

SECTION **RAX**
REAR AXLE

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RAX

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APPLICATION NOTICE

< HOW TO USE THIS MANUAL >

HOW TO USE THIS MANUAL

APPLICATION NOTICE

How to Check Vehicle Type

INFOID:000000011734837

Check the vehicle type to confirm the service information.

x: Applicable, —: Not applicable

Service information	Grade	NISMO-specific suspension	Brake air guide
TYPE 1	<ul style="list-style-type: none">GTR Black editionGTR Premium edition	—	—
TYPE 2	<ul style="list-style-type: none">GTR N-Package	x	—
	<ul style="list-style-type: none">GTR Track editionGTR NISMO		x

NOISE, VIBRATION AND HARSHNESS (NVH) TROUBLESHOOTING

< SYMPTOM DIAGNOSIS >

SYMPTOM DIAGNOSIS

NOISE, VIBRATION AND HARSHNESS (NVH) TROUBLESHOOTING

NVH Troubleshooting Chart

INFOID:000000011485438

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

Reference		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	STEERING
Symptom	DRIVE SHAFT	Noise	x	x				x	x	x	x	x	x	x	x
		Shake	x		x			x		x	x	x		x	x
	REAR AXLE	Noise				x	x	x	x		x	x	x	x	x
		Shake				x	x	x		x	x	x	x	x	x
		Vibration				x	x	x		x			x		x
		Shimmy				x	x			x	x	x		x	x
		Judder				x				x	x			x	x
		Poor quality ride or handling				x	x			x		x	x		

x: Applicable

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PRECAUTIONS

< PRECAUTION >

PRECAUTION

PRECAUTIONS

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

INFOID:000000011485439

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 "SRS AIR BAG" and "SEAT BELT" of this Service Manual.

WARNING:

Always observe the following items for preventing accidental activation.

- To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision that 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 "SRS AIR BAG".
- Never 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 WHEN USING POWER TOOLS (AIR OR ELECTRIC) AND HAMMERS

WARNING:

Always observe the following items for preventing accidental activation.

- When working near the Air Bag Diagnosis Sensor Unit or other Air Bag System sensors with the ignition ON or engine running, never 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.

General Precautions

INFOID:000000011485440

CAUTION:

After finishing servicing, check that all the tools and waste are stored in a customary place.

Precautions for Removing Battery Terminal

INFOID:000000011485441

- When removing the 12V battery terminal, turn OFF the ignition switch and wait at least 30 seconds.

NOTE:

ECU may be active for several tens of seconds after the ignition switch is turned OFF. If the battery terminal is removed before ECU stops, then a DTC detection error or ECU data corruption 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.

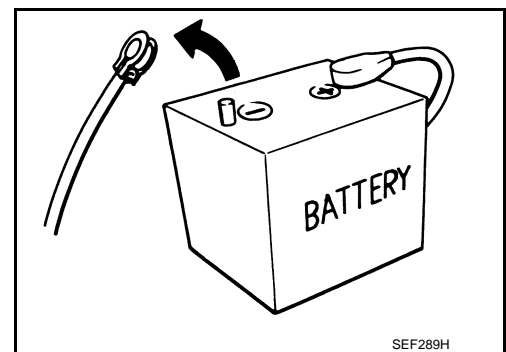
NOTE:

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.



SEF289H

Precautions for Wheel Hub and Bearing Assembly and Axle Housing (GT-R certified

PRECAUTIONS

< PRECAUTION >

NISSAN dealer)

INFOID:000000011485442

- Always tighten each mounting bolt and nut to the specified torque when they are cold.
- When performing removal or installation work, check for any foreign materials entered. If any, eliminate or clean them.
- Check that the wheel hub and bearing assemblies have no backlash and no jerky motion in rotation direction. When changing engine oil, be sure to check them with the road wheels removed.
- When performing inspections or before and after performance driving, check that wheel hub lock nut is not loose.

Precautions for Drive Shaft (GT-R certified NISSAN dealer)

INFOID:000000011485443

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 must be taken into account 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. Never 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.
- Check drive shaft boot for cracks before and after performance driving.

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PREPARATION

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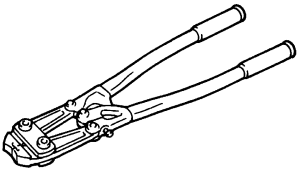
PREPARATION

PREPARATION

Special Service Tool (GT-R certified NISSAN dealer)

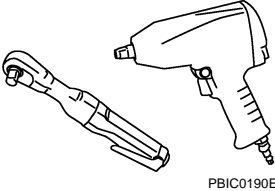
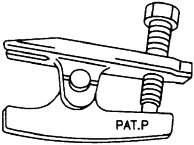
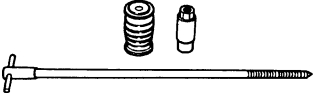
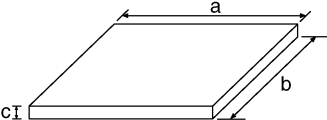
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The actual shapes of Kent-Moore tools may differ from those of the special service tools illustrated here.

Tool number (Kent-Moore No.) Tool name	Description
KV40107300 (-) Boot band crimping tool	Installing boot band
 <p>ZZA1229D</p>	

Commercial Service Tool (GT-R certified NISSAN dealer)

INFOID:000000011485445

Tool name	Description
Power tool	Loosening bolts and nuts
 <p>PBIC0190E</p>	
Ball joint remover	Removing ball joint for steering knuckle
 <p>PAT.P NT146</p>	
Drive shaft puller	Remove drive shaft joint sub assembly
 <p>JPDIG0152ZZ</p>	
Plate (Steel or wooden) a: Approx. 300 mm (11.81 in) b: Approx. 200 mm (7.87 in) c: 15 mm (0.59 in) CAUTION: Plate thickness: 15 mm (0.59 in) without exception	Installing radius rod, front lower link, and rear lower link (NISMO-specific suspension)
 <p>c I a b JSEIA0480ZZ</p>	

REAR WHEEL HUB AND HOUSING

< PERIODIC MAINTENANCE >

PERIODIC MAINTENANCE

REAR WHEEL HUB AND HOUSING

Inspection

INFOID:000000011485446

MOUNTING INSPECTION

Check 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. Check there is no looseness of wheel bearing.

