SECTION RAX
REAR AXLE

CONTENTS

PRECAUTIONS

PFP:00001

Caution

EDS00128

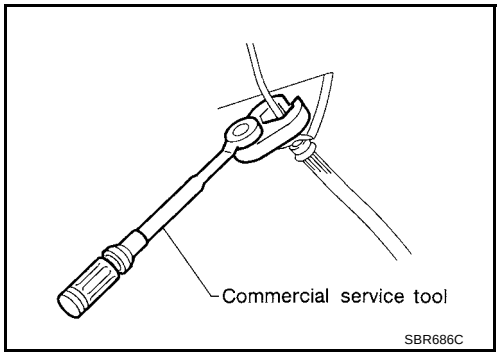
Observe the following precautions when disassembling and servicing drive shaft.

- Perform work in a location which is as dust-free and dirt-free as possible.
- Before disassembling and servicing, clean the outside of parts.
- The disassembly and service location must be clean. Care must be taken to prevent parts from becoming dirty and to prevent the entry of foreign objects.
- 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.

Precautions for Brake System

EDS00129

- When installing rubber parts, 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.
- Use flare nut wrench when removing or installing brake tubes.
- After installing removed suspension parts, check wheel alignment and adjust if necessary.
- Always torque brake lines when installing.

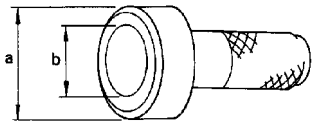
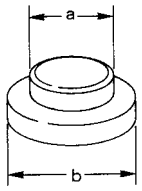
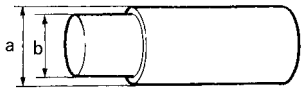


PREPARATION

PFP:00002

Special Service Tools

EDS0012A

Description	Application
Drift ST30720000 a: 77 mm (3.03 in) dia. b: 55 mm (2.17 in) dia.  ZZA0701D	Installing hub cap
Drift ST33022000 a: 56 mm (2.20 in) dia. b: 110 mm (4.33 in) dia.  ZZA0881D	● Installing wheel bearing ● Installing ABS sensor rotor
Drift ST33710000 a: 30 mm (1.18 in) dia. b: 23 mm (0.91 in) dia.  ZZA1234D	Removing wheel bearing

NOISE, VIBRATION, AND HARSHNESS (NVH) TROUBLESHOOTING

PFP:00003

NVH Troubleshooting Chart

EDS0012B

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

			Refer to RAX-5, "REAR WHEEL BEARING"	—	Refer to RAX-5, "REAR WHEEL BEARING"	NVH in FAX and FSU sections.	NVH in WT section.	NVH in WT section.	NVH in FAX section.	NVH in BR section.	NVH in PS section.
Reference page											
Possible cause and SUSPECTED PARTS			Improper installation, looseness	Parts interference	Wheel bearing damage	FRONT AXLE AND FRONT SUSPENSION	TIRES	ROAD WEEL	DRIVE SHAFT	BRAKES	STEERING
Symptom	REAR AXLE	Noise	×	×		×	×	×	×	×	×
		Shake	×	×		×	×	×	×	×	×
		Vibration	×	×		×	×		×		×
		Shimmy	×	×		×	×	×		×	×
		Judder	×			×	×	×		×	×
		Poor quality ride or handling	×	×	×	×	×	×			

×: Applicable

WHEEL HUB

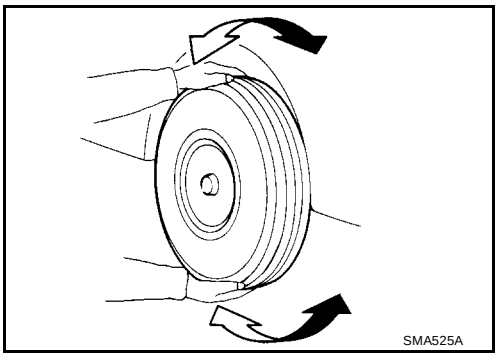
PFP:43202

On-Vehicle Inspection

EDS0012C

Check front axle for unusual play, cracking, excessive wear, or other damage.

- Turn front wheels (left/right) and check the play.



REAR WHEEL BEARING

With the vehicle raised, inspect the following:

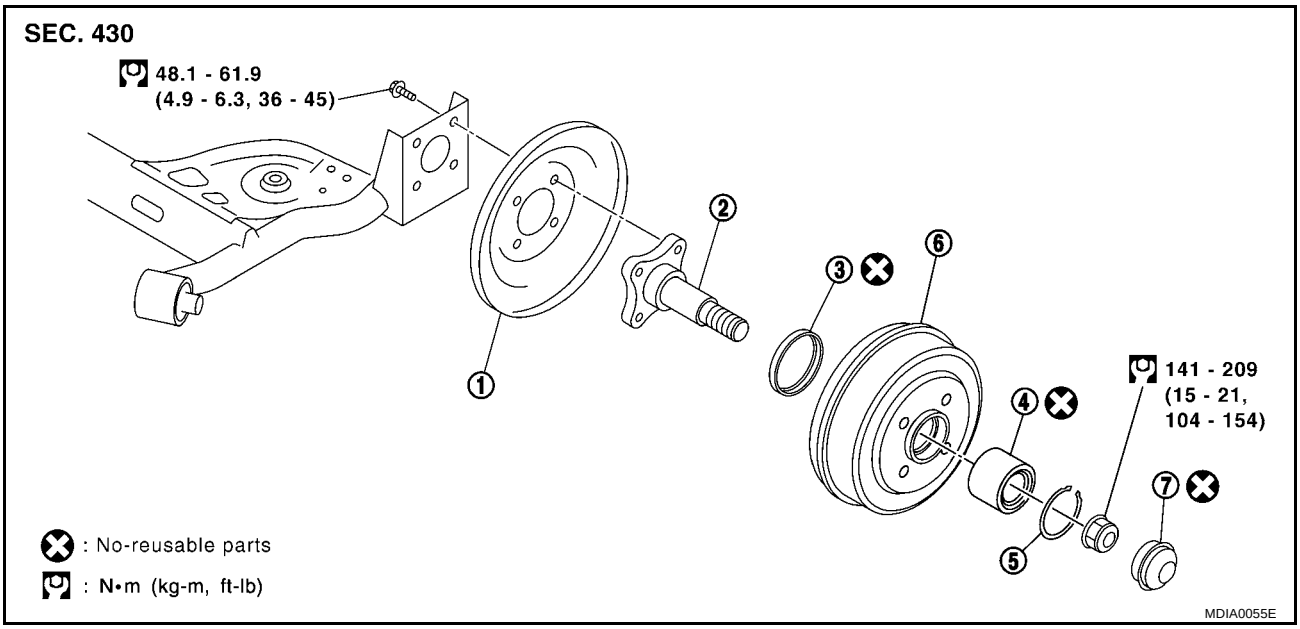
- Manually move the wheel hub in axial direction to check wheel bearing for excessive play.

Axial end play : 0.05 mm (0.0020 in)

- Check for unusual noise by rotating wheel. If there are any non-standard conditions, replace the wheel bearing.
- If outside the standard or any other non-standard condition is found, replace wheel bearing assembly.

Removal and Installation

EDS0012D



1. Back plate
2. Spindle
3. ABS sensor rotor
4. Wheel bearing
5. Snap rings
6. Brake drum
7. Hub cap

REMOVAL

1. Lift up the vehicle and remove tire from the vehicle. Release parking brake.
2. With hub cap pliers (commercial service tool), remove hub cap from brake drum (wheel hub)
3. Remove lock nut and separate brake drum from spindle.
4. Remove ABS sensor rotor from back plate part. Refer to BRC-36, "WHEEL SENSORS" .
5. Loosen self-locking nut and separate parking brake rear cable from rear brake. Refer to PB-3, "PARKING BRAKE SYSTEM" .

6. Separate brake tube from wheel cylinder. Refer to BR-11, "Removal and Installation of Front Brake Piping and Brake Hose" .

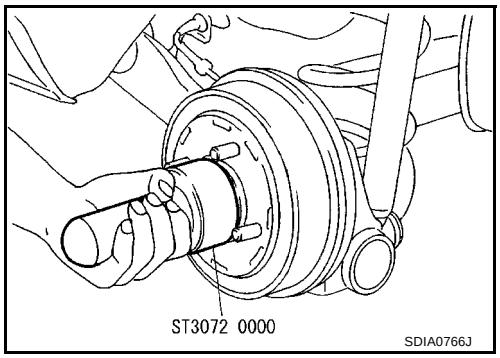
   CAUTION:
   - **Avoid smearing brake fluid on coated surfaces while removing brake tube.**
   - **Never depress brake pedal while removing brake tube and brake drum.**

7. Remove spindle mounting bolt. Separate back plate assembly and spindle from rear suspension trailing arm.

INSTALLATION

- For each tightening torque, refer to RAX-5, "REAR WHEEL BEARING" and tighten in the reverse order of removal.
- For mounting of brake tube and tightening torque, refer to BR-11, "Removal and Installation of Front Brake Piping and Brake Hose" .
- For mounting parking brake and tightening torque, refer to PB-3, "PARKING BRAKE SYSTEM" .
- For mounting ABS wheel sensor and tightening torque, refer to BRC-36, "WHEEL SENSORS" .
- Using a drift (SST), mount hub cap on brake drum (wheel hub).

  CAUTION:
  Do not reuse hub cap.
- Refill with new brake fluid and bleed air. Refer to BR-9, "BRAKE FLUID" .

