

SECTION **RAX**  
REAR AXLE

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RAX

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# NOISE, VIBRATION, AND HARSHNESS(NVH) TROUBLESHOOTING

< SYMPTOM DIAGNOSIS >

## SYMPTOM DIAGNOSIS

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

#### NVH Troubleshooting Chart

INFOID:000000003895008

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

Reference page		<a href="#">RAX-7</a>	<a href="#">RAX-7</a>	<a href="#">RAX-7</a>	<a href="#">WT-57. "NVH Troubleshooting Chart"</a>	<a href="#">WT-57. "NVH Troubleshooting Chart"</a>	<a href="#">BR-5. "NVH Troubleshooting Chart"</a>	
Possible cause and SUSPECTED PARTS		Improper installation, looseness	Parts interference	Wheel bearing damage	TIRES	ROAD WHEEL	BRAKE	
Symptom	REAR AXLE	Noise	x	x		x	x	x
		Shake	x	x		x	x	x
		Vibration	x	x		x		
		Shimmy	x	x		x	x	x
		Shudder	x			x	x	x
		Poor quality ride or handling	x	x	x	x	x	

x: Applicable

# PRECAUTIONS

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## PRECAUTION

### PRECAUTIONS

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

INFOID:000000004244462

The Supplemental Restraint System such as "AIR BAG" and "SEAT BELT PRE-TENSIONER", used along with a front seat belt, helps to reduce the risk or severity of injury to the driver and front passenger for certain types of collision. This system includes seat belt switch inputs and dual stage front air bag modules. The SRS system uses the seat belt switches to determine the front air bag deployment, and may only deploy one front air bag, depending on the severity of a collision and whether the front occupants are belted or unbelted. Information necessary to service the system safely is included in the SR and SB section of this Service Manual.

#### **WARNING:**

- **To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision which would result in air bag inflation, 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 SR section.**
- **Do not use electrical test equipment on any circuit related to the SRS unless instructed to in this Service Manual. SRS wiring harnesses can be identified by yellow and/or orange harnesses or harness connectors.**

#### Precautions Necessary for Steering Wheel Rotation after Battery Disconnect

INFOID:000000004394038

#### **NOTE:**

- Before removing and installing any control units, first turn the push-button 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.

This vehicle is equipped with a push-button ignition switch and a 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 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. Carry the Intelligent Key or insert it to the key slot and turn the push-button 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 push-button ignition switch from ACC position to ON position, then to LOCK position. (The steering wheel will lock when the push-button ignition switch is turned to LOCK position.)
6. Perform self-diagnosis check of all control units using CONSULT-III.

#### Precaution

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- **When installing each rubber part, final tightening must be carried out under unladen condition\* with tires on ground.**

\*: Fuel, radiator coolant and engine oil full. Spare tire, jack, hand tools and mats in designated positions.

## PRECAUTIONS

< PRECAUTION >

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- After installing removed suspension parts, check wheel alignment.
- Do not jack up at the trailing arm and lateral link.

# PREPARATION

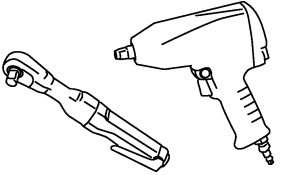
< PREPARATION >

## PREPARATION

### PREPARATION

#### Commercial Service Tool

INFOID:000000003895012

Tool name	Description
<p data-bbox="162 413 272 441">Power tool</p>  <p data-bbox="852 632 922 646">PBIC0190E</p>	<p data-bbox="1015 413 1263 441">Loosening bolts and nuts</p>

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# WHEEL HUB

< ON-VEHICLE MAINTENANCE >

## ON-VEHICLE MAINTENANCE

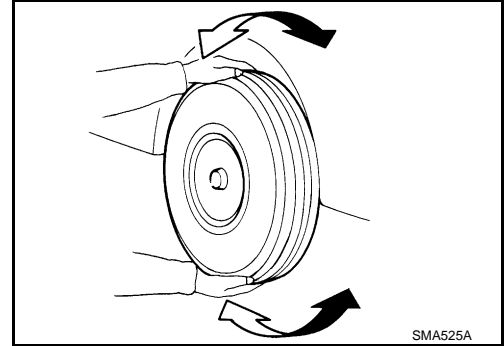
### WHEEL HUB

#### On-vehicle Service

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

- Shake each rear wheel to check for excessive play.