Axial end play : Refer to [RAX-21, "Wheel Bearing \(GT-R certified NISSAN dealer\)"](#).

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

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REAR DRIVE SHAFT

< PERIODIC MAINTENANCE >

REAR DRIVE SHAFT

Inspection

INFOID:000000011485447

- Check drive shaft mounting point and joint for looseness and other damage.
- Check boot for cracks and other damage.

CAUTION:

Replace entire drive shaft assembly when noise or vibration occurs from drive shaft.

REAR WHEEL HUB AND HOUSING

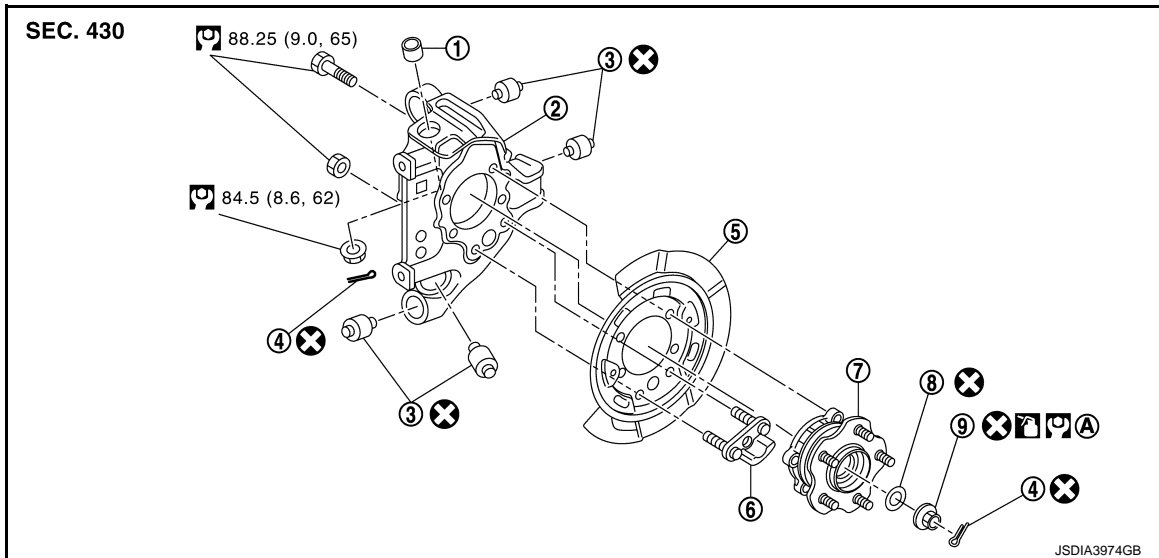
< REMOVAL AND INSTALLATION >

REMOVAL AND INSTALLATION

REAR WHEEL HUB AND HOUSING

Exploded View

INFOID:000000011485448



- | | | |
|-----------------------------------|------------------|-----------------------|
| 1. Ball seat | 2. Axle housing | 3. Bushing |
| 4. Cotter pin | 5. Back plate | 6. Anchor block |
| 7. Wheel hub and bearing assembly | 8. Spring washer | 9. Wheel hub lock nut |

A. Tightening must be done following the installation procedure. Refer to [RAX-9, "TYPE 1 : Removal and Installation \(GT-R certified NISSAN dealer\)"](#) (TYPE 1), [RAX-11, "TYPE 2 : Removal and Installation \(GT-R certified NISSAN dealer\)"](#) (TYPE 2).

Apply anti-corrosion oil.

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

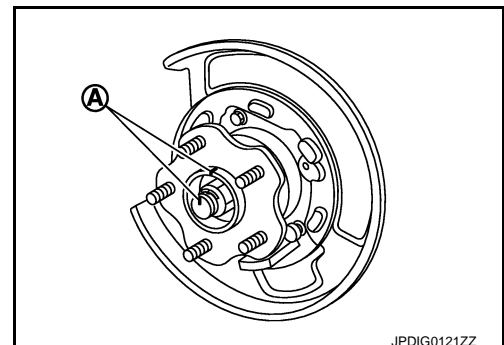
TYPE 1

TYPE 1 : Removal and Installation (GT-R certified NISSAN dealer)

INFOID:000000011485449

REMOVAL

1. Remove tire with power tool. Refer to [WT-74, "EXCEPT NISMO : Exploded View"](#).
2. Remove brake hose bracket. Refer to [BR-25, "REAR : Exploded View"](#).
3. Remove caliper assembly. Hang caliper assembly in a place where it will not interfere with work. Refer to [BR-46, "BRAKE CALIPER ASSEMBLY : Exploded View \(GT-R certified NISSAN dealer\)"](#).
4. Remove disc rotor. Refer to [BR-47, "BRAKE CALIPER ASSEMBLY : Removal and Installation \(GT-R certified NISSAN dealer\)"](#).
5. Remove cotter pin, then loosen wheel hub lock nut with a power tool.
6. Put matching marks (A) on drive shaft and wheel hub and bearing assembly.



REAR WHEEL HUB AND HOUSING

< REMOVAL AND INSTALLATION >

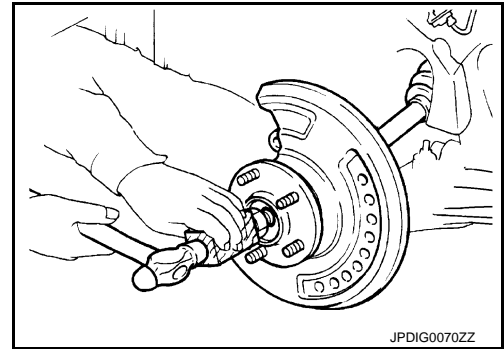
7. Patch wheel hub lock nut with a piece of wood. Hammer the wood to disengage wheel hub and bearing assembly from drive shaft.

