SECTION RAX
REAR AXLE

CONTENTS

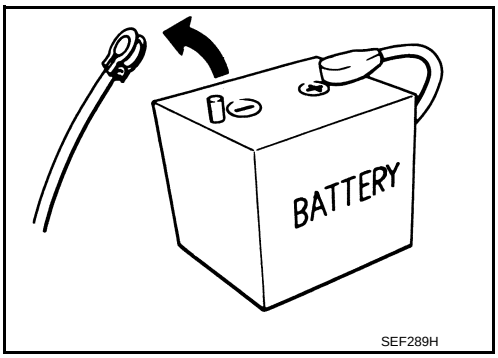
PRECAUTION

PRECAUTIONS

Precautions for Removing Battery Terminal

INFOID:0000000010921176

- With the adoption of Auto ACC function, ACC power is automatically supplied by operating the intelligent key or remote keyless entry or by opening/closing the driver side door. In addition, ACC power is supplied even after the ignition switch is turned to the OFF position, i.e. ACC power is supplied for a certain fixed time.
- When disconnecting the 12V battery terminal, turn off the ACC power before disconnecting the 12V battery terminal, observing “How to disconnect 12V battery terminal” described below.
  NOTE:
  Some ECUs operate for a certain fixed time even after ignition switch is turned OFF and ignition power supply is stopped. If the battery terminal is disconnected before ECU stops, accidental DTC detection or ECU data damage may occur.
- For vehicles with the 2-batteries, be sure to connect the main battery and the sub battery before turning ON the ignition switch.
  NOTE:
  If the ignition switch is turned ON with any one of the terminals of main battery and sub battery disconnected, then DTC may be detected.
- After installing the 12V battery, always check "Self Diagnosis Result" of all ECUs and erase DTC.
  NOTE:
  The removal of 12V battery may cause a DTC detection error.



HOW TO DISCONNECT 12V BATTERY TERMINAL

Disconnect 12V battery terminal according to Instruction 1 or Instruction 2 described below.
For vehicles parked by ignition switch OFF, refer to Instruction 2.

INSTRUCTION 1

1. Open the hood.
2. Turn key switch to the OFF position with the driver side door opened.
3. Get out of the vehicle and close the driver side door.
4. Wait at least 3 minutes. For vehicle with the engine listed below, remove the battery terminal after a lapse of the specified time.

D4D engine	: 20 minutes
HRA2DDT	: 12 minutes
K9K engine	: 4 minutes
M9R engine	: 4 minutes
R9M engine	: 4 minutes
V9X engine	: 4 minutes

CAUTION:
While waiting, never operate the vehicle such as locking, opening, and closing doors. Violation of this caution results in the activation of ACC power supply according to the Auto ACC function.

5. Remove 12V battery terminal.
   CAUTION:
   After installing 12V battery, always check self-diagnosis results of all ECUs and erase DTC.

INSTRUCTION 2 (FOR VEHICLES PARKED BY IGNITION SWITCH OFF)

1. Unlock the door with intelligent key or remote keyless entry.
   NOTE:
   At this moment, ACC power is supplied.
2. Open the driver side door.
3. Open the hood.
4. Close the driver side door.
5. Wait at least 3 minutes.

CAUTION:
While waiting, never operate the vehicle such as locking, opening, and closing doors. Violation of this caution results in the activation of ACC power supply according to the Auto ACC function.

6. Remove 12V battery terminal.

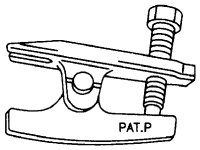
CAUTION:
After installing 12V battery, always check self-diagnosis results of all ECUs and erase DTC.

PREPARATION

PREPARATION

Commercial Service Tools

INFOID:0000000010828152

Tool name	Description
Ball joint remover  NT146	Removing hub bolt

SYMPTOM DIAGNOSIS

NOISE, VIBRATION AND HARSHNESS (NVH) TROUBLESHOOTING

NVH Troubleshooting Chart

INFOID:0000000010828153

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

Reference			RAX-7	—	RAX-6	NVH in RAX and RSU sections	NVH in WT section	NVH in WT section	NVH in BR section
Possible cause and SUSPECTED PARTS			Improper installation, looseness	Parts interference	Wheel bearing damage	REAR AXLE AND REAR SUSPENSION	TIRE	ROAD WHEEL	BRAKE
Symptom	REAR AXLE	Noise	×	×	×	×	×	×	×
		Shake	×	×	×	×	×	×	×
		Vibration	×	×	×	×	×		
		Shimmy	×	×		×	×	×	×
		Judder	×			×	×	×	×
		Poor quality ride or handling	×	×		×	×	×	

×: Applicable

PERIODIC MAINTENANCE

REAR WHEEL HUB AND HOUSING

Inspection

INFOID:0000000010828154

COMPONENT PART

Make sure 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 and bearing assembly in the axial direction by hand. Check there is no looseness of wheel bearing.

Axial end play : Refer to RAX-10, "Wheel Bearing".

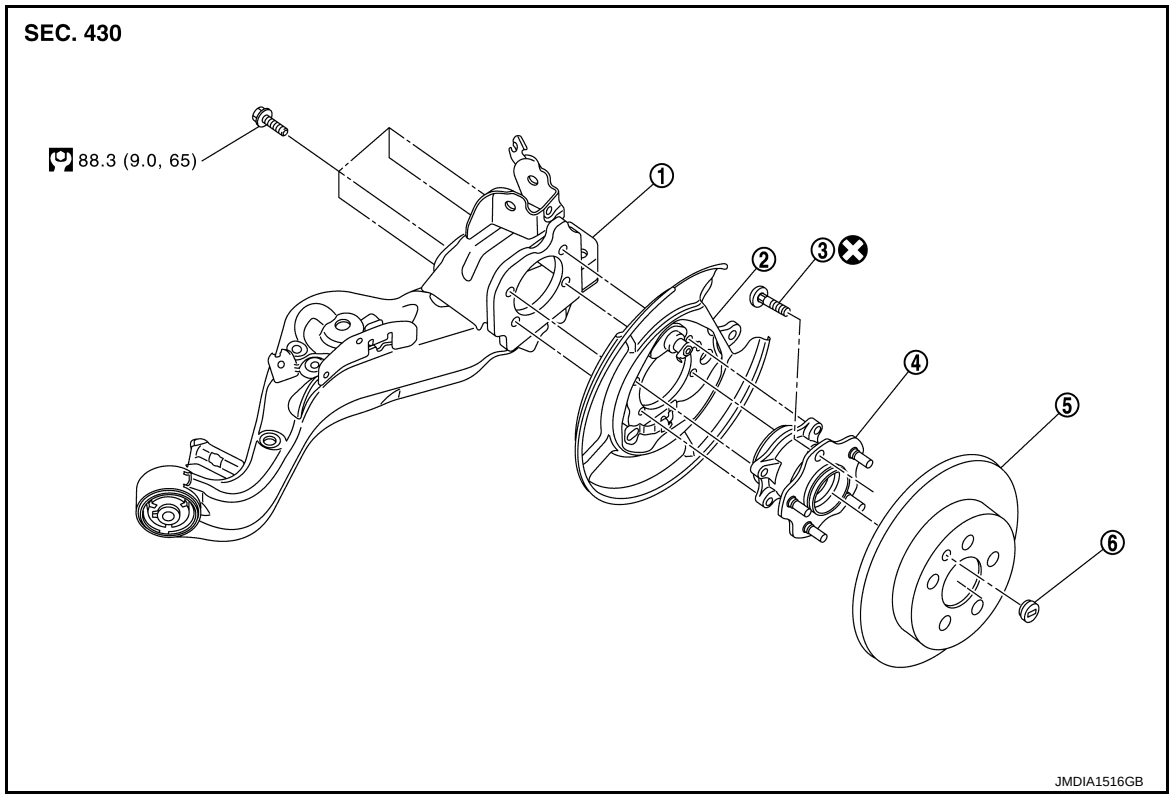
- Rotate wheel hub and make sure there is no unusual noise or other irregular conditions. If there is any of irregular conditions, replace wheel hub and bearing assembly.

