

SECTION BR
BRAKE SYSTEM

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

Reference page		BR-6, BR-8	BR-6, BR-8	BR-6, BR-8	—	—	BR-6, BR-8	—	—	—	BR-6, BR-8	—	FAX-2, RAX-2	FSU-2	FAX-2 Front axle RAX-2 Rear axle	WT-32. "NVH Troubleshooting Chart"	WT-32. "NVH Troubleshooting Chart"	FAX-2. "NVH Troubleshooting Chart"	ST-3. "NVH Troubleshooting Chart"
Possible cause and SUSPECTED PARTS		Pads - damaged	Pads - uneven wear	Shims damaged	Rotor imbalance	Rotor damage	Rotor runout	Rotor deformation	Rotor deflection	Rotor rust	Rotor thickness variation	Drum out of round	WHEEL HUB	SUSPENSION	AXLE	TIRES	ROAD WHEEL	DRIVE SHAFT	STEERING
Symptom	Noise	x	x	x									x	x	x	x	x	x	x
	Shake				x								x	x	x	x	x	x	x
	Shimmy, Shudder				x	x	x	x	x	x	x			x	x	x			x

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PRECAUTIONS

< PRECAUTION >

PRECAUTION

PRECAUTIONS

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

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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.

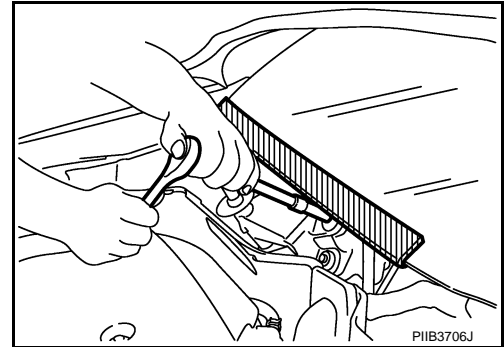
WARNING:

- 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.

Precaution for Procedure without Cowl Top Cover

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When performing the procedure after removing cowl top cover, cover the lower end of windshield with urethane, etc.



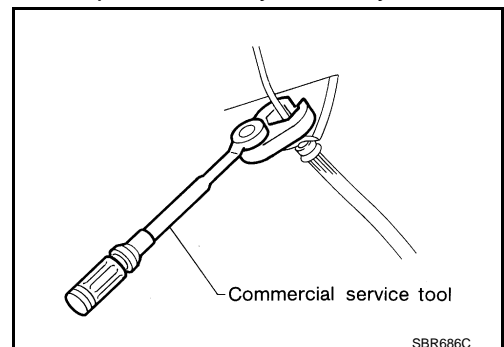
Precaution for Brake System

INFOID:000000001346238

- Clean dust on front brake and rear brake with a vacuum dust collector. Do not blow with compressed air.
- Recommended fluid is brake fluid "DOT 3".
- Never reuse drained brake fluid.
- Be careful not to splash brake fluid on painted areas; it may cause paint damage. If brake fluid is splashed on painted areas, wash it away with water immediately.
- Use clean brake fluid, to clean or wash all parts of master cylinder and disc brake caliper, etc.
- Never use mineral oils such as gasoline or kerosene. They will ruin rubber parts of the hydraulic system.
- Use flare nut torque wrench when installing brake tube.
- When installing brake tube and hose, be sure to check torque.
- Before working, turn ignition switch OFF and disconnect connectors of ABS actuator and electric unit (control unit) or battery cable from the negative terminal.
- Burnish the brake contact surfaces after refinishing or replacing rotors, after replacing pads, or if a soft pedal occurs at very low mileage. Refer to [BR-6. "BRAKE PAD : Brake Burnishing Procedure"](#).

WARNING:

- Clean brake pads and shoes with a waste cloth, then wipe with a dust collector.



PREPARATION

< PREPARATION >

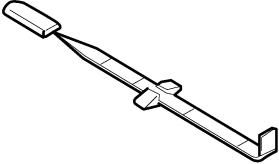
PREPARATION

PREPARATION

Special Service Tool

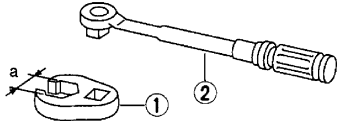
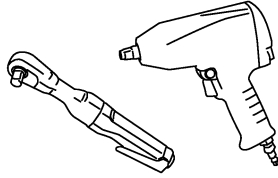

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The actual shapes of Kent-Moore tools may differ from those of special service tools illustrated here.

Tool number (Kent-Moore No.) Tool name	Description
<p>— (J-46532) Brake and clutch pedal height measurement tool</p>  <p style="text-align: right;">LFIA0227E</p>	<p>Measuring brake pedal height</p>

Commercial Service Tool

INFOID:000000001346240

Tool name	Description
<p>1. Flare nut crowfoot a: 10 mm (0.39 in) / 12 mm (0.47 in) 2. Torque wrench</p>  <p style="text-align: right;">NT360</p>	<p>Installing each brake tube and hose</p>
<p>Power tool</p>  <p style="text-align: right;">PBIC0190E</p>	<p>Removing front and rear caliper assembly, tires</p>
<p>Pin punch Tip diameter: 4 mm (0.16in) dia.</p>  <p style="text-align: right;">ZZA0515D</p>	<p>Removing and installing reservoir tank pin</p>

FRONT DISC BRAKE

< BASIC INSPECTION >

BASIC INSPECTION

FRONT DISC BRAKE

BRAKE PAD

BRAKE PAD : Inspection

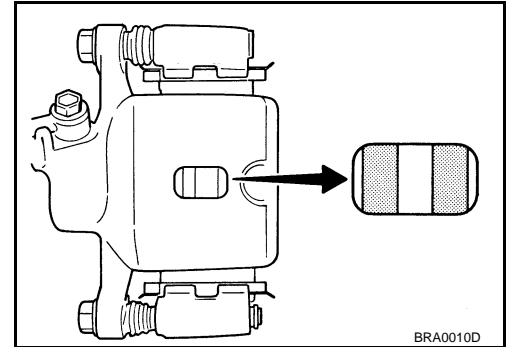
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PAD WEAR

- Check pad thickness from an inspection hole on cylinder body. Check using a scale if necessary.

Standard thickness : 11.0 mm (0.433 in)

Repair limit thickness : 2.0 mm (0.079 in)



BRAKE PAD : Brake Burnishing Procedure

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Burnish contact surfaces between disc rotors and pads according to following procedure after refinishing or replacing rotors, after replacing pads, or if a soft pedal occurs at very low mileage.

CAUTION:

- **Be careful of vehicle speed because the brake does not operate easily until pad and disc rotor are securely fitted.**
 - **Only perform this procedure under safe road and traffic conditions. Use extreme caution.**
1. Drive vehicle on straight, flat road.
 2. Depress brake pedal with the power to stop vehicle within 3 to 5 seconds until the vehicle stops.
 3. Drive without depressing brake for a few minutes to cool the brake.
 4. Repeat steps 1 to 3 until pad and disc rotor are securely fitted.

DISC ROTOR

DISC ROTOR : Inspection

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VISUAL

Check surface of disc rotor for uneven wear, cracks, and serious damage. Replace if necessary.

RUNOUT

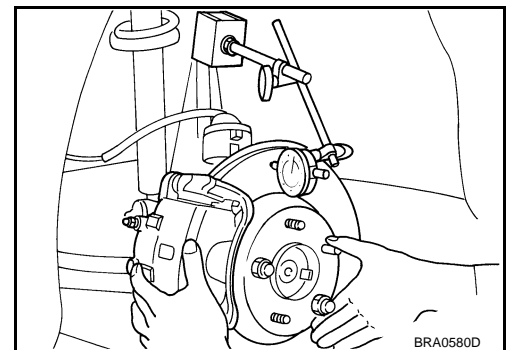
1. Fix disc rotor to wheel hub using wheel nuts (2 or more positions).
2. Inspect runout using a dial gauge. [Measured at 10 mm (0.39 in) inside the disc edge.]

Runout limit : 0.035 mm (0.0014 in)
(with it attached to the vehicle)

NOTE:

Before measuring, make sure that wheel bearing axial end play is within the specification. Refer to [FAX-5. "Inspection"](#).

3. When runout exceeds limit value, displace mounting positions of disc rotor by one hole. And then find a position of the minimum value for runout.
4. Replace or lathe disc rotor if runout is outside the specified value after performing the above operation.



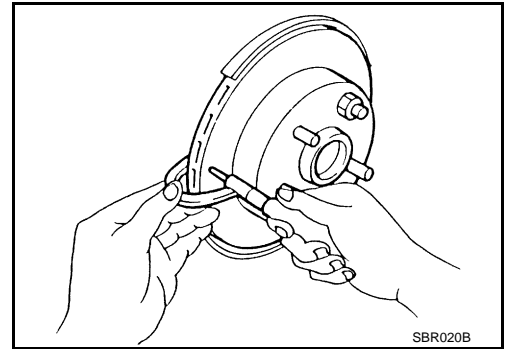
THICKNESS

FRONT DISC BRAKE

< BASIC INSPECTION >

Check thickness of the disc rotor using a micrometer. Replace disc rotor if thickness is under the wear limit.

