N·m (kg-m, ft-lb)

LEFT SIDE

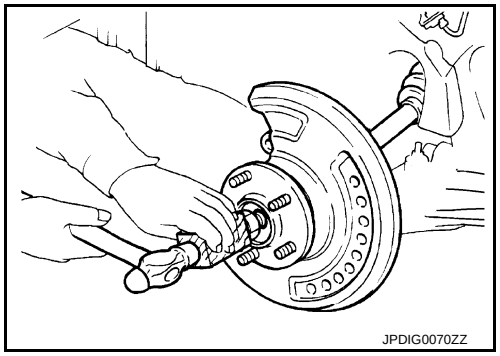
LEFT SIDE : Removal and Installation

INFOID:0000000006601137

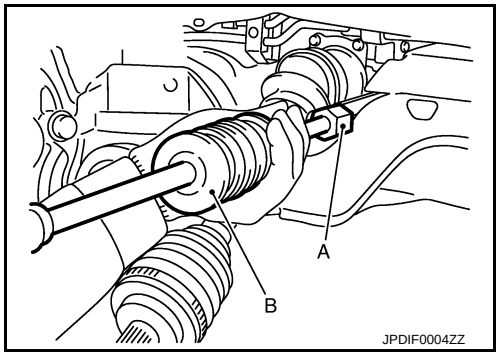
REMOVAL

1. Remove tires. Refer to WT-7, "Removal and Installation".
2. Remove wheel sensor and sensor harness. Refer to BRC-84, "FRONT WHEEL SENSOR : Exploded View" (Without ESP) or BRC-224, "FRONT WHEEL SENSOR : Exploded View" (With ESP).
3. Remove lock plate from strut assembly. Refer to FSU-10, "Removal and Installation".
4. Remove caliper assembly. Hang caliper assembly not to interfere with work. Refer to BR-57, "BRAKE CALIPER ASSEMBLY : Removal and Installation" (LHD) or BR-123, "BRAKE CALIPER ASSEMBLY : Removal and Installation" (RHD).
   CAUTION:
   Never depress brake pedal while brake caliper is removed.
5. Remove disc rotor. Refer to FAX-11, "Removal and Installation".
6. Remove cotter pin, and then loosen wheel hub lock nut. Refer to FAX-11, "Removal and Installation".

7. Patch wheel hub lock nut with a piece of wood. Hammer the wood to disengage wheel hub assembly from drive shaft.
   NOTE:
   Use suitable puller, if wheel hub assembly and drive shaft cannot be separated even after performing the above procedure.
8. Remove wheel hub lock nut. Refer to FAX-11, "Removal and Installation".
9. Remove transverse link from steering knuckle. Refer to FAX-11, "Removal and Installation".
10. Remove shaft assembly from wheel hub assembly.
    CAUTION:
    - **Never place drive shaft joint at an extreme angle. Also be careful not to overextend slide joint.**
    - **Never allow drive shaft to hang down without support for joint sub-assembly, shaft and the other parts.**


JPDIG0070ZZ

11. Use the drive shaft attachment (A) (SST: KV40107500) and a sliding hammer (B) (commercial service tool) while inserting tip of the drive shaft attachment between shaft and transaxle assembly, and then remove drive shaft from transaxle assembly.
    CAUTION:
    - **Never place drive shaft joint at an extreme angle when removing drive shaft. Also be careful not to overextend slide joint.**
    - **Confirm that the circular clip is attached to the drive shaft.**
12. Perform inspection after installation. Refer to FAX-34, "Inspection".



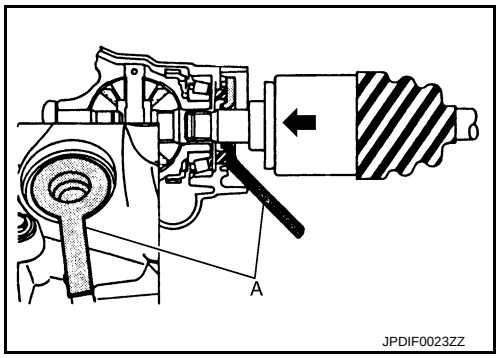
JPDIF0004ZZ

INSTALLATION

Note the following, and install in the reverse order of removal.

Transaxle Side

- Always replace differential side oil seal with new one when installing drive shaft. Refer to TM-76, "Removal and Installation" (M/T) or TM-292, "Removal and Installation" (CVT).
- Place the protector (A) (SST: KV38107900) onto transaxle assembly to prevent damage to the oil seal while inserting drive shaft. Slide drive shaft sliding joint and tap with a hammer to install securely.
  CAUTION:
  Check that circular clip is completely engaged.
- Perform inspection after installation. Refer to FAX-34, "Inspection".

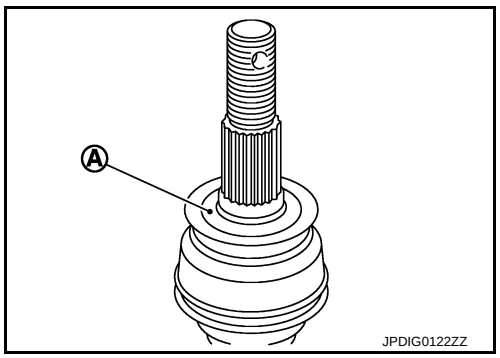


JPDIF0023ZZ

Wheel Hub Side

- Clean the matching surface of wheel hub lock nut and wheel hub assembly.
  CAUTION:
  Never apply lubricating oil to these matching surface.
- Clean the matching surface of drive shaft and wheel hub assembly. And then apply paste [service parts (440037S000)] to surface (A) of joint sub-assembly of drive shaft.
  CAUTION:
  Apply paste to cover entire flat surface of joint sub-assembly of drive shaft.

  Amount paste : 1.0 – 3.0 g (0.04 – 0.10 oz)
- Use the following torque range for tightening the wheel hub lock nut.



JPDIG0122ZZ

: 180 – 185 N·m (18.4 – 18.8 kg-m, 133 – 136 ft-lb)

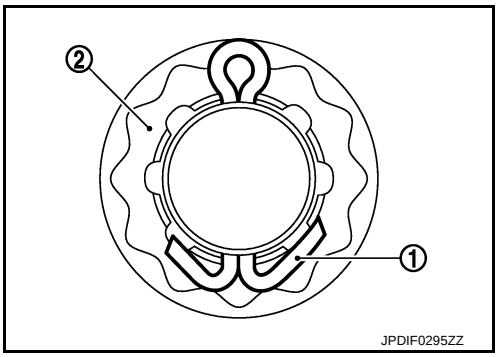
CAUTION:
- **Since the drive shaft is assembled by press-fitting, use the tightening torque range for the wheel hub lock nut.**
- **Be sure to use torque wrench to tighten the wheel hub lock nut. Never use a power tool.**
- **Never reuse wheel hub lock nut.**

NOTE:
Wheel hub lock nut tightening torque does not over torque for avoiding axle noise, and does not less than torque for avoiding looseness.

- Align the matching marks that have been made during removal when reusing the disc rotor.
- When installing a cotter pin (1) and adjusting cap (2), securely bend the basal portion to prevent rattles.

CAUTION:
Never reuse cotter pin.

- Perform the final tightening of each of parts under unladen conditions, which were removed when removing wheel hub assembly and axle housing.
- Perform inspection after installation. Refer to FAX-34, "Inspection".



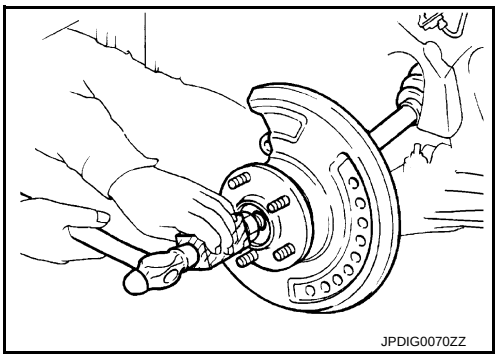
RIGHT SIDE

RIGHT SIDE : Removal and Installation

INFOID:0000000006601138

REMOVAL

1. Remove tires. Refer to WT-7, "Removal and Installation".
2. Remove wheel sensor and sensor harness if necessary. Refer to BRC-84, "FRONT WHEEL SENSOR : Exploded View" (Without ESP) or BRC-224, "FRONT WHEEL SENSOR : Exploded View" (With ESP).
3. Remove lock plate from strut assembly. Refer to FSU-10, "Removal and Installation".
4. Remove caliper assembly. Hang caliper assembly not to interfere with work. Refer to BR-57, "BRAKE CALIPER ASSEMBLY : Removal and Installation" (LHD) or BR-123, "BRAKE CALIPER ASSEMBLY : Removal and Installation" (RHD).
   CAUTION:
   Never depress brake pedal while brake caliper is removed.
5. Remove disc rotor. Refer to FAX-11, "Removal and Installation".
6. Remove cotter pin, and then loosen wheel hub lock nut. Refer to FAX-11, "Removal and Installation".
7. Patch wheel hub lock nut with a piece of wood. Hammer the wood to disengage wheel hub assembly from drive shaft.
   NOTE:
   Use suitable puller, if wheel hub assembly and drive shaft cannot be separated even after performing the above procedure.
8. Remove wheel hub lock nut. Refer to FAX-11, "Removal and Installation".
9. Remove transverse link from steering knuckle. Refer to FAX-11, "Removal and Installation".
10. Remove drive shaft from wheel hub assembly.
    CAUTION:
    - **Never place drive shaft joint at an extreme angle. Also be careful not to overextend slide joint.**
    - **Never allow drive shaft to hang down without support for joint sub-assembly, shaft and the other parts.**
11. Remove bearing housing plate bolts (2WD) or bearing housing bolts (4WD).
12. Remove drive shaft assembly from transaxle assembly.
    CAUTION:



Never place drive shaft joint at an extreme angle when removing drive shaft. Also be careful not to overextend slide joint.

13. Remove support bearing bracket. (2WD)
14. Perform inspection after removal. Refer to FAX-34, "Inspection".

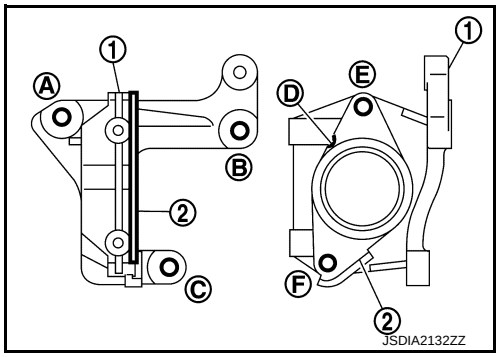
INSTALLATION

Note the following, and install in the reverse order of removal.

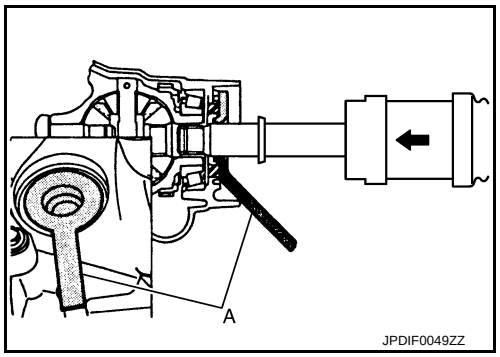
Transaxle Side (2WD)

- Always replace differential side oil seal with new one when installing drive shaft. Refer to TM-76, "Removal and Installation".
- Install support bearing bracket (1) in following procedure,
- Temporarily tighten mounting bolts (A), (B), (C), then tighten them to specified torque.
- Set plate (2) so that notch (D) becomes upper side. Temporarily tighten mounting bolts (E), (F), then tighten them to specified torque.

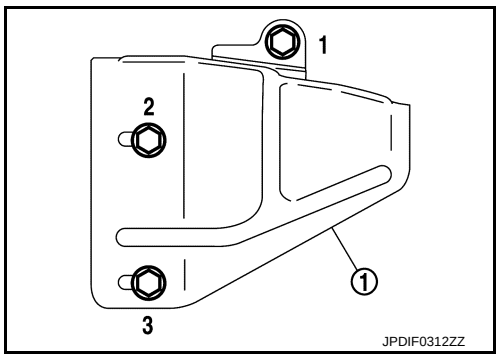
CAUTION:
Never reuse plate.



- Place the protector (A) (SST: KV38107900) onto transaxle assembly to prevent damage to the oil seal while inserting drive shaft. Slide drive shaft sliding joint and tap with a hammer to install securely.



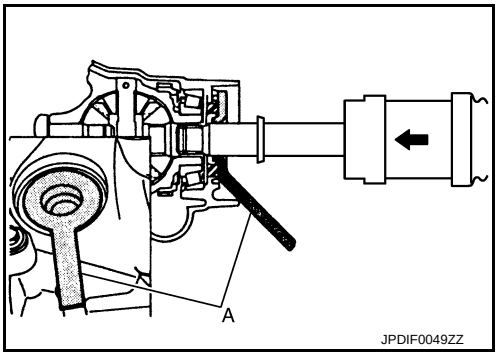
- To install mounting nuts of the heat insulator (1), temporarily tighten them in numerical order shown in the figure and tighten them to the specified torque.
- Perform inspection after removal. Refer to FAX-34, "Inspection".



Transaxle Side (4WD)

- Always replace differential side oil seal with new one when installing drive shaft. Refer to TM-292, "Removal and Installation".

- Place the protector (A) (SST: KV38107900) onto transaxle assembly to prevent damage to the oil seal while inserting drive shaft. Slide drive shaft sliding joint and tap with a hammer to install securely.
- Tighten the bearing housing bolt to the specified to torque. Refer to FAX-21, "Exploded View".
- Perform inspection after removal. Refer to FAX-34, "Inspection".



Wheel Hub Side

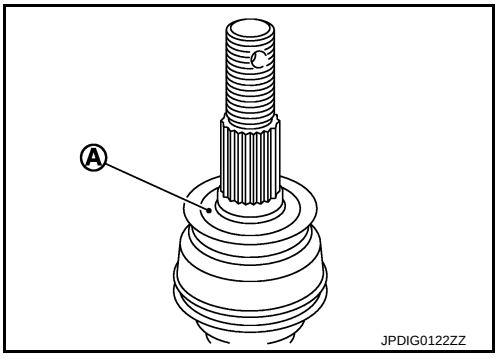
- Clean the matching surface of wheel hub lock nut and wheel hub assembly.

CAUTION:
Never apply lubricating oil to these matching surface.

- Clean the matching surface of drive shaft and wheel hub assembly. And then apply paste [service parts (440037S000)] to surface (A) of joint sub-assembly of drive shaft.

CAUTION:
Apply paste to cover entire flat surface of joint sub-assembly of drive shaft.

Amount paste : 1.0 – 3.0 g (0.04 – 0.10 oz)



- Use the following torque range for tightening the wheel hub lock nut.

: 180 – 185 N·m (18.4 – 18.8 kg-m, 133 – 136 ft-lb)

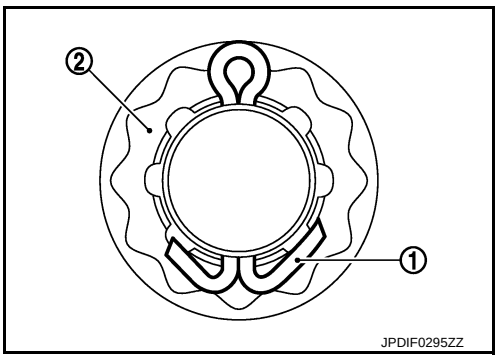
CAUTION:
- **Since the drive shaft is assembled by press-fitting, use the tightening torque range for the wheel hub lock nut.**
- **Be sure to use torque wrench to tighten the wheel hub lock nut. Never use a power tool.**
- **Never reuse wheel hub lock nut.**

NOTE:
Wheel hub lock nut tightening torque does not over torque for avoiding axle noise, and does not less than torque for avoiding looseness.

- Align the matching marks that have been made during removal when reusing the disc rotor.
- When installing a cotter pin (1) and adjusting cap (2), securely bend the basal portion to prevent rattles.

CAUTION:
Never reuse cotter pin.

- Perform the final tightening of each of parts under unladen conditions, which were removed when removing wheel hub assembly and axle housing.
- Perform inspection after installation. Refer to FAX-34, "Inspection".



WHEEL SIDE

WHEEL SIDE : Disassembly and Assembly

INFOID:0000000006601139

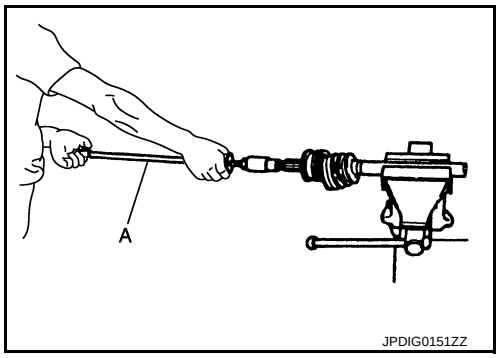
DISASSEMBLY

1. Fix shaft with a vise.

CAUTION:

Protect shaft when fixing with a vise using aluminum or copper plates.

2. Remove boot bands, and then remove boot from joint sub-assembly.
3. Screw drive shaft puller (A) (commercial service tool) into joint sub-assembly screw part to a length of 30 mm (1.18 in) or more. Support drive shaft with one hand and pull out joint sub-assembly from shaft.

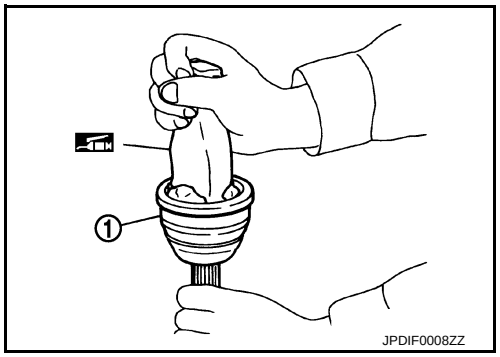


CAUTION:
- **Align drive shaft puller and drive shaft and remove them by pulling firmly and uniformly.**
- **If joint sub-assembly cannot be removed after five or more unsuccessful attempts, replace shaft and joint sub assembly as a set.**

4. Remove circular clip from shaft.
5. Remove boot from shaft.
6. Perform inspection after removal. Refer to FAX-34, "Inspection".

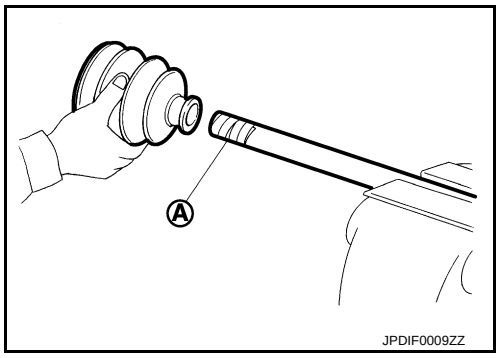
ASSEMBLY

1. Clean the old grease on joint sub-assembly with paper waste.
2. Fill serration slot joint sub-assembly (1) with NISSAN genuine grease or equivalent until the serration slot and ball groove become full to the brim.



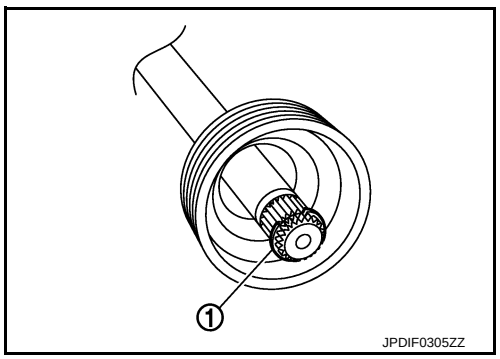
CAUTION:
After applying grease, use a paper waste to wipe off old grease that has oozed out.

3. Install boot and boot bands to shaft.



CAUTION:
- **Wrap serration on shaft with tape (A) to protect the boot from damage.**
- **Never reuse boot and boot band.**

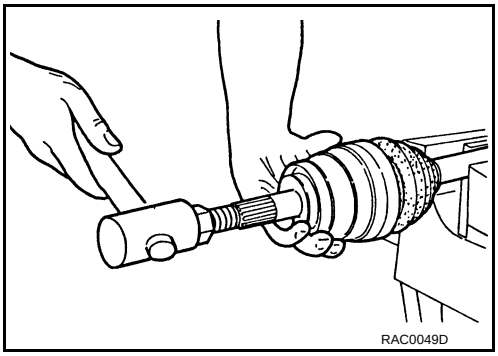
4. Remove the tape wrapped around the serration on shaft.
5. Position the circular clip (1) on groove at the shaft edge.



CAUTION:
Never reuse circular clip.
NOTE:
Drive joint inserter is recommended when installing circular clip.

6. Align both center axles of the shaft edge and joint sub-assembly. Then assemble shaft with joint sub-assembly holding circular clip.

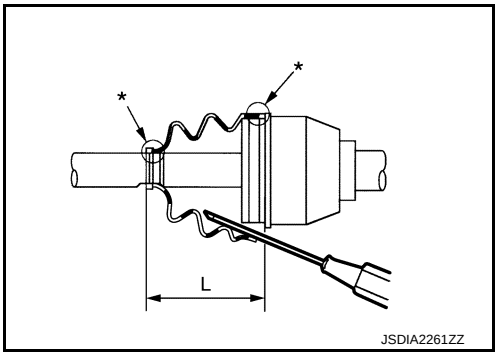
7. Install joint sub-assembly to shaft using plastic hammer.
CAUTION:
- **Check circular clip is properly positioned on groove of the joint sub-assembly.**
- **Confirm that joint sub-assembly is correctly engaged while rotating drive shaft.**



8. Apply the specified amount of grease into the boot inside from large diameter side of boot.

Grease amount : Refer to FAX-35, "Drive Shaft".

9. Install the boot securely into grooves (indicated by “*” marks) shown in the figure.
CAUTION:
If grease adheres to the boot mounting surface (indicated by “*” marks) on the shaft or joint sub-assembly, boot may be removed. Remove all grease from the boot mounting surface.

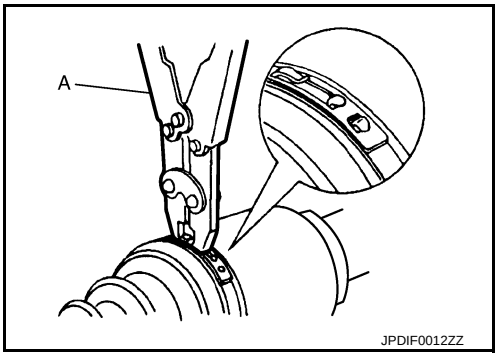


10. To prevent the deformation of the boot, adjust the boot installation length (L) to the specified value shown below by inserting the suitable tool into inside of the boot from the large diameter side of the boot and discharging the inside air.

L : Refer to FAX-35, "Drive Shaft".

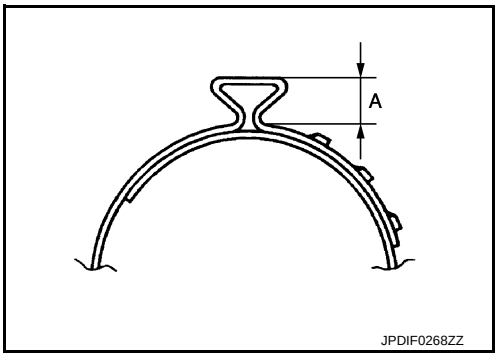
CAUTION:
- **If the boot installation length exceeds the standard, it may cause breakage of the boot.**
- **Be careful not to touch the inside of the boot with a tip of tool.**

11. Secure the large and small ends of the boot with boot bands using the boot band crimping tool (A) (SST: KV40107300).
CAUTION:
- **Never reuse boot band.**



- **Secure boot band so that dimension (A) meets the specification as shown in the figure.**

A
2WD : 5.0 mm (0.197 in) or less.
4WD : 7.0 mm (0.276 in) or less.



12. Check that displacement does not occur when boot is rotated with the joint sub-assembly and shaft fixed.
CAUTION:
- **Reinstall them using boot bands when boot installation positions become incorrect.**
- **Never reuse boot band.**

TRANSAXLE SIDE

TRANSAXLE SIDE : Disassembly and Assembly

INFOID:0000000006601140

DISASSEMBLY

Left Side

1. Fix shaft with a vise.
   CAUTION:
   Protect shaft using aluminum or copper plates when fixing with a vise.
2. Remove wheel side boot from joint sub-assembly. Refer to FAX-16, "WHEEL SIDE : Removal and Installation".
3. Remove dynamic damper as per the following instructions:

a. Remove damper band.
b. Remove dynamic damper from housing assembly.