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 counterpart such as joint sub-assembly, and the other parts.

NOTE:

Use a suitable puller, if wheel hub and bearing assembly and drive shaft cannot be separated even after performing the above procedure.



8. Remove wheel hub lock nut and spring washer.
 9. Remove parking brake shoe and parking brake cable from back plate. Refer to [PB-9, "Exploded View"](#), [PB-7, "Exploded View \(GT-R certified NISSAN dealer\)"](#).
 10. Remove stabilizer connecting rod (upper side). Refer to [RSU-35, "Exploded View"](#).
 11. Set suitable jack under axle housing.
 12. Remove cotter pin of suspension arm, and then loosen mounting nut.
 13. Separate shock absorber from axle housing with power tool. Refer to [RSU-14, "Exploded View"](#).
 14. Separate suspension arm from axle housing so as not to damage ball joint boot using ball joint remover (commercial service tool).
- CAUTION:**
- Temporarily tighten nuts to prevent damage to threads and to prevent the ball joint remover from coming off.
 - 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 counterpart such as joint sub-assembly, and other parts.
15. Separate front lower link from axle housing. Refer to [RSU-28, "TYPE 1 : Exploded View"](#).
 16. Separate rear lower link from axle housing. Refer to [RSU-31, "TYPE 1 : Exploded View"](#).
 17. Separate radius rod from axle housing. Refer to [RSU-24, "TYPE 1 : Exploded View"](#).
 18. Remove wheel hub and bearing assembly.
 19. Remove anchor block mounting nuts, and then remove anchor block and back plate from axle housing.

INSTALLATION

1. Install anchor block and back plate to axle housing.
 2. Install wheel hub and bearing assembly to axle housing.
 3. Temporarily install radius rod to axle housing. Refer to [RSU-24, "TYPE 1 : Exploded View"](#).
- CAUTION:**
Leave 1 mm (0.04 in) of allowance on the bearing surface of mounting nuts and bolts to release bush tension.
4. Temporarily install rear lower link (axle housing side) to axle housing. Refer to [RSU-31, "TYPE 1 : Exploded View"](#).
- CAUTION:**
Leave 1 mm (0.04 in) of allowance on the bearing surface of mounting nuts and bolts to release bush tension.
5. Temporarily install front lower link (axle housing side) to axle housing. Refer to [RSU-28, "TYPE 1 : Exploded View"](#).
- CAUTION:**
Leave 1 mm (0.04 in) of allowance on the bearing surface of mounting nuts and bolts to release bush tension.
6. Install suspension arm.
 7. Install shock absorber to axle housing. Refer to [RSU-14, "Exploded View"](#).
 8. Install stabilizer connecting rod (upper side). Refer to [RSU-35, "Exploded View"](#).
 9. Install parking brake shoe and parking brake cable. Refer to [PB-9, "Exploded View"](#), [PB-7, "Exploded View \(GT-R certified NISSAN dealer\)"](#).

REAR WHEEL HUB AND HOUSING

< REMOVAL AND INSTALLATION >

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

CAUTION:

Never apply lubricating oil to these matching surface.

11. Clean the matching surface of drive shaft and wheel hub and bearing assembly, and then apply paste [service parts (440037S000)] to flat 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 : 0.2 – 1.0 g (0.007 – 0.035 oz)

12. Install spring washer.

CAUTION:

- **When installing the spring washer, face the identification paint mark to the wheel hub and bearing assembly side.**
- **Never reuse spring washer.**

13. Apply anti-corrosion oil to the thread of wheel hub lock nut or drive shaft.

CAUTION:

- **If anti-corrosion oil adheres to a part other than the thread, wipe the part clean of oil with waste.**
- **Never reuse wheel hub lock nut.**

14. Tighten wheel hub lock nut to 225 N·m (23 kg·m, 166 ft·lb), loosen it, and retighten it to 350 N·m (36 kg·m, 258 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.**

NOTE:

Wheel hub lock nut must be retightened to break in spring washer and the contact surface of wheel hub assembly.

15. Install cotter pin.

CAUTION:

Never reuse cotter pin.

16. Install disc rotor. Refer to [BR-47, "BRAKE CALIPER ASSEMBLY : Removal and Installation \(GT-R certified NISSAN dealer\)"](#).

17. Install caliper assembly. Hang caliper assembly in a place where it will not interfere with work. Refer to [BR-46, "BRAKE CALIPER ASSEMBLY : Exploded View \(GT-R certified NISSAN dealer\)"](#).

18. Install brake hose bracket. Refer to [BR-25, "REAR : Exploded View"](#).

19. Install tires. Refer to [WT-74, "EXCEPT NISMO : Exploded View"](#).

20. Fully tighten suspension arm, shock absorber (axle housing side), and stabilizer connecting rod (upper side) under unladen conditions.

21. Install cotter pin.

CAUTION:

Never reuse cotter pin.

22. Fully tighten radius rod, front lower link, and rear lower link under unladen conditions.

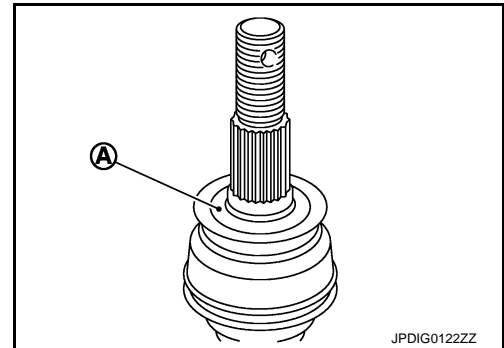
TYPE 2

TYPE 2 : Removal and Installation (GT-R certified NISSAN dealer)

INFOID:000000011485450

REMOVAL

1. Remove tire with power tool. Refer to [WT-74, "NISMO : Exploded View"](#).
2. Remove brake hose bracket. Refer to [BR-25, "REAR : Exploded View"](#).
3. Remove caliper assembly. Hang caliper assembly in a place where it will not interfere with work. Refer to [BR-46, "BRAKE CALIPER ASSEMBLY : Exploded View \(GT-R certified NISSAN dealer\)"](#).
4. Remove disc rotor. Refer to [BR-47, "BRAKE CALIPER ASSEMBLY : Removal and Installation \(GT-R certified NISSAN dealer\)"](#).