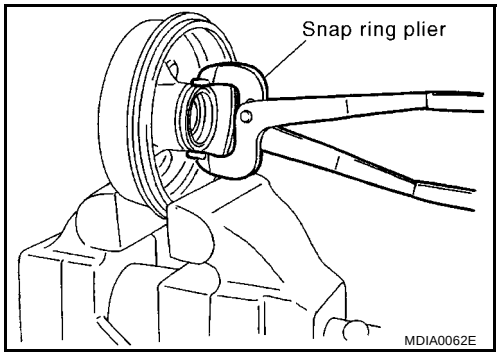


Disassembly and Assembly

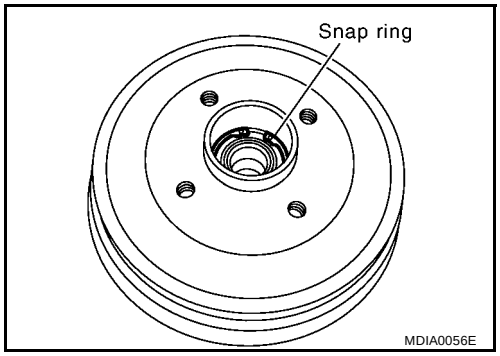
EDS0012E

DISASSEMBLY

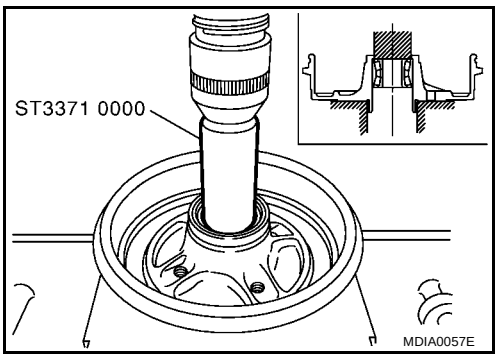
1. Using snap ring pliers (commercial service tool), remove sensor rotor



2. Remove snap ring.



3. Press the wheel bearing out with a drift (SST) to remove.

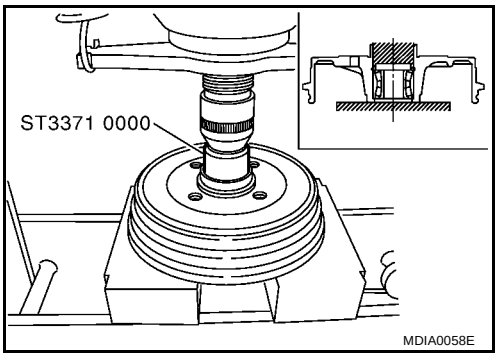


INSPECTION AFTER DISASSEMBLY

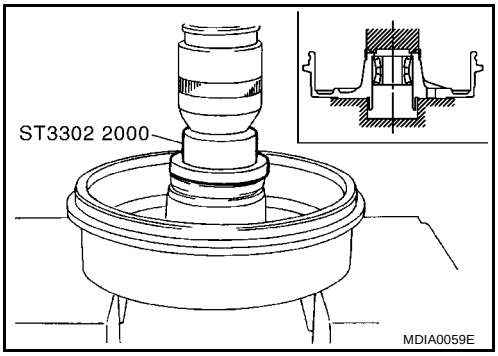
- Check trailing arm for deformed parts, cracks, or any other damage. Replace if necessary.
- Check snap ring for wear or cracks. Replace if necessary.

ASSEMBLY

1. Press-fit the wheel hub with a drift (SST).
   NOTE:
   Final press-loading guideline [50,000 N (5,100 kg, 11,240 lb)]
2. Install snap ring.



3. Press-fit the sensor rotor on the brake drum with a drift (SST).



INSPECTION AFTER ASSEMBLY

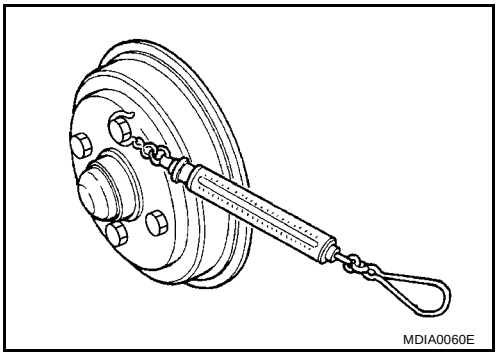
1. After installing brake drum on spindle, tighten lock nut to the standard torque.

   Tightening torque : 141 - 209 N·m (15 - 21 kg-m, 104 - 154 ft-lb)

2. Rotate the wheel hub in both directions ten times each to check for smooth movement.
3. At a rotating speed of 10 ± 2 rpm, place a spring balance on hub bolt to measure torque.

   Rotating torque : 0.018 - 0.109 N·m (0.002 - 0.011 kg-m)

   Spring balance measurement : 3.6 - 21.9 N (0.37 - 2.2 kg)

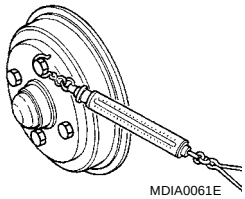


SERVICE DATA AND SPECIFICATIONS (SDS)

PFP:00030

Wheel Bearing

EDS0012F

Axial end play	0.05 mm (0.0020 in)	
Rotating torque	0.018 - 0.109 N·m (0.002 - 0.011 kg-m)	
Spring balance measurement	3.6 - 21.9 N (0.37 - 2.2 kg)	
Installation location of spring scale	Hub bolt position	 MDIA0061E

Tightening Torque

EDS0012G

Hub lock nut	141 - 209 N·m (15 - 21 kg-m, 104 - 154 ft-lb)