Standard thickness	: 26.0 mm (1.024 in)
Wear limit	: 24.0 mm (0.945 in)
Thickness variation (Measured at 8 positions)	: 0.015 mm (0.0006 in)



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REAR DISC BRAKE

< BASIC INSPECTION >

REAR DISC BRAKE

BRAKE PAD

BRAKE PAD : Inspection

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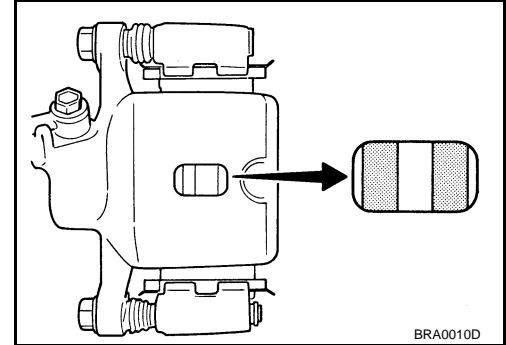
PAD WEAR

- Check pad thickness from an inspection hole on cylinder body. Check using a scale if necessary.

Standard

Standard thickness : 8.5 mm (0.335 in)

Repair limit thickness : 1.0 mm (0.039 in)



DISC ROTOR

DISC ROTOR : Inspection

INFOID:000000001346245

VISUAL

Check surface of disc rotor for uneven wear, cracks, and serious damage. Replace if necessary.

RUNOUT

1. Fix disc rotor to wheel hub using wheel nuts (2 or more positions).
2. Inspect runout using dial gauge. [Measured at 10 mm (0.39 in) inside disc edge.]

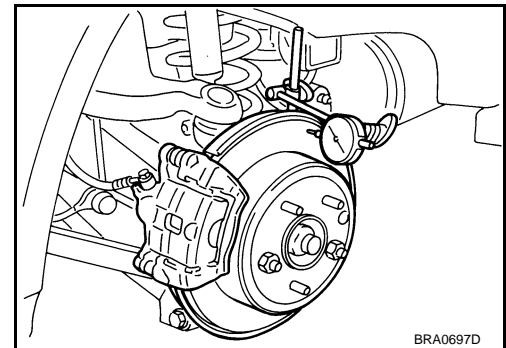
Runout limit : 0.05 mm (0.002 in)

(With it attached to the vehicle)

NOTE:

Before measuring, make sure that wheel bearing axial end play is within the specification. Refer to [FAX-5, "Inspection"](#).

3. When runout exceeds limit value, displace mounting positions of disc rotor by one hole. And then find a position of the minimum value for runout.
4. Replace disc rotor if it is outside repair limit after performing the above operation.



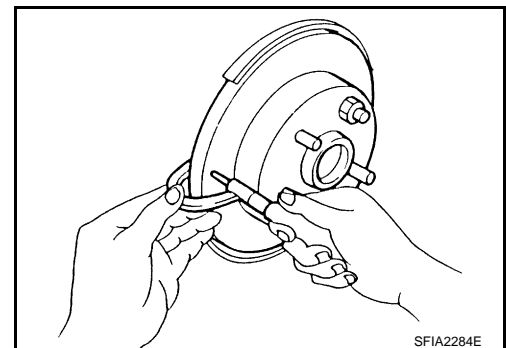
THICKNESS

Check the thickness of the disc rotor using a micrometer. Replace disc rotor if the thickness is under the wear limit.

Standard thickness : 9.0 mm (0.354 in)

Wear limit : 8.0 mm (0.315 in)

Thickness variation : 0.015 mm (0.0006 in)
(Measured at 8 positions)



BRAKE BOOSTER

< BASIC INSPECTION >

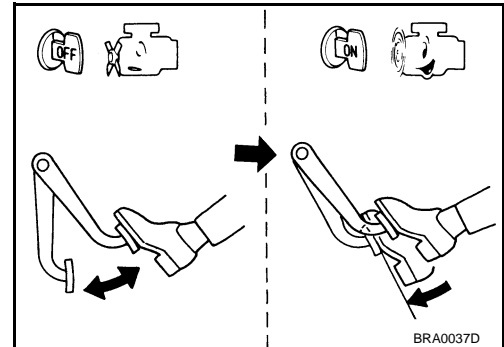
BRAKE BOOSTER

Inspection

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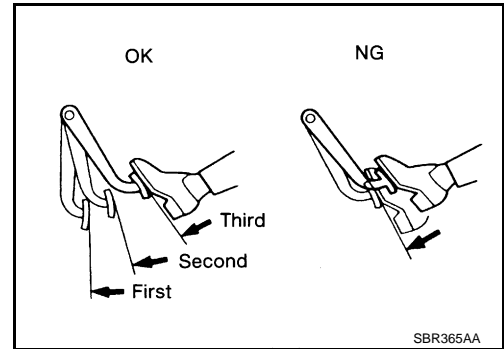
OPERATION

With engine stopped, change vacuum to atmospheric pressure by depressing brake pedal several times. Then with brake pedal fully depressed, start engine and when vacuum pressure reaches the standard, make sure that clearance between brake pedal and floor panel decreases.



AIR TIGHT

- Run engine at idle for approximately 1 minute, and stop it after applying vacuum to booster. Depress brake pedal normally to change vacuum to atmospheric pressure. Make sure that distance at intervals of 5 seconds between brake pedal and floor panel gradually increases.
- Depress brake pedal while engine is running, and stop engine with pedal depressed. The pedal stroke should not change after holding pedal down for 30 seconds.



BRAKE MASTER CYLINDER

< BASIC INSPECTION >

BRAKE MASTER CYLINDER

Inspection

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FLUID LEAK

- Check for leaking in a master cylinder installation surface, a reservoir tank installation surface, and brake tube connections.

BRAKE TUBE AND HOSE

< BASIC INSPECTION >

BRAKE TUBE AND HOSE

FRONT BRAKE

FRONT BRAKE : Inspection

INFOID:000000001346248

INSPECTION AFTER REMOVAL

CAUTION:

Brake tubes and hoses are important safety parts. Always disassemble the parts and retighten their fittings, if a brake fluid leak is detected. Replace applicable part with a new one, if damaged part is detected.

1. Check brake lines (tubes and hoses) and connections for fluid leakage, damage, twists, deformation, contacts with other parts, and loose connections. Replace any damage parts.
2. While depressing brake pedal under a force of 785 N (80 kg-f, 177 lb-f) with engine running for approximately 5 seconds, check each part for fluid leakage.

REAR BRAKE

REAR BRAKE : Inspection

INFOID:000000001346249

INSPECTION AFTER REMOVAL

CAUTION:

Brake tubes and hoses are important safety parts. Always disassemble the parts and retighten their fittings, if a brake fluid leak is detected. Replace applicable part with a new one, if damaged part is detected.

1. Check brake lines (tubes and hoses) and connections for fluid leakage, damage, twists, deformation, contacts with other parts, and loose connections. Replace any damage parts.
2. While depressing brake pedal under a force of 785 N (80 kg-f, 177 lb-f) with engine running for approximately 5 seconds, then check each part for fluid leakage.

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BRAKE PEDAL

< ON-VEHICLE MAINTENANCE >

ON-VEHICLE MAINTENANCE

BRAKE PEDAL

Inspection and Adjustment

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INSPECTION

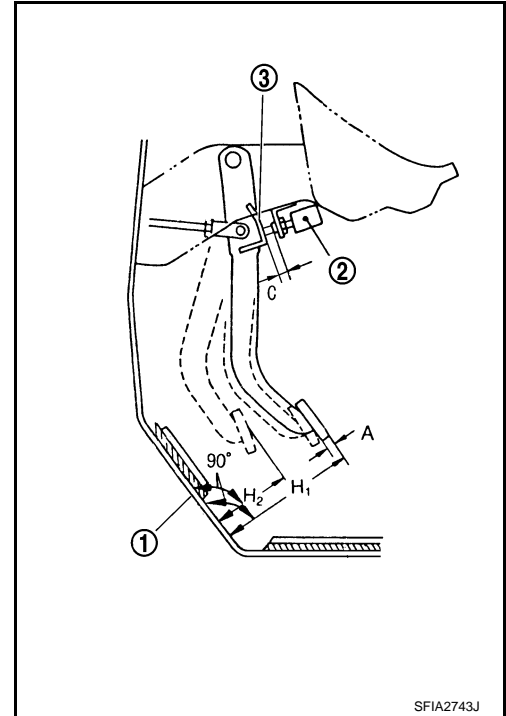
Pedal Play and Clearance

Play and clearance inspection between brake pedal and floor panel with pedal depressed.

- Check brake pedal play.
- Check brake pedal height from dash lower panel (1) using Tool.

Tool number : — (J-46532)

- Adjust height referring to the following specifications.