REMOVAL AND INSTALLATION

REAR WHEEL HUB

Exploded View

INFOID:0000000010828155



① Suspension arm	② Back plate	③ Hub bolt
④ Wheel hub and bearing assembly	⑤ Disc rotor	⑥ Plug

: N·m (kg-m, ft-lb)

: Always replace after every disassembly.

Removal and Installation

INFOID:0000000010828156

REMOVAL

Wheel Hub and Bearing Assembly

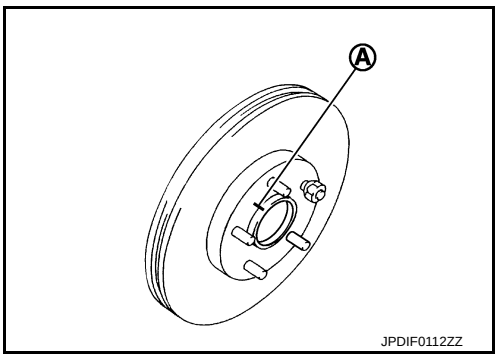
1. Remove tires. Refer to WT-61, "Removal and Installation".
2. Remove wheel sensor from wheel hub and bearing assembly. Refer to BRC-213, "REAR WHEEL SENSOR : Exploded View".
3. Remove caliper assembly. Hang caliper assembly in a place where it will not interfere with work.
   - LHD: Refer to BR-63, "BRAKE CALIPER ASSEMBLY : Removal and Installation".
   - RHD: Refer to BR-123, "BRAKE CALIPER ASSEMBLY : Removal and Installation".

   CAUTION:
   Never depress brake pedal while brake caliper is removed.
4. Remove disc rotor. If disc rotor cannot be removed, remove as follows.

   CAUTION:
   - **Parking brake completely in the released position.**

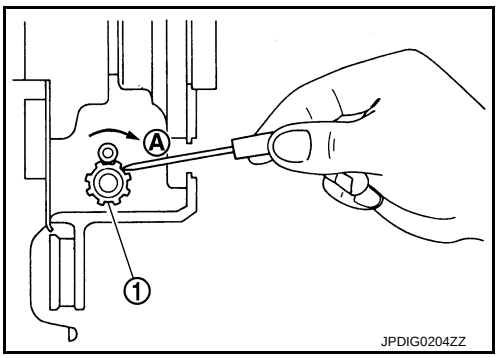
- **Put matching marks Ⓐ on the wheel hub and bearing assembly and the disc rotor before removing the disc rotor.**
- **Never drop disc rotor.**

a. Fix the disc rotor with wheel nuts and remove the adjusting hole plug.

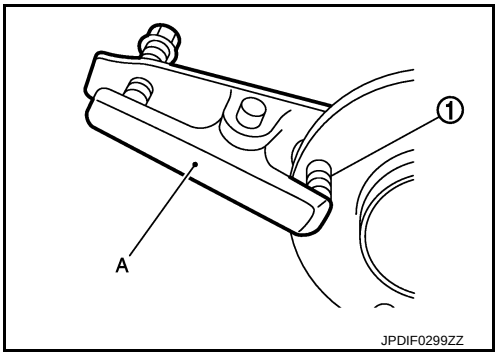


b. Using suitable tool, rotate adjuster ① in the direction Ⓐ to retract and loosen brake shoe.

c. Remove disc rotor.



5. Remove wheel hub and bearing assembly.
   CAUTION:
   Remove parking brake assembly only when necessary.
6. Remove back plate.
7. Remove hub bolts ① from wheel hub and bearing 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 and bearing assembly.**
   - **Pull out the hub bolt in a direction perpendicular to the wheel hub and bearing assembly.**



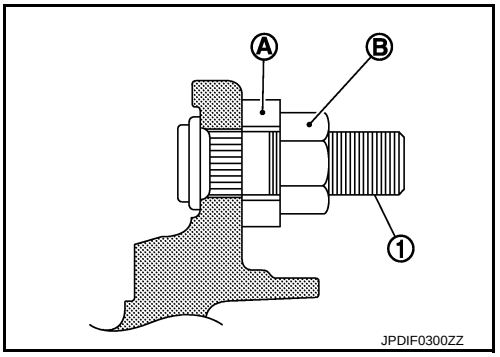
8. Perform inspection after removal. Refer to RAX-9, "Inspection".

INSTALLATION

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

Hub Bolts

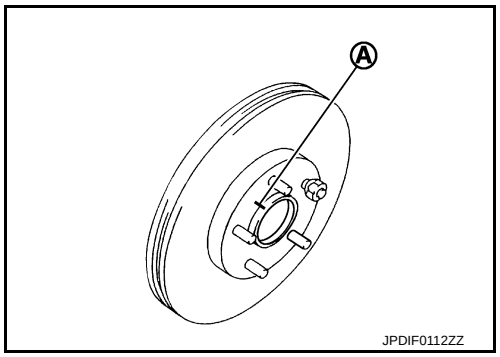
- Place a washer Ⓐ as shown in the figure to install the hub bolts ① by using the tightening force of the nut Ⓑ.
  CAUTION:
  - **Check that there is no clearance between wheel hub and bearing assembly, and hub bolt.**
  - **Never reuse hub bolt.**



Disc rotor

CAUTION:

- **Align the matching marks Ⓐ made during removal when reusing the disc rotor.**
- **Never drop disc rotor.**



- Perform inspection after installation. Refer to RAX-9, "Inspection".

Inspection

INFOID:0000000010828157

INSPECTION AFTER REMOVAL

Check wheel hub and bearing assembly for wear, cracks, and damage. Replace if there are.

INSPECTION AFTER INSTALLATION

1. Check wheel sensor harness for proper connection. Refer to BRC-213, "REAR WHEEL SENSOR : Exploded View".
2. Check wheel alignment. Refer to RSU-7, "Inspection".
3. Adjust neutral position of steering angle sensor. Refer to BRC-99, "Work Procedure".

SERVICE DATA AND SPECIFICATIONS (SDS)

SERVICE DATA AND SPECIFICATIONS (SDS)

Wheel Bearing

INFOID:0000000010828158

Axial end play	0.05 mm (0.002 in) or less

PRECAUTION

PRECAUTIONS

Precautions for Removing Battery Terminal

INFOID:0000000010921258

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  NOTE:
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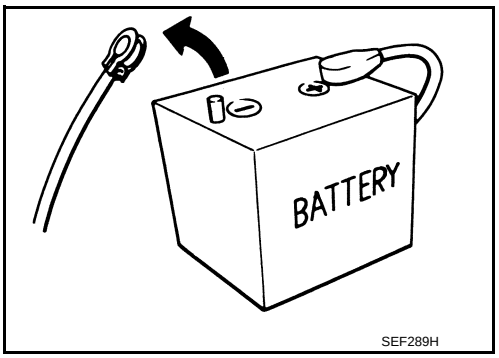
- For vehicles with the 2-batteries, be sure to connect the main battery and the sub battery before turning ON the ignition switch.
  NOTE:
  If the ignition switch is turned ON with any one of the terminals of main battery and sub battery disconnected, then DTC may be detected.
- After installing the 12V battery, always check "Self Diagnosis Result" of all ECUs and erase DTC.
  NOTE:
  The removal of 12V battery may cause a DTC detection error.