#### Inspection

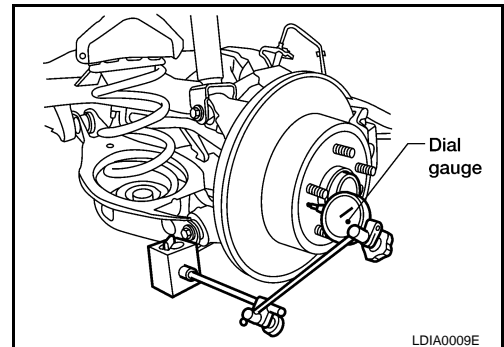
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#### Rear Wheel Bearing

- Check axial end play.

**Axial end play : 0.1 mm (0.004 in) or less**

- Check that wheel hub bearings operate smoothly.
- Replace wheel bearing assembly if there is axial end play or wheel bearing does not turn smoothly. Refer to [FAX-8, "Removal and Installation"](#).



# WHEEL HUB

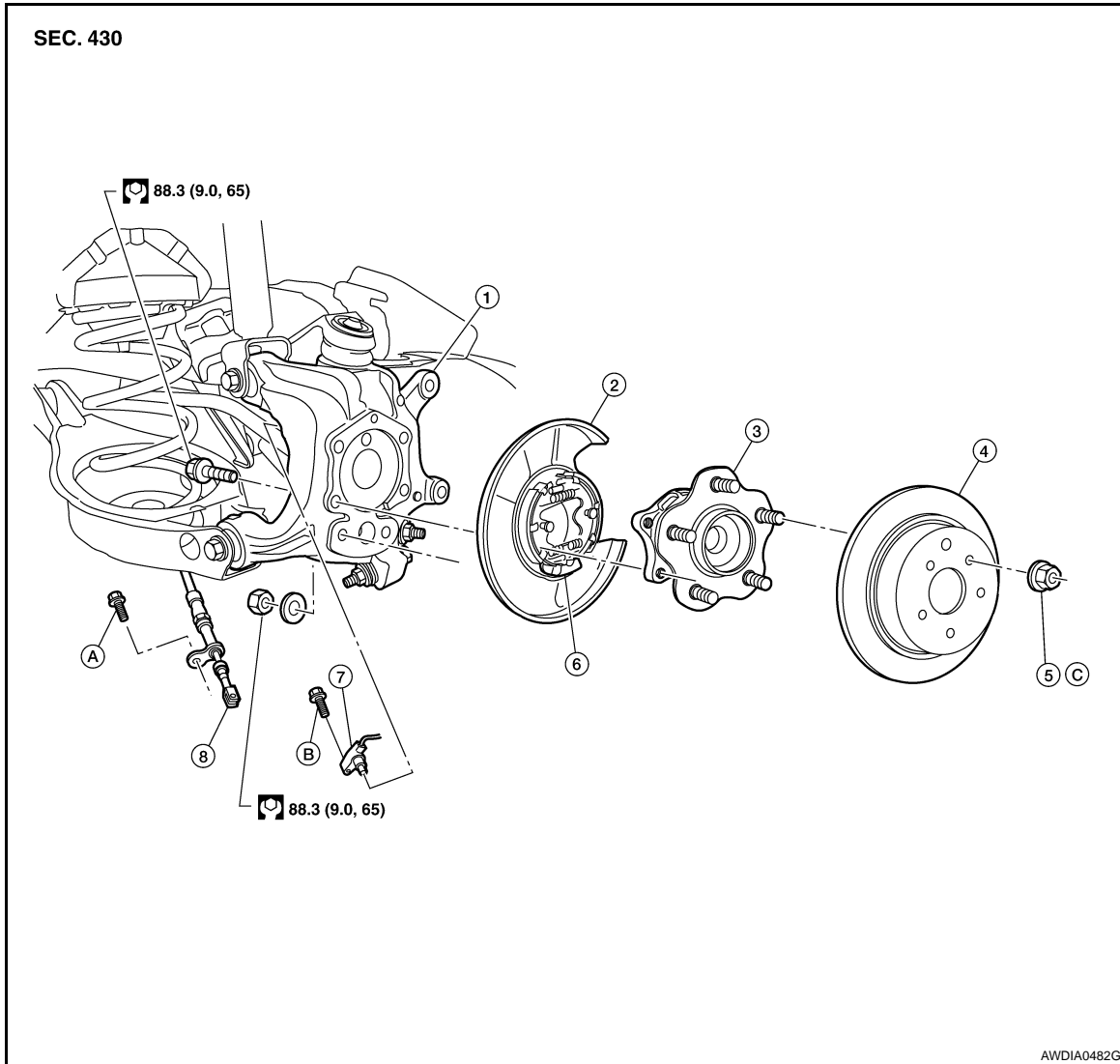
< ON-VEHICLE REPAIR >

## ON-VEHICLE REPAIR

### WHEEL HUB

#### Removal and Installation

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- |   |   |   |
|---|---|---|
| 1. Knuckle  | 2. Baffle plate                                   | 3. Wheel hub assembly                               |
| 4. Brake rotor  | 5. Wheel nut                                      | 6. Anchor block                                     |
| 7. ABS sensor   | 8. Parking brake cable                            | A. Refer to <a href="#">PB-4, "Exploded View"</a> . |
| B. Refer to <a href="#">BRC-100, "Removal and Installation"</a> . | C. Refer to <a href="#">WT-66, "Road Wheel"</a> . |   |

#### REMOVAL

##### **CAUTION:**

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

- A growling noise is emitted from the wheel hub assembly while driving.
- The wheel hub assembly drags or turns roughly.

1. Remove the rear wheel and tire using power tool.