SFIA2743J

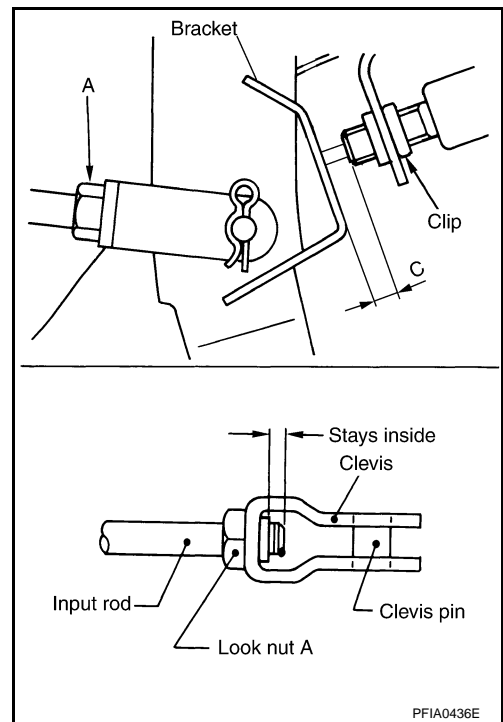
H1	Brake pedal height (from dash lower panel top surface)	CVT	190.7 – 202.7 mm (7.51 – 7.98 in)
		M/T	181.3 – 193.3 mm (7.14 – 7.61 in)
H2	Brake pedal depressed height [under a force of 490 N (50 kg-f, 110 lb-f) with engine running]	CVT	60.7 - 72.7 mm (2.39 - 2.86 in)
		M/T	51.3 - 63.3 mm (2.02 - 2.49 in)
C	Clearance between bracket (3) and threaded end of the stop lamp switch and ASCD switch (2)		0.74 – 1.96 mm (0.0291 – 0.0772 in)
A	Pedal play		3 – 11 mm (0.12 – 0.43 in)

ADJUSTMENT

BRAKE PEDAL

< ON-VEHICLE MAINTENANCE >

1. Loosen stop lamp switch and ASCD switch by turning it counter-clockwise by 45°.
2. Loosen lock nut (A) on the input rod to rotate input rod for adjusting brake pedal height to the specified one, and tighten lock nut (A).
Refer to [BR-16, "Exploded View"](#) brake pedal height, specified torque.
CAUTION:
Make sure the threaded end of input rod stays inside clevis.
3. With the pedal pulled and held by hand, press stop lamp switch and ASCD switch until its threaded end contacts stopper.
4. With the threaded end of the stop lamp switch and ASCD switch contacting the bracket, rotate the switch clockwise by 45° to secure.
CAUTION:
Make sure that the clearance (C) between bracket and end of stop lamp switch and brake switch is within the standard.
Refer to [BR-12, "Inspection and Adjustment"](#).
5. Check pedal play.
CAUTION:
Make sure that stop lamps goes off when pedal is released.
6. Start engine to check brake pedal depression height when depressed. Refer to [BR-12, "Inspection and Adjustment"](#).



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BRAKE FLUID

< ON-VEHICLE MAINTENANCE >

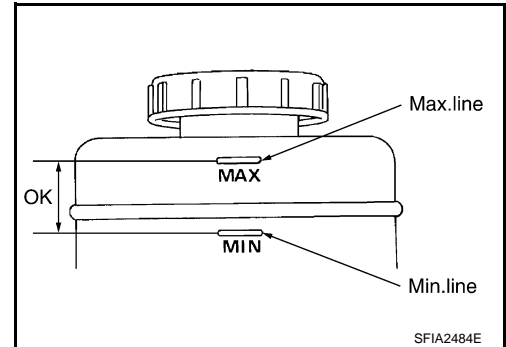
BRAKE FLUID

Inspection

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BRAKE FLUID LEVEL

- Make sure that a brake fluid level in reservoir tank is within the standard (between MAX and MIN lines).
- Visually check around reservoir tank for fluid leakage.
- If the level is excessively low, check brake system for leakage.
- Release parking brake pedal and see if brake warning lamp goes off. If not, check brake system for fluid leakage.

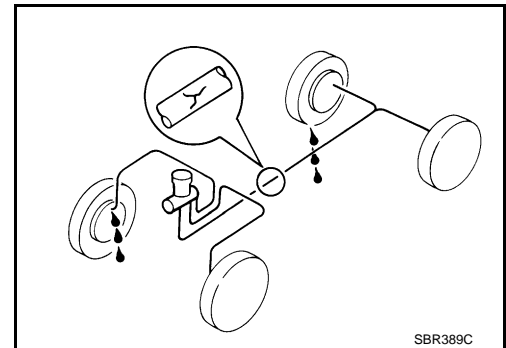


BRAKE LINE

CAUTION:

If leakage occurs around joints, retighten or, if necessary, replace damaged parts.

1. Check brake line (tubes and hoses) for cracks, deterioration or other damage. Replace any damaged parts.
2. Check for oil leakage by fully depressing brake pedal while engine is running.



Draining

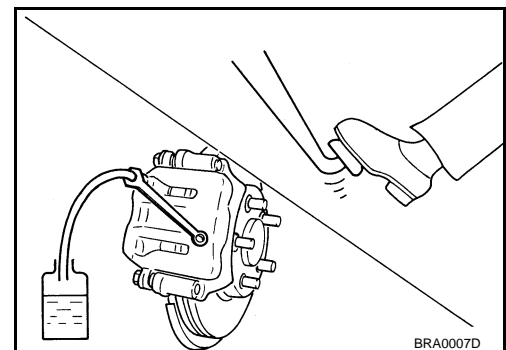
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DRAINING

CAUTION:

- Be careful not to splash brake fluid on painted areas; it may cause paint damage. If brake fluid is splashed on painted areas, wash it away with water immediately.
- Before working, disconnect connectors of ABS actuator and electric unit (control unit) or battery cable from the negative terminal.

1. Connect a vinyl tube to bleed valve.
2. Depress brake pedal, loosen bleed valve, and gradually remove brake fluid.



Refilling

INFOID:000000001346253

REFILLING

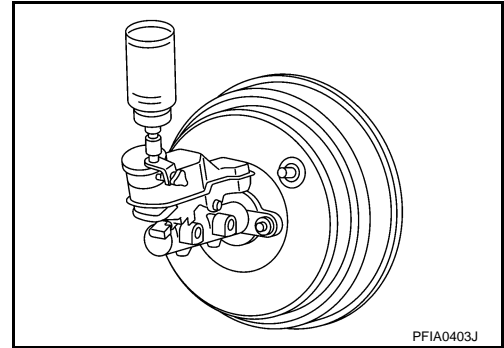
CAUTION:

- Refill with new brake fluid "DOT 3".

BRAKE FLUID

< ON-VEHICLE MAINTENANCE >

- **Never reuse drained brake fluid.**
 - **Before working, disconnect connectors of ABS actuator and electric unit (control unit) or battery cable from the negative terminal.**
1. Make sure there is no foreign material in the reservoir tank, and refill with new brake fluid.
 2. Loosen bleed valve, depress brake pedal slowly to full stroke and then release it. Repeat the procedure every 2 or 3 seconds until the new brake fluid comes out, then close the bleed valve while depressing the pedal. Repeat the same work for each wheel.
 3. Bleed air. Refer to [BR-15, "Bleeding Brake System"](#).



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Bleeding Brake System

BLEEDING BRAKE SYSTEM

CAUTION:

- **While bleeding, pay attention to master cylinder fluid level.**
 - **Before working, disconnect connectors of ABS actuator and electric unit (control unit) or battery cable from the negative terminal.**
1. Connect a vinyl tube to rear right brake caliper bleed valve.
 2. Fully depress brake pedal 4 or 5 times.
 3. With brake pedal depressed, loosen bleed valve to bleed air in brake line, and then tighten it immediately.
 4. Repeat steps 2 and 3 until all of the air is out of the brake line.
 5. Tighten the bleed valve to the specified torque. Refer to front disc brake: [BR-26, "Exploded View"](#), rear disc brake: [BR-30, "Exploded View"](#).
 6. From step 1 to 5, with master cylinder reservoir tank filled at least half way, bleed air from brake hydraulic line bleed valves in the following order:
Rear right brake→Front left brake→Rear left brake→Front right brake