HOW TO DISCONNECT 12V BATTERY TERMINAL

Disconnect 12V battery terminal according to Instruction 1 or Instruction 2 described below.
For vehicles parked by ignition switch OFF, refer to Instruction 2.

INSTRUCTION 1

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4. Wait at least 3 minutes. For vehicle with the engine listed below, remove the battery terminal after a lapse of the specified time.

D4D engine	: 20 minutes
HRA2DDT	: 12 minutes
K9K engine	: 4 minutes
M9R engine	: 4 minutes
R9M engine	: 4 minutes
V9X engine	: 4 minutes

CAUTION:
While waiting, never operate the vehicle such as locking, opening, and closing doors. Violation of this caution results in the activation of ACC power supply according to the Auto ACC function.

5. Remove 12V battery terminal.
   CAUTION:
   After installing 12V battery, always check self-diagnosis results of all ECUs and erase DTC.

INSTRUCTION 2 (FOR VEHICLES PARKED BY IGNITION SWITCH OFF)

1. Unlock the door with intelligent key or remote keyless entry.
   NOTE:
   At this moment, ACC power is supplied.
2. Open the driver side door.
3. Open the hood.
4. Close the driver side door.
5. Wait at least 3 minutes.

CAUTION:
While waiting, never operate the vehicle such as locking, opening, and closing doors. Violation of this caution results in the activation of ACC power supply according to the Auto ACC function.

6. Remove 12V battery terminal.

CAUTION:
After installing 12V battery, always check self-diagnosis results of all ECUs and erase DTC.

Precautions for Drive Shaft

INFOID:0000000010828160

CAUTION:
Note the following precautions when disassembling and assembling drive shaft.

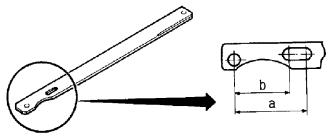
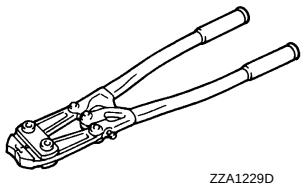
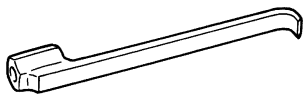
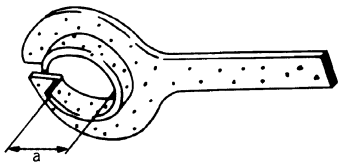
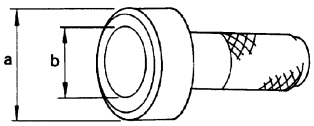
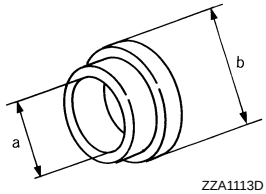
- **Joint sub-assembly does not disassemble because it is non-overhaul parts.**
- **Perform work in a dust-free location.**
- **Before disassembling and assembling, clean the parts.**
- **Prevent the entry of foreign objects during disassembly of the service location.**
- **Disassembled parts must be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

PREPARATION

PREPARATION

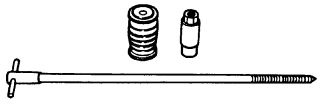
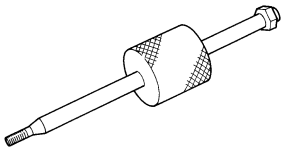
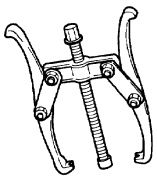
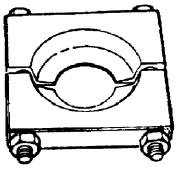
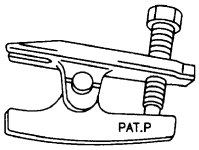
Special Service Tool

INFOID:0000000010828161

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
KV38100500 Drift a: 80 mm (3.15 in) dia. b: 60 mm (2.36 in) dia.  ZZA0701D	Installing sensor rotor
KV40101840 Collar a: 67 mm (2.64 in) dia. b: 85 mm (3.35 in) dia.  ZZA1113D	Installing sensor rotor

Commercial Service Tool

INFOID:0000000010828162

Tool name	Description
Drive shaft puller  JPDIG0152ZZ	Removing drive shaft joint sub assembly
Sliding hammer  ZZA0023D	Removing drive shaft
Puller  ZZA0119D	Removing sensor rotor
Replacer  ZZA0700D	Removing sensor rotor
Ball joint remover  NT146	Removing hub bolt

Lubricant or/and Sealant

INFOID:0000000010828163

Name	Description
Fill NISSAN Genuine grease or equivalent	• Joint sub-assembly inside • Housing inside

SYMPTOM DIAGNOSIS

NOISE, VIBRATION AND HARSHNESS (NVH) TROUBLESHOOTING

NVH Troubleshooting Chart

INFOID:0000000010828164

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

Reference			—	RAX-30	—	RAX-22	—	NVH in DLN section	NVH in DLN section	NVH in RAX and RSU sections	Refer to REAR AXLE in this chart	NVH in WT section	NVH in WT section	Refer to DRIVE SHAFT in this chart	NVH in BR section
Possible cause and SUSPECTED PARTS			Excessive joint angle	Joint sliding resistance	Imbalance	Improper installation, looseness	Parts interference	PROPELLER SHAFT	DIFFERENTIAL	REAR AXLE AND REAR SUSPENSION	REAR AXLE	TIRE	ROAD WHEEL	DRIVE SHAFT	BRAKE
Symptom	DRIVE SHAFT	Noise	×	×				×	×	×	×	×	×		×
		Shake	×		×			×		×	×	×	×		×
	REAR AXLE	Noise				×	×	×	×	×		×	×	×	×
		Shake				×	×	×		×		×	×	×	×
		Vibration				×	×	×		×		×		×	
		Shimmy				×	×			×		×	×		×
		Judder				×				×		×	×		×
		Poor quality ride or handling				×	×			×		×	×		

×: Applicable

PERIODIC MAINTENANCE

REAR WHEEL HUB AND HOUSING

Inspection

INFOID:0000000010828165

COMPONENT PART

Make sure 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 and bearing assembly in the axial direction by hand. Check there is no looseness of wheel bearing.

Axial end play : Refer to RAX-31, "Wheel Bearing".