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REAR WHEEL HUB AND HOUSING

< REMOVAL AND INSTALLATION >

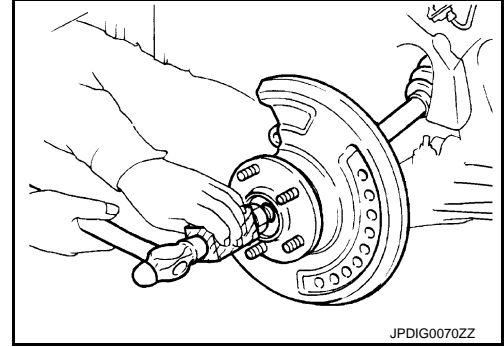
5. Remove cotter pin, then loosen wheel hub lock nut with a power tool.
6. Patch wheel hub lock nut with a piece of wood. Hammer the wood to disengage wheel hub and bearing assembly from drive shaft.

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 counterpart such as joint sub-assembly, and the other parts.

NOTE:

Use a suitable puller, if wheel hub and bearing assembly and drive shaft cannot be separated even after performing the above procedure.



7. Remove wheel hub lock nut and spring washer.
 8. Remove parking brake shoe and parking brake cable from back plate. Refer to [PB-9, "Exploded View"](#), [PB-7, "Exploded View \(GT-R certified NISSAN dealer\)"](#).
 9. Remove stabilizer connecting rod (upper side). Refer to [RSU-35, "Exploded View"](#).
 10. Set suitable jack under axle housing.
 11. Remove cotter pin of suspension arm, and then loosen mounting nut.
 12. Separate shock absorber from axle housing with power tool. Refer to [RSU-14, "Exploded View"](#).
 13. Separate suspension arm from axle housing so as not to damage ball joint boot using ball joint remover (commercial service tool).
- CAUTION:**
- Temporarily tighten nuts to prevent damage to threads and to prevent the ball joint remover from coming off.
 - 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 counterpart such as joint sub-assembly, and other parts.
14. Separate front lower link from axle housing. Refer to [RSU-29, "TYPE 2 : Exploded View"](#).
 15. Separate rear lower link from axle housing. Refer to [RSU-32, "TYPE 2 : Exploded View"](#).
 16. Separate radius rod from axle housing. Refer to [RSU-25, "TYPE 2 : Exploded View"](#).
 17. Remove wheel hub and bearing assembly.
 18. Remove anchor block mounting nuts, and then remove anchor block and back plate from axle housing.

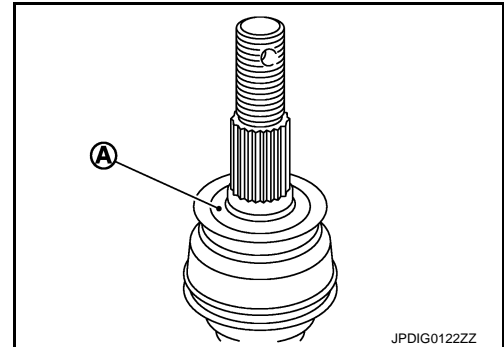
INSTALLATION

1. Install anchor block and back plate to axle housing.
 2. Install wheel hub and bearing assembly to axle housing.
 3. Temporarily install radius rod to axle housing. Refer to [RSU-25, "TYPE 2 : Exploded View"](#).
- CAUTION:**
Leave 1 mm (0.04 in) of allowance on the bearing surface of mounting nuts and bolts to release bush tension.
4. Temporarily install rear lower link (axle housing side) to axle housing. Refer to [RSU-32, "TYPE 2 : Exploded View"](#).
- CAUTION:**
Leave 1 mm (0.04 in) of allowance on the bearing surface of mounting nuts and bolts to release bush tension.
5. Temporarily install front lower link (axle housing side) to axle housing. Refer to [RSU-29, "TYPE 2 : Exploded View"](#).
- CAUTION:**
Leave 1 mm (0.04 in) of allowance on the bearing surface of mounting nuts and bolts to release bush tension.
6. Install suspension arm.
 7. Install shock absorber to axle housing. Refer to [RSU-14, "Exploded View"](#).
 8. Install stabilizer connecting rod (upper side). Refer to [RSU-35, "Exploded View"](#).

REAR WHEEL HUB AND HOUSING

< REMOVAL AND INSTALLATION >

9. Install parking brake shoe and parking brake cable. Refer to [PB-9. "Exploded View"](#), [PB-7. "Exploded View \(GT-R certified NISSAN dealer\)"](#).
10. Clean the matching surface of wheel hub lock nut and wheel hub and bearing assembly.
CAUTION:
Never apply lubricating oil to these matching surface.
11. Clean the matching surface of drive shaft and wheel hub and bearing assembly, and then apply paste [service parts (440037S000)] to flat 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 : 0.2 – 1.0 g (0.007 – 0.035 oz)**
12. Install spring washer.
CAUTION:
- When installing the spring washer, face the identification paint mark to the wheel hub and bearing assembly side.
 - Never reuse spring washer.
13. Apply anti-corrosion oil to the thread of wheel hub lock nut or drive shaft.
CAUTION:
- If anti-corrosion oil adheres to a part other than the thread, wipe the part clean of oil with waste.
 - Never reuse wheel hub lock nut.
14. Tighten wheel hub lock nut to 225 N·m (23 kg·m, 166 ft·lb), loosen it, and retighten it to 350 N·m (36 kg·m, 258 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.
- NOTE:**
Wheel hub lock nut must be retightened to break in spring washer and the contact surface of wheel hub assembly.
15. Install cotter pin.
CAUTION:
Never reuse cotter pin.
16. Install disc rotor. Refer to [BR-47. "BRAKE CALIPER ASSEMBLY : Removal and Installation \(GT-R certified NISSAN dealer\)"](#).
17. Install caliper assembly. Hang caliper assembly in a place where it will not interfere with work. Refer to [BR-46. "BRAKE CALIPER ASSEMBLY : Exploded View \(GT-R certified NISSAN dealer\)"](#).
18. Install brake hose bracket. Refer to [BR-25. "REAR : Exploded View"](#).
19. Install tires. Refer to [WT-74. "NISMO : Exploded View"](#).
20. Fully tighten suspension arm, shock absorber (axle housing side), and stabilizer connecting rod (upper side) under unladen conditions.
21. Install cotter pin.
CAUTION:
Never reuse cotter pin.
22. To fully tighten radius rod, front lower link, and rear lower link, follow the steps below with the vehicle under unladen conditions.
NOTE:
To enhance the straight line stability and the turning performance, tighten bush according to the following steps.
- a. Adjust tire pressure to the specified value. Refer to [WT-81. "Tire"](#).
 - b. Remove rear diffuser. Refer to [EXT-44. "REAR DIFFUSER : Exploded View"](#).
 - c. Set the vehicle on the alignment tester (on the slide table).
 - d. Loosen mounting bolt of radius rod (rear suspension member side) for both right and left wheels.
CAUTION:



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REAR WHEEL HUB AND HOUSING

< REMOVAL AND INSTALLATION >

Leave 1 mm (0.04 in) of allowance on the bearing surface of mounting nuts and bolts to release bush tension.

- e. Move the vehicle back and forth to release friction from tires.

NOTE:

Moving the vehicle back and forth must be performed on and within the slide table.

- f. Set Plate (A) (commercial service tool) under the rear tire (on the side where final tightening is performed).

CAUTION:

- Plate size (commercial service tool): Larger than tire ground contact area.
- Plate thickness: 15 mm (0.59 in).

- g. Shake the vehicle up and down to release friction from bush.

CAUTION:

The rear side slide table pin must be removed beforehand.

- h. Be sure to tighten each link (Plate setting side), observing the following order below.

1. Tighten front lower link (axle housing side) to the specified torque. Refer to [RSU-29, "TYPE 2 : Exploded View"](#).
2. Tighten rear lower link (axle housing side) to the specified torque. Refer to [RSU-32, "TYPE 2 : Exploded View"](#).
3. Tighten radius rod (axle housing side) to the specified torque. Refer to [RSU-25, "TYPE 2 : Exploded View"](#).
4. Tighten radius rod (rear suspension member side) to the specified torque. Refer to [RSU-25, "TYPE 2 : Exploded View"](#).

- i. After tightening each link, remove plate (commercial service tool).

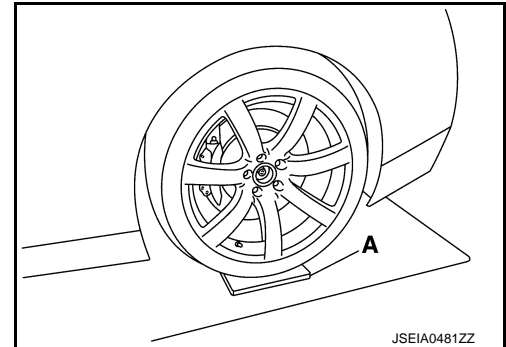
- j. Perform steps (f) to (i) for the other side.

CAUTION:

Even when a part on only one side is removed , tighten mounting bolts both side.

- k. After tightening each link, be sure to check and adjust wheel alignment. Refer to [RSU-12, "Adjustment"](#).

- l. Install rear diffuser. Refer to [EXT-44, "REAR DIFFUSER : Exploded View"](#).



Inspection (GT-R certified NISSAN dealer)

INFOID:000000011485451

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.

- TYPE 1: Refer to [RSU-20, "TYPE 1 : Inspection \(GT-R certified NISSAN dealer\)"](#).
- TYPE 2: Refer to [RSU-22, "TYPE 2 : Inspection \(GT-R certified NISSAN dealer\)"](#).

NOTE:

Check the vehicle type. Refer to [RSU-3, "How to Check Vehicle Type"](#).

INSPECTION AFTER INSTALLATION

1. Adjust parking brake operation (stroke). Refer to [PB-4, "Inspection and Adjustment"](#).
2. Check wheel alignment. Refer to [RSU-12, "Inspection"](#).
3. Adjust neutral position of steering angle sensor. Refer to [BRC-9, "ADJUSTMENT OF STEERING ANGLE SENSOR NEUTRAL POSITION : Special Repair Requirement \(GT-R certified NISSAN dealer\)"](#).

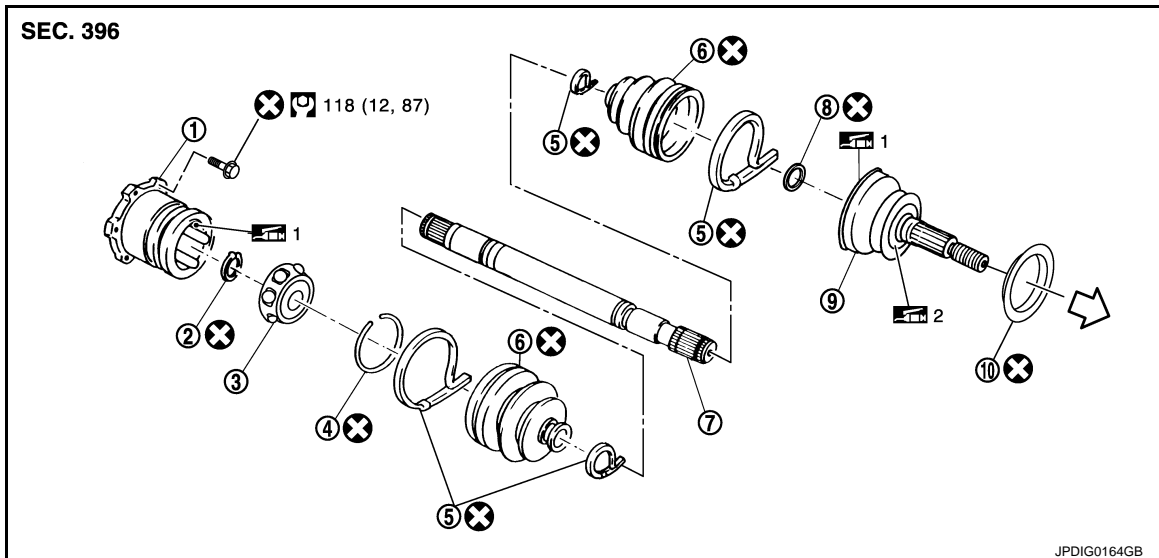
REAR DRIVE SHAFT

< REMOVAL AND INSTALLATION >

REAR DRIVE SHAFT

Exploded View (GT-R certified NISSAN dealer)