4. Remove boot bands, then remove boot from housing assembly.
5. Remove circular clip from housing assembly.
6. Remove dust shield from housing assembly.
7. Perform inspection after disassembly. Refer to FAX-34, "Inspection".

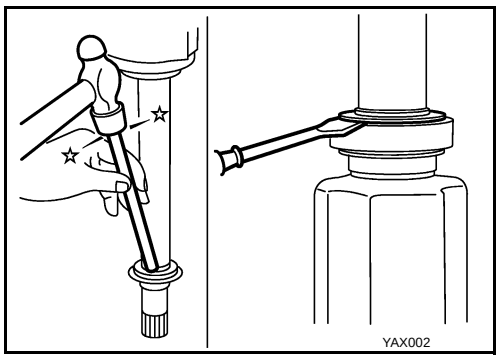
Right Side

1. Fix shaft with a vise.
   CAUTION:
   Protect shaft using aluminum or copper plates when fixing with a vise.
2. Remove wheel side boot from joint sub-assembly. Refer to FAX-16, "WHEEL SIDE : Removal and Installation".
3. Remove dynamic damper as per the following instructions:

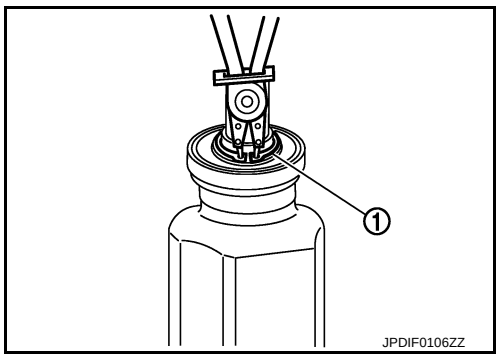
a. Remove damper band.
b. Remove dynamic damper from housing assembly.

4. Remove boot bands, then remove boot from housing assembly.
5. Remove support bearing, follow the procedure described below. (2WD)

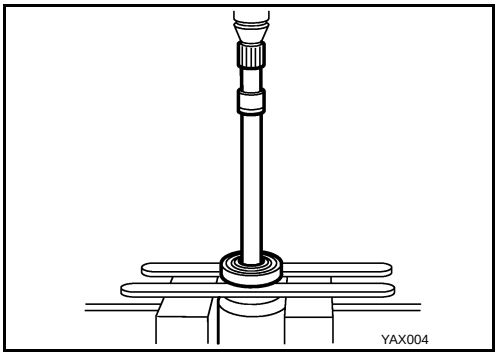
a. Remove dust shield from housing.



b. Remove snap ring (1).



c. Press out support bearing from housing.
d. Remove dust shield from housing.
6. Perform inspection after installation. Refer to FAX-34, "Inspection".

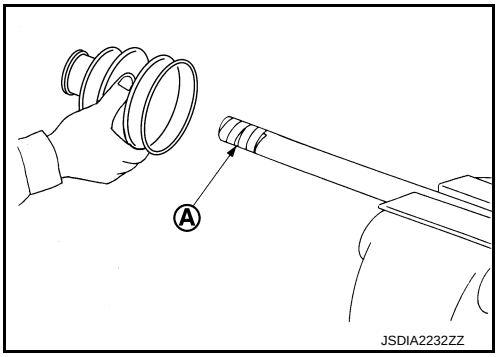


ASSEMBLY

Left Side

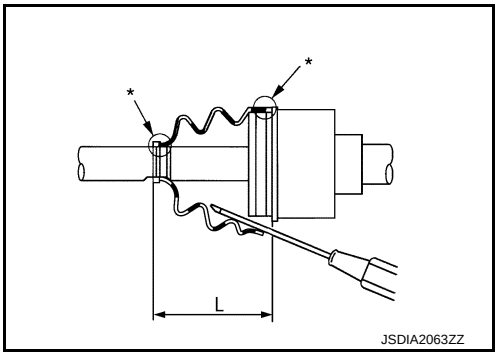
1. Clean the old grease on housing assembly with paper waste.
2. Install boot and boot bands to housing assembly.
   CAUTION:
   - **Wrap serration on housing assembly with tape (A) to protect the boot from damage.**
   - **Never reuse boot and boot band.**
3. Remove the tape wrapped around the serration on housing assembly.
4. Apply NISSAN genuine grease (refer to parts catalog) to housing assembly.

   Grease amount : Refer to FAX-35, "Drive Shaft".



5. Install boot securely into grooves (indicated by “*” marks) shown in the figure.
   CAUTION:
   If grease adheres to the boot mounting surface (with “*” marks) on shaft or housing, boot may be removed. Remove all grease from the surface.
6. To prevent the deformation of the boot, adjust the boot installation length to the value shown below (L) by inserting the suitable tool into the inside of boot from the large diameter side of boot and discharging inside air.

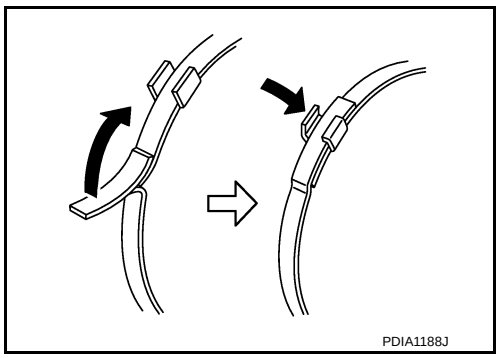
   L : Refer to FAX-35, "Drive Shaft".



   CAUTION:
   - **If the boot installation length exceeds the standard, it may cause breakage of the boot.**
   - **Be careful not to touch the inside of the boot with the tip of tool.**
7. Install boot bands securely.
   CAUTION:
   Never reuse boot bands.

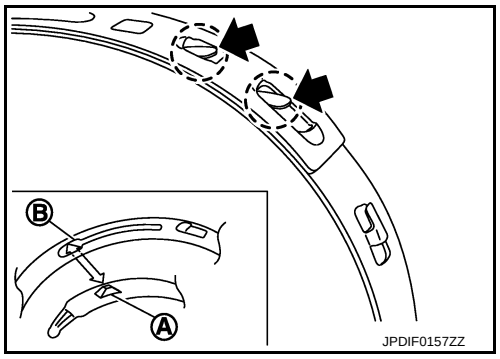
   For one-touch clamp band

- Install boot bands securely as shown in the figure.

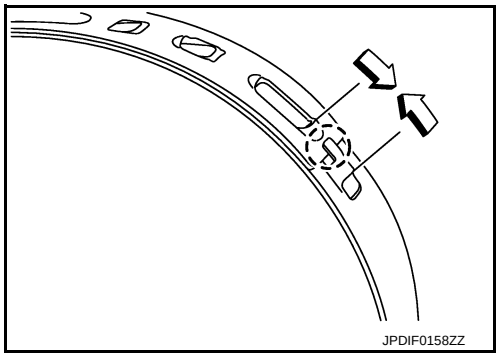


For low profile type band

1. Put boot band in the groove on drive shaft boot. Then fit pawls (⬅) into holes to temporary installation.
   NOTE:
   For the large diameter side, fit projection (A) and guide slit (B) at first.



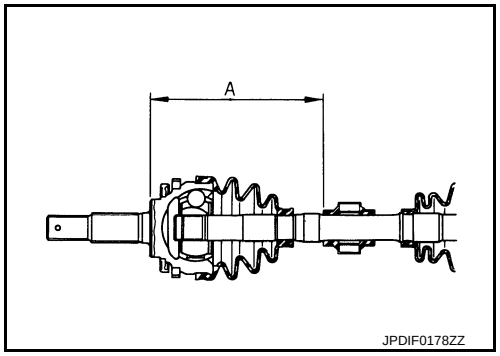
2. Pinch projection on the band with suitable pliers to tighten band.
3. Insert the tip of band into the lower part of pawl (marked with dotted circle) as shown in the figure.



8. Check that displacement does not occur when boot is rotated with the housing assembly fixed.
   CAUTION:
   - **If displacement occurs, reinstall band.**
   - **Never reuse boot band.**
9. Install dynamic damper, follow the procedure described below.

a. Install dynamic damper to shaft.

b. Secure dynamic damper with bands in the following specified position (A) when installing.
   CAUTION:
   Never reuse boot bands.



A : Refer to FAX-35, "Drive Shaft".

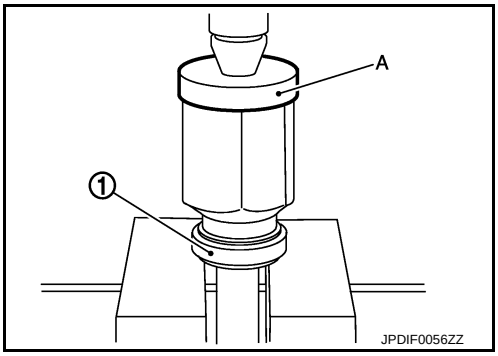
10. Install dust shield to housing assembly.
    CAUTION:
    Never reuse dust shield.
11. Install circular clip to housing.
    CAUTION:
    Never reuse circular clip.
12. Install boot to the wheel side. Refer to FAX-26, "WHEEL SIDE : Disassembly and Assembly".

Right Side

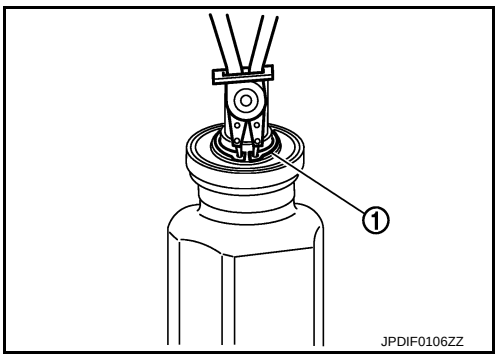
1. Install support bearing, follow the procedure described below. (2WD)

a. Install dust shield to housing.
   CAUTION:
   Never reuse dust shield.

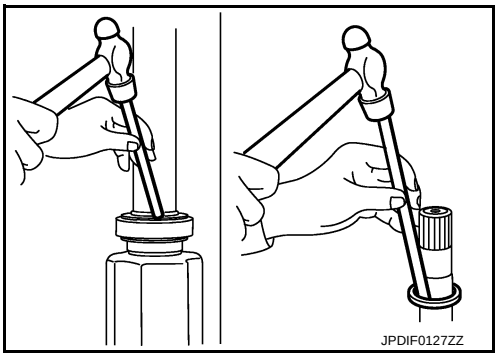
b. Press support bearing (1) onto housing to using the suitable tool (A).
CAUTION:
Never reuse support bearing.



c. Install snap ring (1).
CAUTION:
Never reuse snap ring.

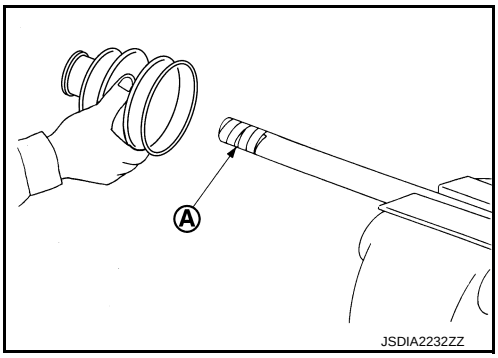


d. Install dust shields.
CAUTION:
Never reuse dust shields.

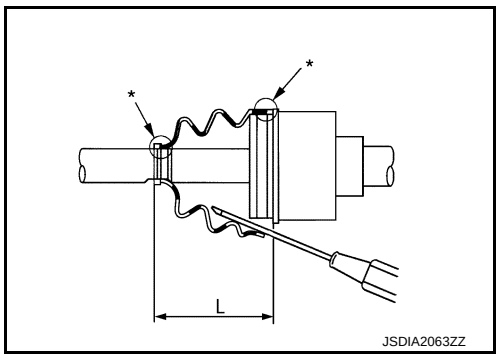


2. Clean the old grease on housing assembly with paper waste.
3. Install boot and boot bands to housing assembly.
CAUTION:
- **Wrap serration on housing assembly with tape (A) to protect the boot from damage.**
- **Never reuse boot and boot band.**
4. Remove the tape wrapped around the serration on housing assembly.
5. Apply NISSAN genuine grease (refer to parts catalog) to housing assembly.

Grease amount : Refer to FAX-35, "Drive Shaft".



6. Install boot securely into grooves (indicated by “*” marks) shown in the figure.
CAUTION:
If grease adheres to the boot mounting surface (with “*” marks) on shaft or housing, boot may be removed. Remove all grease from the surface.



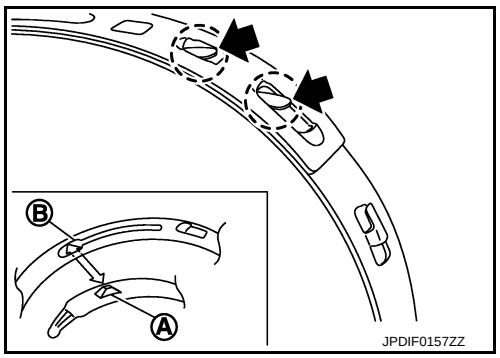
7. To prevent the deformation of the boot, adjust the boot installation length to the value shown below (L) by inserting the suitable tool into the inside of boot from the large diameter side of boot and discharging inside air.

L : Refer to FAX-35, "Drive Shaft".

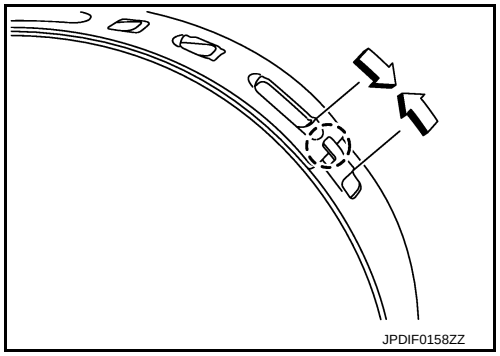
CAUTION:
- **If the boot installation length exceeds the standard, it may cause breakage of the boot.**
- **Be careful not to touch the inside of the boot with the tip of tool.**

8. Install boot bands securely.
CAUTION:
Never reuse boot bands.

a. Put boot band in the groove on drive shaft boot. Then fit pawls (⬅) into holes to temporary installation.
NOTE:
For the large diameter side, fit projection (A) and guide slit (B) at first.

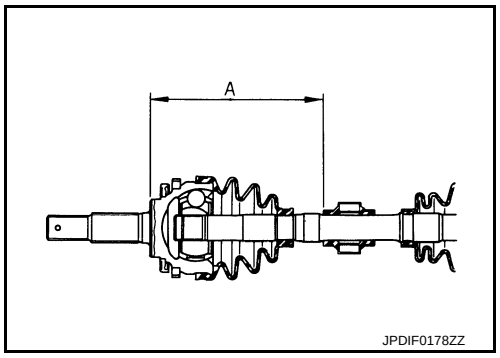


b. Pinch projection on the band with suitable pliers to tighten band.
c. Insert the tip of band into the lower part of pawl (marked with dotted circle) as shown in the figure.



9. Check that displacement does not occur when boot is rotated with the housing assembly fixed.
CAUTION:
- **If displacement occurs, reinstall band.**
- **Never reuse boot band.**

10. Install dynamic damper, follow the procedure described below.
a. Install dynamic damper to shaft.
b. Secure dynamic damper with bands in the following specified position (A) when installing.
CAUTION:
Never reuse bands.



A : Refer to FAX-35, "Drive Shaft".

11. Install boot to the wheel side. Refer to FAX-26, "WHEEL SIDE : Disassembly and Assembly".

Inspection

INFOID:0000000006601126

INSPECTION AFTER REMOVAL

Check the following items, and replace the part if necessary.

- Move joint up/down, left/right, and in the axial directions. Check for motion that is not smooth and for significant looseness.
- Check boot for cracks, damage, and leakage of grease.
- Check the support bearing bracket for cracks, deformation and other damage.

INSPECTION AFTER DISASSEMBLY

Check the following items, and replace the part if necessary.

Dynamic Damper

Check damper for cracks or wear.

Joint Sub-Assembly

Check the following:

- Joint sub-assembly for rough rotation and excessive axial looseness.
- The inside of the joint sub-assembly for entry of foreign material.
- Joint sub-assembly for compression scars, cracks, and fractures inside of joint sub-assembly.

Replace joint sub-assembly if there are any non-standard conditions of components.

Housing assembly

- Replace housing assembly if there is scratching or wear of housing assembly roller contact surface.
- Check shaft for runout, cracks, or other damage.

Support Bearing (Right Side)

Check bearing rolls freely and is free from noise, cracks, pitting or wear. Replace support bearing if there are any non-standard conditions.

Support Bearing Bracket (Right Side)

Check for support bearing bracket, cracks, or damage. Replace support bearing bracket if there are any non-standard conditions.

INSPECTION AFTER INSTALLATION

1. Check wheel sensor harness for proper connection. Refer to BRC-84, "FRONT WHEEL SENSOR : Exploded View" (Without ESP) or BRC-224, "FRONT WHEEL SENSOR : Exploded View" (With ESP).
2. Check the wheel alignment. Refer to FSU-7, "Inspection".

SERVICE DATA AND SPECIFICATIONS (SDS)

SERVICE DATA AND SPECIFICATIONS (SDS)

Wheel Bearing

INFOID:0000000006608694

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

Drive Shaft

INFOID:0000000006608695

2WD

Item	Standard	
	Wheel side	Transaxle side
Grease quantity	110 – 130 g (3.88 – 4.59 oz)	123.3 – 139.3 g (4.35 – 4.91 oz)
Boots installed length*	96.0 mm (3.78 in)	95.9 mm (3.78 in)
Dimension of dynamic damper*	257 – 263 mm (10.12 – 10.35 in)	

*: For measuring position, refer to FAX-26, "WHEEL SIDE : Disassembly and Assembly" (Wheel side), FAX-29, "TRANSAXLE SIDE : Disassembly and Assembly" (Transaxle side).

4WD

Item	Standard	
	Wheel side	Transaxle side
Grease quantity	88 – 108 g (3.10 – 3.81 oz)	114 – 124 g (4.02 – 4.37 oz)
Boots installed length*	94.8 mm (3.73 in)	93.2 mm (3.67 in)
Dimension of dynamic damper*	267 – 273 mm (10.51 – 10.75 in)	

*: For measuring position, refer to FAX-26, "WHEEL SIDE : Disassembly and Assembly" (Wheel side), FAX-29, "TRANSAXLE SIDE : Disassembly and Assembly" (Transaxle side).

PRECAUTION

PRECAUTIONS

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

INFOID:0000000006752365

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 “SRS AIR BAG” and “SEAT BELT” of this Service Manual.

The vehicle may be equipped with a passenger air bag deactivation switch. Because no rear seat exists where a rear-facing child restraint can be placed, the switch is designed to turn off the passenger air bag so that a rear-facing child restraint can be used in the front passenger seat. The switch is located in the center of the instrument panel, near the ashtray. When the switch is turned to the ON position, the passenger air bag is enabled and could inflate for certain types of collision. When the switch is turned to the OFF position, the passenger air bag is disabled and will not inflate. A passenger air bag OFF indicator on the instrument panel lights up when the passenger air bag is switched OFF. The driver air bag always remains enabled and is not affected by the passenger air bag deactivation switch.

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 AIR BAG”.**
- **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.**
- **The vehicle may be equipped with a passenger air bag deactivation switch which can be operated by the customer. When the passenger air bag is switched OFF, the passenger air bag is disabled and will not inflate. When the passenger air bag is switched ON, the passenger air bag is enabled and could inflate for certain types of collision. After SRS maintenance or repair, make sure the passenger air bag deactivation switch is in the same position (ON or OFF) as when the vehicle arrived for service.**

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, and wait at least 3 minutes before performing any service.**

Precaution Necessary for Steering Wheel Rotation after Battery Disconnect

INFOID:0000000006752373

NOTE:

- Before removing and installing any control units, first turn the ignition switch to the LOCK position, then disconnect both battery cables.
- After finishing work, confirm that all control unit connectors are connected properly, then re-connect both battery cables.
- Always use CONSULT-III to perform self-diagnosis as a part of each function inspection after finishing work. If a DTC is detected, perform trouble diagnosis according to self-diagnosis results.

For vehicle with steering lock unit, if the battery is disconnected or discharged, the steering wheel will lock and cannot be turned.

If turning the steering wheel is required with the battery disconnected or discharged, follow the operation 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. Turn the ignition switch to ACC position.
   (At this time, the steering lock will be released.)
3. Disconnect both battery cables. The steering lock will remain released with both battery cables disconnected and the steering wheel can be turned.
4. Perform the necessary repair operation.
5. When the repair work is completed, re-connect both battery cables. With the brake pedal released, turn the ignition switch from ACC position to ON position, then to LOCK position. (The steering wheel will lock when the ignition switch is turned to LOCK position.)
6. Perform self-diagnosis check of all control units using CONSULT-III.

Precautions for Drive Shaft

INFOID:0000000006597327

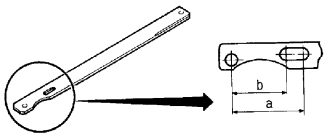
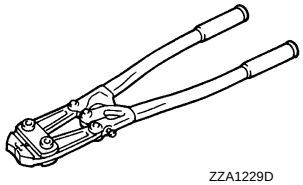
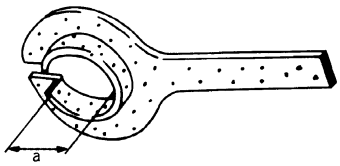
- Observe the following precautions when disassembling and assembling drive shaft.
- Never disassemble joint sub-assembly because it is non-overhaul parts.
- Perform work in a location which is as dust-free as possible.
- Clean the parts, before disassembling and assembling.
- Prevent the entry of foreign objects during disassembly of the service location.
- Reassemble disassembled parts carefully in the correct order. If work is interrupted, a clean cover must be placed over parts.
- Use paper waste. Fabric shop cloths must not be used because of the danger of lint adhering to parts.
- Clean disassembled parts (except for rubber parts) with kerosene which shall be removed by blowing with air or wiping with paper waste.

PREPARATION

PREPARATION

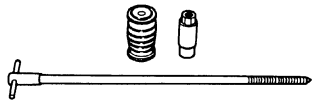
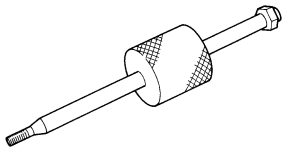
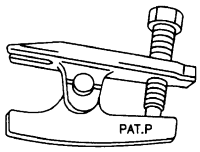
Special Service Tool

INFOID:0000000006597328

Tool number Tool name	Description
KV40104000 Hub lock nut wrench a: 85 mm (3.35 in) b: 65 mm (2.56 in)  ZZA0802D	Removing and Installing wheel hub lock nut.
KV40107300 Boot band crimping tool  ZZA1229D	Installing boot band
KV40107500 Drive shaft attachment  ZZA1230D	Removing drive shaft
KV38107900 Protector a: 32 mm (1.26 in) dia.  PDIA1183J	Installing drive shaft

Commercial Service Tools

INFOID:0000000006597329

Tool name	Description
Drive shaft puller  JPDIG0152ZZ	Remove drive shaft joint sub assembly
Sliding hammer  ZZA0023D	Remove drive shaft
Ball joint remover  NT146	Removing hub bolt

SYMPTOM DIAGNOSIS

NOISE, VIBRATION AND HARSHNESS (NVH) TROUBLESHOOTING

NVH Troubleshooting Chart

INFOID:0000000006597330

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

Reference page			—	FAX-59, "Inspection"	—	FAX-43, "Exploded View"	—	FAX-41, "Inspection"	NVH in FAX and FSU sections	Refer to FRONT AXLE in this chart	NVH in WT section	NVH in WT section	Refer to DRIVE SHAFT in this chart	NVH in BR section	NVH in ST section
Possible cause and SUSPECTED PARTS			Excessive joint angle	Joint sliding resistance	Imbalance	Improper installation, looseness	Parts interference	Wheel bearing damage	FRONT AXLE AND FRONT SUSPENSION	FRONT AXLE	TIRE	ROAD WHEEL	DRIVE SHAFT	BRAKE	STEERING
Symptom	DRIVE SHAFT	Noise	×	×				×	×	×	×	×		×	×
		Shake	×		×			×	×	×	×	×		×	×
	FRONT AXLE	Noise				×	×	×	×		×	×	×	×	×
		Shake				×	×	×	×		×	×	×	×	×
		Vibration				×	×	×	×		×		×		×
		Shimmy				×	×		×		×	×		×	×
		Judder				×			×		×	×		×	×
		Poor quality ride or handling				×	×		×		×	×			

×: Applicable

PERIODIC MAINTENANCE

FRONT WHEEL HUB AND KNUCKLE

Inspection

INFOID:0000000006597331

COMPONENT PART

Check that the mounting conditions (looseness, backlash) of each component and component conditions (wear, damage) are normal.

