

SECTION **RAX**  
REAR AXLE

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RAX

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# PRECAUTIONS

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## PRECAUTION

### PRECAUTIONS

#### Precaution for Technicians Using Medical Electric

INFOID:000000007073070

##### OPERATION PROHIBITION

###### **WARNING:**

- Parts with strong magnet is used in this vehicle.
- Technicians using a medical electric device such as pacemaker must never perform operation on the vehicle, as magnetic field can affect the device function by approaching to such parts.

##### NORMAL CHARGE PRECAUTION

###### **WARNING:**

- If a technician uses a medical electric device such as an implantable cardiac pacemaker or an implantable cardioverter defibrillator, the possible effects on the devices must be checked with the device manufacturer before starting the charge operation.
- As radiated electromagnetic wave generated by on board charger at normal charge operation may effect medical electric devices, a technician using a medical electric device such as implantable cardiac pacemaker or an implantable cardioverter defibrillator must not enter the vehicle compartment (including luggage room) during normal charge operation.

##### Precaution at telematics system operation

###### **WARNING:**

- If a technician uses implantable cardiac pacemaker or implantable cardioverter defibrillator (ICD), avoid the device implanted part from approaching within approximately 220 mm (8.66 in) from interior/exterior antenna.
- The electromagnetic wave of TCU might affect the function of the implantable cardiac pacemaker or the implantable cardioverter defibrillator (ICD), when using the service, etc.
- If a technician uses other medical electric devices than implantable cardiac pacemaker or implantable cardioverter defibrillator(ICD), the electromagnetic wave of TCU might affect the function of the device. The possible effects on the devices must be checked with the device manufacturer before TCU use.

##### Precaution at intelligent key system operation

###### **WARNING:**

- If a technician uses implantable cardiac pacemaker or implantable cardioverter defibrillator (ICD), avoid the device implanted part from approaching within approximately 220 mm (8.66 in) from interior/exterior antenna.
- The electromagnetic wave of intelligent key might affect the function of the implantable cardiac pacemaker or the implantable cardioverter defibrillator (ICD), at door operation, at each request switch operation, or at engine starting.
- If a technician uses other medical electric devices than implantable cardiac pacemaker or implantable cardioverter defibrillator (ICD), the electromagnetic wave of intelligent key might affect the function of the device. The possible effects on the devices must be checked with the device manufacturer before intelligent key use.

#### Point to Be Checked Before Starting Maintenance Work

INFOID:000000007080023

The high voltage system may starts automatically. It is required to check that the timer air conditioner and timer charge (during EVSE connection) are not set before starting maintenance work.

###### **NOTE:**

If the timer air conditioner or timer charge (during EVSE connection) is set, the high voltage system starts automatically even when the power switch is in OFF state.

# PREPARATION

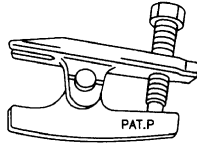
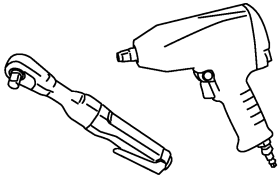
< PREPARATION >

## PREPARATION

### PREPARATION

#### Commercial Service Tools

INFOID:000000007006100

Tool name	Description
Ball joint remover  NT146	Removing hub bolt
Power tool  PBIC0190E	Loosening bolts and nuts

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# NOISE, VIBRATION AND HARSHNESS (NVH) TROUBLESHOOTING

< SYMPTOM DIAGNOSIS >

## SYMPTOM DIAGNOSIS

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

#### NVH Troubleshooting Chart

INFOID:000000007006101

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

Reference page			RAX-6	—	RAX-5	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	x	x	x	x	x	x	x
		Shake	x	x	x	x	x	x	x
		Vibration	x	x	x	x	x		
		Shimmy	x	x		x	x	x	x
		Judder	x			x	x	x	x
		Poor quality ride or handling	x	x		x	x	x	