INFOID:000000011485452



- | | | |
|-----------------|------------------|---|
| 1. Housing | 2. Snap ring | 3. Ball cage/steel ball/inner race assembly |
| 4. Stopper ring | 5. Boot band | 6. Boot |
| 7. Shaft | 8. Circular clip | 9. Joint sub-assembly |
| 10. Dust shield | | |

↔: Wheel side

1: NISSAN genuine grease or an equivalent.

2: Apply paste [service parts (440037S000)]

Refer to [GI-4, "Components"](#) for symbols not described on the above.

Removal and Installation (GT-R certified NISSAN dealer)

INFOID:000000011485453

REMOVAL

1. Remove axle housing. Refer to [RAX-9, "Exploded View"](#).
2. Remove mounting bolts between side flange and drive shaft.

INSTALLATION

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

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

CAUTION:

Never apply lubricating oil to these matching surface.

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

CAUTION:

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

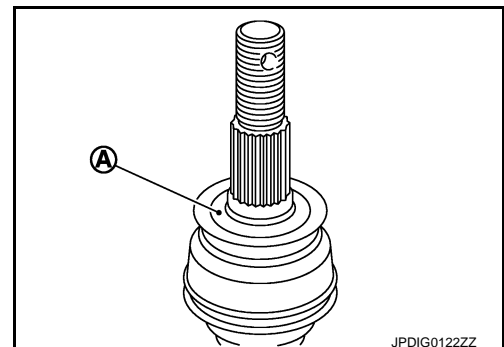
Amount paste : 0.2 – 1.0 g (0.007 – 0.035 oz)

- When installing the spring washer, face the identification paint mark to the wheel hub and bearing assembly side.

CAUTION:

Never reuse spring washer.

- Apply anti-corrosion oil to the thread of wheel hub lock nut or drive shaft.



REAR DRIVE SHAFT

< REMOVAL AND INSTALLATION >

CAUTION:

- If anti-corrosion oil adheres to a part other than the thread, wipe the part clean of oil with waste.
- Never reuse wheel hub lock nut.
- When tightening wheel hub lock nut, tighten the lock nut to 225 N·m (23 kg·m, 166 ft·lb), loosen it, and retighten it to 350 N·m (36 kg·m, 258 ft·lb) to break in spring washer and the contact surface of wheel hub assembly.

CAUTION:

- When assembling the drive shaft, never press it, but pull it until fully seated by tightening the wheel hub lock nut.
- Be sure to use torque wrench to tighten the wheel hub lock nut. Never use a power tool.
- Perform the final tightening of each of parts under unladen conditions, which were removed when removing wheel hub and bearing assembly and axle housing.
- Never reuse cotter pin, ball seal and bushing.

WHEEL SIDE

WHEEL SIDE : Disassembly and Assembly (GT-R certified NISSAN dealer)

INFOID:000000011485454

DISASSEMBLY

1. Fix shaft with a vise.

CAUTION:

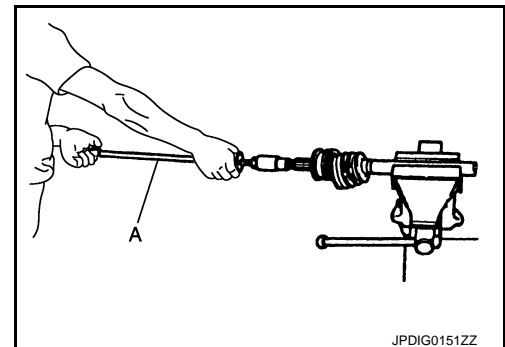
Protect shaft when fixing with a vise using aluminum or copper plates.

2. Remove dust shield from drive shaft.
3. Remove boot bands and then remove boot from joint sub-assembly.
4. Screw the drive shaft puller (A) (commercial service tool) 30 mm (1.18 in) or more into the thread of joint sub-assembly, and remove 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.

5. Remove circular clip from shaft.
6. Remove boot from shaft.

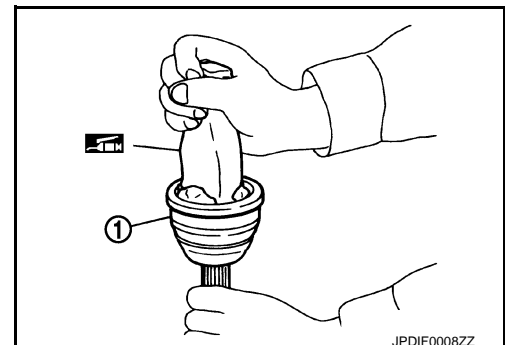


ASSEMBLY

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 it out old grease that has oozed out.



REAR DRIVE SHAFT

< REMOVAL AND INSTALLATION >

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 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 axes of the shaft edge and joint sub-assembly. Then assemble shaft with joint sub-assembly holding circular clip.

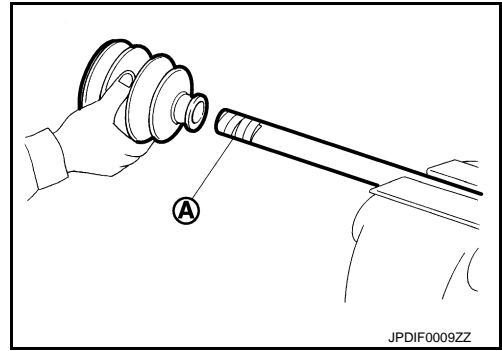
7. Install joint sub-assembly to shaft using plastic hammer.