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

REAR DRIVE SHAFT

Inspection

INFOID:0000000010828166

REAR DRIVE SHAFT INSPECTION

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

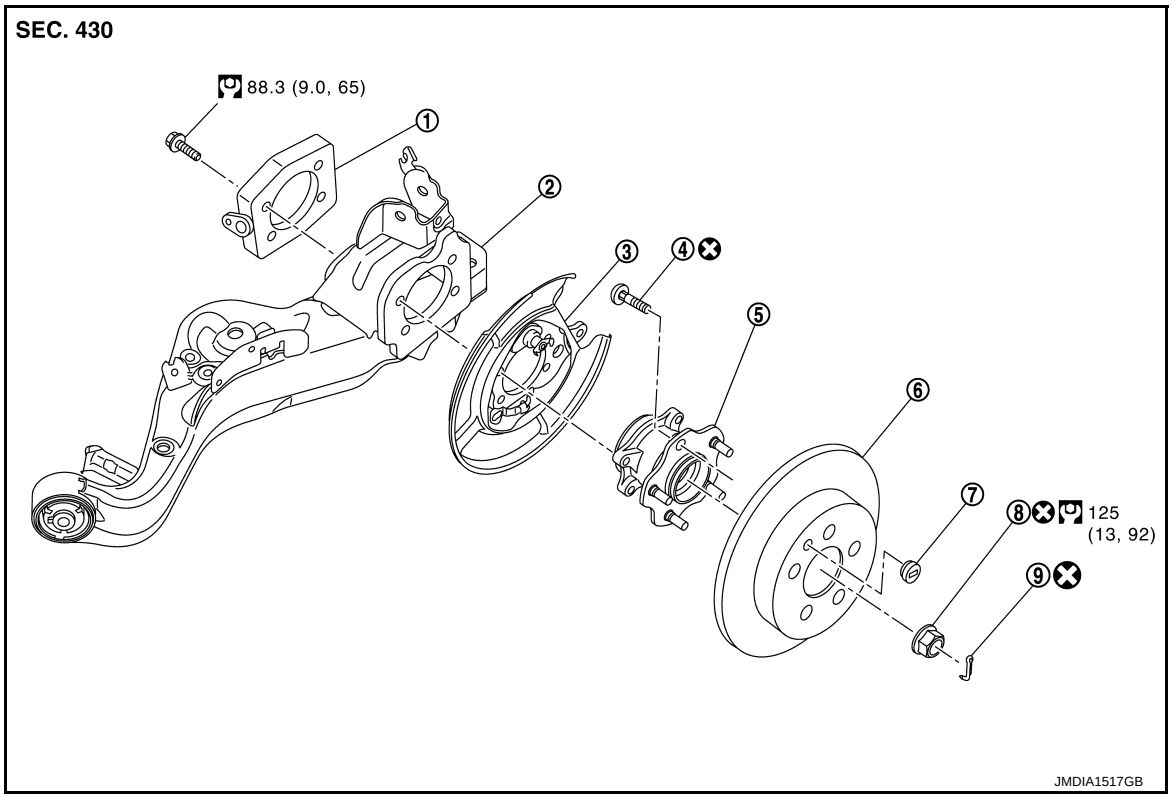
- Check drive shaft mounting point and joint for looseness and other damage.
  CAUTION:
  Replace entire drive shaft assembly when noise or vibration occur from drive shaft.
- Check boot for cracks and other damage.

REMOVAL AND INSTALLATION

REAR WHEEL HUB AND HOUSING

Exploded View

INFOID:0000000010828167



① Axle housing	② Suspension arm	③ Back plate
④ Hub bolt	⑤ Wheel hub and bearing assembly	⑥ Disc rotor
⑦ Plug	⑧ Wheel hub lock nut	⑨ Cotter pin

: N·m (kg-m, ft-lb)

: Always replace after every disassembly.

Removal and Installation

INFOID:0000000010828168

REMOVAL

Wheel Hub and Bearing Assembly

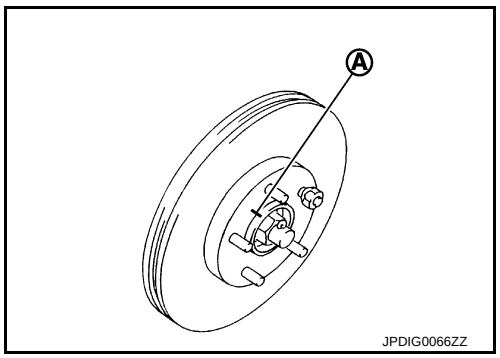
1. Remove tires. Refet to WT-61, "Exploded View".
2. Remove wheel sensor from axle housing. Refer to BRC-213, "REAR WHEEL SENSOR : Exploded View".
3. Remove caliper assembly. Hang caliper assembly in a place where it will not interfere with work.
   - LHD: Refer to BR-63, "BRAKE CALIPER ASSEMBLY : Removal and Installation".
   - RHD: Refer to BR-123, "BRAKE CALIPER ASSEMBLY : Removal and Installation".

   CAUTION:
   Never depress brake pedal while brake caliper is removed.
4. Remove disc rotor. If disc rotor cannot be removed, remove as follows.

   CAUTION:
   - **Parking brake completely in the released position.**

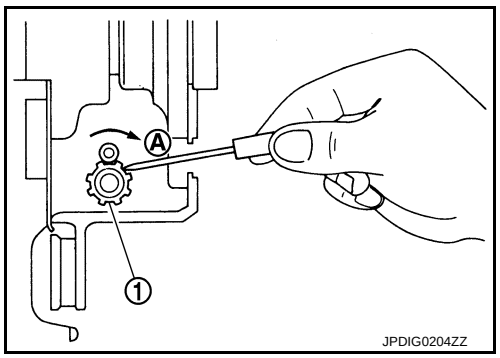
- **Put matching marks Ⓐ on the wheel hub and bearing assembly and the disc rotor before removing the disc rotor.**
- **Never drop disc rotor.**

a. Fix the disc rotor with wheel nuts and remove the adjusting hole plug.

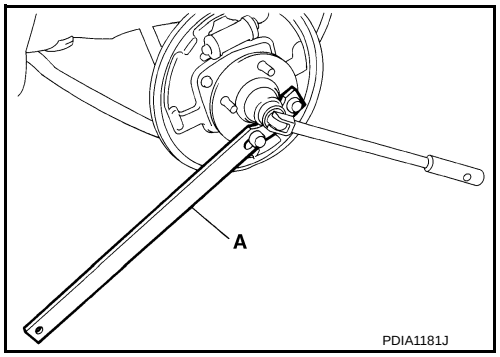


b. Using suitable tool, rotate adjuster ① in the direction Ⓐ to retract and loosen brake shoe.

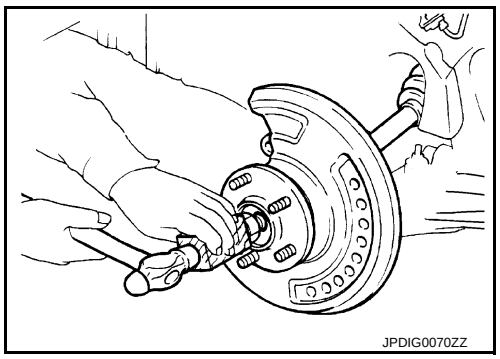
c. Remove disc rotor.



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

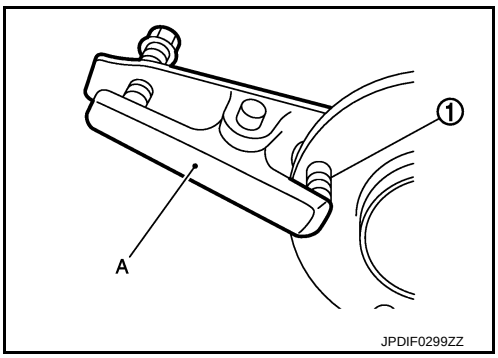


6. Patch wheel hub lock nut with a piece of wood. Hammer the wood to disengage wheel hub and bearing assembly from drive shaft.
NOTE:
Use suitable puller, if wheel hub and bearing assembly and drive shaft cannot be separated even after performing the above procedure.



7. Remove wheel hub and bearing assembly.
CAUTION:
Remove parking brake assembly only when necessary.
8. Remove back plate.
9. If axle housing need to be removed, remove drive shaft. Refer to RAX-22, "Removal and Installation".