WHEEL HUB ASSEMBLY (BEARING-INTEGRATED TYPE)

Check the following items, and replace the part if necessary.

- Move wheel hub assembly in the axial direction by hand. Check there is no looseness of wheel bearing.

Axial end play : Refer to FAX-60, "Wheel Bearing".

- Rotate wheel hub assembly and check there is no unusual noise or other irregular conditions. If there is any of irregular conditions, replace wheel hub assembly.

FRONT DRIVE SHAFT

Inspection

INFOID:0000000006597332

Check the following items, and replace the part if necessary.

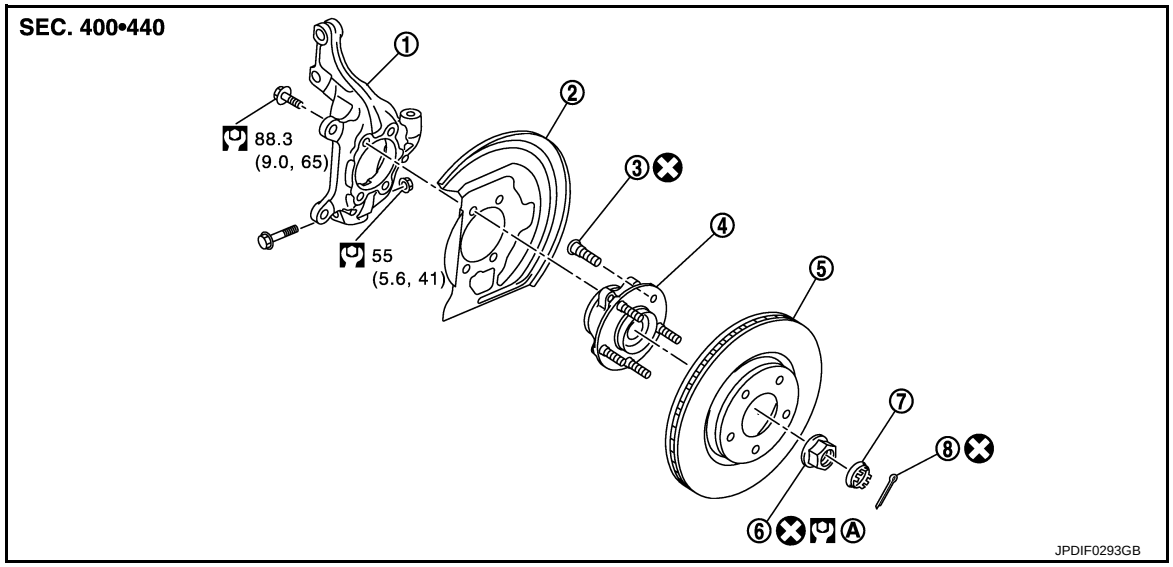
- Check drive shaft mounting point and joint for looseness and other damage.
  CAUTION:
  Replace entire drive shaft assembly when noise or vibration occurs from drive shaft.
- Check boot for cracks and other damage.

REMOVAL AND INSTALLATION

FRONT WHEEL HUB AND KNUCKLE

Exploded View

INFOID:0000000006597333



1. Steering knuckle
2. Splash guard
3. Hub bolt
4. Wheel hub assembly (Bearing-integrated type)
5. Disc rotor
6. Wheel hub lock nut
7. Adjusting cap
8. Cotter pin

A. Tightening must be done following the installation procedure. Refer to FAX-43, "Removal and Installation".

: Always replace after every disassembly.

: N·m (kg-m, ft-lb)

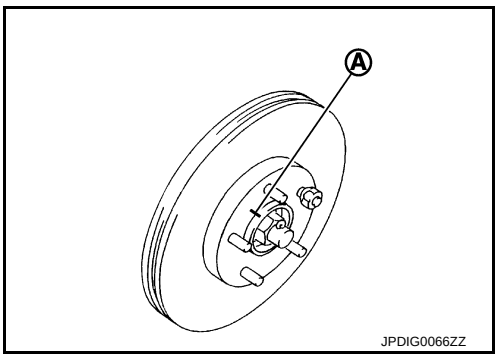
Removal and Installation

INFOID:0000000006597334

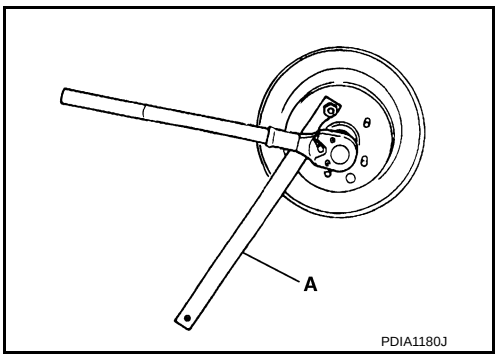
REMOVAL

1. Remove tires. Refer toWT-7, "Removal and Installation".
2. Remove wheel sensor and sensor harness. Refer to BRC-84, "FRONT WHEEL SENSOR : Exploded View" (Without ESP) or BRC-224, "FRONT WHEEL SENSOR : Exploded View" (With ESP).
3. Remove lock plate from strut assembly. Refer to FSU-14, "Removal and Installation".
4. Remove caliper assembly. Hang caliper assembly not to interfere with work. Refer to BR-57, "BRAKE CALIPER ASSEMBLY : Removal and Installation" (LHD) or BR-123, "BRAKE CALIPER ASSEMBLY : Removal and Installation" (RHD).
   CAUTION:
   Never depress brake pedal while brake caliper is removed.
5. Remove disc rotor.
   CAUTION:

- **Put matching marks (A) on the wheel hub assembly and the disc rotor before removing the disc rotor.**
- **Never drop disc rotor.**

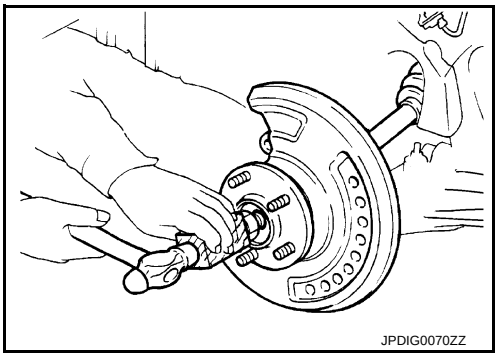


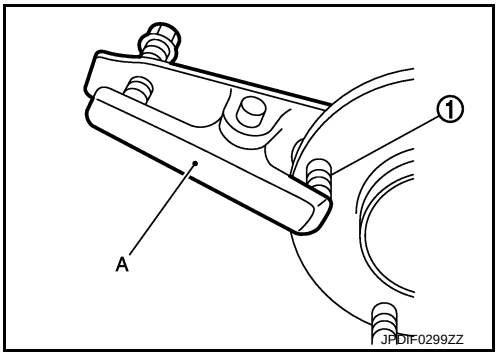
6. Remove cotter pin, and adjusting cap, and then loosen wheel hub lock nut, using a hub lock nut wrench (A) (SST: KV40104000).



7. Patch wheel hub lock nut with a piece of wood. Hammer the wood to disengage wheel hub assembly from drive shaft.
   CAUTION:
   - **Never place drive shaft joint at an extreme angle. Also be careful not to overextend slide joint.**
   - **Never allow drive shaft to hang down without support for joint sub-assembly, shaft and the other parts.**

   NOTE:
   Use suitable puller, if wheel hub assembly and drive shaft cannot be separated even after performing the above procedure.
8. Remove wheel hub lock nut.
9. Remove steering outer socket from steering knuckle. Refer to ST-19, "Removal and Installation".
10. Remove strut assembly from steering knuckle. Refer to FSU-10, "Removal and Installation".
11. Suspend the drive shaft with suitable wire.
12. Remove steering knuckle from transverse link.
13. Remove splash guard from steering knuckle.
14. Remove hub bolts (1) from wheel hub assembly, using the ball joint remover (A) (commercial service tool).
    CAUTION:
    - **Remove hub bolt only when necessary.**
    - **Never hammer the hub bolt to avoid impact to the wheel hub assembly.**
    - **Pull out the hub bolt in a direction perpendicular to the wheel hub assembly.**
15. Perform inspection after removal. Refer to FAX-45, "Inspection".





INSTALLATION

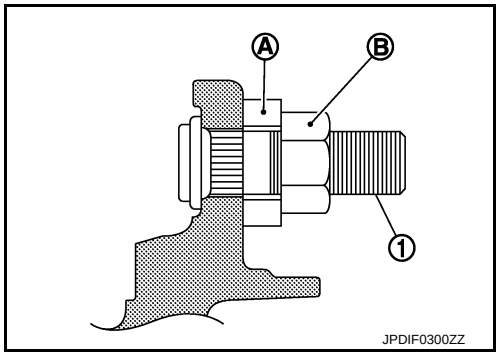
Note the following, and install in the reverse order of the removal.

- Place a washer (A) as shown in the figure to install the hub bolts (1) by using the tightening force of the nut (B).

CAUTION:
- **Check that there is no clearance between wheel hub assembly, and hub bolt.**
- **Never reuse hub bolt.**

- Never reuse steering knuckle and transverse link fixing nut.
- Clean the matching surface of wheel hub lock nut and wheel hub assembly.

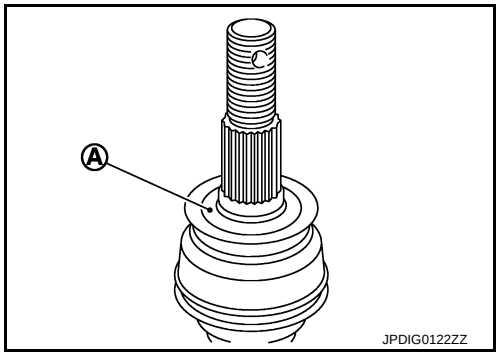
CAUTION:
Never apply lubricating oil to these matching surface.



- Clean the matching surface of drive shaft, wheel hub assembly. And then apply paste [service parts (440037S000)] to surface (A) of joint sub-assembly of drive shaft.

CAUTION:
Apply paste to cover entire flat surface of joint sub-assembly of drive shaft.

Amount paste : 1.0 – 3.0 g (0.04 – 0.10 oz)



- Use the following torque range for tightening the wheel hub lock nut.

: 180 – 185 N·m (18.4 – 18.8 kg-m, 133 – 136 ft-lb)

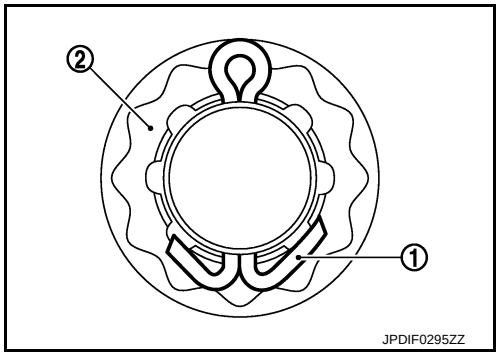
CAUTION:
- **Since the drive shaft is assembled by press-fitting, use the tightening torque range for the wheel hub lock nut.**
- **Be sure to use torque wrench to tighten the wheel hub lock nut. Never use a power tool.**
- **Never reuse wheel hub lock nut.**

NOTE:
Wheel hub lock nut tightening torque does not over torque for avoiding axle noise, and does not less than torque for avoiding looseness.

- Align the matching marks that have been made during removal when reusing the disc rotor.
- When installing a cotter pin (1) and adjusting cap (2), securely bend the basal portion to prevent rattles.

CAUTION:
Never reuse cotter pin.

- Perform the final tightening of each of parts under unladen conditions, which were removed when removing wheel hub assembly and axle housing.
- Perform inspection after installation. Refer to FAX-45, "Inspection".



Inspection

INFOID:0000000006597335

INSPECTION AFTER REMOVAL

Check the following items, and replace the part if necessary.
- Check components for deformation, cracks, and other damage.
- Check boots of transverse link and steering outer socket ball joint for breakage, axial end play, and swing torque. Refer to FSU-14, "Inspection" and ST-21, "Inspection".

INSPECTION AFTER INSTALLATION

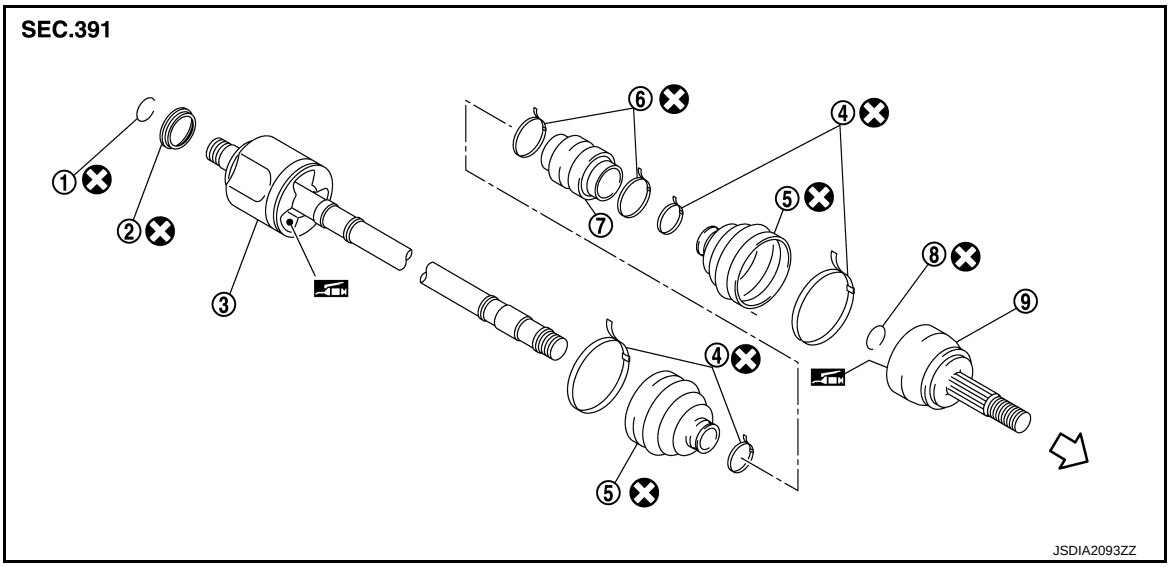
1. Check wheel sensor harness for proper connection. Refer to BRC-84, "FRONT WHEEL SENSOR : Exploded View" (Without ESP) or BRC-224, "FRONT WHEEL SENSOR : Exploded View" (With ESP).
2. Check the wheel alignment. Refer to FSU-7, "Inspection".

FRONT DRIVE SHAFT BOOT

Exploded View

INFOID:0000000006597336

LEFT SIDE



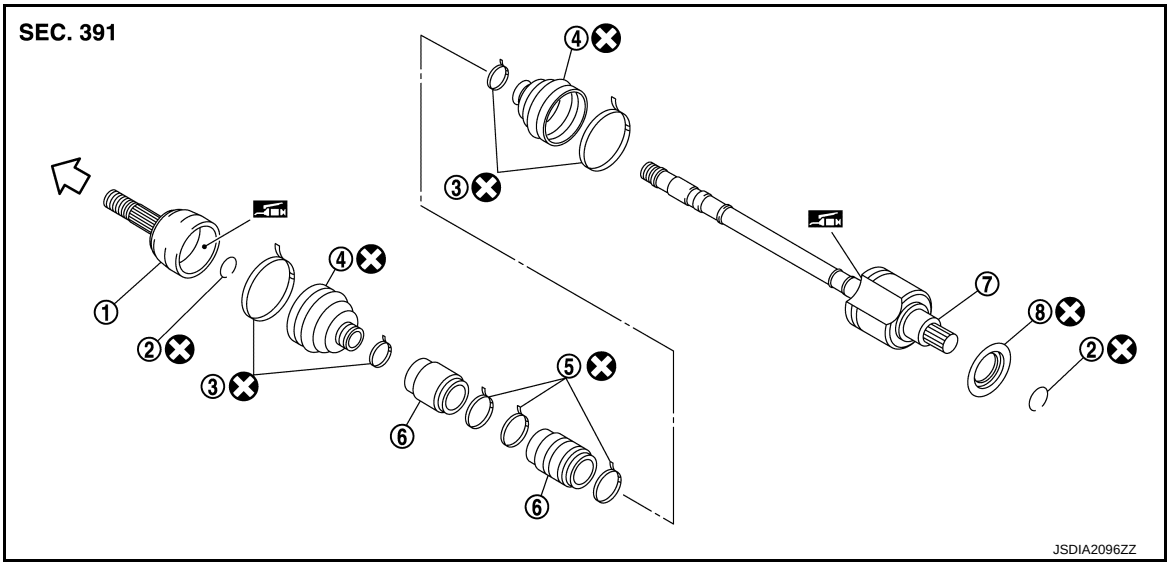
1. Circular clip
2. Dust shield
3. Housing assembly
4. Boot band
5. Boot
6. Damper band
7. Dynamic damper
8. Circular clip
9. Joint sub-assembly

⇦ : Wheel side

: Fill NISSAN Genuine grease or equivalent.

⊗: Always replace after every disassembly.

RIGHT SIDE



1. Joint sub-assembly
2. Circular clip
3. Boot band
4. Boot
5. Band
6. Dynamic damper
7. Housing assembly
8. Dust shield

⇦ : Wheel side

: Fill NISSAN Genuine grease or equivalent.

: Always replace after every disassembly.

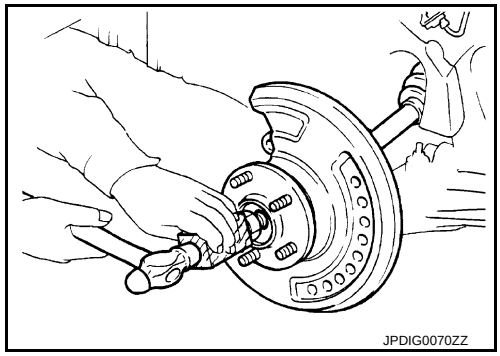
WHEEL SIDE

WHEEL SIDE : Removal and Installation

INFOID:0000000006597337

REMOVAL

1. Remove tires. Refer to WT-7, "Removal and Installation".
2. Remove wheel sensor and sensor harness. Refer to BRC-84, "FRONT WHEEL SENSOR : Exploded View" (Without ESP) or BRC-224, "FRONT WHEEL SENSOR : Exploded View" (With ESP).
3. Remove lock plate from strut assembly. Refer to FSU-10, "Removal and Installation".
4. Remove caliper assembly. Hang caliper assembly not to interfere with work. Refer to BR-57, "BRAKE CALIPER ASSEMBLY : Removal and Installation" (LHD) or BR-123, "BRAKE CALIPER ASSEMBLY : Removal and Installation" (RHD).
   CAUTION:
   Never depress brake pedal while brake caliper is removed.
5. Remove disc rotor. Refer to FAX-43, "Removal and Installation".
6. Remove cotter pin, and then loosen wheel hub lock nut. Refer to FAX-43, "Removal and Installation".
7. Patch wheel hub lock nut with a piece of wood. Hammer the wood to disengage wheel hub assembly from drive shaft.
   NOTE:
   Use suitable puller, if wheel hub assembly and drive shaft cannot be separated even after performing the above procedure.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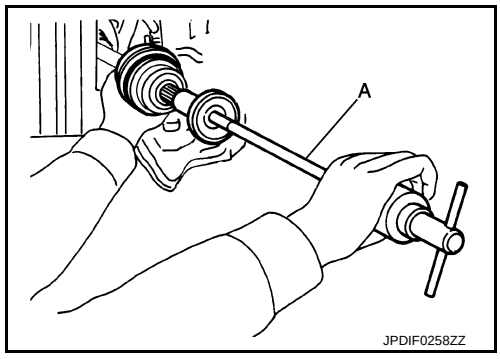
8. Remove wheel hub lock nut. Refer to FAX-43, "Removal and Installation".
9. Remove strut assembly from steering knuckle. Refer to FAX-43, "Removal and Installation".
10. Remove drive shaft from wheel hub assembly.
    CAUTION:
    - **Never place drive shaft joint at an extreme angle. Also be careful not to overextend slide joint.**
    - **Never allow drive shaft to hang down without support for joint sub-assembly, shaft and the other parts.**
11. Remove boot bands, and then remove boot from joint sub-assembly.
12. Screw drive shaft puller (A) (commercial service tool) into joint sub-assembly screw part to a length of 30 mm (1.18 in) or more. Support drive shaft with one hand and pull out joint sub-assembly from shaft.
    CAUTION:
    - **Align drive shaft puller and drive shaft and remove them by pulling firmly and uniformly.**
    - **If joint sub-assembly cannot be pulled out, try after removing drive shaft from vehicle. Refer to FAX-54, "WHEEL SIDE : Disassembly and Assembly".**



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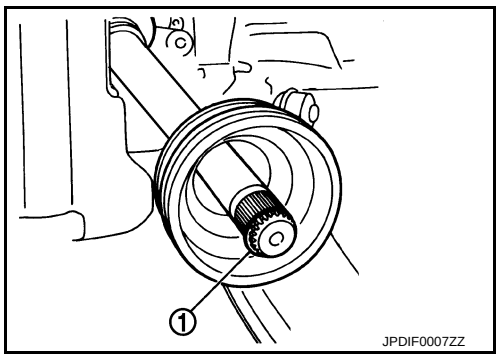
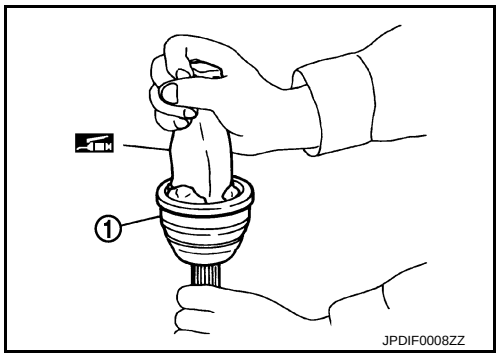
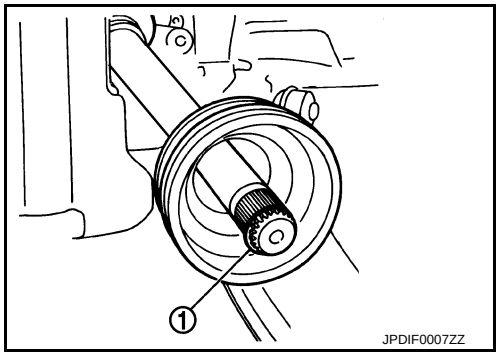
13. Remove circular clip (1) from shaft.
14. Remove boot from shaft.



INSTALLATION

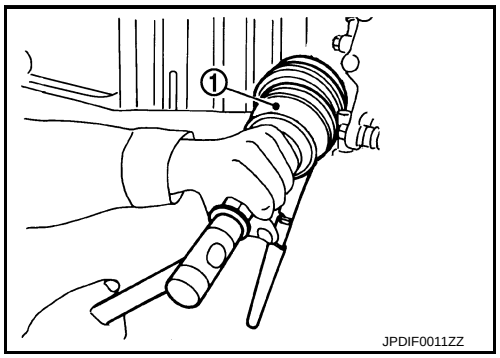
1. Clean the old grease on joint sub-assembly with paper waste.
2. Fill serration slot joint sub-assembly (1) with NISSAN genuine grease or equivalent until the serration slot and ball groove become full to the brim.
   CAUTION:
   After applying grease, use a paper waste to wipe off old grease that has oozed out.
3. Install boot and boot bands to shaft.
   CAUTION:
   - **Wrap serration on shaft with tape to protect the boot from damage.**
   - **Never reuse boot and boot band.**
4. Remove the tape wrapped around the serration on shaft.
5. Position the circular clip (1) on groove at the shaft edge.
   CAUTION:
   Never reuse circular clip.
   NOTE:
   Drive joint inserter is recommended when installing circular clip.
6. Align both center axles of the shaft edge and joint sub-assembly. Then assemble shaft with joint sub-assembly holding circular clip.