BRAKE PEDAL

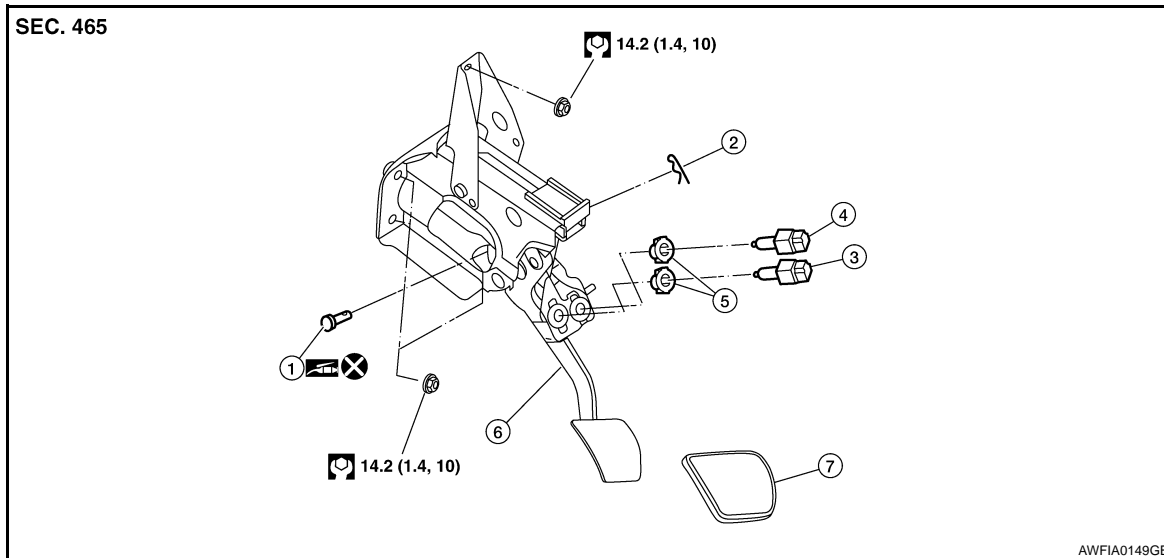
< ON-VEHICLE REPAIR >

ON-VEHICLE REPAIR

BRAKE PEDAL

Exploded View

INFOID:000000001346255



- | | | |
|--------------------|------------------------|-------------------------|
| 1. Clevis pin | 2. Snap pin | 3. Stop lamp switch |
| 4. ASCD switch | 5. Clip | 6. Brake pedal assembly |
| 7. Brake pedal pad | : Multi-purpose grease | |

NOTE:

Clevis pin can be installed from both left and right.

Removal and Installation

INFOID:000000001346256

REMOVAL

1. Remove instrument lower cover (LH) and lower knee protector. Refer to [IP-10. "Exploded View"](#).
2. Remove steering column assembly. Refer to [ST-14. "Removal and Installation"](#).
3. Disconnect stop lamp switch and ASCD switch connector.
4. Remove stop lamp switch and ASCD switch from brake pedal assembly.
5. Disconnect brake pedal stroke sensor connector (With pre-crash seat belt).
CAUTION:
Brake pedal stroke sensor is not detachable. Do not detach it.
6. Remove snap pin and clevis pin from clevis of brake booster.
7. Remove brake pedal assembly nuts. Pull brake booster toward engine room to the extent that does not deform brake tube.
8. Remove brake booster clevis from input rod.
9. Remove bolt and then remove brake pedal assembly from vehicle.

INSTALLATION

Installation is in the reverse order of removal.

- Tightening brake pedal assembly nuts and bolts to specified torque. Refer to [BR-16. "Exploded View"](#)
- Adjust brake pedal height after installing brake pedal assembly to vehicle. Refer to [BR-12. "Inspection and Adjustment"](#).

CAUTION:

Do not reuse clevis pin.

BRAKE TUBE AND HOSE

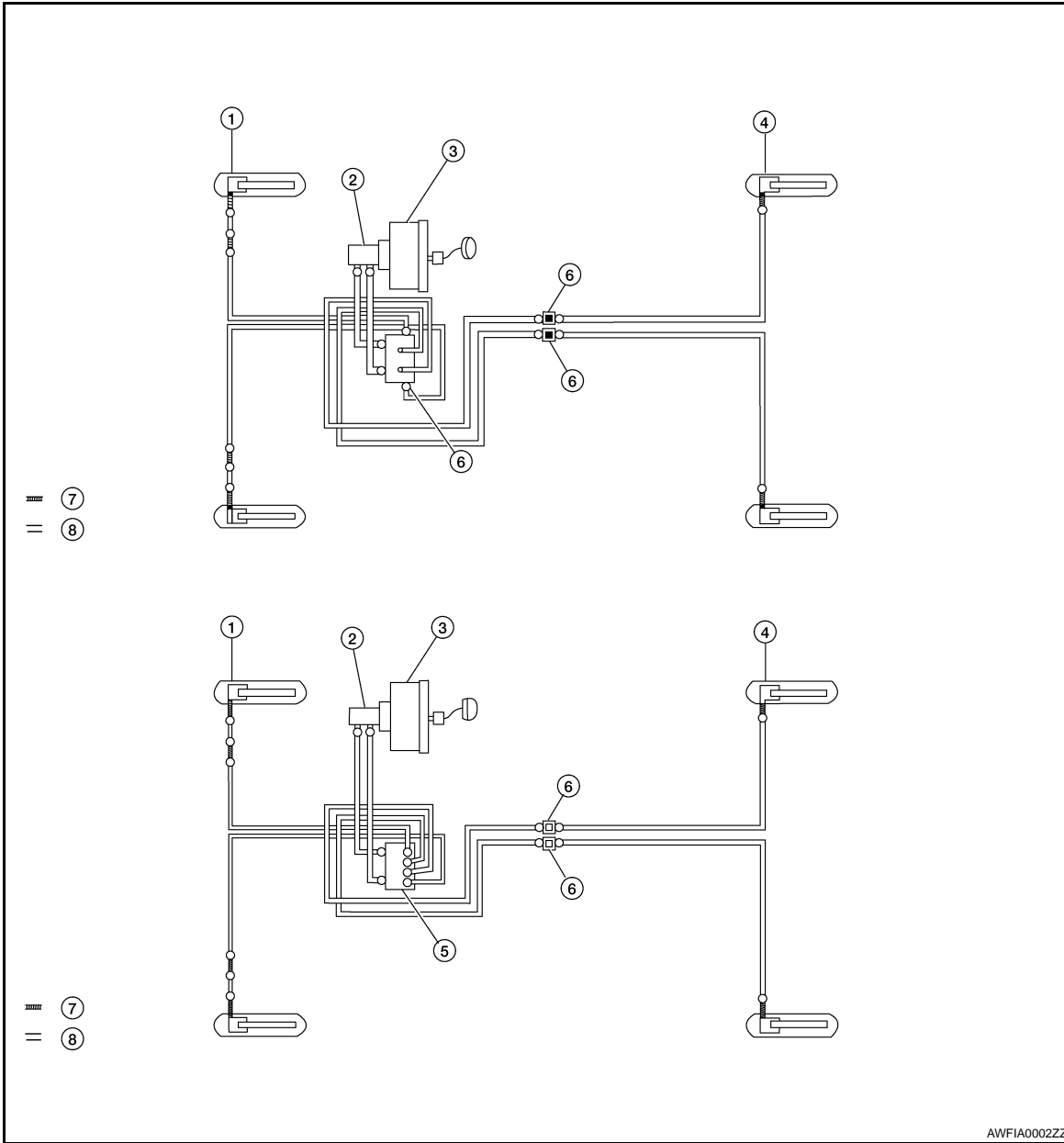
< ON-VEHICLE REPAIR >

BRAKE TUBE AND HOSE

FRONT BRAKE

FRONT BRAKE : Exploded View


INFOID:000000001346257





- 1. Front disc brake
- 4. Rear disc brake
- 7. Brake hose



- 2. Master cylinder
- 5. ABS actuator and electric unit (control unit)
- 8. Brake tube

- 3. Brake booster
- 6. Connector

Flare nut 8 mm
 : 16.2 (1.7, 12)

Union bolt
 : 18.2 (1.9, 13)

Flare nut 10 mm
 : 19.1 (1.9, 14)

 : Connector bolt
 : 7.0 (0.7, 62)

FRONT BRAKE : Removal and Installation

INFOID:000000001346258

REMOVAL

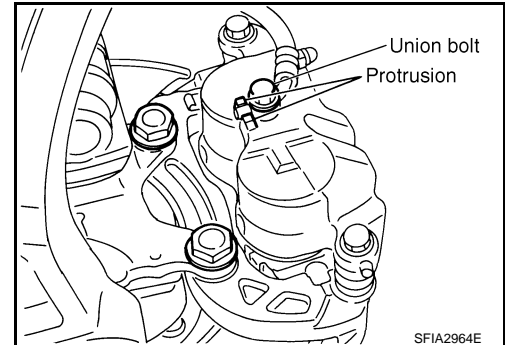
CAUTION:

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BRAKE TUBE AND HOSE

< ON-VEHICLE REPAIR >

- Be careful not to splash brake fluid on painted areas; it may cause paint damage. If brake fluid is splashed on painted areas, wash it away with water immediately.
 - Cover the open end of brake tubes and hoses when disconnecting to prevent entrance of dirt.
1. Drain brake fluid. Refer to [BR-14, "Draining"](#).
 2. Disconnect brake hose from brake tube, using a suitable tool.
 3. Remove union bolt and remove brake hose from caliper assembly.
 4. Remove lock plate and remove brake hose from vehicle.