10. Remove hub bolts ① from wheel hub and bearing 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 and bearing assembly.**
- **Pull out the hub bolt in a direction perpendicular to the wheel hub and bearing assembly.**



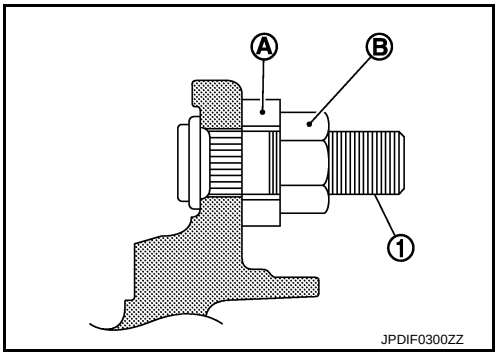
11. Perform inspection after removal. Refer to RAX-21, "Inspection".

INSTALLATION

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

Hub Bolts

- Place a washer Ⓐ as shown in the figure to install the hub bolts ① by using the tightening force of the nut Ⓑ.
CAUTION:
  - **Check that there is no clearance between wheel hub and bearing assembly, and hub bolt.**
  - **Never reuse hub bolt.**

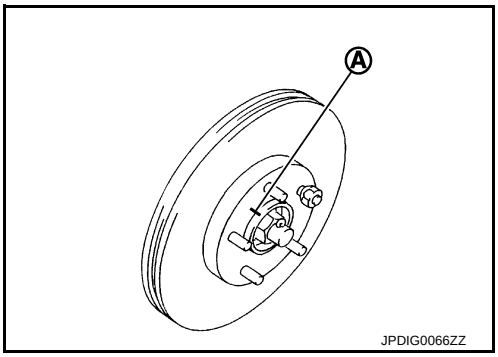


Drive shaft

- Tighten the wheel hub lock nut to the specified torque. Refer to RAX-18, "Exploded View".
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.**
- When installing a cotter pin, securely band the basal portion to prevent rattles.
CAUTION:
  - **Bend cotter pin at the root sufficiently to prevent any looseness.**
  - **Never reuse cotter pin.**

Disc rotor

CAUTION:
- **Align the matching marks Ⓐ made during removal when reusing the disc rotor.**
- **Never drop disc rotor.**



- Perform inspection after installation. Refer to RAX-21, "Inspection".

Inspection

INFOID:0000000010828169

INSPECTION AFTER REMOVAL

Check wheel hub and bearing assembly for wear, cracks, and damage. Replace if there are.

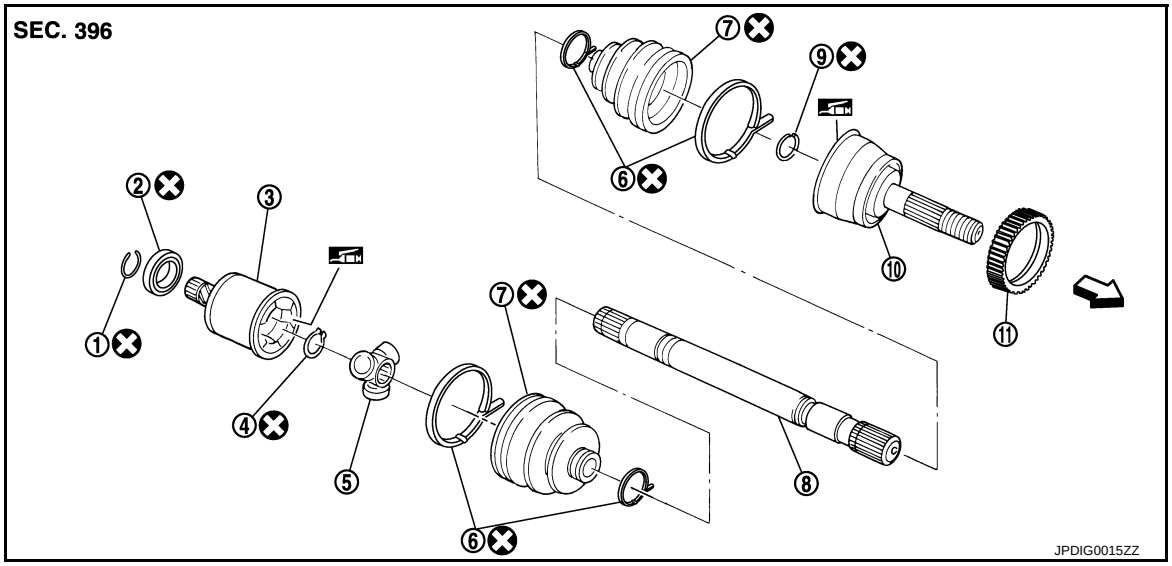
INSPECTION AFTER INSTALLATION

1. Check wheel sensor harness for proper connection. Refer to BRC-213, "REAR WHEEL SENSOR : Exploded View".
2. Check wheel alignment. Refer to RSU-7, "Inspection".
3. Adjust neutral position of steering angle sensor. Refer to BRC-99, "Work Procedure".

REAR DRIVE SHAFT

Exploded View

INFOID:0000000010828170



① Circular clip	② Dust shield	③ Housing
④ Snap ring	⑤ Spider assembly	⑥ Boot band
⑦ Boot	⑧ Shaft	⑨ Circular clip
⑩ Joint sub-assembly	⑪ Sensor rotor	

⇦: Wheel side

: Fill NISSAN genuine grease or an equivalent.

: Always replace after every disassembly.

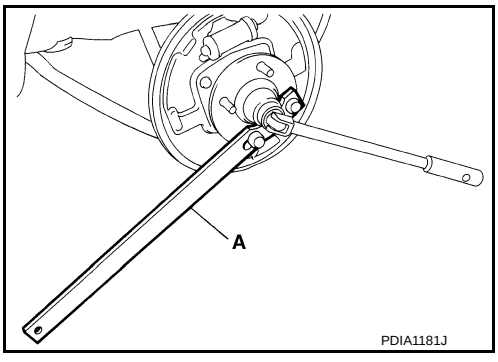
Removal and Installation

INFOID:0000000010828171

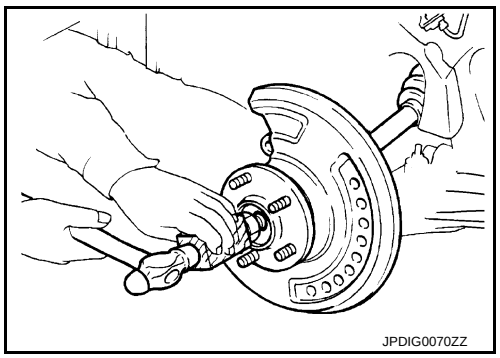
REMOVAL

1. Remove tires. Refer to WT-61, "Removal and Installation".
2. Remove wheel sensor from wheel hub and bearing assembly. Refer to BRC-213, "REAR WHEEL SENSOR : Exploded View".
3. Remove caliper assembly. Hang caliper assembly in a place where it will not interfere with work.
   - LHD: Refer to BR-63, "BRAKE CALIPER ASSEMBLY : Removal and Installation".
   - RHD: Refer to BR-123, "BRAKE CALIPER ASSEMBLY : Removal and Installation".

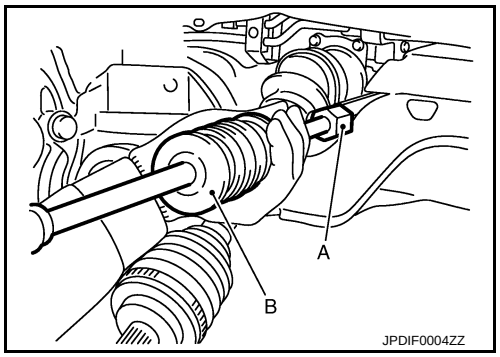
   CAUTION:
   Never depress brake pedal while brake caliper is removed.
4. Remove disc rotor. Refer to RAX-18, "Removal and Installation".
5. Remove cotter pin, and then loosen wheel hub lock nut, using a wheel hub lock nut wrench (A) (SST: KV40104000).