x: Applicable

# REAR WHEEL HUB

< PERIODIC MAINTENANCE >

## PERIODIC MAINTENANCE

### REAR WHEEL HUB

#### Inspection

INFOID:000000007006102

#### COMPONENT PART

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

#### WHEEL HUB ASSEMBLY (BEARING-INTEGRATED TYPE)

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

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

**Axial end play** : Refer to [RAX-8, "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.

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# REAR WHEEL HUB

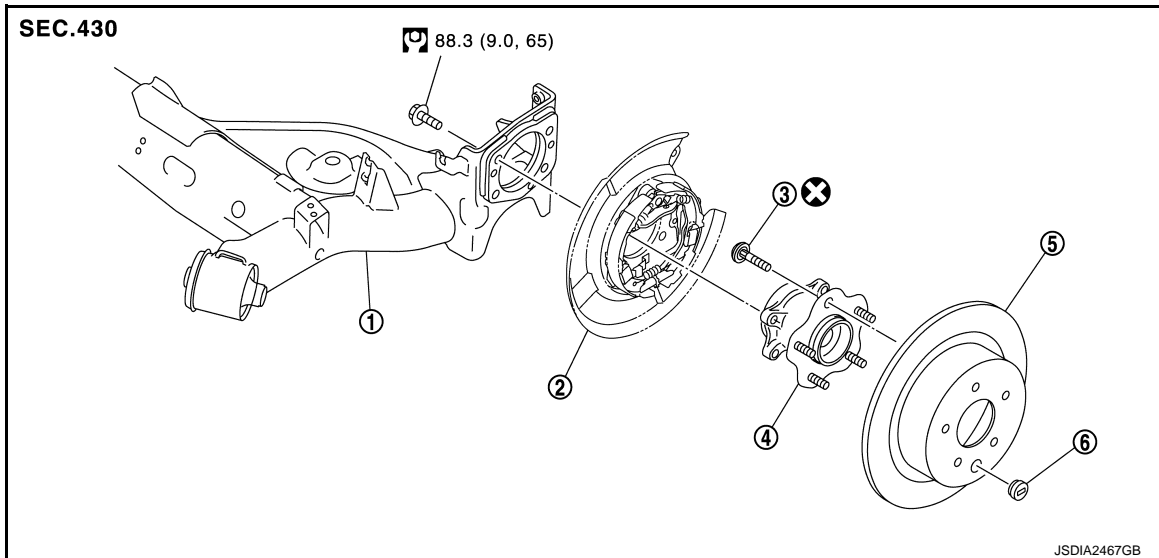
< REMOVAL AND INSTALLATION >

## REMOVAL AND INSTALLATION

### REAR WHEEL HUB

Exploded View

INFOID:000000007006103



- |   |                                |             |
|---|--------------------------------|-------------|
| 1. Rear suspension beam                         | 2. Parking brake shoe assembly | 3. Hub bolt |
| 4. Wheel hub assembly (Bearing-integrated type) | 5. Disc rotor                  | 6. Plug     |

⊗: Always replace after every disassembly.

🔧: N·m (kg·m, ft·lb)

### Removal and Installation

INFOID:000000007006104

#### REMOVAL

1. Remove tires with power tool. Refer to [WT-45, "Exploded View"](#).
2. Remove wheel sensor. Refer to [BRC-149, "REAR WHEEL SENSOR : Removal and Installation"](#).
3. Remove caliper assembly. Hang caliper assembly in a place where it will not interfere with work. Refer to [BR-236, "BRAKE CALIPER ASSEMBLY : Removal and Installation"](#).

#### CAUTION:

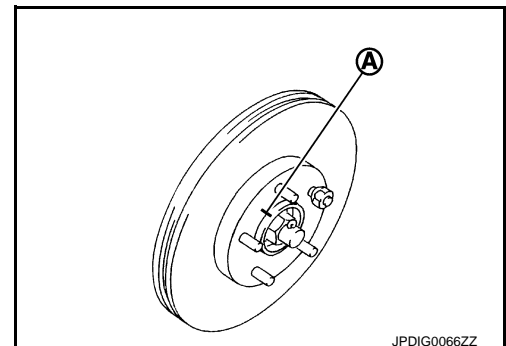
**Never depress brake pedal while brake caliper is removed.**

4. Remove disc rotor. If disc rotor cannot be removed, remove as follows.

#### CAUTION:

- Parking brake completely in the released position.
- Put matching marks (A) on the wheel hub 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.