INSTALLATION

CAUTION:

- All brake hoses and tubes must be free from excessive bending, twisting and pulling.
- Make sure that there is no interference with other parts when turning steering both clockwise and counterclockwise.
- Brake tubes and hoses are an important safety part. Always disassemble the parts and retighten their fittings, if a brake fluid leak is detected. Replace applicable part with a new one, if damaged part is detected.
- Be careful not to splash brake fluid on painted areas; it may cause paint damage. If brake fluid is splashed on painted areas, wash it away with water immediately.
- Refill with new brake fluid "DOT 3".
- Never reuse drained brake fluid.

1. Assemble the union bolt and copper washer to the brake hose.

CAUTION:

Do not reuse copper washer.

2. Install brake hose by aligning with the protrusion on brake caliper assembly, and tighten union bolt to the specified torque. Refer to [BR-17, "FRONT BRAKE : Exploded View"](#).
3. Connect brake hose to brake tube, partially tighten flare nut by hand as much as possible, then secure it to the bracket with lock plate.
4. Tighten flare nut to the specified torque, using a suitable tool. Refer to [BR-17, "FRONT BRAKE : Exploded View"](#).
5. Refill brake fluid and bleed air. Refer to [BR-15, "Bleeding Brake System"](#).

REAR BRAKE

REAR BRAKE : Removal and Installation

INFOID:000000001346260

REMOVAL

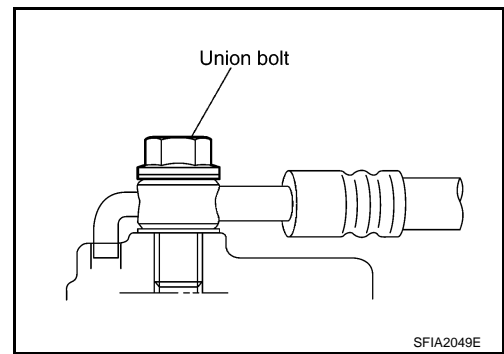
CAUTION:

- Be careful not to splash brake fluid on painted areas; it may cause paint damage. If brake fluid is splashed on painted areas, wash it away with water immediately.
 - Cover the open end of brake tubes and hoses when disconnecting to prevent entrance of dirt.
1. Drain brake fluid. Refer to [BR-14, "Draining"](#).
 2. Disconnect brake hose from brake tube, using a suitable tool.

BRAKE TUBE AND HOSE

< ON-VEHICLE REPAIR >

3. Remove union bolts, and then remove brake hose from brake caliper assembly.
4. Remove lock plate and then remove brake hose from vehicle.



INSTALLATION

CAUTION:

- All brake hoses and tubes must be free from excessive bending, twisting and pulling.
- Make sure that there is no interference with other parts when turning steering both clockwise and counterclockwise.
- Brake tubes and hoses are an important safety part. Always disassemble the parts and retighten their fittings, if a brake fluid leak is detected. Replace applicable part with a new one, if damaged part is detected.
- Be careful not to splash brake fluid on painted areas; it may cause paint damage. If brake fluid is splashed on painted areas, wash it away with water immediately.
- Refill with new brake fluid "DOT 3".
- Never reuse drained brake fluid.

1. Assemble the union bolt and copper washer to the brake hose.

CAUTION:

Do not reuse copper washer.

2. Attach L-shape metal fitting of the brake hose to brake caliper assembly positioning hole, and then tighten union bolt to the specified torque. Refer to [BR-17, "FRONT BRAKE : Exploded View"](#).
3. Connect brake hose to brake tube, partially tighten flare nut by hand as much as possible, then secure it to the bracket with lock plate.
4. Tighten flare nut to the specified torque, using a suitable tool. Refer to [BR-17, "FRONT BRAKE : Exploded View"](#).
5. Refill brake fluid and bleed air. Refer to [BR-15, "Bleeding Brake System"](#).

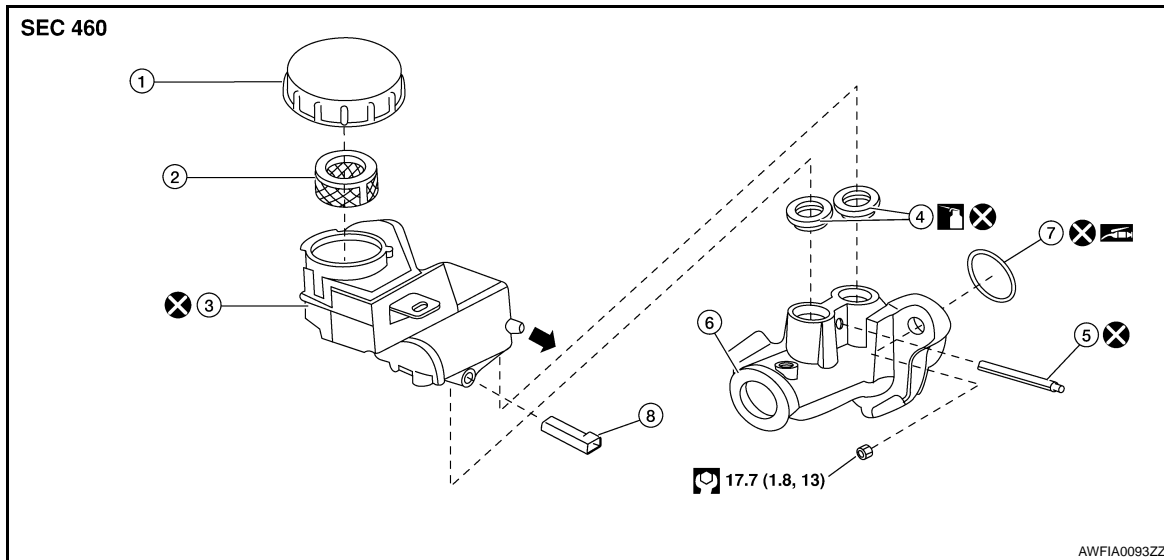
BRAKE MASTER CYLINDER

< ON-VEHICLE REPAIR >

BRAKE MASTER CYLINDER

Exploded View

INFOID:000000001346261



- | | | |
|------------------|---------------------------------------|-----------------------------|
| 1. Reservoir cap | 2. Oil strainer | 3. Reservoir tank |
| 4. Grommet | 5. Pin | 6. Master cylinder assembly |
| 7. O-ring | 8. Brake fluid level switch connector | Brake fluid |

: PBC (Poly Butyl Cuprysil) grease or silicone-based grease

Removal and Installation

INFOID:000000001346262

REMOVAL

CAUTION:

- Be careful not to splash brake fluid on painted areas; it may cause paint damage. If brake fluid is splashed on painted areas, wash it away with water immediately.
- Never scratch the piston of master cylinder when installing/removing because the piston is exposed. Check if any dust is not on the piston, and wash with brake fluid if needed.
- Hold cylinder body when handling master cylinder. Never hold the piston because the piston might be detached if pulled strongly.

1. Drain brake fluid. Refer to [BR-14, "Draining"](#).
2. Disconnect brake fluid level switch harness connector.
3. Disconnect master cylinder brake tubes, using a suitable tool.
4. Remove master cylinder nuts and remove master cylinder assembly from vehicle.

INSTALLATION

CAUTION:

- Be careful not to splash brake fluid on painted areas; it may cause paint damage. If brake fluid is splashed on painted areas, wash it away with water immediately.
- Never scratch the piston of master cylinder when installing/removing because the piston is exposed. Check if any dust is not on the piston, and wash with brake fluid if needed.
- Hold cylinder body when handling master cylinder. Never hold the piston because the piston might be detached if pulled strongly.
- Refill with new brake fluid "DOT 3".
- Never reuse drained brake fluid.

BRAKE MASTER CYLINDER

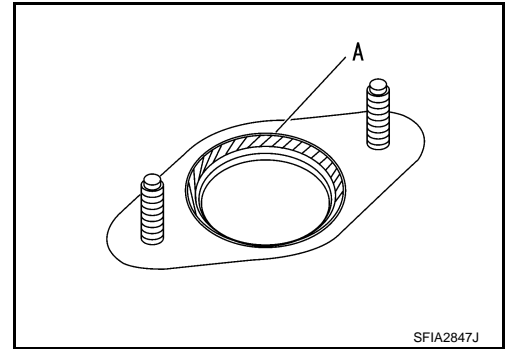
< ON-VEHICLE REPAIR >

1. Installation is in the reverse order of removal.

CAUTION:

Apply silicone grease to brake booster (to "A" position as shown) when installing master cylinder to brake booster.

2. Tighten brake tube flare nut to the specified torque using a suitable tool. Refer to [BR-17, "FRONT BRAKE : Exploded View"](#).
3. Refill with new brake fluid and bleed air. Refer to [BR-15, "Bleeding Brake System"](#).