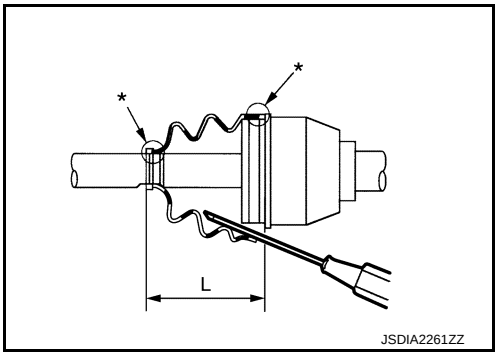


7. Install joint sub-assembly (1) to shaft using plastic hammer.
   CAUTION:
   - **Check circular clip is properly positioned on groove of the joint sub-assembly.**
   - **Confirm that joint sub-assembly is correctly engaged while rotating drive shaft.**
8. Apply the specified amount of grease into the boot inside from large diameter side of boot.

Grease amount : Refer to FAX-60, "Drive Shaft".



9. Install the boot securely into grooves (indicated by "*" marks) shown in the figure.
CAUTION:
If grease adheres to the boot mounting surface (indicated by "*" marks) on the shaft or joint sub-assembly, boot may be removed. Remove all grease from the boot mounting surface.

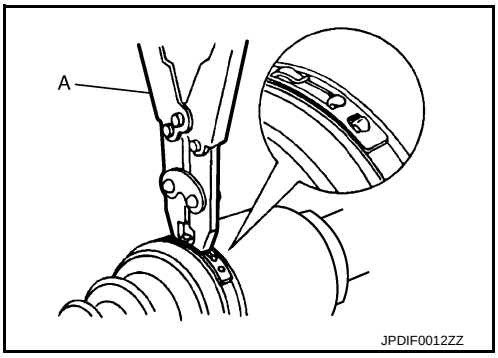


10. To prevent the deformation of the boot, adjust the boot installation length (L) to the specified value shown below by inserting the suitable tool into inside of the boot from the large diameter side of the boot and discharging the inside air.

L : Refer to FAX-60, "Drive Shaft".

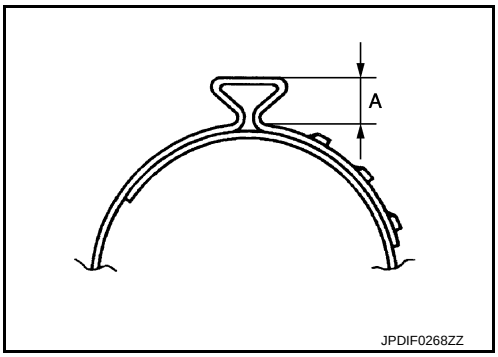
CAUTION:
- **If the boot installation length exceeds the standard, it may cause breakage of the boot.**
- **Be careful not to touch the inside of the boot with a tip of tool.**

11. Secure the large and small ends of the boot with boot bands using the boot band crimping tool (A) (SST: KV40107300).
CAUTION:
- **Never reuse boot band.**



- **Secure boot band so that dimension (A) meets the specification as shown in the figure.**

A : 5.0 mm (0.197 in) or less.

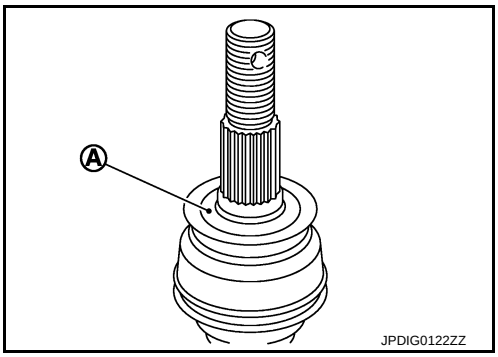


12. Check that displacement does not occur when boot is rotated with the joint sub-assembly and shaft fixed.
CAUTION:
- **Reinstall them using boot bands when boot installation positions become incorrect.**
- **Never reuse boot band.**

13. Clean the matching surface of wheel hub lock nut and wheel hub assembly.
CAUTION:
Never apply lubricating oil to these matching surface.

14. Clean the matching surface of drive shaft, wheel hub assembly. And then apply paste [service parts (440037S000)] to surface (A) of joint sub-assembly of drive shaft.
CAUTION:
Apply paste to cover entire flat surface of joint sub-assembly of drive shaft.

Amount paste : 1.0 – 3.0 g (0.04 – 0.10 oz)



15. Insert drive shaft to wheel hub assembly, and then temporarily tighten wheel hub lock nut.
CAUTION:

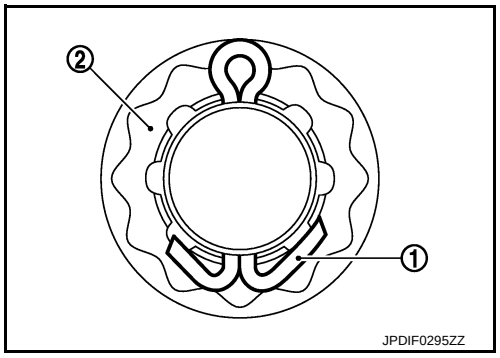
Be sure to use torque wrench to tighten the wheel hub lock nut. Never use a power tool.

16. Install strut assembly to steering knuckle. Refer to FSU-10, "Removal and Installation".
17. Install disc rotor. Refer to FAX-43, "Removal and Installation".
18. Install caliper assembly to steering knuckle. Refer to BR-57, "BRAKE CALIPER ASSEMBLY : Removal and Installation" (LHD) or BR-123, "BRAKE CALIPER ASSEMBLY : Removal and Installation" (RHD).
19. Install lock plate to strut assembly. Refer to FSU-10, "Removal and Installation".
20. Install wheel sensor and sensor harness. Refer to BRC-84, "FRONT WHEEL SENSOR : Exploded View" (Without ESP) or BRC-224, "FRONT WHEEL SENSOR : Exploded View" (With ESP).
21. Use the following torque range for tightening the wheel hub lock nut.

    : 180 – 185 N·m (18.4 – 18.8 kg-m, 133 – 136 ft-lb)

    CAUTION:
    - **Since the drive shaft is assembled by press-fitting, use the tightening torque range for the wheel hub lock nut.**
    - **Be sure to use torque wrench to tighten the wheel hub lock nut. Never use a power tool.**
    - **Never reuse wheel hub lock nut.**

    NOTE:
    Wheel hub lock nut tightening torque does not over torque for avoiding axle noise, and does not less than torque for avoiding looseness.
22. When installing a cotter pin (1) and adjusting cap (2), securely bend the basal portion to prevent rattles.
    CAUTION:
    Never reuse cotter pin.
23. Install tires. Refer to WT-7, "Removal and Installation".
24. Perform inspection after installation. Refer to FAX-51, "Inspection".



TRANSAXLE SIDE

TRANSAXLE SIDE : Removal and Installation

INFOID:0000000006597338

Remove boot after drive shaft is removed from the vehicle.
- For drive shaft removal and installation, refer to FAX-53, "Removal and Installation".
- For drive shaft disassembly and assembly, refer to FAX-56, "TRANSAXLE SIDE : Disassembly and Assembly".

Inspection

INFOID:0000000006597339

INSPECTION AFTER INSTALLATION

1. Check wheel sensor harness for proper connection. Refer to BRC-84, "FRONT WHEEL SENSOR : Exploded View" (Without ESP) or BRC-224, "FRONT WHEEL SENSOR : Exploded View" (With ESP).
2. Check the wheel alignment. Refer to FSU-7, "Inspection".

FRONT DRIVE SHAFT

Exploded View

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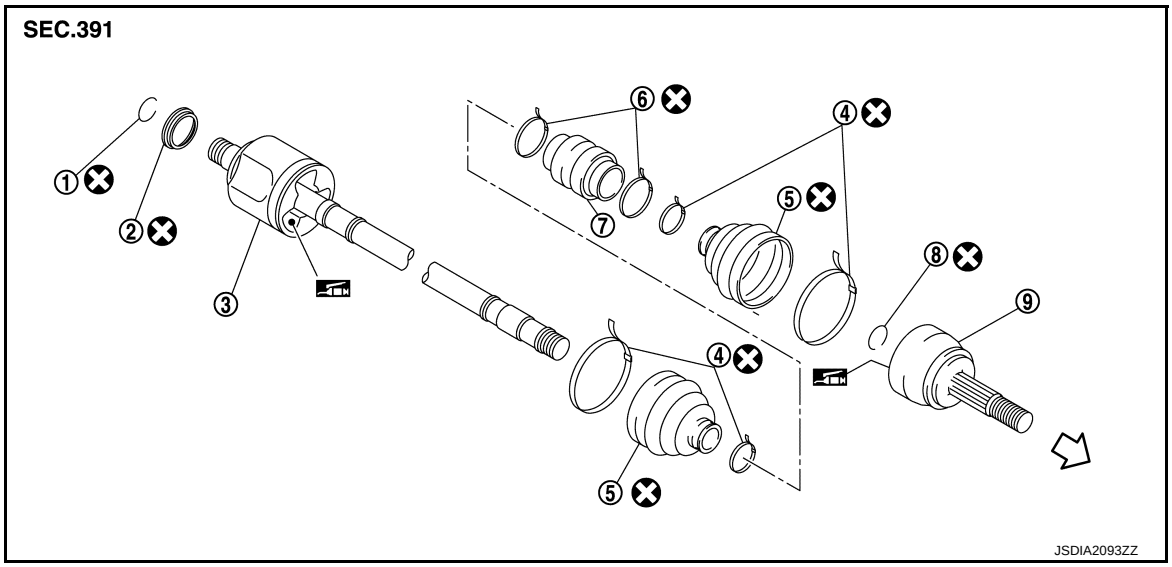
LEFT SIDE



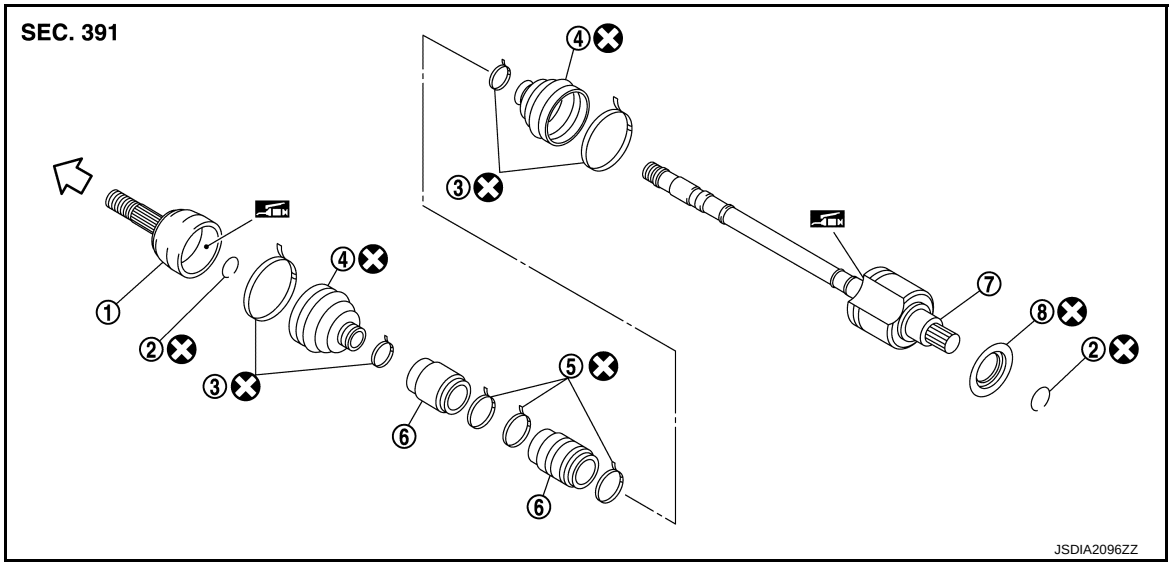
1. Circular clip
2. Dust shield
3. Housing assembly
4. Boot band
5. Boot
6. Damper band
7. Dynamic damper
8. Circular clip
9. Joint sub-assembly

⇦ : Wheel side

: Fill NISSAN Genuine grease or equivalent.

: Always replace after every disassembly.

RIGHT SIDE



1. Joint sub-assembly
2. Circular clip
3. Boot band
4. Boot
5. Band
6. Dynamic damper
7. Housing assembly
8. Dust shield

⇦ : Wheel side

: Fill NISSAN Genuine grease or equivalent.

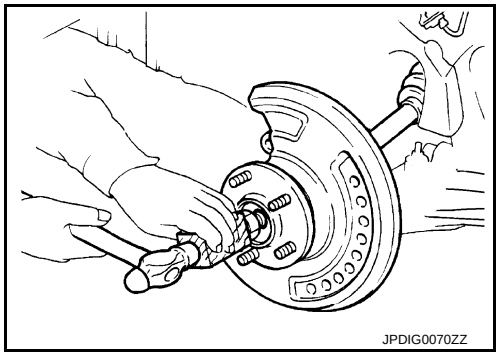
: Always replace after every disassembly.

Removal and Installation

INFOID:0000000006597341

REMOVAL

1. Remove tires. Refer to WT-7, "Removal and Installation".
2. Remove wheel sensor and sensor harness. Refer to BRC-84, "FRONT WHEEL SENSOR : Exploded View" (Without ESP) or BRC-224, "FRONT WHEEL SENSOR : Exploded View" (With ESP).
3. Remove lock plate from strut assembly. Refer to FSU-10, "Removal and Installation".
4. Remove caliper assembly. Hang caliper assembly not to interfere with work. Refer to BR-57, "BRAKE CALIPER ASSEMBLY : Removal and Installation" (LHD) or BR-123, "BRAKE CALIPER ASSEMBLY : Removal and Installation" (RHD).
   CAUTION:
   Never depress brake pedal while brake caliper is removed.
5. Remove disc rotor. Refer to FAX-43, "Removal and Installation".
6. Remove cotter pin, and then loosen wheel hub lock nut. Refer to FAX-43, "Removal and Installation".
7. Patch wheel hub lock nut with a piece of wood. Hammer the wood to disengage wheel hub assembly from drive shaft.
   NOTE:
   Use suitable puller, if wheel hub assembly and drive shaft cannot be separated even after performing the above procedure.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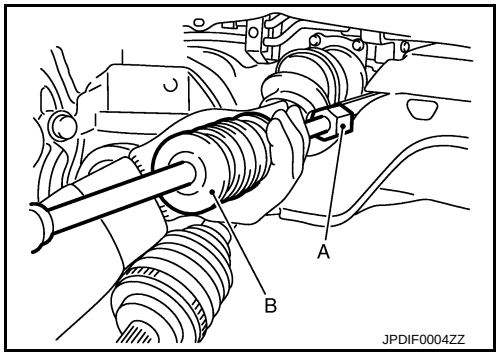
8. Remove wheel hub lock nut. Refer to FAX-43, "Removal and Installation".
9. Remove transverse link from steering knuckle. Refer to FAX-43, "Removal and Installation".
10. Remove shaft assembly from wheel hub assembly.
    CAUTION:
    - **Never place drive shaft joint at an extreme angle. Also be careful not to overextend slide joint.**
    - **Never allow drive shaft to hang down without support for joint sub-assembly, shaft and the other parts.**
11. Use the drive shaft attachment (A) (SST: KV40107500) and a sliding hammer (B) (commercial service tool) while inserting tip of the drive shaft attachment between shaft and transaxle assembly, and then remove drive shaft from transaxle assembly.
    CAUTION:
    - **Never place drive shaft joint at an extreme angle when removing drive shaft. Also be careful not to overextend slide joint.**
    - **Confirm that the circular clip is attached to the drive shaft.**



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12. Perform inspection after removal. Refer to FAX-59, "Inspection".

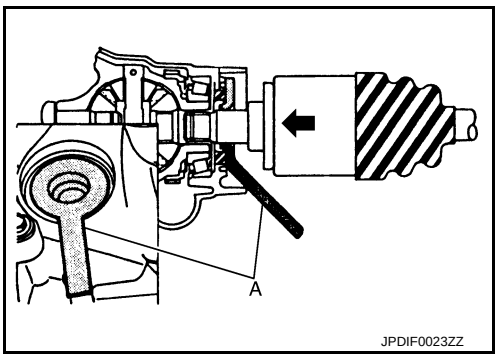
INSTALLATION

Note the following, and install in the reverse order of removal.

Transaxle Side

- Always replace differential side oil seal with new one when installing drive shaft. Refer to TM-23, "Removal and Installation" (5M/T) or TM-498, "Removal and Installation" (CVT).

- Place the protector (A) (SST: KV38107900) onto transaxle assembly to prevent damage to the oil seal while inserting drive shaft. Slide drive shaft sliding joint and tap with a hammer to install securely.
  CAUTION:
  Check that circular clip is completely engaged.
- Perform inspection after removal. Refer to FAX-59, "Inspection".

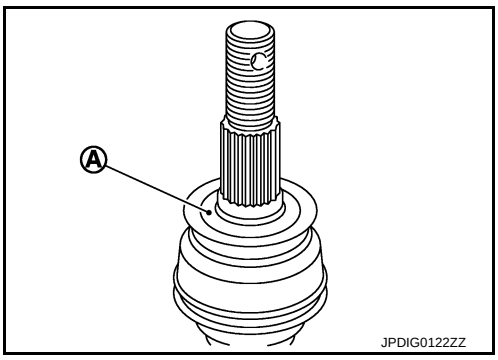


Wheel Hub Side

- Clean the matching surface of wheel hub lock nut and wheel hub assembly.
  CAUTION:
  Never apply lubricating oil to these matching surface.
- Clean the matching surface of drive shaft and wheel hub assembly. And then apply paste [service parts (440037S000)] to surface (A) of joint sub-assembly of drive shaft.
  CAUTION:
  Apply paste to cover entire flat surface of joint sub-assembly of drive shaft.

  Amount paste : 1.0 – 3.0 g (0.04 – 0.10 oz)
- Use the following torque range for tightening the wheel hub lock nut.

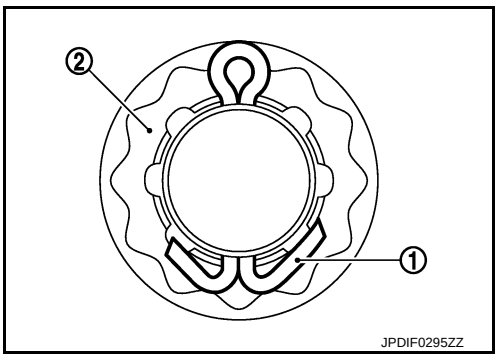
  : 180 – 185 N·m (18.4 – 18.8 kg-m, 133 – 136 ft-lb)



CAUTION:
- **Since the drive shaft is assembled by press-fitting, use the tightening torque range for the wheel hub lock nut.**
- **Be sure to use torque wrench to tighten the wheel hub lock nut. Never use a power tool.**
- **Never reuse wheel hub lock nut.**

NOTE:
Wheel hub lock nut tightening torque does not over torque for avoiding axle noise, and does not less than torque for avoiding looseness.

- Align the matching marks that have been made during removal when reusing the disc rotor.
- When installing a cotter pin (1) and adjusting cap (2), securely bend the basal portion to prevent rattles.
  CAUTION:
  Never reuse cotter pin.
- Perform the final tightening of each of parts under unladen conditions, which were removed when removing wheel hub assembly and axle housing.
- Perform inspection after installation. Refer to FAX-59, "Inspection".



WHEEL SIDE

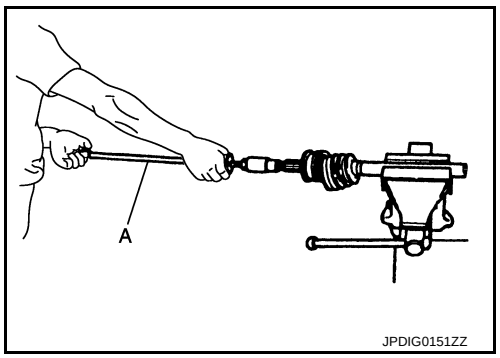
WHEEL SIDE : Disassembly and Assembly

INFOID:0000000006597342

DISASSEMBLY

1. Fix shaft with a vise.
   CAUTION:
   Protect shaft when fixing with a vise using aluminum or copper plates.
2. Remove boot bands, and then remove boot from joint sub-assembly.

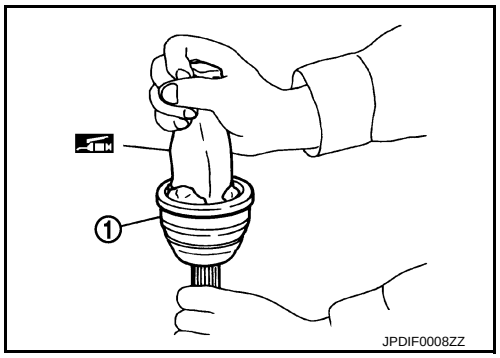
3. Screw drive shaft puller (A) (commercial service tool) into joint sub-assembly screw part to a length of 30 mm (1.18 in) or more. Support drive shaft with one hand and pull out joint sub-assembly from shaft.
CAUTION:
- **Align drive shaft puller and drive shaft and remove them by pulling firmly and uniformly.**
- **If joint sub-assembly cannot be removed after five or more unsuccessful attempts, replace shaft and joint sub assembly as a set.**



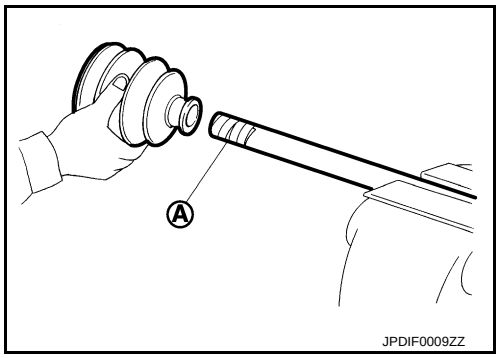
4. Remove circular clip from shaft.
5. Remove boot from shaft.
6. Perform inspection after disassembly. Refer to FAX-59, "Inspection".

ASSEMBLY

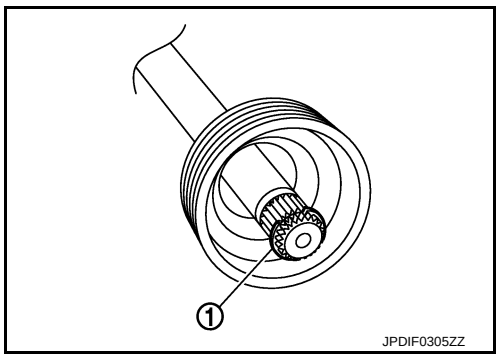
1. Clean the old grease on joint sub-assembly with paper waste.
2. Fill serration slot joint sub-assembly (1) with NISSAN genuine grease or equivalent until the serration slot and ball groove become full to the brim.
CAUTION:
After applying grease, use a paper waste to wipe off old grease that has oozed out.



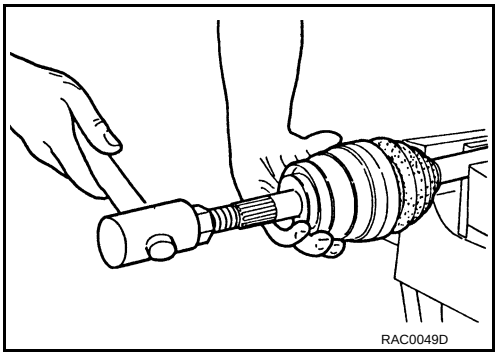
3. Install boot and boot bands to shaft.
CAUTION:
- **Wrap serration on shaft with tape (A) to protect the boot from damage.**
- **Never reuse boot and boot band.**
4. Remove the tape wrapped around the serration on shaft.



5. Position the circular clip (1) on groove at the shaft edge.
CAUTION:
Never reuse circular clip.
NOTE:
Drive joint inserter is recommended when installing circular clip.
6. Align both center axles of the shaft edge and joint sub-assembly. Then assemble shaft with joint sub-assembly holding circular clip.



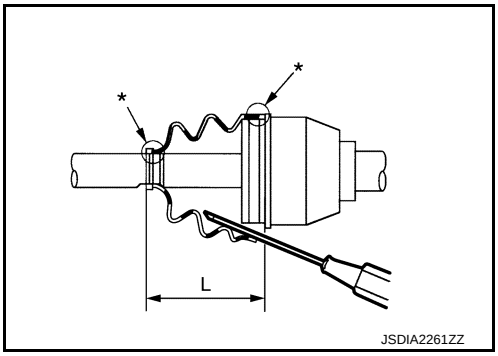
7. Install joint sub-assembly to shaft using plastic hammer.
CAUTION:
- **Check circular clip is properly positioned on groove of the joint sub-assembly.**
- **Confirm that joint sub-assembly is correctly engaged while rotating drive shaft.**


RAC0049D

8. Apply the specified amount of grease into the boot inside from large diameter side of boot.

Grease amount : Refer to FAX-60, "Drive Shaft".