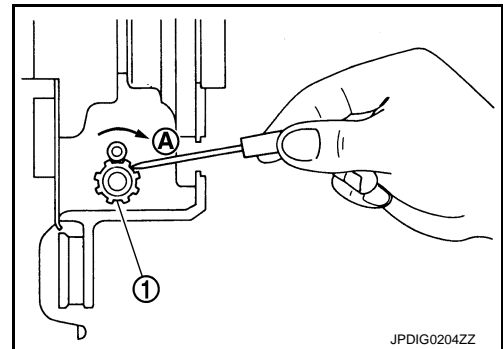
# REAR WHEEL HUB

## < REMOVAL AND INSTALLATION >

- b. Using suitable tool, rotate adjuster (1) in the direction (A) to retract and loosen brake shoe.
5. Remove wheel hub assembly with power tool.

**CAUTION:**

**Never remove parking brake shoe assembly. Protect it from falling.**

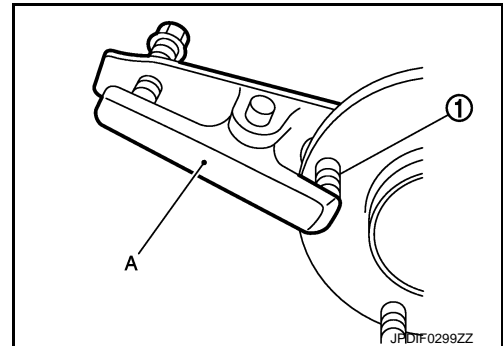


6. Remove hub bolts (1) from wheel hub assembly, using the ball joint remover (A) (commercial service tool).

**CAUTION:**

- Remove hub bolt only when necessary.
- Never hammer the hub bolt to avoid impact to the wheel bearing.
- Pull out the hub bolt in a direction perpendicular to the wheel hub assembly.

7. Perform inspection after removal. Refer to [RAX-7, "Inspection"](#).



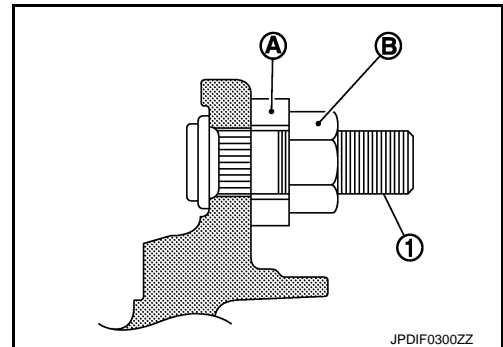
## INSTALLATION

Note the following, and install in the reverse order of 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.
- Fit the pin of rear brake assembly to hole of rear suspension beam when install rear brake assembly.
- Align the matching marks that have been made during removal when reusing the disc rotor.
- Perform inspection after installation. Refer to [RAX-7, "Inspection"](#).



## Inspection

INFOID:000000007006105

## INSPECTION AFTER REMOVAL

Check the wheel hub assembly for wear, cracks, and damage. Replace if necessary.

## INSPECTION AFTER INSTALLATION

1. Check wheel sensor harness for proper connection. [BRC-149, "REAR WHEEL SENSOR : Exploded View"](#).
2. Adjust parking brake operation (stroke). Refer to [PB-81, "Inspection and Adjustment"](#).
3. Check wheel alignment. Refer to [RSU-7, "Inspection"](#).
4. Adjust neutral position of steering angle sensor. Refer to [BRC-59, "Work Procedure"](#).

## SERVICE DATA AND SPECIFICATIONS (SDS)

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## SERVICE DATA AND SPECIFICATIONS (SDS)

### SERVICE DATA AND SPECIFICATIONS (SDS)

Wheel Bearing

INFOID:000000007006106

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