6. Patch wheel hub lock nut with a piece of wood. Hammer the wood to disengage wheel hub and bearing assembly from drive shaft.
NOTE:
Use suitable puller, if wheel hub and bearing assembly and drive shaft cannot be separated even after performing the above procedure.


JPDIG0070ZZ

7. Remove wheel hub and bearing assembly.
CAUTION:
Remove parking brake assembly only when necessary.
8. Remove back plate.
9. Remove stabilizer link. Refer to RSU-19, "Removal and Installation".
10. Remove shock absorber from suspension arm. Refer to RSU-11, "Removal and Installation".
11. Remove upper link from suspension arm. Refer to RSU-17, "Removal and Installation".
12. Remove lower link from suspension arm. Refer to RSU-15, "Removal and Installation".
13. Loosen the mounting bolt and nut of suspension arm and suspension arm braket. Refer to RSU-13, "Removal and Installation".
14. Remove drive shaft from final drive assembly.
- 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 housing and final drive 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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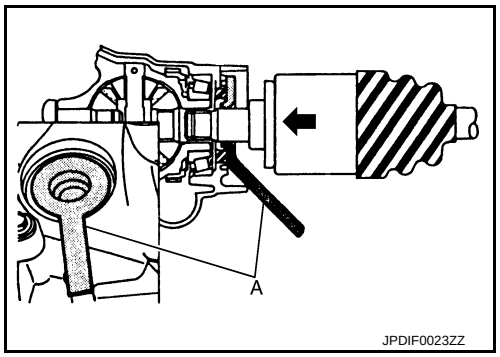
15. Perfrom inspection after removal. Refer to RAX-30, "Inspection".

INSTALLATION

Note the following, and install in the reverse order of removal.
CAUTION:
Always replace side oil seal with new one when installing drive shaft. Refer to DLN-229, "Removal and Installation".
- Place the protector (A) (SST: KV38107900) onto final drive assembly to prevent damage to the side 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.**
- **Never reuse side oil seal.**



JPDIF0023ZZ

- Tighten the wheel hub lock nut to the specified torque. Refer to RAX-18, "Exploded View".
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.**

- When installing a cotter pin, securely band the basal portion to prevent rattles.
  CAUTION:
  - **Bend cotter pin at the root sufficiently to prevent any looseness.**
  - **Never reuse cotter pin.**
- Perform inspection after installation. Refer to RAX-30, "Inspection".

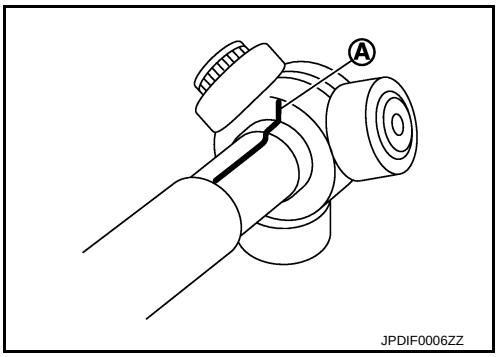
Disassembly and Assembly

INFOID:0000000010828172

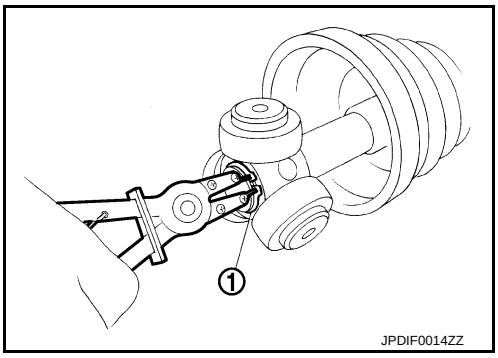
DISASSEMBLY

Final Drive Side

1. Fix shaft with a vise.
   CAUTION:
   Protect shaft using aluminum or copper plates when fixing with a vise.
2. Remove boot bands, and then remove boot from housing.
3. Put matching marks on housing and shaft.
   CAUTION:
   Use paint or an equivalent for matching marks. Never scratch the surface.
4. Put matching marks Ⓐ on the spider assembly and shaft.
   CAUTION:
   Use paint or an equivalent for matching marks. Never scratch the surface.



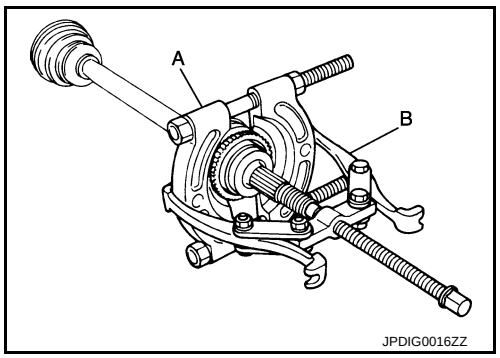
5. Remove snap ring ①, and then remove spider assembly from shaft.



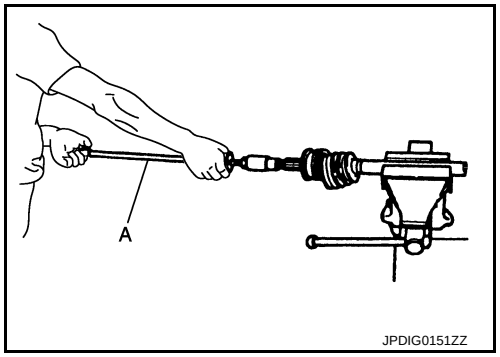
6. Remove boot from shaft.
7. Remove circular clip housing.
8. Remove dust shield to housing.
9. Remove old grease on housing with paper towels.
10. Perform inspection after disassembly. Refer to RAX-30, "Inspection".

Wheel Side

1. If sensor rotor needs to be removed, use a bearing replacer (A) and puller (B) (commercial service tool).



2. Fix shaft with a vise.
CAUTION:
Protect shaft using aluminum or copper plates when fixing with a vise.
3. Remove boot bands. Then remove boot from joint sub-assembly.
4. Screw drive shaft puller (A) (commercial service tool) into joint sub-assembly screw part to a length 30 mm (1.18 in) or more. Support drive shaft with one hand and pull out joint sub-assembly from shaft.
CAUTION:
- **If joint sub-assembly cannot be removed after five or more unsuccessful attempts, replace shaft and joint sub assembly as a set.**
- **Align sliding hammer and drive shaft and remove them by pulling directory.**

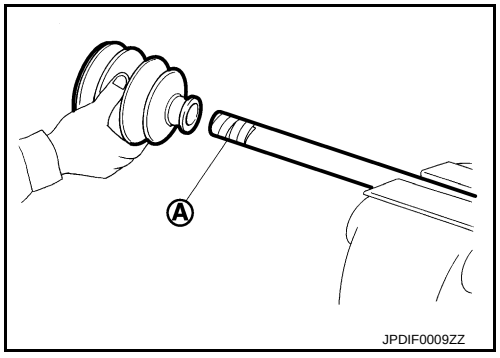


5. Remove circular clip from shaft.
CAUTION:
Never reuse circular clip.
6. Remove boot from shaft.
7. Remove old grease on joint sub-assembly with paper towels.
8. Perform inspection after disassembly. Refer to RAX-30, "Inspection".