9. Install the boot securely into grooves (indicated by "*" marks) shown in the figure.
CAUTION:
If grease adheres to the boot mounting surface (indicated by "*" marks) on the shaft or joint sub-assembly, boot may be removed. Remove all grease from the boot mounting surface.



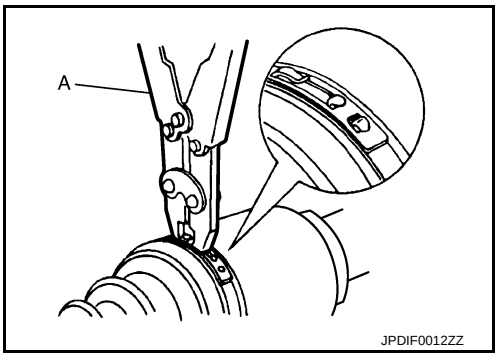
JSDIA2261ZZ

10. To prevent the deformation of the boot, adjust the boot installation length (L) to the specified value shown below by inserting the suitable tool into inside of the boot from the large diameter side of the boot and discharging the inside air.

L : Refer to FAX-60, "Drive Shaft".

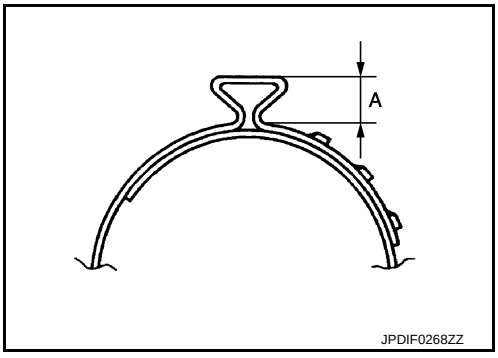
CAUTION:
- **If the boot installation length exceeds the standard, it may cause breakage of the boot.**
- **Be careful not to touch the inside of the boot with a tip of tool.**

11. Secure the large and small ends of the boot with boot bands using the boot band crimping tool (A) (SST: KV40107300).
CAUTION:
- **Never reuse boot band.**



JPDIF0012ZZ

- **Secure boot band so that dimension (A) meets the specification as shown in the figure.**



JPDIF0268ZZ

A : 5.0 mm (0.197 in) or less.

12. Check that displacement does not occur when boot is rotated with the joint sub-assembly and shaft fixed.
CAUTION:
- **Reinstall them using boot bands when boot installation positions become incorrect.**
- **Never reuse boot band.**

TRANSAXLE SIDE

TRANSAXLE SIDE : Disassembly and Assembly

INFOID:0000000006597343

DISASSEMBLY

1. Fix shaft with a vise.

CAUTION:
Protect shaft using aluminum or copper plates when fixing with a vise.

2. Remove wheel side boot. Refer to FAX-48, "WHEEL SIDE : Removal and Installation".
3. Remove dynamic damper as per the following instructions:

a. Remove boot band.
b. Remove dynamic damper from housing assembly.

4. Remove boot bands, then remove boot from housing assembly.
5. Remove circular clip from housing assembly.
6. Remove dust shield from housing assembly.
7. Perform inspection after disassembly. Refer to FAX-59, "Inspection".

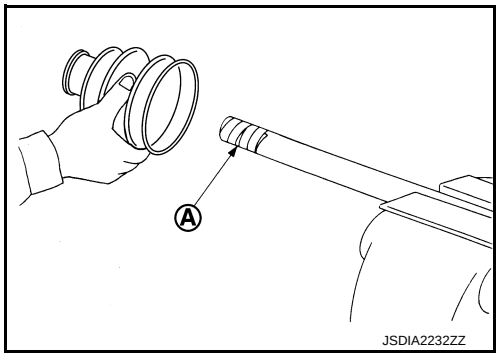
ASSEMBLY

1. Clean the old grease on housing assembly with paper waste.
2. Install boot and boot bands to housing assembly.

CAUTION:
- **Wrap serration on housing assembly with tape (A) to protect the boot from damage.**
- **Never reuse boot and boot band.**

3. Remove the tape wrapped around the serration on housing assembly.
4. Apply NISSAN genuine grease (refer to parts catalog) to housing assembly.

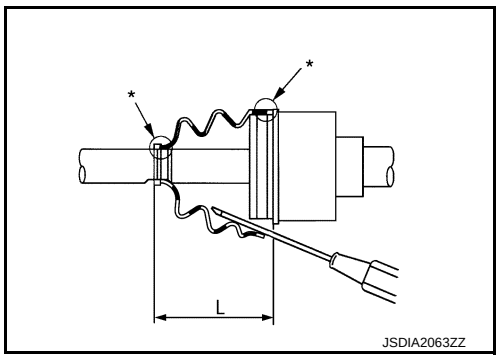
Grease amount : Refer to FAX-60, "Drive Shaft".



5. Install boot securely into grooves (indicated by “*” marks) shown in the figure.

CAUTION:
If grease adheres to the boot mounting surface (with “*” marks) on shaft or housing, boot may be removed. Remove all grease from the surface.

6. To prevent the deformation of the boot, adjust the boot installation length to the value shown below (L) by inserting the suitable tool into the inside of boot from the large diameter side of boot and discharging inside air.



L : Refer to FAX-60, "Drive Shaft".

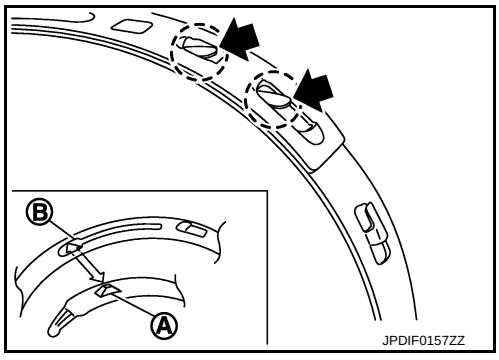
CAUTION:
- **If the boot installation length exceeds the standard, it may cause breakage of the boot.**
- **Be careful not to touch the inside of the boot with the tip of tool.**

7. Install boot bands securely.

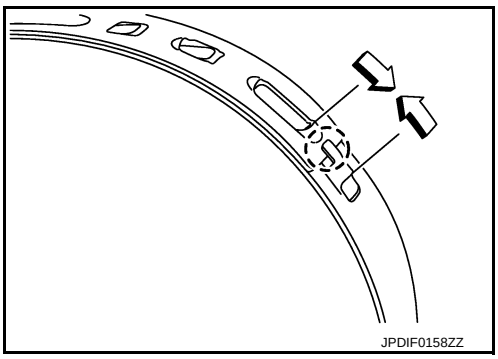
CAUTION:
Never reuse boot bands.

For low profile type band

1. Put boot band in the groove on drive shaft boot. Then fit pawls (⬅) into holes to temporary installation.
NOTE:
For the large diameter side, fit projection (A) and guide slit (B) at first.



2. Pinch projection on the band with suitable pliers to tighten band.
3. Insert the tip of band into the lower part of pawl (marked with dotted circle) as shown in the figure.

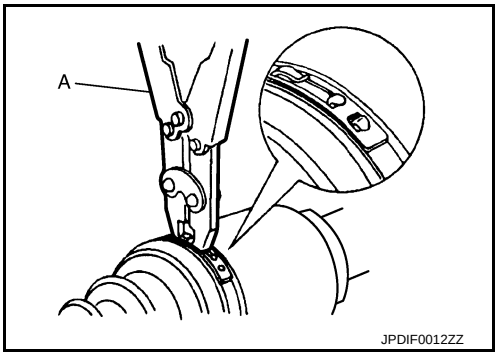


For crimping type band

- Secure the large and small ends of the boot with boot bands using the boot band crimping tool (A) (SST: KV40107300).

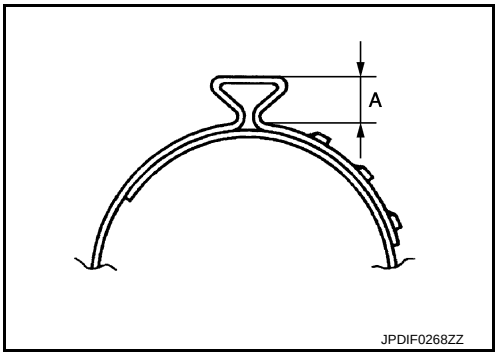
CAUTION:

- **Never reuse boot band.**



- **Secure boot band so that dimension (A) meets the specification as shown in the figure.**

A : 5.0 mm (0.197 in) or less.



8. Check that displacement does not occur when boot is rotated with the housing assembly fixed.

CAUTION:

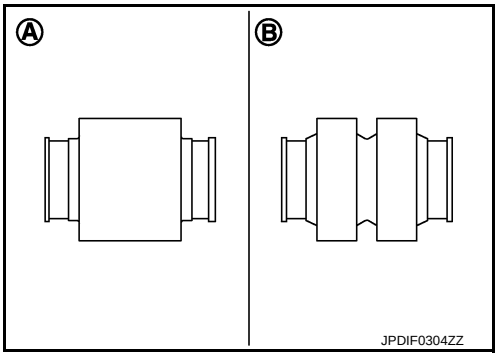
- **Reinstall them using boot bands when boot installation positions become incorrect.**
- **Never reuse boot band.**

9. Install dynamic damper, follow the procedure described below.

a. Install dynamic damper to the shaft of housing assembly.

- For installation position by shape, refer to the table below.

Drive shaft	Wheel side	Transaxle side
Left side	B	
Right side	A	B



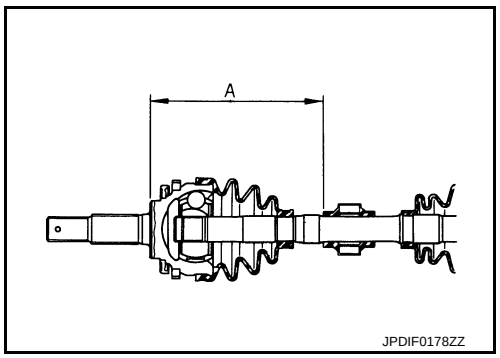
NOTE:
Left side has 1 dynamic damper and 2 on the right side.

b. Install dynamic damper as shown in the figure and fix with band.

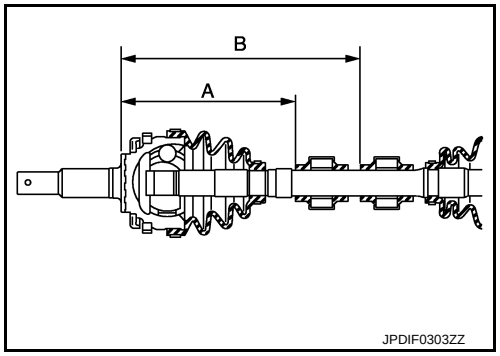
CAUTION:
Never reuse boot band.

Dynamic damper installation position: : FAX-60, "Drive Shaft".

- Left side



- Right side



10. Install dust shield to housing assembly.
CAUTION:
Never reuse dust shield.
11. Install circular clip to housing.
CAUTION:
Never reuse circular clip.
12. Install boot to the wheel side. Refer to FAX-54, "WHEEL SIDE : Disassembly and Assembly".

Inspection

INFOID:0000000006597344

INSPECTION AFTER REMOVAL

Check the following items, and replace the part if necessary.
- Move joint up/down, left/right, and in the axial directions. Check for motion that is not smooth and for significant looseness.
- Check boot for cracks, damage, and leakage of grease.

INSPECTION AFTER DISASSEMBLY

Check the following items, and replace the part if necessary.

Joint Sub-Assembly

Check the following:
- Joint sub-assembly for rough rotation and excessive axial looseness.
- The inside of the joint sub-assembly for entry of foreign material.
- Joint sub-assembly for compression scars, cracks, and fractures inside of joint sub-assembly.

Replace joint sub-assembly if there are any non-standard conditions of components.

Housing assembly
- Replace housing assembly if there is scratching or wear of housing roller contact surface or spider roller contact surface.
- Check shaft for runout, cracks, or other damage.

Dynamic Damper

Check damper for cracks or wear.

INSPECTION AFTER INSTALLATION

1. Check wheel sensor harness for proper connection. Refer to BRC-84, "FRONT WHEEL SENSOR : Exploded View" (Without ESP) or BRC-224, "FRONT WHEEL SENSOR : Exploded View" (With ESP).
2. Check the wheel alignment. Refer to FSU-7, "Inspection".

SERVICE DATA AND SPECIFICATIONS (SDS)

SERVICE DATA AND SPECIFICATIONS (SDS)

Wheel Bearing

INFOID:0000000006608698

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

Drive Shaft

INFOID:0000000006608699

M/T

Item			Standard	
			Wheel side	Transaxle side
Grease quantity			115 – 135 g (4.06 – 4.76 oz)	114 – 124 g (4.02 – 4.37 oz)
Boots installed length*			94.0 mm (3.70 in)	93.2 mm (3.67 in)
Dimension of dynamic damper*	Left side	Dimension A	263 – 269 mm (10.35 – 10.59 in)	
	Right side	Dimension A	364 – 370 mm (14.33 – 14.57 in)	—
		Dimension B	—	480 – 486 mm (18.90 – 19.13 in)

*: For measuring position, refer to FAX-54, "WHEEL SIDE : Disassembly and Assembly" (Wheel side), FAX-56, "TRANSAXLE SIDE : Disassembly and Assembly" (Transaxle side).

CVT

Item			Standard	
			Wheel side	Transaxle side
Grease quantity			80 – 100 g (2.82 – 3.53 oz)	102.3 – 115.8 g (3.61 – 4.08 oz)
Boots installed length*			91.0 mm (3.58 in)	92.7 mm (3.65 in)
Dimension of dynamic damper*	Left side	Dimension A	278 – 284 mm (10.94 – 11.18 in)	
	Right side	Dimension A	364 – 370 mm (14.33 – 14.57 in)	—
		Dimension B	—	489 – 495 mm (19.25 – 19.49 in)

*: For measuring position, refer to FAX-54, "WHEEL SIDE : Disassembly and Assembly" (Wheel side), FAX-56, "TRANSAXLE SIDE : Disassembly and Assembly" (Transaxle side).

PRECAUTION

PRECAUTIONS

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

INFOID:0000000006752366

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 “SRS AIR BAG” and “SEAT BELT” of this Service Manual.

The vehicle may be equipped with a passenger air bag deactivation switch. Because no rear seat exists where a rear-facing child restraint can be placed, the switch is designed to turn off the passenger air bag so that a rear-facing child restraint can be used in the front passenger seat. The switch is located in the center of the instrument panel, near the ashtray. When the switch is turned to the ON position, the passenger air bag is enabled and could inflate for certain types of collision. When the switch is turned to the OFF position, the passenger air bag is disabled and will not inflate. A passenger air bag OFF indicator on the instrument panel lights up when the passenger air bag is switched OFF. The driver air bag always remains enabled and is not affected by the passenger air bag deactivation switch.

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 AIR BAG”.**
- **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.**
- **The vehicle may be equipped with a passenger air bag deactivation switch which can be operated by the customer. When the passenger air bag is switched OFF, the passenger air bag is disabled and will not inflate. When the passenger air bag is switched ON, the passenger air bag is enabled and could inflate for certain types of collision. After SRS maintenance or repair, make sure the passenger air bag deactivation switch is in the same position (ON or OFF) as when the vehicle arrived for service.**

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, and wait at least 3 minutes before performing any service.**

Precaution Necessary for Steering Wheel Rotation after Battery Disconnect

INFOID:0000000006752378

NOTE:

- Before removing and installing any control units, first turn the ignition switch to the LOCK position, then disconnect both battery cables.
- After finishing work, confirm that all control unit connectors are connected properly, then re-connect both battery cables.
- Always use CONSULT-III to perform self-diagnosis as a part of each function inspection after finishing work. If a DTC is detected, perform trouble diagnosis according to self-diagnosis results.

For vehicle with steering lock unit, if the battery is disconnected or discharged, the steering wheel will lock and cannot be turned.

If turning the steering wheel is required with the battery disconnected or discharged, follow the operation 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. Turn the ignition switch to ACC position.
   (At this time, the steering lock will be released.)
3. Disconnect both battery cables. The steering lock will remain released with both battery cables disconnected and the steering wheel can be turned.
4. Perform the necessary repair operation.
5. When the repair work is completed, re-connect both battery cables. With the brake pedal released, turn the ignition switch from ACC position to ON position, then to LOCK position. (The steering wheel will lock when the ignition switch is turned to LOCK position.)
6. Perform self-diagnosis check of all control units using CONSULT-III.

Precautions for Drive Shaft

INFOID:0000000006600928

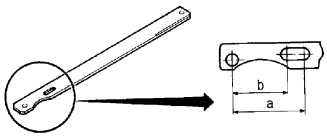
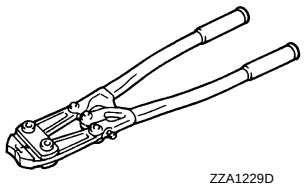
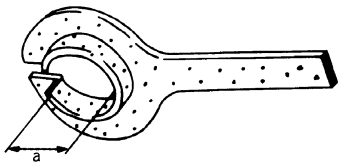
• Observe the following precautions when disassembling and assembling drive shaft.
- Never disassemble joint sub-assembly because it is non-overhaul parts.
- Perform work in a location which is as dust-free as possible.
- Clean the parts, before disassembling and assembling.
- Prevent the entry of foreign objects during disassembly of the service location.
- Reassemble disassembled parts carefully in the correct order. If work is interrupted, a clean cover must be placed over parts.
- Use paper waste. Fabric shop cloths must not be used because of the danger of lint adhering to parts.
- Clean disassembled parts (except for rubber parts) with kerosene which shall be removed by blowing with air or wiping with paper waste.

PREPARATION

PREPARATION

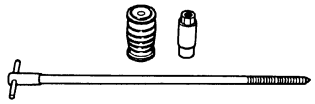
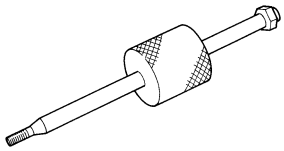
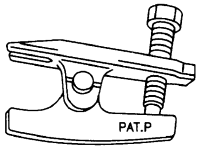
Special Service Tool

INFOID:0000000006600929

Tool number Tool name	Description
KV40104000 Hub lock nut wrench a: 85 mm (3.35 in) b: 65 mm (2.56 in)  ZZA0802D	Removing and Installing wheel hub lock nut.
KV40107300 Boot band crimping tool  ZZA1229D	Installing boot band
KV40107500 Drive shaft attachment  ZZA1230D	Removing drive shaft
KV38107900 Protector a: 32 mm (1.26 in) dia.  PDIA1183J	Installing drive shaft

Commercial Service Tools

INFOID:0000000006600930

Tool name	Description
Drive shaft puller  JPDIG0152ZZ	Remove drive shaft joint sub assembly
Sliding hammer  ZZA0023D	Remove drive shaft
Ball joint remover  NT146	Removing hub bolt

SYMPTOM DIAGNOSIS

NOISE, VIBRATION AND HARSHNESS (NVH) TROUBLESHOOTING

NVH Troubleshooting Chart

INFOID:0000000006600931

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

Reference page			—	FAX-89, "Inspection"	—	FAX-68, "Exploded View"	—	FAX-66, "Inspection"	NVH in FAX and FSU sections	Refer to FRONT AXLE in this chart	NVH in WT section	NVH in WT section	Refer to DRIVE SHAFT in this chart	NVH in BR section	NVH in ST section
Possible cause and SUSPECTED PARTS			Excessive joint angle	Joint sliding resistance	Imbalance	Improper installation, looseness	Parts interference	Wheel bearing damage	FRONT AXLE AND FRONT SUSPENSION	FRONT AXLE	TIRE	ROAD WHEEL	DRIVE SHAFT	BRAKE	STEERING
Symptom	DRIVE SHAFT	Noise	×	×				×	×	×	×	×		×	×
		Shake	×		×			×	×	×	×	×		×	×
	FRONT AXLE	Noise				×	×	×	×		×	×	×	×	×
		Shake				×	×	×	×		×	×	×	×	×
		Vibration				×	×	×	×		×		×		×
		Shimmy				×	×		×		×	×		×	×
		Judder				×			×		×	×		×	×
		Poor quality ride or handling				×	×		×		×	×			

×: Applicable

PERIODIC MAINTENANCE

FRONT WHEEL HUB AND KNUCKLE

Inspection

INFOID:0000000006600932

COMPONENT PART

Check that the mounting conditions (looseness, backlash) of each component and component conditions (wear, damage) are normal.

WHEEL HUB ASSEMBLY (BEARING-INTEGRATED TYPE)

Check the following items, and replace the part if necessary.

- Move wheel hub assembly in the axial direction by hand. Check there is no looseness of wheel bearing.

Axial end play : Refer to FAX-90, "Wheel Bearing".

- Rotate wheel hub assembly and check there is no unusual noise or other irregular conditions. If there is any of irregular conditions, replace wheel hub assembly.

FRONT DRIVE SHAFT

Inspection

INFOID:0000000006600933

Check the following items, and replace the part if necessary.

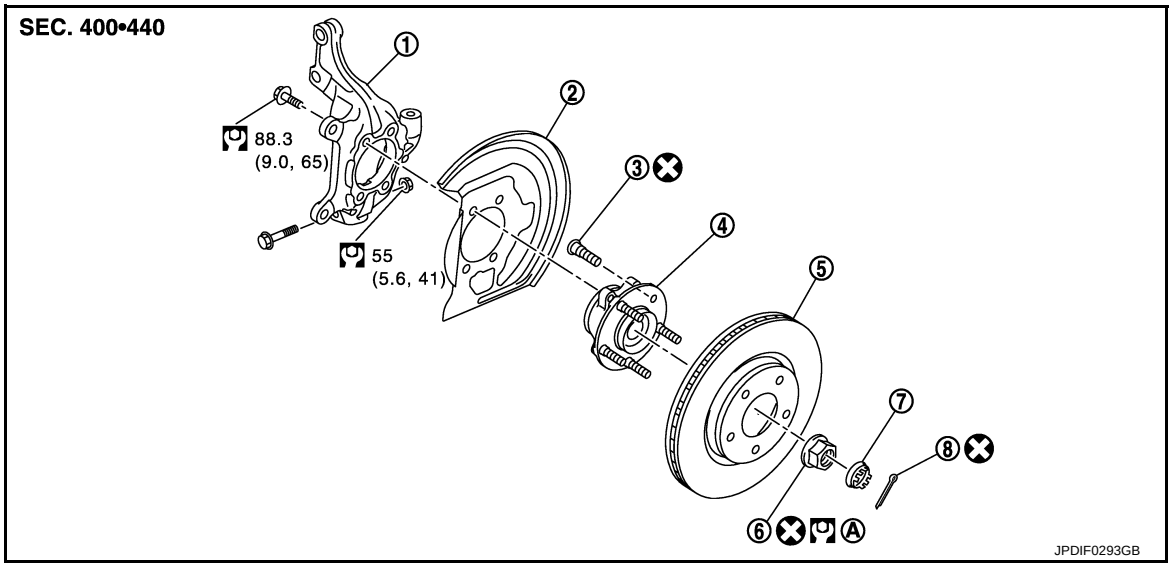
- Check drive shaft mounting point and joint for looseness and other damage.
  CAUTION:
  Replace entire drive shaft assembly when noise or vibration occurs from drive shaft.
- Check boot for cracks and other damage.

REMOVAL AND INSTALLATION

FRONT WHEEL HUB AND KNUCKLE

Exploded View

INFOID:0000000006600934



1. Steering knuckle
2. Splash guard
3. Hub bolt
4. Wheel hub assembly (Bearing-integrated type)
5. Disc rotor
6. Wheel hub lock nut
7. Adjusting cap
8. Cotter pin

A. Tightening must be done following the installation procedure. Refer to FAX-68, "Removal and Installation".

: Always replace after every disassembly.