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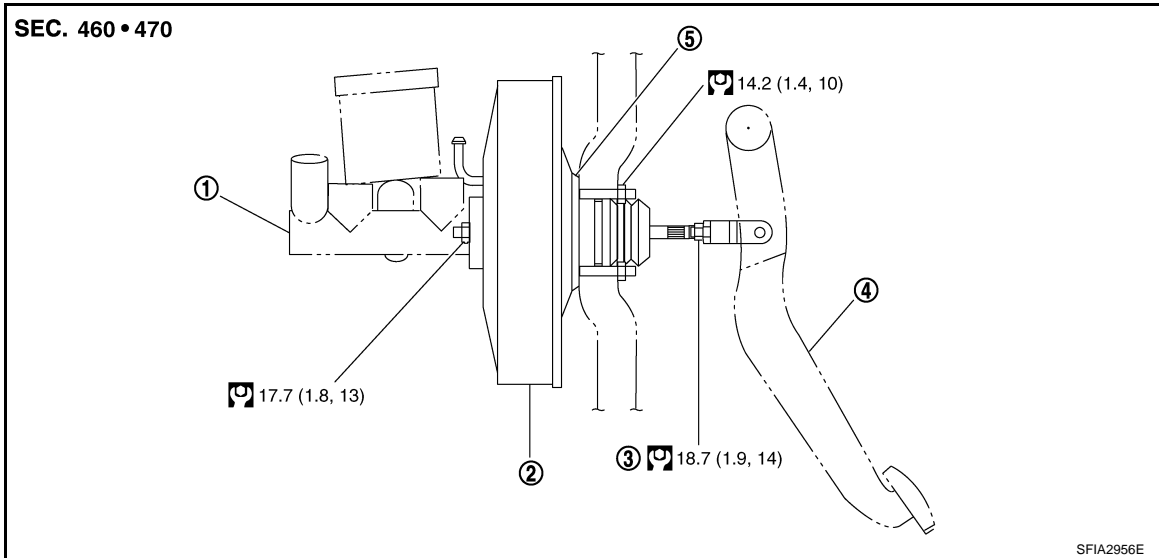
BRAKE BOOSTER

< ON-VEHICLE REPAIR >

BRAKE BOOSTER

Exploded View

INFOID:000000001346263



- | | | |
|-----------------------------|------------------|-------------|
| 1. Master cylinder assembly | 2. Brake booster | 3. Lock nut |
| 4. Brake pedal | 5. Gasket | |

Removal and installation

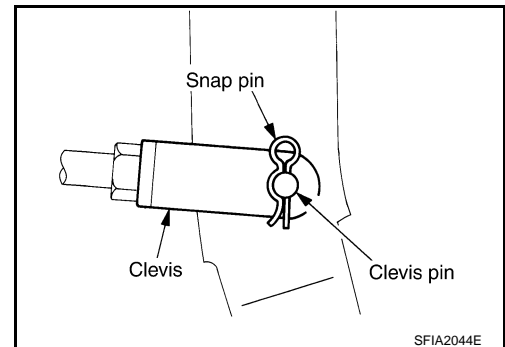
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REMOVAL

CAUTION:

Be careful not to deform or bend brake tube while removing and installing brake booster.

1. Remove cowl top. Refer to [EXT-18, "Removal and Installation"](#).
2. Disconnect fuel lines.
3. Remove brake master cylinder. Refer to [BR-20, "Removal and Installation"](#).
4. Remove vacuum hose from brake booster. Refer to [BR-22, "Exploded View"](#).
5. Remove snap pin and clevis pin from inside vehicle.
6. Remove nuts on brake booster and brake pedal assembly, then remove brake pedal.
7. Remove brake booster from dash panel in engine room side.



INSTALLATION

CAUTION:

- **Be careful not to deform or bend brake tube while removing and installing brake booster.**
- **Replace clevis pin if it is damaged.**
- **Be careful not to damage brake booster stud bolt threads. If brake booster is tilted during installation, the dash panel may damage the threads.**

BRAKE BOOSTER

< ON-VEHICLE REPAIR >

1. Loosen lock nut to adjust input rod length so that length "B" (in the figure) satisfies the specified value.

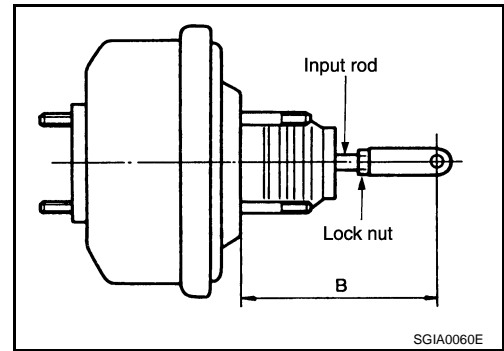
Length "B" : 125 mm (4.92 in)

2. After adjusting "B", temporarily tighten lock nut to install booster assembly to vehicle. At this time, make sure that a gasket between booster assembly and dash panel is installed.

CAUTION:

Always install gasket between brake booster and dash panel.

3. Install and connect brake pedal with clevis of input rod.
4. Install brake pedal bracket nuts and tighten them to the specified torque. Refer to [BR-16, "Exploded View"](#).
5. Install vacuum hose into brake booster. Refer to [BR-22, "Exploded View"](#).
6. Install master cylinder to booster assembly. Refer to [BR-20, "Removal and Installation"](#).
7. Adjust the brake pedal height and the play of the brake pedal. Refer to [BR-12, "Inspection and Adjustment"](#).
8. Tighten lock nut of input rod to the specified torque. Refer to [BR-22, "Exploded View"](#).
9. Connect fuel lines.
10. Install cowl top. Refer to [EXT-18, "Removal and Installation"](#).
11. Refill new brake fluid and bleed air. Refer to [BR-15, "Bleeding Brake System"](#).



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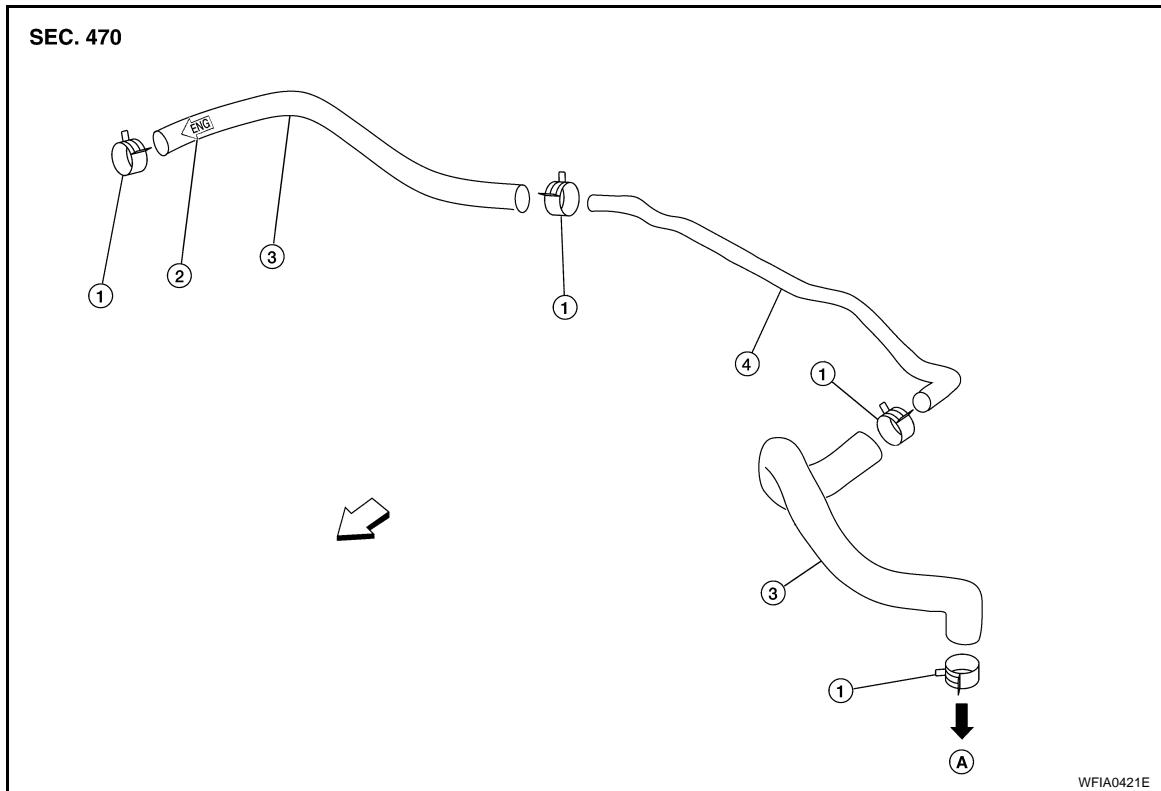
VACUUM LINES

< ON-VEHICLE REPAIR >

VACUUM LINES

Exploded View

INFOID:000000001346265



- | | | |
|------------------|--------------------------------|----------------|
| 1. Clamp | 2. Check valve direction stamp | 3. Vacuum hose |
| 4. Vacuum piping | A. To brake booster | ← Front |

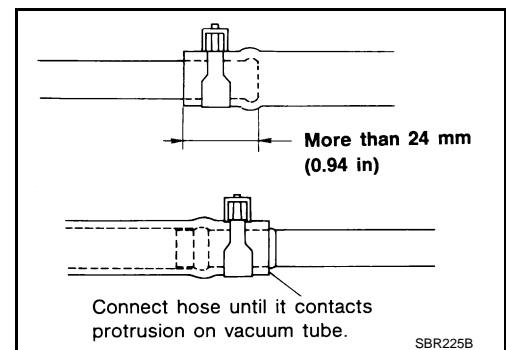
Removal and Installation

INFOID:000000001346266

Refer to illustration for removal and installation of vacuum lines.