ASSEMBLY

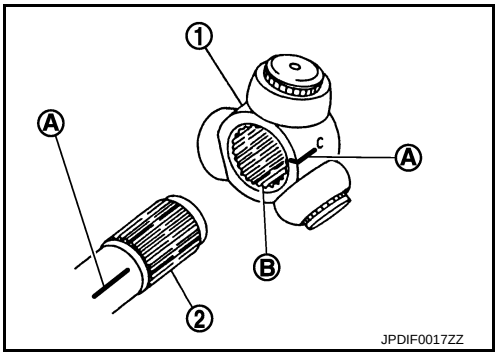
Final drive Side

1. Wrap serration on shaft with tape Ⓐ to protect boot from damage. Install new boot and boot band to shaft.
CAUTION:
Never reuse boot and boot band.

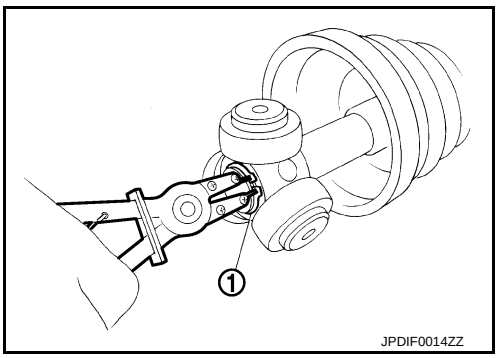


2. Remove the tape wrapped around the serrated on shaft.

3. To install the spider assembly ①, align it with the matching marks Ⓐ on the shaft ② during the removal, and direct the serration mounting surface Ⓑ to the shaft.



4. Secure spider assembly onto shaft with snap ring ①.
CAUTION:
Never reuse snap ring.

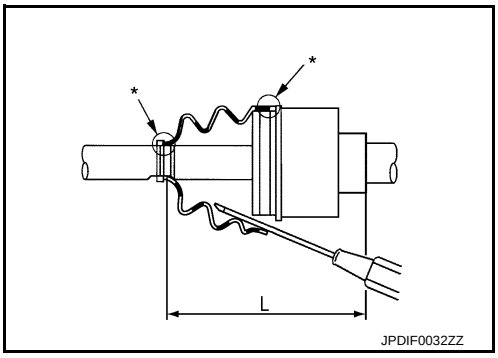


5. Assemble the housing onto spider assembly, and apply the balance of the specified amount grease.

Standard

Grease amount : Refer to RAX-31, "Drive Shaft".

6. Align matching marks painted when housing were removed.
7. Install boot securely into grooves (indicated by "*" marks) shown in the figure.
CAUTION:
If there is grease on boot mounting surfaces (indicated by "*" marks) of shaft or housing, boot may be removed. Remove all grease from the surfaces.



8. To prevent from 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.

Standard

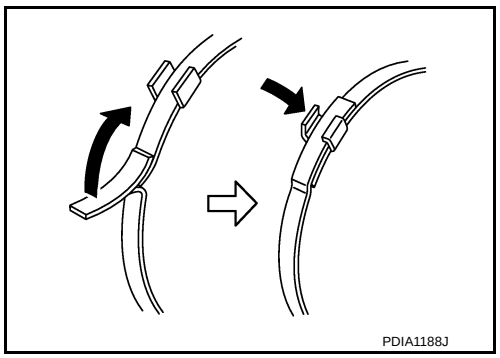
L : Refer to RAX-31, "Drive Shaft".

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

9. Install new boot bands securely.
CAUTION:
Never reuse boot band.

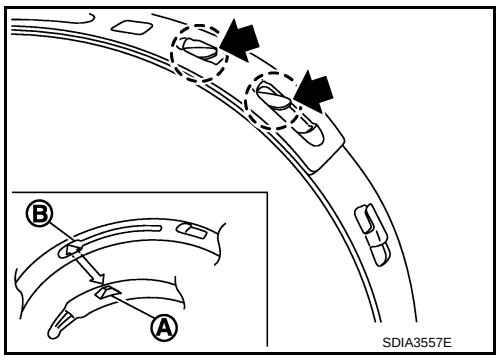
a. For one-touch clamp band

- Secure the large and small ends of boot with new boot bands as shown in the figure.



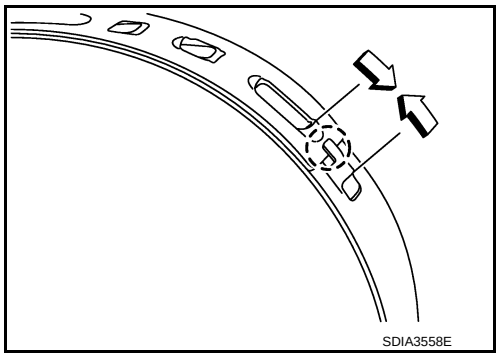
b. For low profile type band

i. 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 Ⓐ and guide slit Ⓑ at first.



ii. Pinch projection on the band with suitable pliers to tighten band.

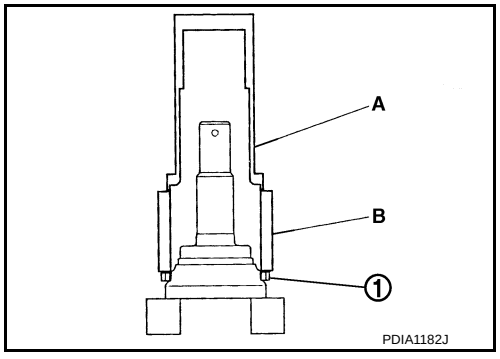
iii. Insert tip of band below end of the pawl.



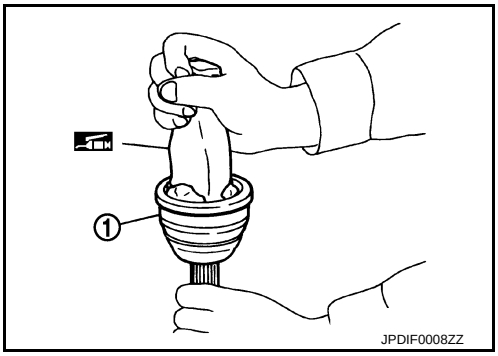
10. Secure housing and shaft, and then make sure that they are in the correct position when rotating boot. Install them with new boot band when the mounting positions become incorrect.
11. Install dust shield to housing.
CAUTION:
Never reuse dust shield.
12. Install circular clip to housing.
CAUTION:
Never reuse circular clip.
13. Perform inspection after assembly. Refer to RAX-30, "Inspection".

Wheel Side

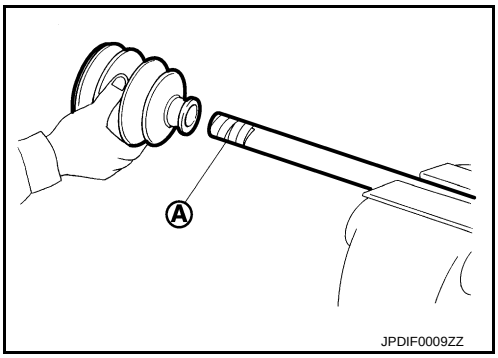
1. If sensor rotor ① is removed, use a drift (A) (SST: KV38100500) and color (B) (SST: KV40101840) to press in a new one.



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 shop cloth to wipe off old grease that has oozed out.



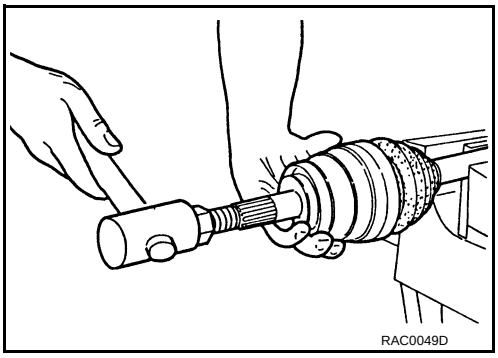
3. Wrap serrated part of shaft with tape Ⓐ. Install boot band and boot to shaft. Be careful not to damage boot.
CAUTION:
Never reuse boot and boot band.