CAUTION:

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 [RAX-21, "Drive Shaft \(GT-R certified NISSAN dealer\)"](#).

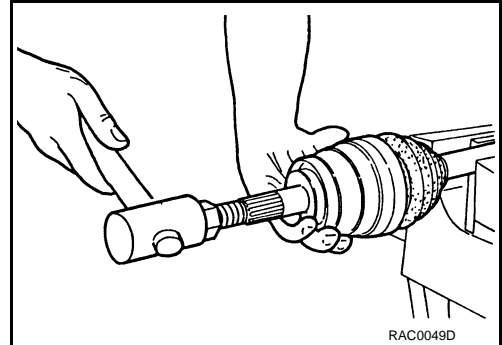


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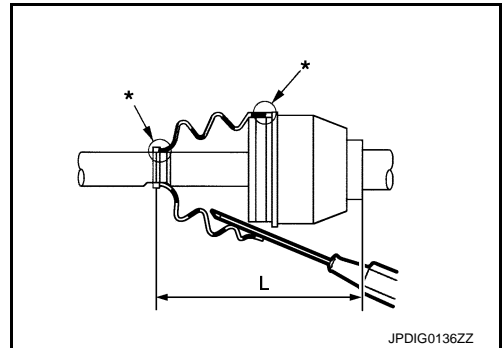
9. Install the boot securely into grooves (indicated by "*" marks) shown in the figure.

CAUTION:

If grease adheres to the boot mounting surface (indicated by "*" mark) on the shaft or housing, boot may come off. Remove all grease from the surfaces.

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 boot and discharging the inside air.

L : Refer to [RAX-21, "Drive Shaft \(GT-R certified NISSAN dealer\)"](#).



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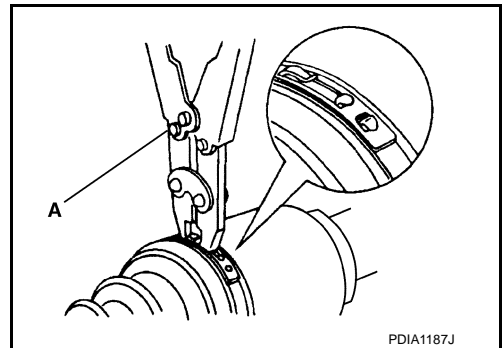
CAUTION:

- If the boot installation length is outside the standard, it may cause breakage of the boot.
- Be careful not to touch the inside of the boot with the tip of tool.

11. Secure the ends of the boot with boot bands using the boot band crimping tool (A) [SST: KV40107300 (-)].

CAUTION:

Never reuse boot band.



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NOTE:

REAR DRIVE SHAFT

< REMOVAL AND INSTALLATION >

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

M : 2.0 – 3.0 mm (0.079 – 0.118 in)

12. Secure joint sub-assembly and shaft, and then check that they are in the correct position when rotating boot. Install them with boot band when boot installation positions become incorrect.

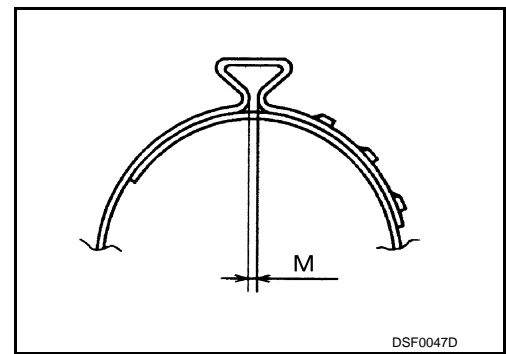
CAUTION:

Never reuse boot band.

13. Install dust shield to drive shaft.

CAUTION:

Never reuse dust shield.



FINAL DRIVE SIDE

FINAL DRIVE SIDE : Disassembly and Assembly (GT-R certified NISSAN dealer)

INFOID:000000011485455

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 housing.
3. Put matching marks on housing and shaft.

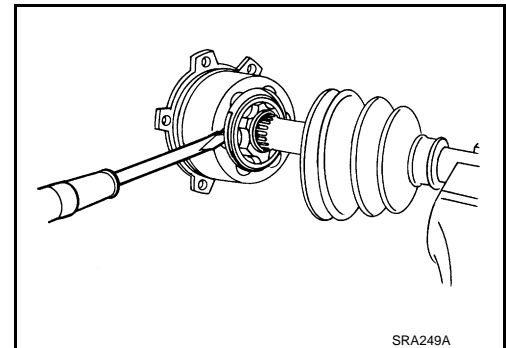
CAUTION:

Use paint or similar substance for matching marks. Never scratch the surface.

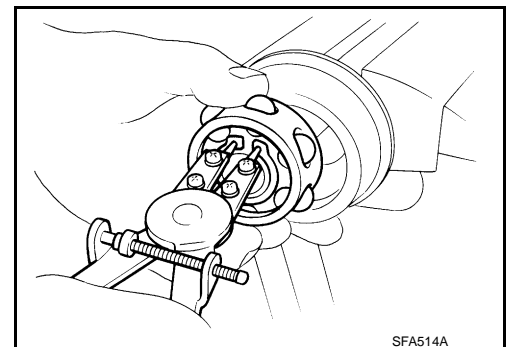
4. Remove stopper ring with suitable tool, and pull out housing.
5. Put matching marks on ball cage/steel ball/inner race assembly and shaft.

CAUTION:

Use paint or similar substance for matching marks. Never scratch the surface.