CAUTION:

- Because vacuum hose contains a check valve, it must be installed in the correct position. Refer to the stamp to confirm correct installation. Brake booster will not operate normally if the hose is installed in the wrong direction.
- Insert vacuum hose at least 24 mm (0.94 in).
- Do not use lubricating oil during assembly.



Inspection After Removal

INFOID:000000001346267

Visual

Check for correct assembly, damage and deterioration.

Check Valve Airtightness

VACUUM LINES

< ON-VEHICLE REPAIR >

Use a handy vacuum pump to check.

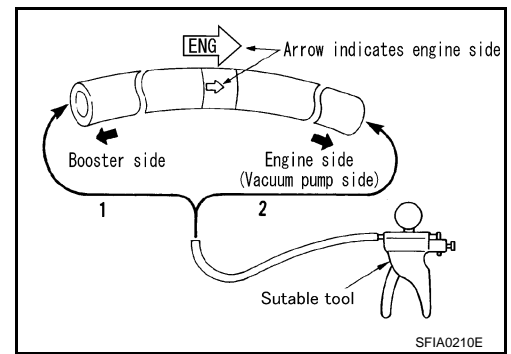
When connected to the booster side (1):

Vacuum should decrease within 1.3 kPa (10 mm-Hg, 0.39 inHg) for 15 seconds under a vacuum of –66.7 kPa (–500 mmHg, –19.69 inHg).

When connected to the engine side (2):

Vacuum should not exist.

- Replace vacuum hose assembly if vacuum hose and check valve are malfunctioning.



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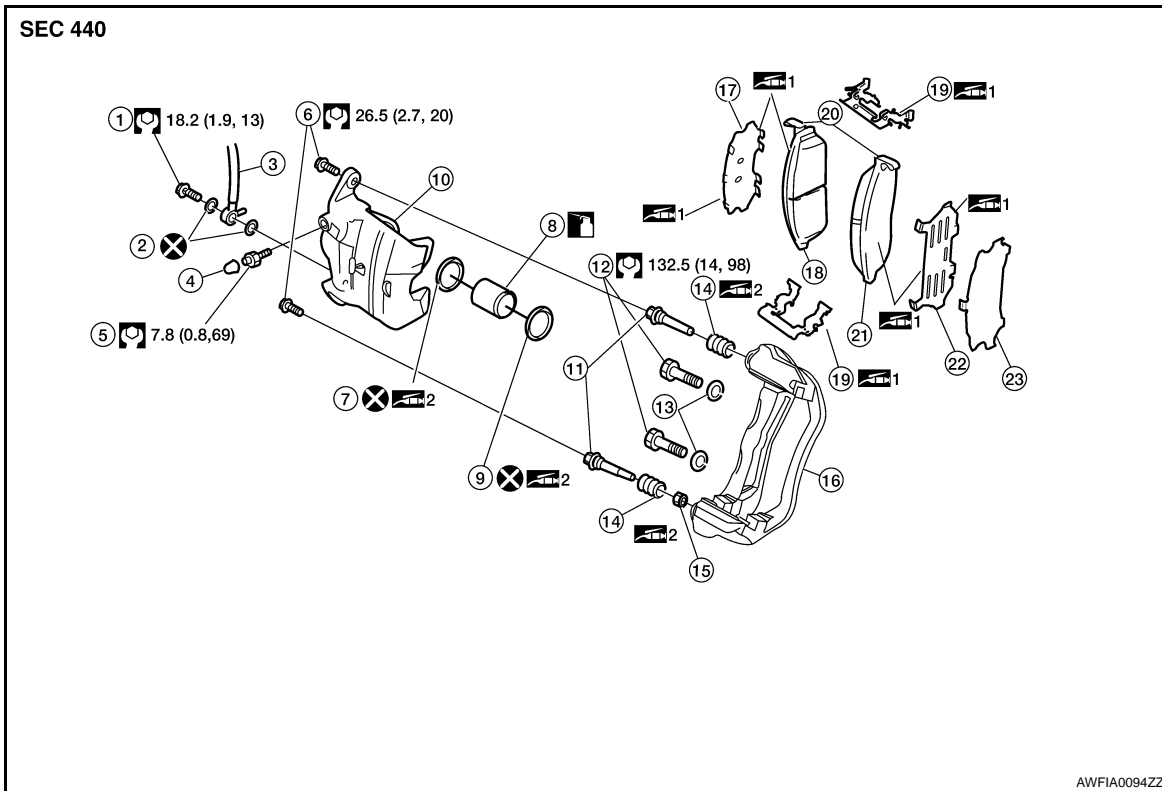
FRONT DISC BRAKE

< ON-VEHICLE REPAIR >

FRONT DISC BRAKE

Exploded View

INFOID:000000001346268



- | | | |
|-------------------|-----------------------------|---------------------------------|
| 1. Union bolt | 2. Copper washer | 3. Brake hose |
| 4. Cap | 5. Bleed valve | 6. Sliding pin bolt |
| 7. Piston seal | 8. Piston | 9. Piston boot |
| 10. Cylinder body | 11. Sliding pin | 12. Torque member mounting bolt |
| 13. Washer | 14. Sliding pin boot | 15. Bushing |
| 16. Torque member | 17. Inner multilayered shim | 18. Inner pad |
| 19. Pad retainer | 20. Pad wear sensor | 21. Outer pad |
| 22. Outer shim | 23. Outer shim cover | |
- 1: Molykote M-77 grease
 2: Rubber grease
 : Brake fluid

Removal and Installation (Pads)

INFOID:000000001346269

REMOVAL

WARNING:

Clean dust on caliper and brake pad with a vacuum dust collector to minimize the hazard of air borne particles or other materials.

CAUTION:

- While removing cylinder body, do not depress brake pedal because piston will pop out.
- It is not necessary to remove bolts on torque member and brake hose except for disassembly or replacement of caliper assembly. In this case, hang cylinder body with a wire so as not to stretch brake hose.
- Do not damage piston boot.
- If any shim is subject to serious corrosion, replace it with a new one.
- Always replace shim and shim cover as a set when replacing brake pads.
- Keep rotor free from brake fluid.

FRONT DISC BRAKE

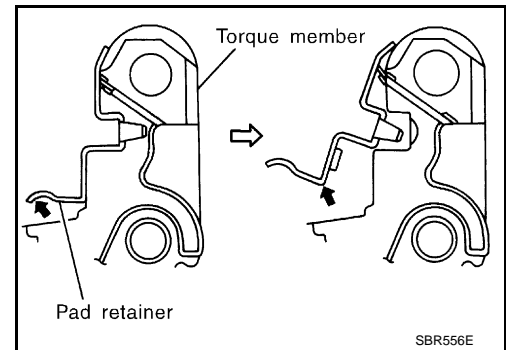
< ON-VEHICLE REPAIR >

- **Burnish the brake pads and disc rotor mutually contacting surfaces, after refinishing or replacing rotors, after replacing pads, or if a soft pedal occurs at very low mileage. Refer to [BR-6, "BRAKE PAD : Brake Burnishing Procedure"](#).**

1. Remove front tires from vehicle using power tool.
2. Remove lower sliding pin bolt.
3. Hang cylinder body with a wire, and remove pads, pad retainers, shims, and shim cover from torque member.

CAUTION:

When removing the pad retainer from the torque member, lift it in the direction indicated by the arrow as shown so that it does not deform.



INSTALLATION

WARNING:

Clean dust on caliper and brake pad with a vacuum dust collector to minimize the hazard of air borne particles or other materials.

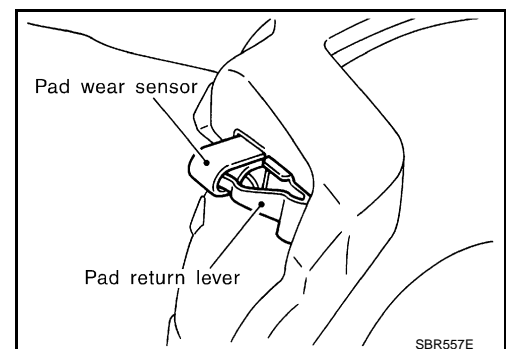
CAUTION:

- While removing cylinder body, do not depress brake pedal because piston will pop out.
- It is not necessary to remove bolts on torque member and brake hose except for disassembly or replacement of caliper assembly. In this case, hang cylinder body with a wire so as not to stretch brake hose.
- Do not damage piston boot.
- If any shim is subject to serious corrosion, replace it with a new one.
- Always replace shim and shim cover as a set when replacing brake pads.
- Keep rotor free from brake fluid.
- Burnish the brake pads and disc rotor mutually contacting surfaces, after refinishing or replacing rotors, after replacing pads, or if a soft pedal occurs at very low mileage. Refer to [BR-6, "BRAKE PAD : Brake Burnishing Procedure"](#).