2. Remove the brake caliper assembly and brake rotor using power tool. Refer to [BR-35, "Removal and Installation of Brake Caliper and Rotor"](#).
  - The brake hose does not need to be disconnected from the brake caliper.

# WHEEL HUB

## < ON-VEHICLE REPAIR >

### CAUTION:

- Suspend the brake caliper assembly using wire, do not stretch the brake hose.
- Do not depress the brake pedal, or the caliper piston will pop out.
- Do not twist the brake hose.

3. Remove the rear ABS sensor, then move it away from the wheel hub assembly. Refer to [BRC-100, "Removal and Installation"](#).

### CAUTION:

Failure to remove the ABS sensor may result in damage to the sensor wires and the sensor being inoperative.

4. Remove the wheel hub assembly from knuckle.

## INSPECTION AFTER REMOVAL

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

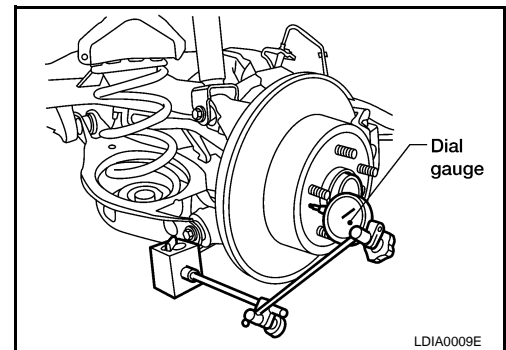
## INSTALLATION

Installation is in the reverse order of removal.

- Check that the wheel bearings operate smoothly.
- Check that the wheel hub bearing axial end play is within specification.

**Axial end play : 0.1 mm (0.004 in) or less**

- Tighten wheel nut to specification. Refer to [WT-66, "Road Wheel"](#).





# SERVICE DATA AND SPECIFICATIONS (SDS)

< SERVICE DATA AND SPECIFICATIONS (SDS)

## SERVICE DATA AND SPECIFICATIONS (SDS)

SERVICE DATA AND SPECIFICATIONS (SDS)

Wheel Bearing (Rear)

INFOID:000000003895015

Wheel bearing axial end play	0.1 mm (0.004 in) or less
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