

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

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

Reference page			RAX-4	—	RAX-3	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

REAR WHEEL HUB AND HOUSING

< ON-VEHICLE MAINTENANCE >

ON-VEHICLE MAINTENANCE

REAR WHEEL HUB AND HOUSING

Inspection

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MOUNTING INSPECTION

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

WHEEL BEARING INSPECTION

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

Standard

Axial end play : Refer to [RAX-6, "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.

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REAR WHEEL HUB AND HOUSING

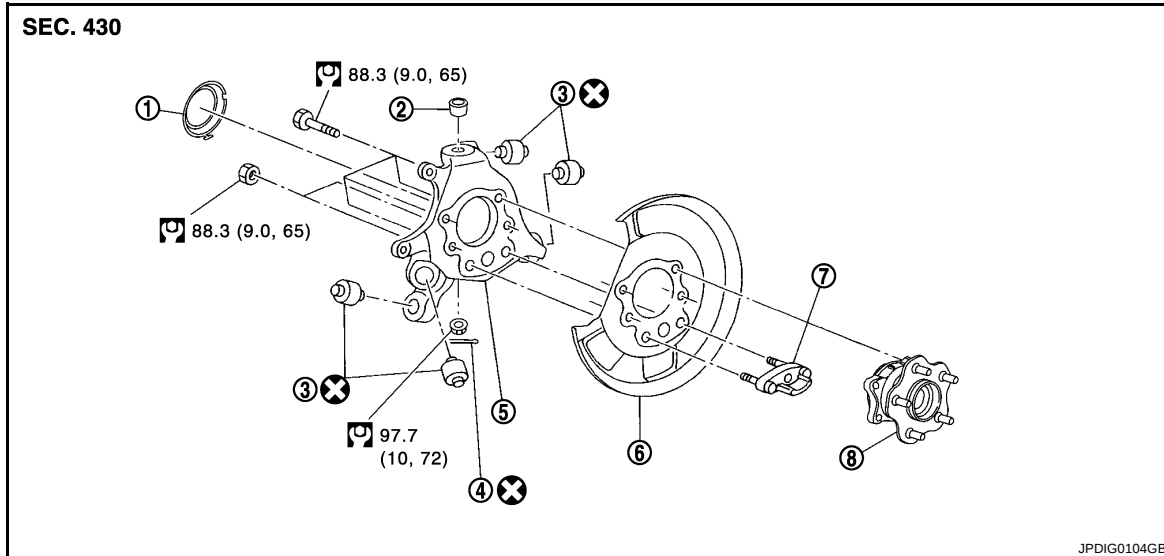
< ON-VEHICLE REPAIR >

ON-VEHICLE REPAIR

REAR WHEEL HUB AND HOUSING

Exploded View

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- | | | |
|-----------------|-----------------------------------|---------------|
| 1. Hub cap | 2. Ball seat | 3. Bushing |
| 4. Cotter pin | 5. Axle housing | 6. Back plate |
| 7. Anchor block | 8. Wheel hub and bearing assembly | |

Refer to [GI-4, "Components"](#) for symbols in the figure.

Removal and Installation

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REMOVAL

1. Remove tire.
2. Remove wheel sensor and sensor harness. Refer to [BRC-58, "REAR WHEEL SENSOR : Exploded View"](#) (without VDC), [BRC-152, "REAR WHEEL SENSOR : Exploded View"](#) (with VDC).
3. Remove caliper assembly. Hang caliper assembly in a place where it will not interfere with work. Refer to [BR-40, "BRAKE CALIPER ASSEMBLY : Exploded View"](#).
4. Remove disc rotor. Refer to [BR-41, "BRAKE CALIPER ASSEMBLY : Removal and Installation"](#).
5. Remove cotter pin, then loosen suspension arm mounting nut of axle housing. Refer to [RAX-4, "Exploded View"](#).
6. Remove wheel hub and bearing assembly.
7. Remove parking brake shoe and parking brake cable from back plate. Refer to [PB-7, "Exploded View"](#) and [PB-5, "Exploded View"](#).
8. Remove anchor block mounting nuts, and then remove anchor block and back plate from axle housing.
9. Remove stabilizer connecting rod (upper side). Refer to [RSU-15, "Exploded View"](#).
10. Remove radius rod (axle housing side). Refer to [RSU-12, "Exploded View"](#).
11. Remove coil spring. Refer to [RSU-8, "Exploded View"](#).
12. Set suitable jack under axle housing.
13. Remove shock absorber (lower side). Refer to [RSU-10, "Exploded View"](#).
14. Remove front lower link (axle housing side). Refer to [RSU-14, "Exploded View"](#).
15. Separate suspension arm from axle housing so as not to damage ball joint boot using ball joint remover, and then remove axle housing from the vehicle.

CAUTION:

REAR WHEEL HUB AND HOUSING

< ON-VEHICLE REPAIR >

Temporarily tighten nuts to prevent damage to threads and to prevent the ball joint remover from coming off.

16. Remove hub cap.

INSTALLATION

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

- Perform the final tightening of each of parts under unladen conditions, which were removed when removing wheel hub and bearing assembly and steering knuckle.
- Never reuse cotter pin.

Inspection

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INSPECTION AFTER REMOVAL

Wheel Hub and Bearing Assembly

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

Axle Housing

Check the axle housing for wear, cracks, and damage. Replace if necessary.

Ball Joint Inspection

Check for boot breakage, axial looseness, and torque of suspension arm ball joint. Refer to [RSU-16, "Inspection"](#).

INSPECTION AFTER INSTALLATION

1. Check wheel sensor harness for proper connection. Refer to [BRC-58, "REAR WHEEL SENSOR : Exploded View"](#) (without VDC), [BRC-152, "REAR WHEEL SENSOR : Exploded View"](#) (with VDC).
2. Adjust parking brake operation (stroke). Refer to [PB-2, "Inspection and Adjustment"](#).
3. Check wheel alignment. Refer to [RSU-6, "Inspection"](#).
4. Adjust neutral position of steering angle sensor (with VDC). Refer to [BRC-66, "ADJUSTMENT OF STEERING ANGLE SENSOR NEUTRAL POSITION : Special Repair Requirement"](#).

SERVICE DATA AND SPECIFICATIONS (SDS)

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SERVICE DATA AND SPECIFICATIONS (SDS)

SERVICE DATA AND SPECIFICATIONS (SDS)

Wheel Bearing

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