: N·m (kg-m, ft-lb)

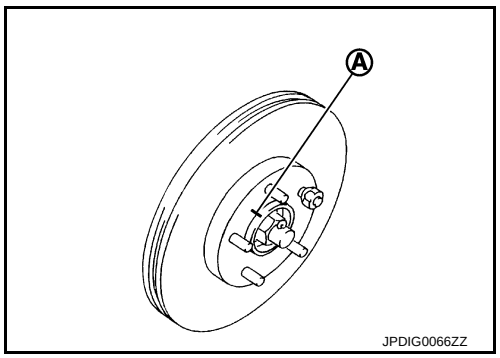
Removal and Installation

INFOID:0000000006600935

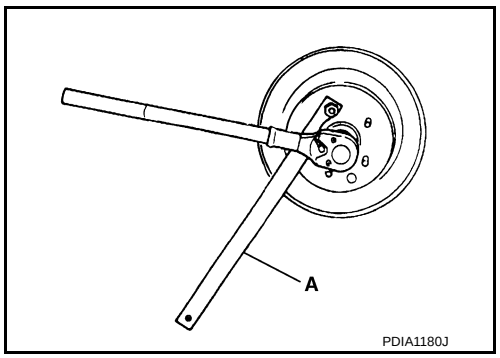
REMOVAL

1. Remove tires. Refer toWT-7, "Removal and Installation".
2. Remove wheel sensor and sensor harness. Refer to BRC-84, "FRONT WHEEL SENSOR : Exploded View" (Without ESP) or BRC-224, "FRONT WHEEL SENSOR : Exploded View" (With ESP).
3. Remove lock plate from strut assembly. Refer to FSU-14, "Removal and Installation".
4. Remove caliper assembly. Hang caliper assembly not to interfere with work. Refer to BR-57, "BRAKE CALIPER ASSEMBLY : Removal and Installation" (LHD) or BR-123, "BRAKE CALIPER ASSEMBLY : Removal and Installation" (RHD).
   CAUTION:
   Never depress brake pedal while brake caliper is removed.
5. Remove disc rotor.
   CAUTION:

- **Put matching marks (A) on the wheel hub assembly and the disc rotor before removing the disc rotor.**
- **Never drop disc rotor.**

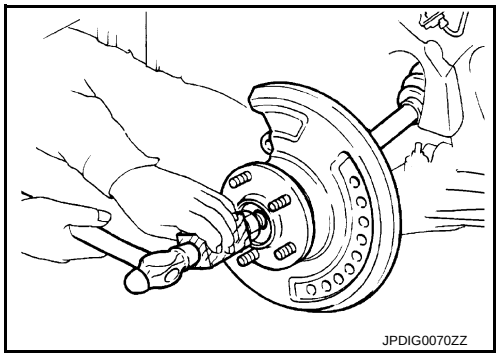


6. Remove cotter pin, and adjusting cap, and then loosen wheel hub lock nut, using a hub lock nut wrench (A) (SST: KV40104000).

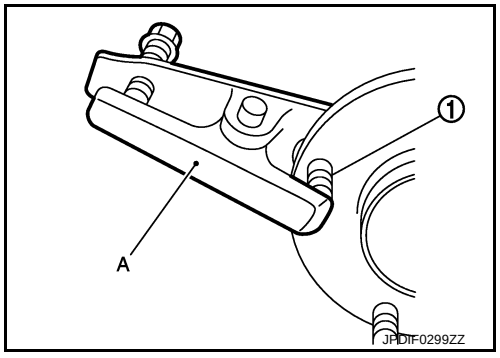


7. Patch wheel hub lock nut with a piece of wood. Hammer the wood to disengage wheel hub assembly from drive shaft.
   CAUTION:
   - **Never place drive shaft joint at an extreme angle. Also be careful not to overextend slide joint.**
   - **Never allow drive shaft to hang down without support for joint sub-assembly, shaft and the other parts.**

   NOTE:
   Use suitable puller, if wheel hub assembly and drive shaft cannot be separated even after performing the above procedure.
8. Remove wheel hub lock nut.
9. Remove steering outer socket from steering knuckle. Refer to ST-19, "Removal and Installation".



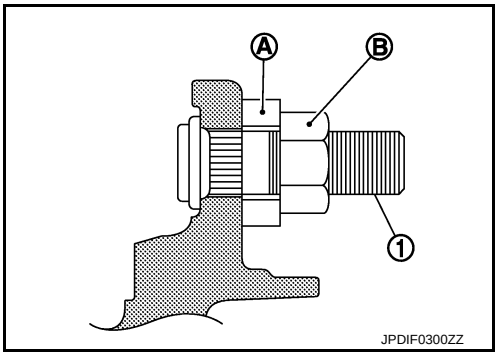
10. Remove strut assembly from steering knuckle. Refer to FSU-10, "Removal and Installation".
11. Suspend the drive shaft with suitable wire.
12. Remove steering knuckle from transverse link.
13. Remove splash guard from steering knuckle.
14. Remove hub bolts (1) from wheel hub assembly, using the ball joint remover (A) (commercial service tool).
    CAUTION:
    - **Remove hub bolt only when necessary.**
    - **Never hammer the hub bolt to avoid impact to the wheel hub assembly.**
    - **Pull out the hub bolt in a direction perpendicular to the wheel hub assembly.**
15. Perform inspection after removal. Refer to FAX-70, "Inspection".



INSTALLATION

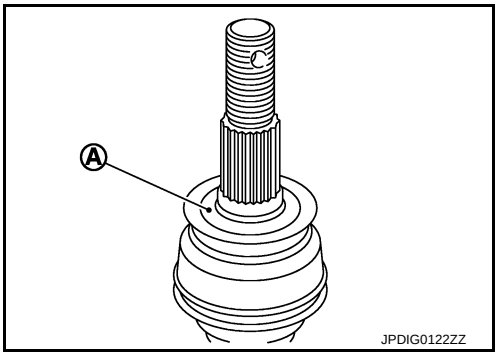
Note the following, and install in the reverse order of the removal.

- Place a washer (A) as shown in the figure to install the hub bolts (1) by using the tightening force of the nut (B).
  CAUTION:
  - **Check that there is no clearance between wheel hub assembly, and hub bolt.**
  - **Never reuse hub bolt.**
- Never reuse steering knuckle and transverse link fixing nut.
- Clean the matching surface of wheel hub lock nut and wheel hub assembly.
  CAUTION:
  Never apply lubricating oil to these matching surface.



- Clean the matching surface of drive shaft, wheel hub assembly. And then apply paste [service parts (440037S000)] to surface (A) of joint sub-assembly of drive shaft.
  CAUTION:
  Apply paste to cover entire flat surface of joint sub-assembly of drive shaft.

  Amount paste : 1.0 – 3.0 g (0.04 – 0.10 oz)

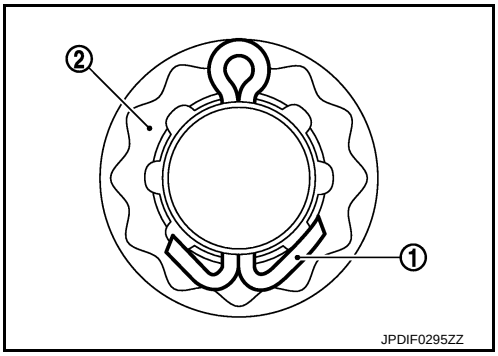


- Use the following torque range for tightening the wheel hub lock nut.

  : 180 – 185 N·m (18.4 – 18.8 kg-m, 133 – 136 ft-lb)

  CAUTION:
  - **Since the drive shaft is assembled by press-fitting, use the tightening torque range for the wheel hub lock nut.**
  - **Be sure to use torque wrench to tighten the wheel hub lock nut. Never use a power tool.**
  - **Never reuse wheel hub lock nut.**

  NOTE:
  Wheel hub lock nut tightening torque does not over torque for avoiding axle noise, and does not less than torque for avoiding looseness.
- Align the matching marks that have been made during removal when reusing the disc rotor.
- When installing a cotter pin (1) and adjusting cap (2), securely bend the basal portion to prevent rattles.
  CAUTION:
  Never reuse cotter pin.
- Perform the final tightening of each of parts under unladen conditions, which were removed when removing wheel hub assembly and axle housing.
- Perform inspection after installation. Refer to FAX-70, "Inspection".



Inspection

INFOID:0000000006600936

INSPECTION AFTER REMOVAL

Check the following items, and replace the part if necessary.
- Check components for deformation, cracks, and other damage.
- Check boots of transverse link and steering outer socket ball joint for breakage, axial end play, and swing torque. Refer to FSU-14, "Inspection" and ST-21, "Inspection".

INSPECTION AFTER INSTALLATION

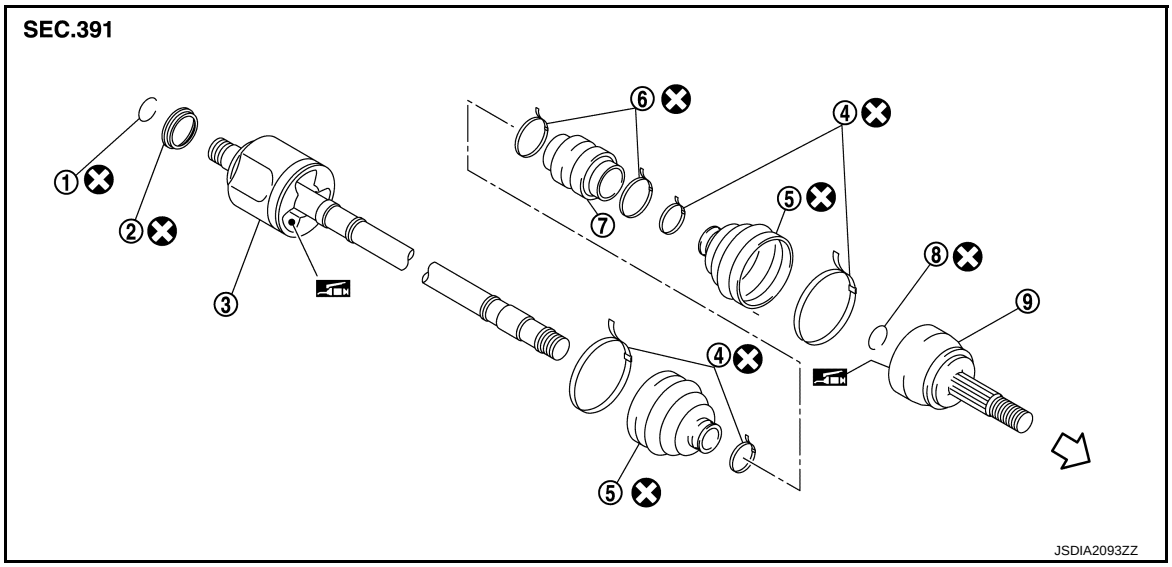
1. Check wheel sensor harness for proper connection. Refer to BRC-84, "FRONT WHEEL SENSOR : Exploded View" (Without ESP) or BRC-224, "FRONT WHEEL SENSOR : Exploded View" (With ESP).
2. Check the wheel alignment. Refer to FSU-7, "Inspection".

FRONT DRIVE SHAFT BOOT

Exploded View

INFOID:0000000006600937

LEFT SIDE



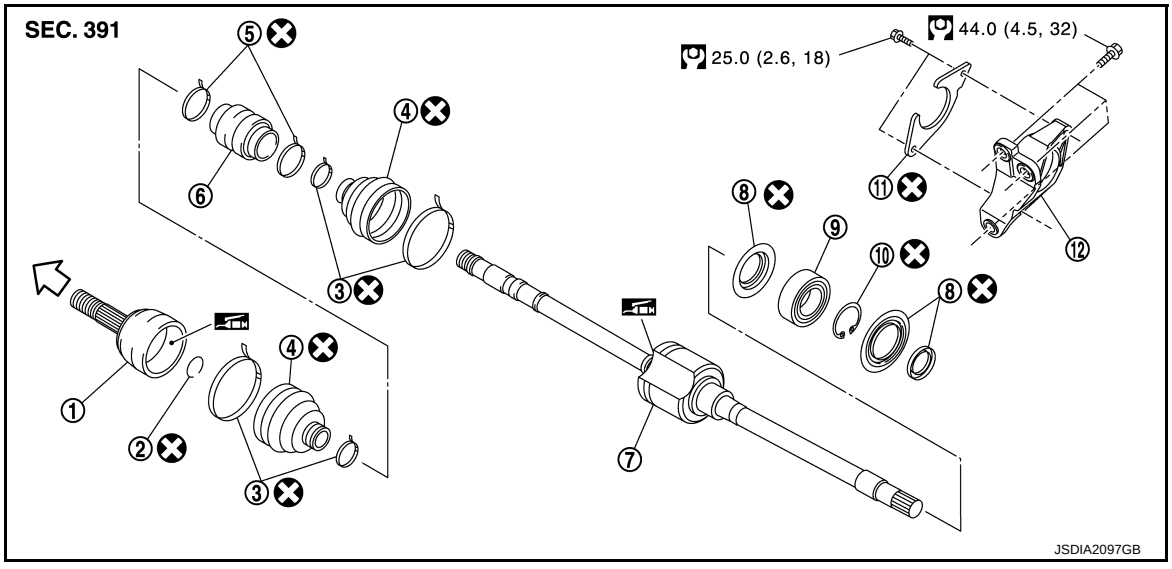
1. Circular clip
2. Dust shield
3. Housing assembly
4. Boot band
5. Boot
6. Damper band
7. Dynamic damper
8. Circular clip
9. Joint sub-assembly

⇦ : Wheel side

: Fill NISSAN Genuine grease or equivalent.

: Always replace after every disassembly.

RIGHT SIDE



1. Joint sub-assembly
2. Circular clip
3. Boot band
4. Boot
5. Damper band
6. Dynamic damper
7. Housing assembly
8. Dust shield
9. Support bearing
10. Snap ring
11. Plate
12. Support bearing bracket

⇦ : Wheel side

: Fill NISSAN Genuine grease or equivalent.

: Always replace after every disassembly.

: N·m (kg-m, ft-lb)

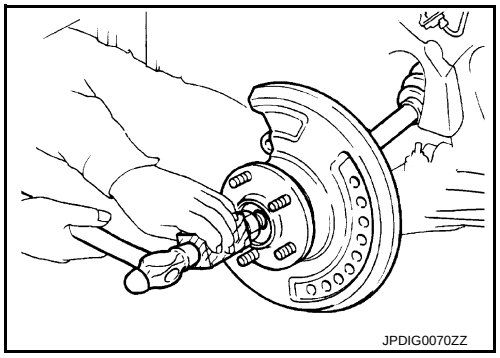
WHEEL SIDE

WHEEL SIDE : Removal and Installation

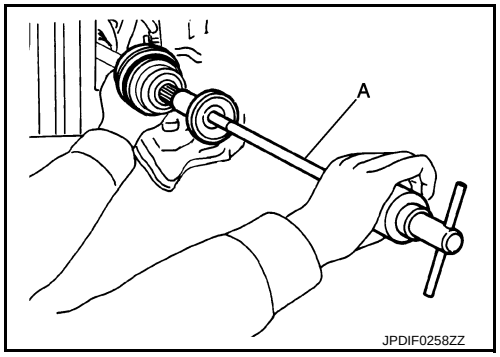
INFOID:0000000006600938

REMOVAL

1. Remove tires. Refer to WT-7, "Removal and Installation".
2. Remove wheel sensor and sensor harness. Refer to BRC-84, "FRONT WHEEL SENSOR : Exploded View" (Without ESP) or BRC-224, "FRONT WHEEL SENSOR : Exploded View" (With ESP).
3. Remove lock plate from strut assembly. Refer to FSU-10, "Removal and Installation".
4. Remove caliper assembly. Hang caliper assembly not to interfere with work. Refer to BR-57, "BRAKE CALIPER ASSEMBLY : Removal and Installation" (LHD) or BR-123, "BRAKE CALIPER ASSEMBLY : Removal and Installation" (RHD).
   CAUTION:
   Never depress brake pedal while brake caliper is removed.
5. Remove disc rotor. Refer to FAX-68, "Removal and Installation".
6. Remove cotter pin, and then loosen wheel hub lock nut. Refer to FAX-68, "Removal and Installation".
7. Patch wheel hub lock nut with a piece of wood. Hammer the wood to disengage wheel hub assembly from drive shaft.
   NOTE:
   Use suitable puller, if wheel hub assembly and drive shaft cannot be separated even after performing the above procedure.


JPDIG0070ZZ

8. Remove wheel hub lock nut. Refer to FAX-68, "Removal and Installation".
9. Remove strut assembly from steering knuckle. Refer to FSU-10, "Removal and Installation".
10. Remove drive shaft from wheel hub assembly.
    CAUTION:
    - **Never place drive shaft joint at an extreme angle. Also be careful not to overextend slide joint.**
    - **Never allow drive shaft to hang down without support for joint sub-assembly, shaft and the other parts.**
11. Remove boot bands, and then remove boot from joint sub-assembly.
12. Screw drive shaft puller (A) (commercial service tool) into joint sub-assembly screw part to a length of 30 mm (1.18 in) or more. Support drive shaft with one hand and pull out joint sub-assembly from shaft.
    CAUTION:
    - **Align drive shaft puller and drive shaft and remove them by pulling firmly and uniformly.**
    - **If joint sub-assembly cannot be pulled out, try after removing drive shaft from vehicle. Refer to FAX-81, "WHEEL SIDE : Disassembly and Assembly".**



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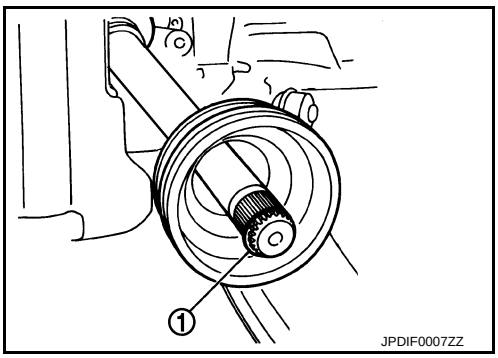
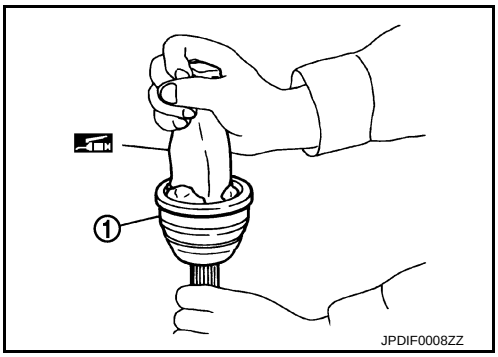
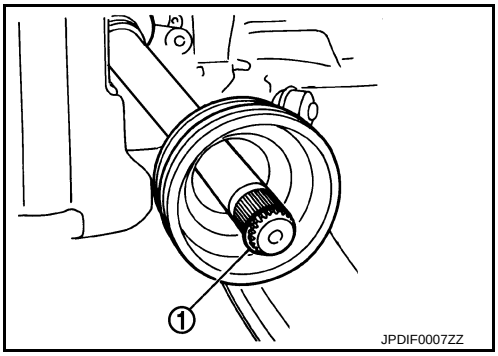
13. Remove circular clip (1) from shaft.
14. Remove boot from shaft.



INSTALLATION

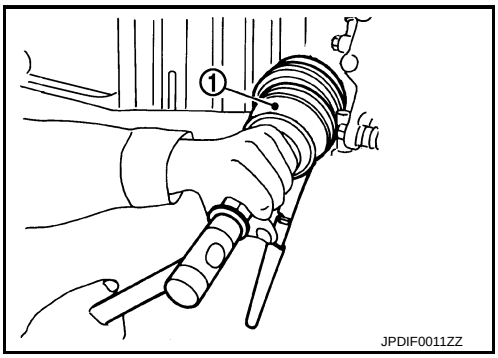
1. Clean the old grease on joint sub-assembly with paper waste.
2. Fill serration slot joint sub-assembly (1) with NISSAN genuine grease or equivalent until the serration slot and ball groove become full to the brim.
   CAUTION:
   After applying grease, use a paper waste to wipe off old grease that has oozed out.
3. Install boot and boot bands to shaft.
   CAUTION:
   - **Wrap serration on shaft with tape to protect the boot from damage.**
   - **Never reuse boot and boot band.**
4. Remove the tape wrapped around the serration on shaft.
5. Position the circular clip (1) on groove at the shaft edge.
   CAUTION:
   Never reuse circular clip.
   NOTE:
   Drive joint inserter is recommended when installing circular clip.
6. Align both center axles of the shaft edge and joint sub-assembly. Then assemble shaft with joint sub-assembly holding circular clip.



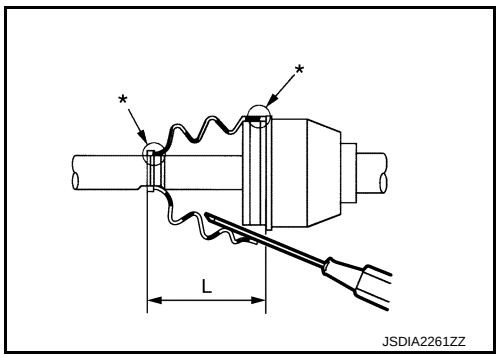


7. Install joint sub-assembly (1) to shaft using plastic hammer.
   CAUTION:
   - **Check circular clip is properly positioned on groove of the joint sub-assembly.**
   - **Confirm that joint sub-assembly is correctly engaged while rotating drive shaft.**
8. Apply the specified amount of grease into the boot inside from large diameter side of boot.

Grease amount : Refer to FAX-90, "Drive Shaft".



9. Install the boot securely into grooves (indicated by "*" marks) shown in the figure.
CAUTION:
If grease adheres to the boot mounting surface (indicated by "*" marks) on the shaft or joint sub-assembly, boot may be removed. Remove all grease from the boot mounting surface.

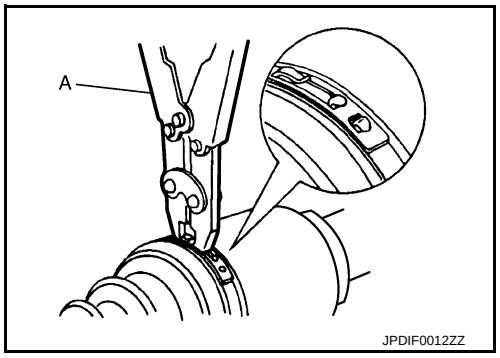


10. To prevent the deformation of the boot, adjust the boot installation length (L) to the specified value shown below by inserting the suitable tool into inside of the boot from the large diameter side of the boot and discharging the inside air.

L : Refer to FAX-90, "Drive Shaft".

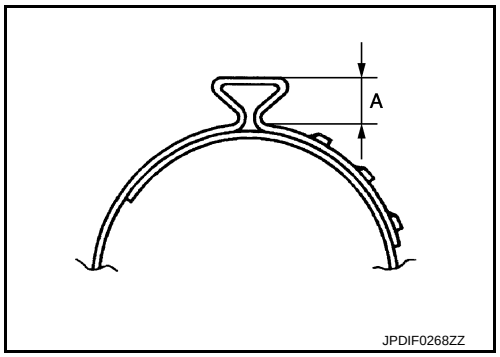
CAUTION:
- **If the boot installation length exceeds the standard, it may cause breakage of the boot.**
- **Be careful not to touch the inside of the boot with a tip of tool.**

11. Secure the large and small ends of the boot with boot bands using the boot band crimping tool (A) (SST: KV40107300).
CAUTION:
- **Never reuse boot band.**



- **Secure boot band so that dimension (A) meets the specification as shown in the figure.**

A : 5.0 mm (0.197 in) or less.

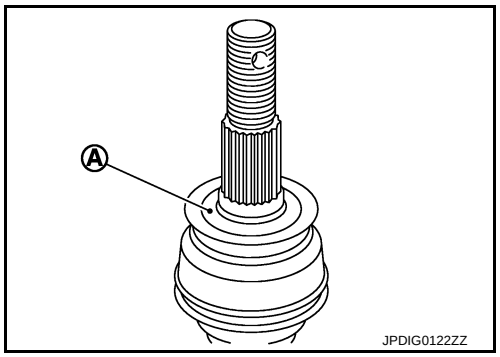


12. Check that displacement does not occur when boot is rotated with the joint sub-assembly and shaft fixed.
CAUTION:
- **Reinstall them using boot bands when boot installation positions become incorrect.**
- **Never reuse boot band.**

13. Clean the matching surface of wheel hub lock nut and wheel hub assembly.
CAUTION:
Never apply lubricating oil to these matching surface.

14. Clean the matching surface of drive shaft, wheel hub assembly. And then apply paste [service parts (440037S000)] to surface (A) of joint sub-assembly of drive shaft.
CAUTION:
Apply paste to cover entire flat surface of joint sub-assembly of drive shaft.