4. Remove the tape wrapped around the serrated on shaft.
5. Position circular clip 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 circular clip joint sub-assembly.
7. Install joint sub-assembly to shaft using plastic hammer.
CAUTION:
Confirm that joint sub-assembly is correctly engaged while rotating drive shaft.
8. Apply the balance of the specified amount of grease into the boot inside from large diameter side of boot.

Standard

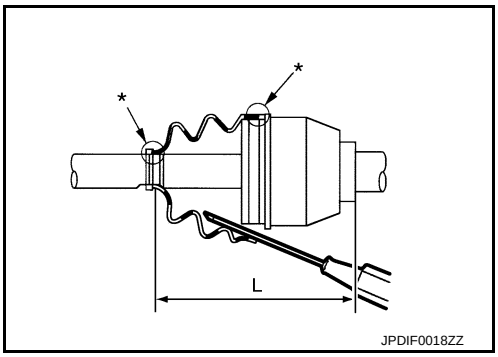
Grease amount **: Refer to RAX-31, "Drive Shaft".**



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

Standard

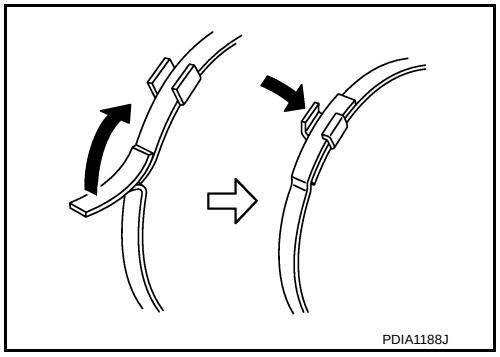
L **: Refer to RAX-31, "Drive Shaft".**



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

11. Secure large and small ends of boot with new boot bands as shown in the figure.
CAUTION:
Never reuse boot band.

a. For one-touch clamp band
- Secure the large and small ends of boot with new boot bands as shown in the figure.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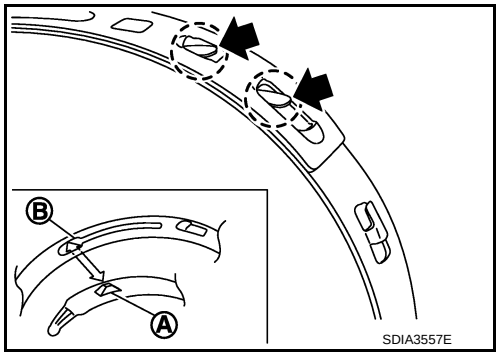
b. For low profile type band

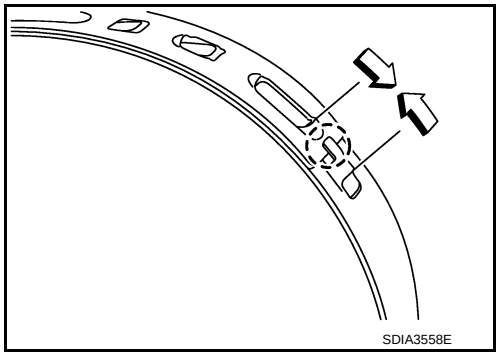
i. Put boot band in the groove on drive shaft boot. Then fit pawls (⬅) into holes to temporary installation.
NOTE:
For the large diameter side, fit projection Ⓐ and guide slit Ⓑ at first.



SDIA3557E

ii. Pinch projection on the band with suitable pliers to tighten band.

iii. Insert tip of band below end of the pawl.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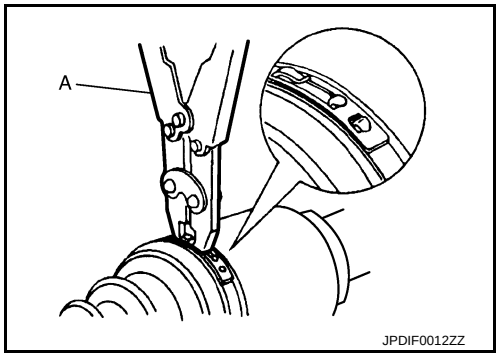
c. For omege type band

i. Secure the boot bands using the boot band crimping tool (A) (SST: KV40107300).
CAUTION:
Never reuse boot band.



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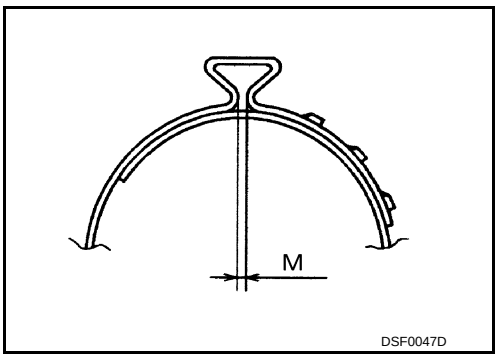
NOTE:

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

M : 1.0 – 4.0 mm (0.039 – 0.157 in)



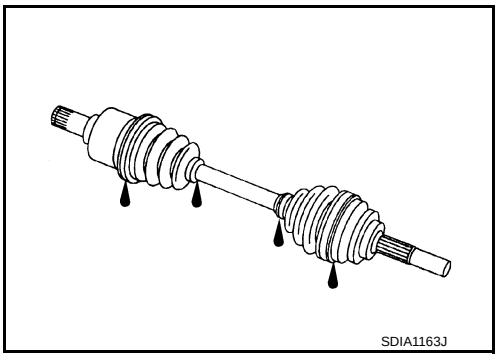
12. Secure housing and shaft, and then make sure that they are in the correct position when rotating boot. Install them with new boot band when the mounting positions become incorrect.

Inspection

INFOID:0000000010828173

INSPECTION AFTER REMOVAL

- Move joint up/down, left/right, and in the axial direction. Check for motion that is not smooth and for significant looseness.
- Check boot for cracks or other damage, and also for grease leakage.
- If a malfunction is found, disassemble drive shaft, and then replace with new one.



INSPECTION AFTER DISASSEMBLY

Shaft

Check shaft for runout, cracks, or other damage. Replace if there are any abnormal condition.

Joint Sub-Assembly (Wheel Side)

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 and Spider assembly (Final Drive Side)

Replace housing and spider assembly if there is scratching or wear of housing roller contact surface or spider roller contact surface.

NOTE:

Housing and spider assembly are used in a set.

INSPECTION AFTER INSTALLATION

1. Check wheel sensor harness for proper connection. Refer to BRC-213, "REAR WHEEL SENSOR : Exploded View".
2. Check wheel alignment. Refer to RSU-7, "Inspection".
3. Adjust neutral position of steering angle sensor. Refer to BRC-99, "Work Procedure".

SERVICE DATA AND SPECIFICATIONS (SDS)

SERVICE DATA AND SPECIFICATIONS (SDS)

Wheel Bearing

INFOID:0000000010828174

Axial end play	0.05 mm (0.002 in) or less

Drive Shaft

INFOID:0000000010828175

Item		Standard
Grease quantity	Wheel side	35 – 45 g (1.24 – 1.58 oz)
	Final drive side	40 – 50 g (1.42 – 1.76 oz)
Boots installed length*	Wheel side	90.2 – 92.2 mm (3.551 – 3.630 in)
	Final drive side	151.55 – 153.55 mm (5.97 – 6.05 in)

*: For measuring position. Refer to RAX-24, "Disassembly and Assembly".