6. Remove snap ring, then remove ball cage/steel ball/inner race assembly from shaft.
7. Remove boot from shaft.



ASSEMBLY

1. Remove old grease on housing with paper waste.

REAR DRIVE SHAFT

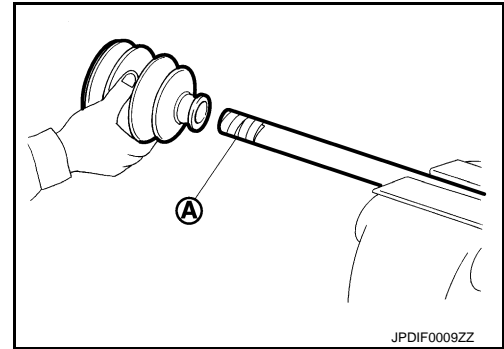
< REMOVAL AND INSTALLATION >

2. 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.

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



4. Install ball cage/steel ball/inner race assembly (1), align it with the matching marks on shaft (2) put during the removal.

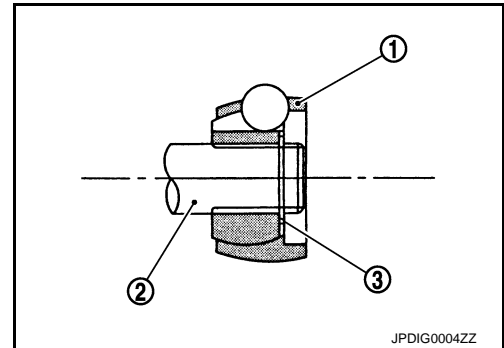
5. install ball cage/steel ball/inner race assembly onto shaft with snap ring (3).

CAUTION:

Never reuse snap ring.

6. Apply the appropriate amount of grease onto housing and sliding surface.

Grease amount : Refer to [RAX-21, "Drive Shaft \(GT-R certified NISSAN dealer\)"](#).



7. Install stopper ring to housing.

CAUTION:

Never reuse stopper ring.

8. After installed, pull shaft to check engagement between housing and stopper ring.

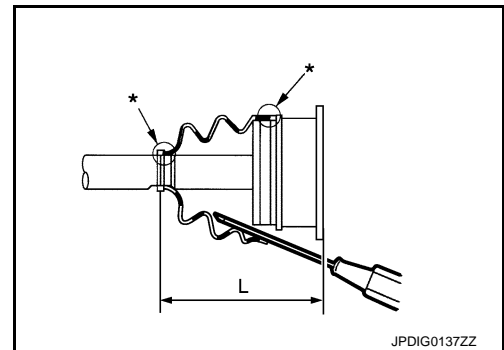
9. Install boot into grooves (indicated by "*" marks) shown in the figure.

CAUTION:

If grease adheres to the boot mounting surfaces (indicated by "*" marks) on shaft or housing, boot may be removed. Remove all grease from the surfaces.

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

L : Refer to [RAX-21, "Drive Shaft \(GT-R certified NISSAN dealer\)"](#).



CAUTION:

- If the boot installation length is outside the standard, it may cause breakage of the boot.
- Be careful not to touch the inside of the boot with the tip of tool.

11. Install boot bands as shown in the figure.

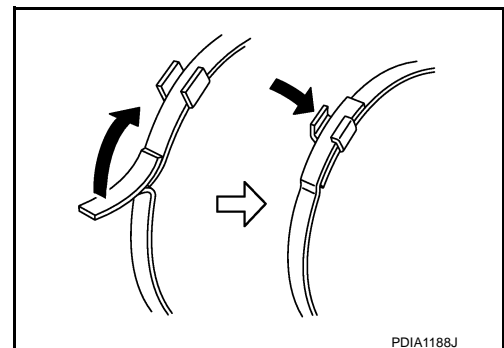
CAUTION:

Never reuse boot band.

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

CAUTION:

Never reuse boot band.



REAR DRIVE SHAFT

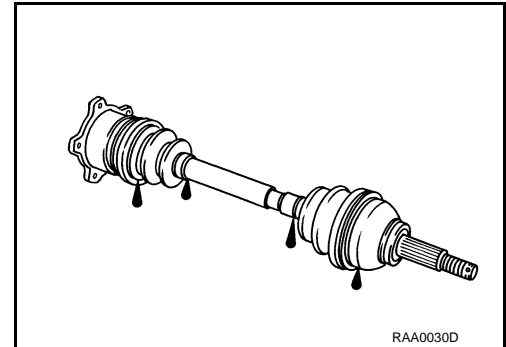
< REMOVAL AND INSTALLATION >

Inspection (GT-R certified NISSAN dealer)

INFOID:000000011485456

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, damage and grease leakage.
- Disassemble drive shaft and exchange malfunctioning part if there is abnormal condition.



INSPECTION AFTER DISASSEMBLY

Shaft

Check shaft for runout, cracks and other damage. Replace it if necessary.

Joint-Sub Assembly (Wheel Side)

Check the following items, replace the parts if necessary.

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

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

Housing and Ball Cage/Steel Ball/Inner Race Assembly

Replace housing and ball cage/steel ball/inner race assembly if there is scratching or wear of housing roller contact surface or spider roller contact surface.

NOTE:

Housing and ball cage/steel ball/inner race assembly are used in a set.

INSPECTION AFTER INSTALLATION

1. Adjust parking brake operation (stroke). Refer to [PB-4, "Inspection and Adjustment"](#).
2. Check wheel alignment. Refer to [RSU-12, "Adjustment"](#).
3. Adjust neutral position of steering angle sensor. Refer to [BRC-9, "ADJUSTMENT OF STEERING ANGLE SENSOR NEUTRAL POSITION : Special Repair Requirement \(GT-R certified NISSAN dealer\)"](#).

SERVICE DATA AND SPECIFICATIONS (SDS)

< SERVICE DATA AND SPECIFICATIONS (SDS)

SERVICE DATA AND SPECIFICATIONS (SDS)

SERVICE DATA AND SPECIFICATIONS (SDS)

Wheel Bearing (GT-R certified NISSAN dealer)

INFOID:0000000011485457

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

Drive Shaft (GT-R certified NISSAN dealer)

INFOID:0000000011485458

Joint	Wheel side	Final drive side
Grease quantity	130 – 150 g (4.59 – 5.29 oz)	155 – 175 g (5.47 – 6.17 oz)
Boots installed length	142.0 mm (5.59 in)	148.7 mm (5.85 in)

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