Amount paste : 1.0 – 3.0 g (0.04 – 0.10 oz)



15. Insert drive shaft to wheel hub assembly, and then temporarily tighten wheel hub lock nut.
CAUTION:

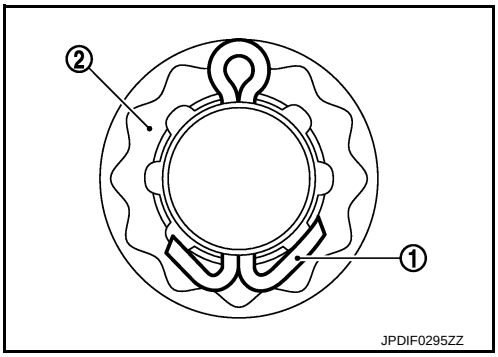
Be sure to use torque wrench to tighten the wheel hub lock nut. Never use a power tool.

16. Install strut assembly to steering knuckle. Refer to FSU-10, "Removal and Installation".
17. Install disc rotor. Refer to FAX-68, "Removal and Installation".
18. Install caliper assembly to steering knuckle. Refer to BR-57, "BRAKE CALIPER ASSEMBLY : Removal and Installation" (LHD) or BR-123, "BRAKE CALIPER ASSEMBLY : Removal and Installation" (RHD).
19. Install lock plate to strut assembly. Refer to FSU-10, "Removal and Installation".
20. Install wheel sensor and sensor harness. Refer to BRC-84, "FRONT WHEEL SENSOR : Exploded View" (Without ESP) or BRC-224, "FRONT WHEEL SENSOR : Exploded View" (With ESP).
21. Use the following torque range for tightening the wheel hub lock nut.

    : 180 – 185 N·m (18.4 – 18.8 kg-m, 133 – 136 ft-lb)

    CAUTION:
    - **Since the drive shaft is assembled by press-fitting, use the tightening torque range for the wheel hub lock nut.**
    - **Be sure to use torque wrench to tighten the wheel hub lock nut. Never use a power tool.**
    - **Never reuse wheel hub lock nut.**

    NOTE:
    Wheel hub lock nut tightening torque does not over torque for avoiding axle noise, and does not less than torque for avoiding looseness.
22. When installing a cotter pin (1) and adjusting cap (2), securely bend the basal portion to prevent rattles.
    CAUTION:
    Never reuse cotter pin.
23. Install tires. Refer to WT-7, "Removal and Installation".
24. Perform inspection after installation. Refer to FAX-76, "Inspection".



TRANSAXLE SIDE

TRANSAXLE SIDE : Removal and Installation

INFOID:0000000006600939

Remove boot after drive shaft is removed from the vehicle.
- For drive shaft removal and installation, refer to FAX-78, "LEFT SIDE : Removal and Installation" (LEFT SIDE) or FAX-79, "RIGHT SIDE : Removal and Installation" (RIGHT SIDE).
- For drive shaft disassembly and assembly, refer to FAX-84, "TRANSAXLE SIDE : Disassembly and Assembly".

Inspection

INFOID:0000000006600940

INSPECTION AFTER INSTALLATION

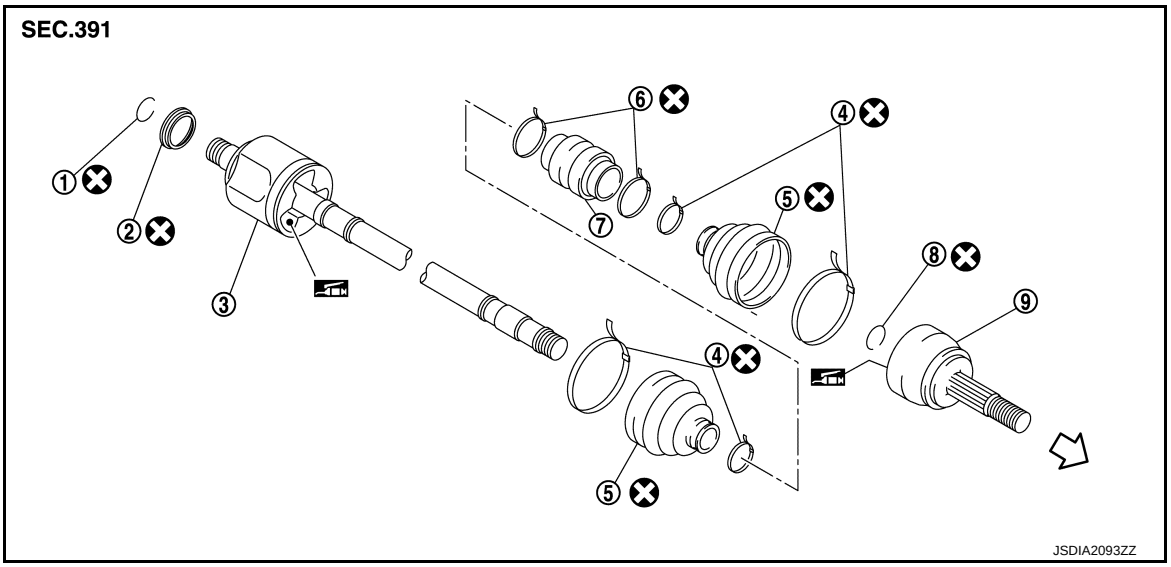
1. Check wheel sensor harness for proper connection. Refer to BRC-84, "FRONT WHEEL SENSOR : Exploded View" (Without ESP) or BRC-224, "FRONT WHEEL SENSOR : Exploded View" (With ESP).
2. Check the wheel alignment. Refer to FSU-7, "Inspection".

FRONT DRIVE SHAFT

Exploded View

INFOID:0000000006601131

LEFT SIDE



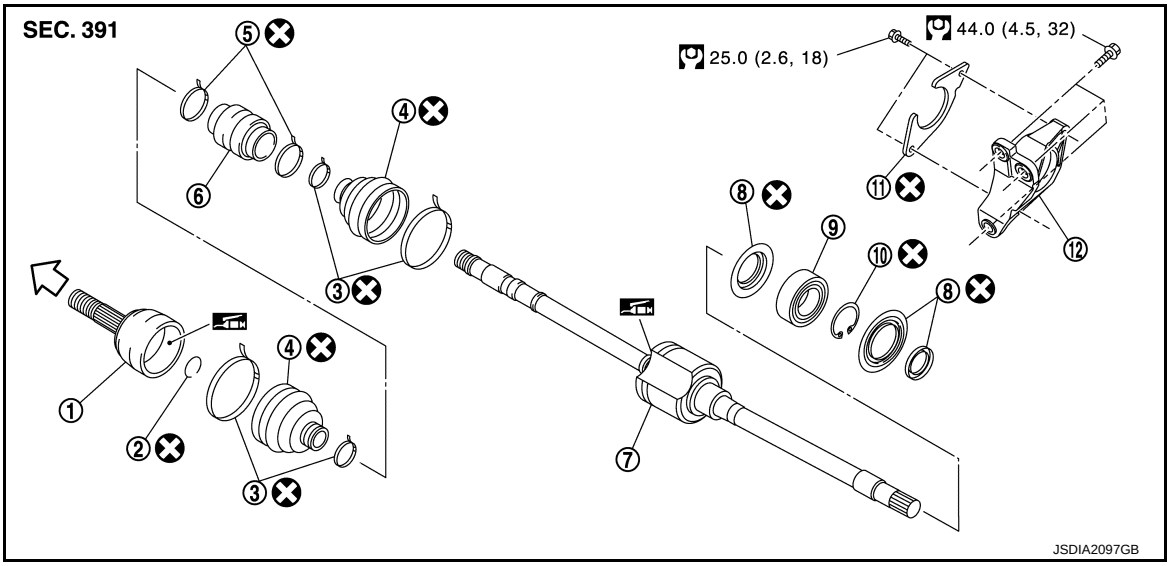
1. Circular clip
2. Dust shield
3. Housing assembly
4. Boot band
5. Boot
6. Damper band
7. Dynamic damper
8. Circular clip
9. Joint sub-assembly

⇦ : Wheel side

: Fill NISSAN Genuine grease or equivalent.

⊗: Always replace after every disassembly.

RIGHT SIDE



1. Joint sub-assembly
2. Circular clip
3. Boot band
4. Boot
5. Damper band
6. Dynamic damper
7. Housing assembly
8. Dust shield
9. Support bearing
10. Snap ring
11. Plate
12. Support bearing bracket

⇦ : Wheel side

: Fill NISSAN Genuine grease or equivalent.

: Always replace after every disassembly.

: N·m (kg-m, ft-lb)

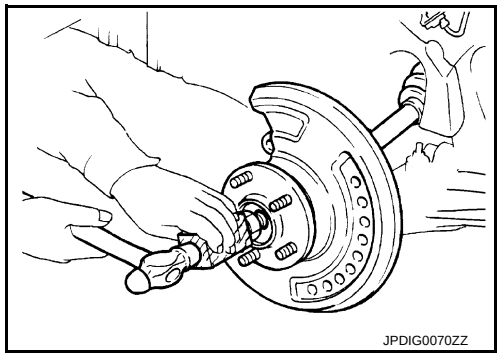
LEFT SIDE

LEFT SIDE : Removal and Installation

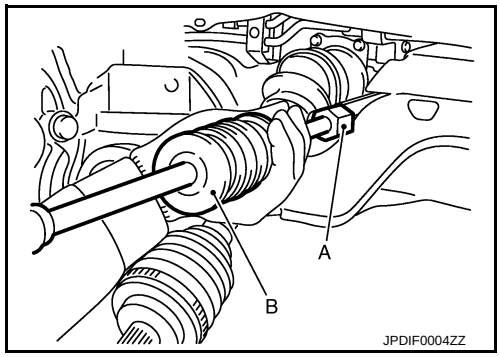
INFOID:0000000006607725

REMOVAL

1. Remove tires. Refer to WT-7, "Removal and Installation".
2. Remove wheel sensor and sensor harness. Refer to BRC-84, "FRONT WHEEL SENSOR : Exploded View" (Without ESP) or BRC-224, "FRONT WHEEL SENSOR : Exploded View" (With ESP).
3. Remove lock plate from strut assembly. Refer to FSU-10, "Removal and Installation".
4. Remove caliper assembly. Hang caliper assembly not to interfere with work. Refer to BR-57, "BRAKE CALIPER ASSEMBLY : Removal and Installation" (LHD) or BR-123, "BRAKE CALIPER ASSEMBLY : Removal and Installation" (RHD).
   CAUTION:
   Never depress brake pedal while brake caliper is removed.
5. Remove disc rotor. Refer to FAX-68, "Removal and Installation".
6. Remove cotter pin, and then loosen wheel hub lock nut. Refer to FAX-68, "Removal and Installation".
7. Patch wheel hub lock nut with a piece of wood. Hammer the wood to disengage wheel hub assembly from drive shaft.
   NOTE:
   Use suitable puller, if wheel hub assembly and drive shaft cannot be separated even after performing the above procedure.


JPDIG0070ZZ

8. Remove wheel hub lock nut. Refer to FAX-68, "Removal and Installation".
9. Remove transverse link from steering knuckle. Refer to FAX-68, "Removal and Installation".
10. Remove shaft assembly from wheel hub assembly.
    CAUTION:
    - **Never place drive shaft joint at an extreme angle. Also be careful not to overextend slide joint.**
    - **Never allow drive shaft to hang down without support for joint sub-assembly, shaft and the other parts.**
11. Use the drive shaft attachment (A) (SST: KV40107500) and a sliding hammer (B) (commercial service tool) while inserting tip of the drive shaft attachment between shaft and transaxle assembly, and then remove drive shaft from transaxle assembly.
    CAUTION:
    - **Never place drive shaft joint at an extreme angle when removing drive shaft. Also be careful not to overextend slide joint.**
    - **Confirm that the circular clip is attached to the drive shaft.**



JPDIF0004ZZ

12. Perform inspection after installation. Refer to FAX-89, "Inspection".

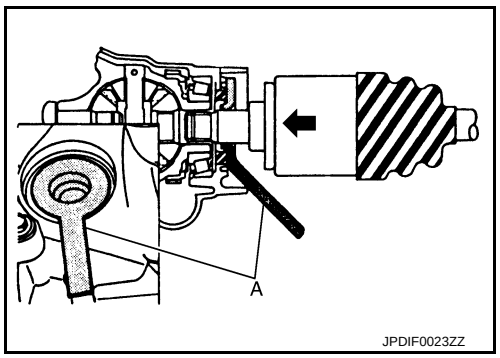
INSTALLATION

Note the following, and install in the reverse order of removal.

Transaxle Side

- Always replace differential side oil seal with new one when installing drive shaft. Refer to TM-76, "Removal and Installation".

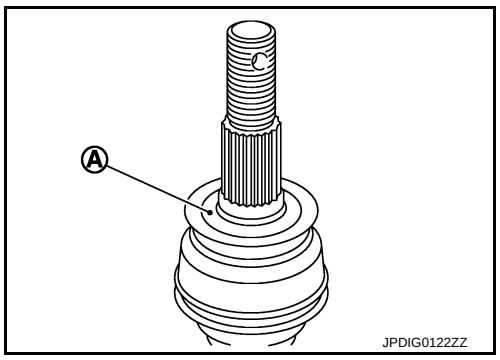
- Place the protector (A) (SST: KV38107900) onto transaxle assembly to prevent damage to the oil seal while inserting drive shaft. Slide drive shaft sliding joint and tap with a hammer to install securely.
  CAUTION:
  Check that circular clip is completely engaged.
- Perform inspection after installation. Refer to FAX-89, "Inspection".



Wheel Hub Side

- Clean the matching surface of wheel hub lock nut and wheel hub assembly.
  CAUTION:
  Never apply lubricating oil to these matching surface.
- Clean the matching surface of drive shaft and wheel hub assembly. And then apply paste [service parts (440037S000)] to surface (A) of joint sub-assembly of drive shaft.
  CAUTION:
  Apply paste to cover entire flat surface of joint sub-assembly of drive shaft.

  Amount paste : 1.0 – 3.0 g (0.04 – 0.10 oz)

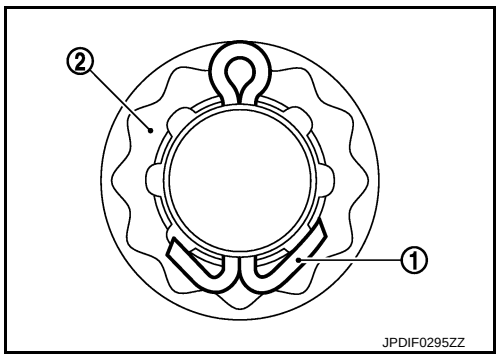


- Use the following torque range for tightening the wheel hub lock nut.

  : 180 – 185 N·m (18.4 – 18.8 kg-m, 133 – 136 ft-lb)

  CAUTION:
  - **Since the drive shaft is assembled by press-fitting, use the tightening torque range for the wheel hub lock nut.**
  - **Be sure to use torque wrench to tighten the wheel hub lock nut. Never use a power tool.**
  - **Never reuse wheel hub lock nut.**

  NOTE:
  Wheel hub lock nut tightening torque does not over torque for avoiding axle noise, and does not less than torque for avoiding looseness.
- Align the matching marks that have been made during removal when reusing the disc rotor.
- When installing a cotter pin (1) and adjusting cap (2), securely bend the basal portion to prevent rattles.
  CAUTION:
  Never reuse cotter pin.
- Perform the final tightening of each of parts under unladen conditions, which were removed when removing wheel hub assembly and axle housing.
- Perform inspection after installation. Refer to FAX-89, "Inspection".



RIGHT SIDE

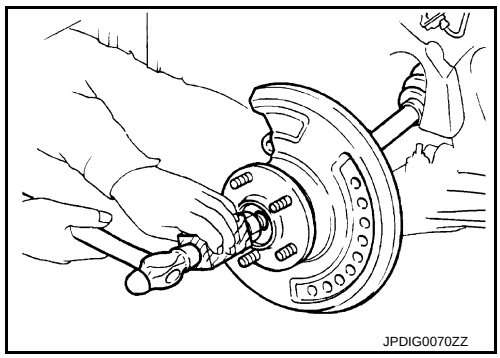
RIGHT SIDE : Removal and Installation

INFOID:0000000006601122

REMOVAL

1. Remove tires. Refer to WT-7, "Removal and Installation".
2. Remove wheel sensor and sensor harness if necessary. Refer to BRC-84, "FRONT WHEEL SENSOR : Exploded View" (Without ESP) or BRC-224, "FRONT WHEEL SENSOR : Exploded View" (With ESP).
3. Remove lock plate from strut assembly. Refer to FSU-10, "Removal and Installation".

4. Remove caliper assembly. Hang caliper assembly not to interfere with work. Refer to BR-57, "BRAKE CALIPER ASSEMBLY : Removal and Installation" (LHD) or BR-123, "BRAKE CALIPER ASSEMBLY : Removal and Installation" (RHD).
   CAUTION:
   Never depress brake pedal while brake caliper is removed.
5. Remove disc rotor. Refer to FAX-68, "Removal and Installation".
6. Remove cotter pin, and then loosen wheel hub lock nut. Refer to FAX-68, "Removal and Installation".
7. Patch wheel hub lock nut with a piece of wood. Hammer the wood to disengage wheel hub assembly from drive shaft.
   NOTE:
   Use suitable puller, if wheel hub assembly and drive shaft cannot be separated even after performing the above procedure.


JPDIG0070ZZ

8. Remove wheel hub lock nut. Refer to FAX-68, "Removal and Installation".
9. Remove transverse link from steering knuckle. Refer to FAX-68, "Removal and Installation".
10. Remove drive shaft from wheel hub assembly.
    CAUTION:
    - **Never place drive shaft joint at an extreme angle. Also be careful not to overextend slide joint.**
    - **Never allow drive shaft to hang down without support for joint sub-assembly, shaft and the other parts.**
11. Remove bearing housing plate bolts.
12. Remove drive shaft assembly from transaxle assembly.
    CAUTION:
    Never place drive shaft joint at an extreme angle when removing drive shaft. Also be careful not to overextend slide joint.
13. Remove support bearing bracket.
14. Perform inspection after removal. Refer to FAX-89, "Inspection".

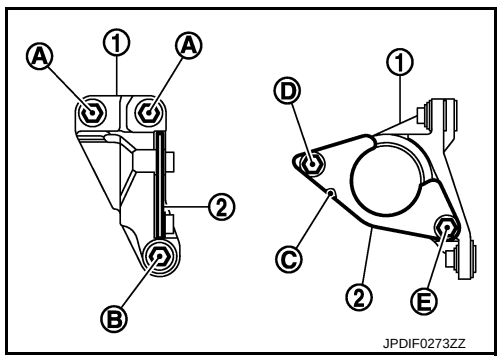
INSTALLATION

Note the following, and install in the reverse order of removal.

Transaxle Side

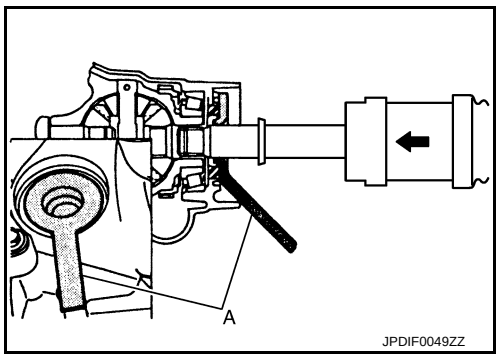
- Always replace differential side oil seal with new one when installing drive shaft. Refer to TM-76, "Removal and Installation".
- Install support bearing bracket (1) in following procedure,

- Temporarily tighten mounting bolts (A), (B), then tighten them to specified torque.
- Set plate (2) so that notch (C) becomes upper side. Temporarily tighten mounting bolts (D), (E), then tighten them to specified torque.
  CAUTION:
  Never reuse plate.



JPDIF0273ZZ

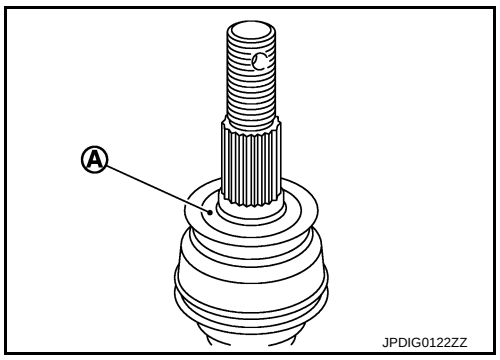
- Place the protector (A) (SST: KV38107900) onto transaxle assembly to prevent damage to the oil seal while inserting drive shaft. Slide drive shaft sliding joint and tap with a hammer to install securely.
- Perform inspection after removal. Refer to FAX-89, "Inspection".



Wheel Hub Side

- Clean the matching surface of wheel hub lock nut and wheel hub assembly.
  CAUTION:
  Never apply lubricating oil to these matching surface.
- Clean the matching surface of drive shaft and wheel hub assembly. And then apply paste [service parts (440037S000)] to surface (A) of joint sub-assembly of drive shaft.
  CAUTION:
  Apply paste to cover entire flat surface of joint sub-assembly of drive shaft.

  Amount paste : 1.0 – 3.0 g (0.04 – 0.10 oz)

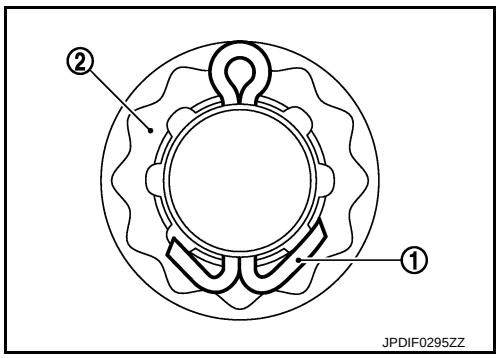


- Use the following torque range for tightening the wheel hub lock nut.

  : 180 – 185 N·m (18.4 – 18.8 kg-m, 133 – 136 ft-lb)

  CAUTION:
  - **Since the drive shaft is assembled by press-fitting, use the tightening torque range for the wheel hub lock nut.**
  - **Be sure to use torque wrench to tighten the wheel hub lock nut. Never use a power tool.**
  - **Never reuse wheel hub lock nut.**

  NOTE:
  Wheel hub lock nut tightening torque does not over torque for avoiding axle noise, and does not less than torque for avoiding looseness.
- Align the matching marks that have been made during removal when reusing the disc rotor.
- When installing a cotter pin (1) and adjusting cap (2), securely bend the basal portion to prevent rattles.
  CAUTION:
  Never reuse cotter pin.
- Perform the final tightening of each of parts under unladen conditions, which were removed when removing wheel hub assembly and axle housing.
- Perform inspection after installation. Refer to FAX-89, "Inspection".



WHEEL SIDE

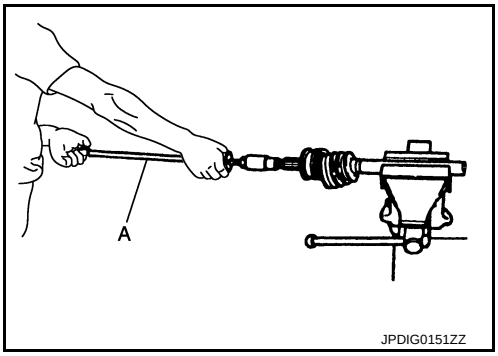
WHEEL SIDE : Disassembly and Assembly

INFOID:0000000006601123

DISASSEMBLY

1. Fix shaft with a vise.
   CAUTION:
   Protect shaft when fixing with a vise using aluminum or copper plates.
2. Remove boot bands, and then remove boot from joint sub-assembly.

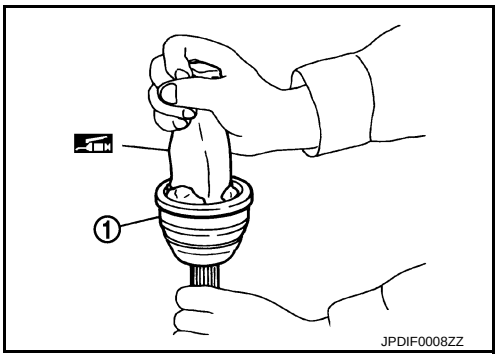
3. Screw drive shaft puller (A) (commercial service tool) into joint sub-assembly screw part to a length of 30 mm (1.18 in) or more. Support drive shaft with one hand and pull out joint sub-assembly from shaft.
CAUTION:
- **Align drive shaft puller and drive shaft and remove them by pulling firmly and uniformly.**
- **If joint sub-assembly cannot be removed after five or more unsuccessful attempts, replace shaft and joint sub assembly as a set.**



4. Remove circular clip from shaft.
5. Remove boot from shaft.
6. Perform inspection after removal. Refer to FAX-89, "Inspection".

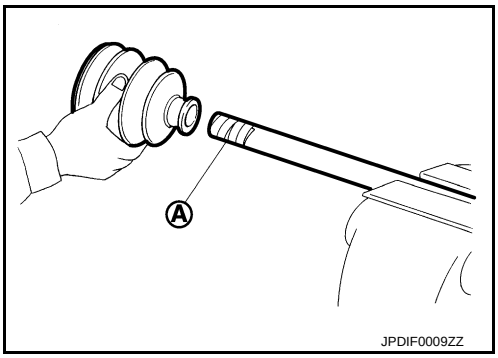
ASSEMBLY

1. Clean the old grease on joint sub-assembly with paper waste.
2. Fill serration slot joint sub-assembly (1) with NISSAN genuine grease or equivalent until the serration slot and ball groove become full to the brim.
CAUTION:
After applying grease, use a paper waste to wipe off old grease that has oozed out.

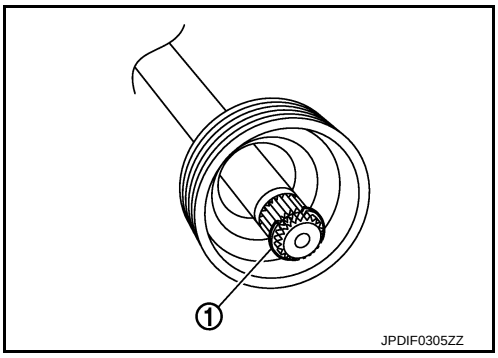


3. Install boot and boot bands to shaft.
CAUTION:
- **Wrap serration on shaft with tape (A) to protect the boot from damage.**
- **Never reuse boot and boot band.**

4. Remove the tape wrapped around the serration on shaft.

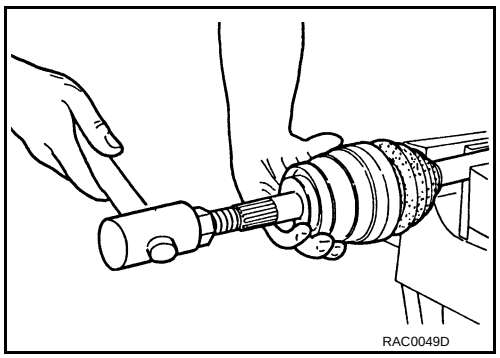


5. Position the circular clip (1) on groove at the shaft edge.
CAUTION:
Never reuse circular clip.
NOTE:
Drive joint inserter is recommended when installing circular clip.



6. Align both center axles of the shaft edge and joint sub-assembly. Then assemble shaft with joint sub-assembly holding circular clip.

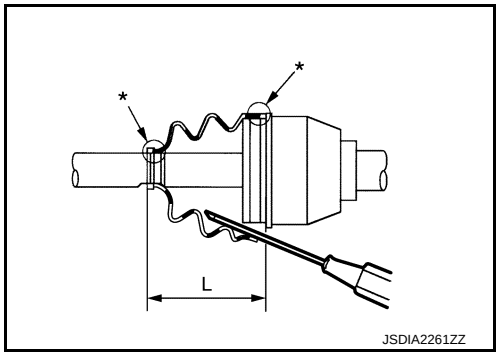
7. Install joint sub-assembly to shaft using plastic hammer.
CAUTION:
- **Check circular clip is properly positioned on groove of the joint sub-assembly.**
- **Confirm that joint sub-assembly is correctly engaged while rotating drive shaft.**



8. Apply the specified amount of grease into the boot inside from large diameter side of boot.

Grease amount : Refer to FAX-90, "Drive Shaft".

9. Install the boot securely into grooves (indicated by "*" marks) shown in the figure.
CAUTION:
If grease adheres to the boot mounting surface (indicated by "*" marks) on the shaft or joint sub-assembly, boot may be removed. Remove all grease from the boot mounting surface.

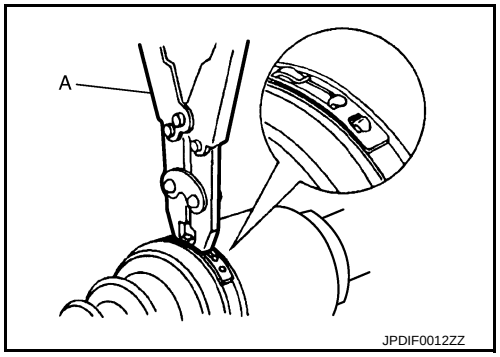


10. To prevent the deformation of the boot, adjust the boot installation length (L) to the specified value shown below by inserting the suitable tool into inside of the boot from the large diameter side of the boot and discharging the inside air.

L : Refer to FAX-90, "Drive Shaft".

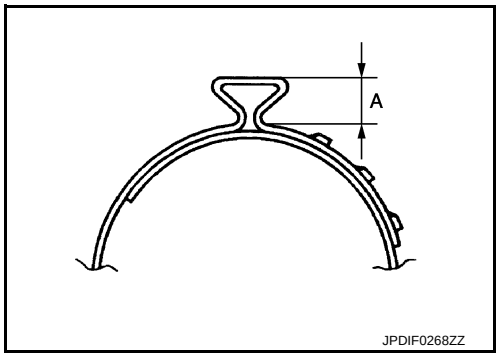
CAUTION:
- **If the boot installation length exceeds the standard, it may cause breakage of the boot.**
- **Be careful not to touch the inside of the boot with a tip of tool.**

11. Secure the large and small ends of the boot with boot bands using the boot band crimping tool (A) (SST: KV40107300).
CAUTION:
- **Never reuse boot band.**



- **Secure boot band so that dimension (A) meets the specification as shown in the figure.**

A : 5.0 mm (0.197 in) or less.



12. Check that displacement does not occur when boot is rotated with the joint sub-assembly and shaft fixed.
CAUTION:
- **Reinstall them using boot bands when boot installation positions become incorrect.**
- **Never reuse boot band.**

TRANSAXLE SIDE

TRANSAXLE SIDE : Disassembly and Assembly

INFOID:0000000006601124

DISASSEMBLY

Left Side

1. Fix shaft with a vise.
   CAUTION:
   Protect shaft using aluminum or copper plates when fixing with a vise.
2. Remove wheel side boot. Refer to FAX-81, "WHEEL SIDE : Disassembly and Assembly".
3. Remove dynamic damper as per the following instructions:

a. Remove damper band.
b. Remove dynamic damper from housing assembly.

4. Remove boot bands, then remove boot from housing assembly.
5. Remove circular clip from housing assembly.
6. Remove dust shield from housing assembly.
7. Perform inspection after disassembly. Refer to FAX-89, "Inspection".

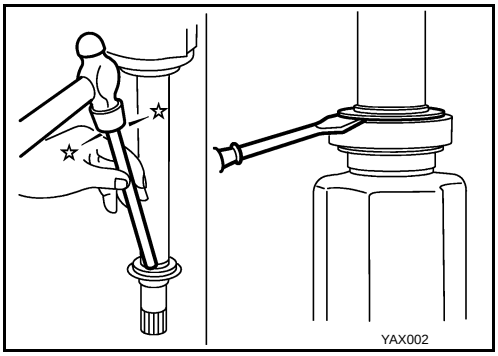
Right Side

1. Fix shaft with a vise.
   CAUTION:
   Protect shaft using aluminum or copper plates when fixing with a vise.
2. Remove wheel side boot from joint sub-assembly. Refer to FAX-16, "WHEEL SIDE : Removal and Installation".
3. Remove dynamic damper as per the following instructions:

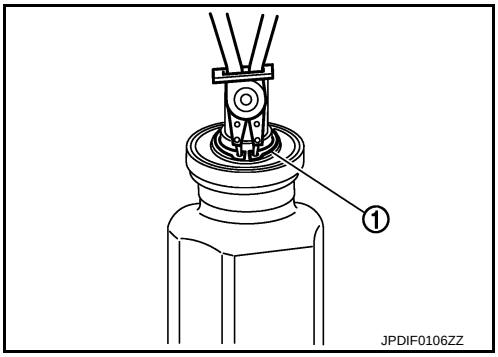
a. Remove damper band.
b. Remove dynamic damper from housing assembly.

4. Remove boot bands, then remove boot from housing assembly.
5. Remove support bearing, follow the procedure described below.

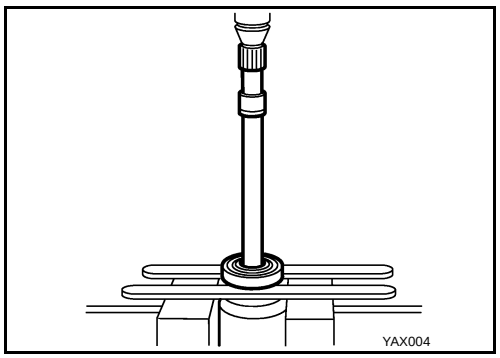
a. Remove dust shield from housing.



b. Remove snap ring (1).



c. Press out support bearing from housing.
d. Remove dust shield from housing.
6. Perform inspection after installation. Refer to FAX-34, "Inspection".

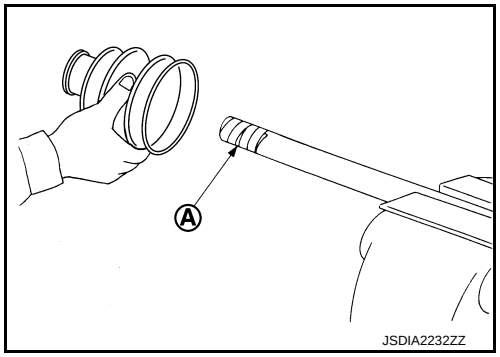


ASSEMBLY

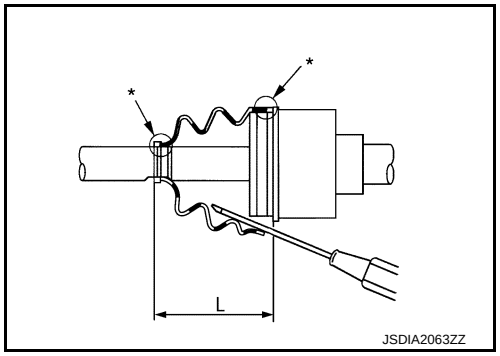
Left Side

1. Clean the old grease on housing assembly with paper waste.
2. Install boot and boot bands to housing assembly.
CAUTION:
- **Wrap serration on housing assembly with tape (A) to protect the boot from damage.**
- **Never reuse boot and boot band.**
3. Remove the tape wrapped around the serration on housing assembly.
4. Apply NISSAN genuine grease (refer to parts catalog) to housing assembly.

Grease amount : Refer to FAX-90, "Drive Shaft".



5. Install boot securely into grooves (indicated by “*” marks) shown in the figure.
CAUTION:
If grease adheres to the boot mounting surface (with “*” marks) on shaft or housing, boot may be removed. Remove all grease from the surface.
6. To prevent the deformation of the boot, adjust the boot installation length to the value shown below (L) by inserting the suitable tool into the inside of boot from the large diameter side of boot and discharging inside air.



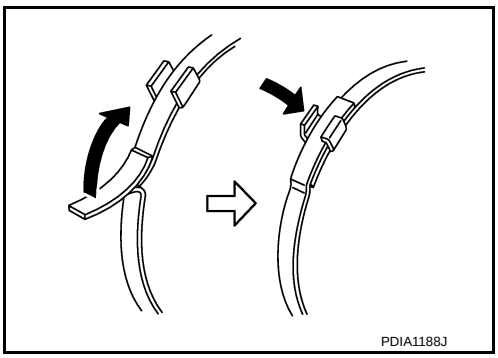
L : Refer to FAX-90, "Drive Shaft".

CAUTION:
- **If the boot installation length exceeds the standard, it may cause breakage of the boot.**
- **Be careful not to touch the inside of the boot with the tip of tool.**

7. Install boot bands securely.
CAUTION:
Never reuse boot bands.

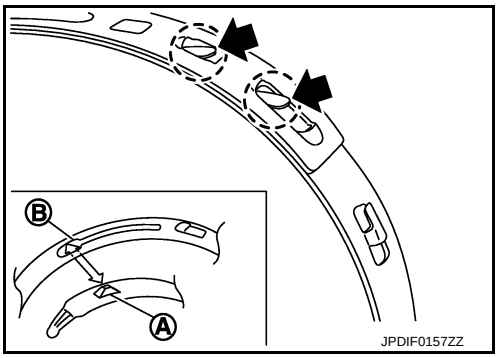
For one-touch clamp band

- Install boot bands securely as shown in the figure.

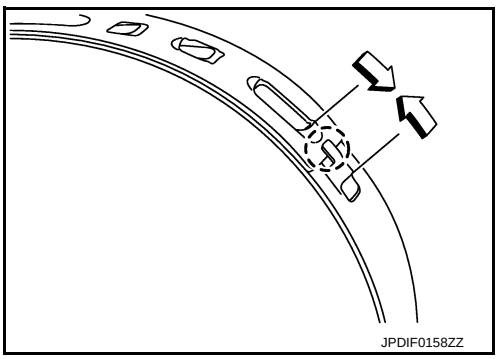


For low profile type band

1. Put boot band in the groove on drive shaft boot. Then fit pawls (⬅) into holes to temporary installation.
   NOTE:
   For the large diameter side, fit projection (A) and guide slit (B) at first.



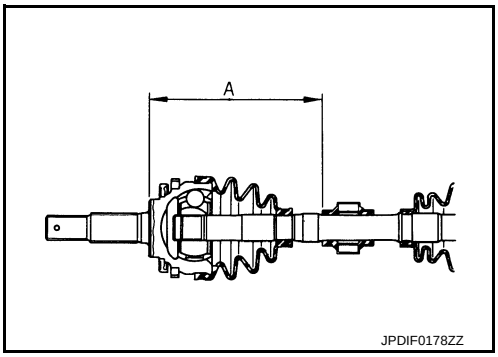
2. Pinch projection on the band with suitable pliers to tighten band.
3. Insert the tip of band into the lower part of pawl (marked with dotted circle) as shown in the figure.



8. Check that displacement does not occur when boot is rotated with the housing assembly fixed.
   CAUTION:
   - **Reinstall them using boot bands when boot installation positions become incorrect.**
   - **Never reuse boot band.**
9. Install dynamic damper, follow the procedure described below.

a. Install dynamic damper to shaft.

b. Secure dynamic damper with bands in the following specified position (A) when installing.
   CAUTION:
   Never reuse bands.



A : Refer to FAX-90, "Drive Shaft".

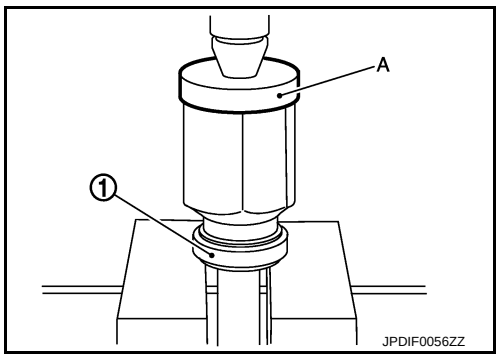
10. Install dust shield to housing assembly.
    CAUTION:
    Never reuse dust shield.
11. Install circular clip to housing.
    CAUTION:
    Never reuse circular clip.
12. Install boot to the wheel side. Refer to FAX-81, "WHEEL SIDE : Disassembly and Assembly".

Right Side

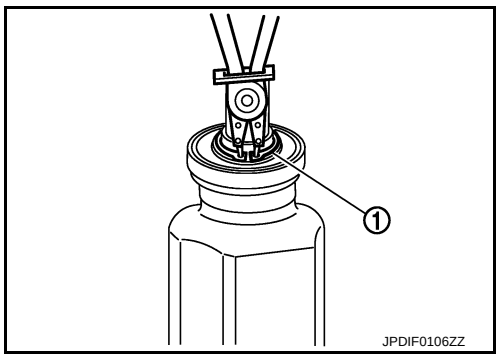
1. Install support bearing, follow the procedure described below.

a. Install dust shield to housing.
   CAUTION:
   Never reuse dust shield.

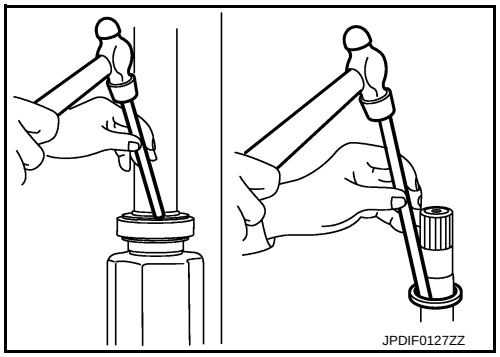
b. Press support bearing (1) onto housing to using the suitable tool (A).
CAUTION:
Never reuse support bearing.



c. Install snap ring (1).
CAUTION:
Never reuse snap ring.

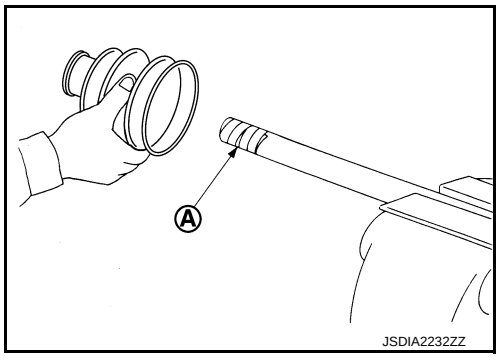


d. Install dust shields.
CAUTION:
Never reuse dust shields.

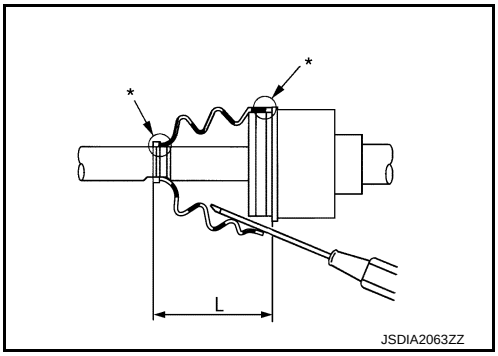


2. Clean the old grease on housing assembly with paper waste.
3. Install boot and boot bands to housing assembly.
CAUTION:
- **Wrap serration on housing assembly with tape (A) to protect the boot from damage.**
- **Never reuse boot and boot band.**
4. Remove the tape wrapped around the serration on housing assembly.
5. Apply NISSAN genuine grease (refer to parts catalog) to housing assembly.

Grease amount : Refer to FAX-35, "Drive Shaft".



6. Install boot securely into grooves (indicated by "*" marks) shown in the figure.
CAUTION:
If grease adheres to the boot mounting surface (with "*" marks) on shaft or housing, boot may be removed. Remove all grease from the surface.



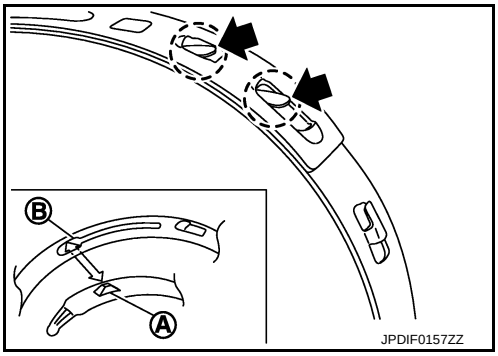
7. To prevent the deformation of the boot, adjust the boot installation length to the value shown below (L) by inserting the suitable tool into the inside of boot from the large diameter side of boot and discharging inside air.

L : Refer to FAX-35, "Drive Shaft".

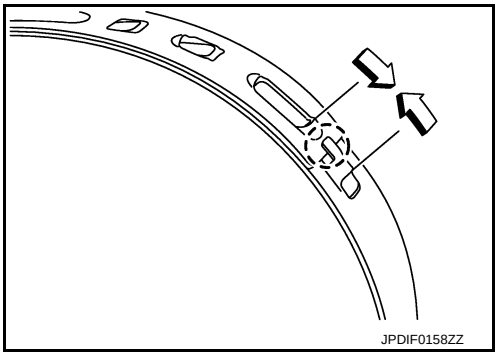
CAUTION:
- **If the boot installation length exceeds the standard, it may cause breakage of the boot.**
- **Be careful not to touch the inside of the boot with the tip of tool.**

8. Install boot bands securely.
CAUTION:
Never reuse boot bands.

a. Put boot band in the groove on drive shaft boot. Then fit pawls (⬅) into holes to temporary installation.
NOTE:
For the large diameter side, fit projection (A) and guide slit (B) at first.



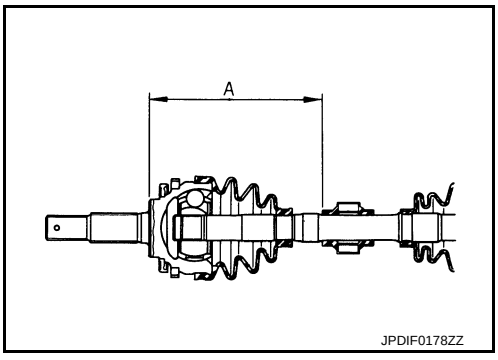
b. Pinch projection on the band with suitable pliers to tighten band.
c. Insert the tip of band into the lower part of pawl (marked with dotted circle) as shown in the figure.



9. Check that displacement does not occur when boot is rotated with the housing assembly fixed.
CAUTION:
- **If displacement occurs, reinstall band.**
- **Never reuse boot band.**

10. Install dynamic damper, follow the procedure described below.
a. Install dynamic damper to shaft.
b. Secure dynamic damper with bands in the following specified position (A) when installing.
CAUTION:
Never reuse bands.

A : Refer to FAX-35, "Drive Shaft".



11. Install boot to the wheel side. Refer to FAX-26, "WHEEL SIDE : Disassembly and Assembly".

Inspection

INFOID:0000000006601165

INSPECTION AFTER REMOVAL

Check the following items, and replace the part if necessary.

- Move joint up/down, left/right, and in the axial directions. Check for motion that is not smooth and for significant looseness.
- Check boot for cracks, damage, and leakage of grease.
- Check the support bearing bracket for cracks, deformation and other damage.

INSPECTION AFTER DISASSEMBLY

Check the following items, and replace the part if necessary.

Dynamic Damper

Check damper for cracks or wear.

Joint Sub-Assembly

Check the following:

- Joint sub-assembly for rough rotation and excessive axial looseness.
- The inside of the joint sub-assembly for entry of foreign material.
- Joint sub-assembly for compression scars, cracks, and fractures inside of joint sub-assembly.

Replace joint sub-assembly if there are any non-standard conditions of components.

Housing assembly

- Replace housing assembly if there is scratching or wear of housing assembly roller contact surface.
- Check shaft for runout, cracks, or other damage.

Support Bearing (Right Side)

Check bearing rolls freely and is free from noise, cracks, pitting or wear. Replace support bearing if there are any non-standard conditions.

Support Bearing Bracket (Right Side)

Check for support bearing bracket, cracks, or damage. Replace support bearing bracket if there are any non-standard conditions.

INSPECTION AFTER INSTALLATION

1. Check wheel sensor harness for proper connection. Refer to BRC-84, "FRONT WHEEL SENSOR : Exploded View" (Without ESP) or BRC-224, "FRONT WHEEL SENSOR : Exploded View" (With ESP).
2. Check the wheel alignment. Refer to FSU-7, "Inspection".

SERVICE DATA AND SPECIFICATIONS (SDS)

SERVICE DATA AND SPECIFICATIONS (SDS)

Wheel Bearing

INFOID:0000000006608700

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

Drive Shaft

INFOID:0000000006608701

Item	Standard	
	Wheel side	Transaxle side
Grease quantity	110 – 130 g (3.88 – 4.59 oz)	123.3 – 139.3 g (4.31 – 4.91 oz)
Boots installed length*	96.0 mm (3.78 in)	95.9 mm (3.78 in)
Dimension of dynamic damper*	260 – 266 mm (10.24 – 10.47 in)	

*: For measuring position, refer to FAX-81, "WHEEL SIDE : Disassembly and Assembly" (Wheel side), FAX-84, "TRANSAXLE SIDE : Disassembly and Assembly" (Transaxle side).