1. Apply Molykote M-77 grease or equivalent to between shim cover and shim. Install outer shim, outer shim cover to inner pad, and inner multilayered shim to outer pad.
2. Apply Molykote M-77 grease or equivalent to between pad retainer and pad. Install pad retainers and pads to torque member.

CAUTION:

- Securely assemble pad retainers so that they are not being lifted up from torque member.
- Both inner and outer pads have a pad return system on the pad retainer. Install pad return lever securely to pad wear sensor.



3. Install cylinder body to torque member.

CAUTION:

In the case of replacing a pad with new one, check a brake fluid level in the reservoir tank because brake fluid returns to master cylinder reservoir tank when pressing piston in.

NOTE:

Press piston into cylinder body, using a suitable tool.

4. Install lower sliding pin bolt, and tighten it to the specified torque. Refer to [BR-26, "Exploded View"](#).
5. Check front disc brake for drag.
6. Install front tires.

Removal and Installation (Rotor)

INFOID:000000001346271

REMOVAL

WARNING:

FRONT DISC BRAKE

< ON-VEHICLE REPAIR >

Clean dust on caliper and brake pad with a vacuum dust collector to minimize the hazard of air borne particles or other materials.

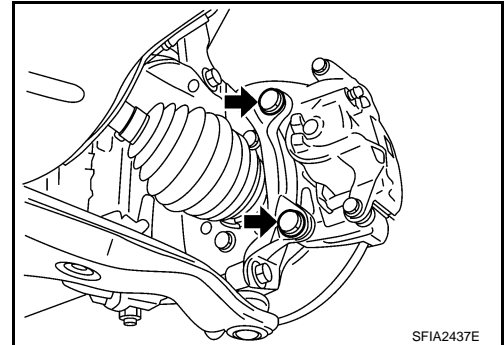
CAUTION:

- While removing cylinder body, do not depress brake pedal because piston will pop out.
- Do not damage piston boot.
- Keep rotor free from brake fluid.

1. Remove front tires using power tool.
2. Fasten disc rotor using wheel nut.
3. Drain brake fluid. Refer to [BR-14, "Draining"](#).
4. Remove union bolt, and then disconnect brake hose from caliper assembly.
5. Remove torque member bolts, and remove brake caliper assembly.

CAUTION:

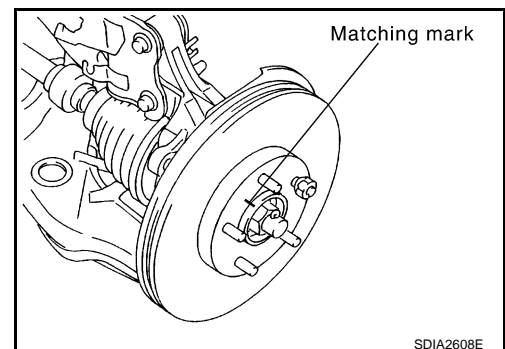
Do not drop brake pad.



6. Remove disc rotor.

CAUTION:

Put matching marks on wheel hub assembly and disc rotor, if it is necessary to remove disc rotor.



INSTALLATION

WARNING:

Clean dust on caliper and brake pad with a vacuum dust collector to minimize the hazard of air borne particles or other materials.

CAUTION:

- While removing cylinder body, do not depress brake pedal because piston will pop out.
- Do not damage piston boot.
- Keep rotor free from brake fluid.
- Refill with new brake fluid "DOT 3".
- Never reuse drained brake fluid.

1. Install disc rotor.

CAUTION:

Put alignment marks on disc rotor and wheel hub at the time of removal when reusing disc rotor.

2. Install brake caliper assembly to vehicle, and tighten torque member bolts to the specified torque. Refer to [BR-26, "Exploded View"](#).

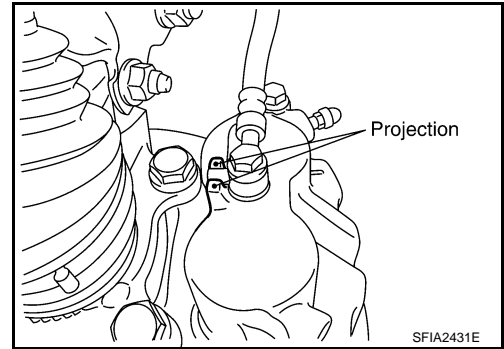
CAUTION:

Do not allow oil or any moisture on all contact surfaces between steering knuckle and caliper assembly, bolts, and washer.

FRONT DISC BRAKE

< ON-VEHICLE REPAIR >

3. Install brake hose to brake caliper assembly, and tighten union bolts to the specified torque. Refer to [BR-17, "FRONT BRAKE : Removal and Installation"](#).
4. Refill with new brake fluid and bleed air. Refer to [BR-15, "Bleeding Brake System"](#).
5. Check front disc brake for drag.
6. Install front tires.



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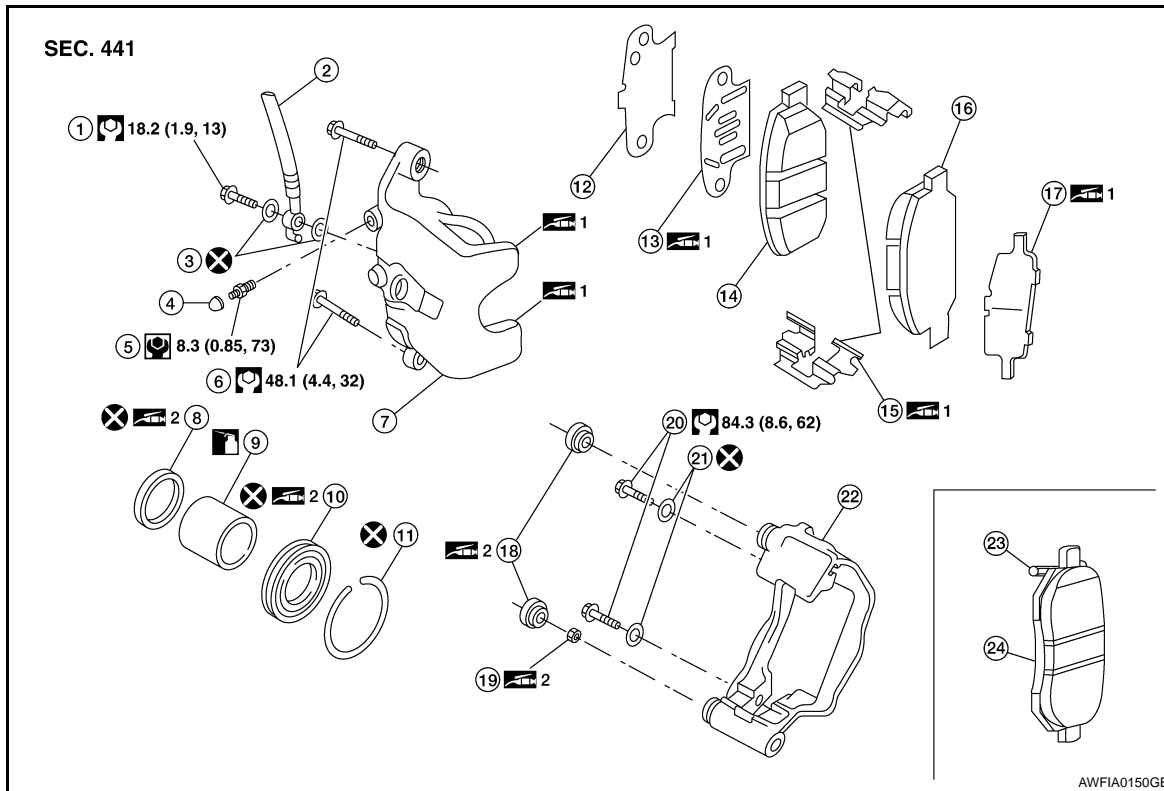
REAR DISC BRAKE

< ON-VEHICLE REPAIR >

REAR DISC BRAKE

Exploded View

INFOID:000000001346272



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- | | | |
|-------------------|---------------------------------|----------------------|
| 1. Union bolt | 2. Brake hose | 3. Copper washer |
| 4. Cap | 5. Bleed valve | 6. Sliding pin bolt |
| 7. Cylinder body | 8. Piston seal | 9. Piston |
| 10. Piston boot | 11. Retaining ring | 12. Inner shim cover |
| 13. Inner shim | 14. Inner pad | 15. Pad retainer |
| 16. Outer pad | 17. Outer multilayered shim | 18. Sliding pin boot |
| 19. Bushing | 20. Torque member mounting bolt | 21. Washer |
| 22. Torque member | 23. Pad wear sensor | 24. Inner pad (RH) |

1: PBC (Poly Butyl Cuprysil) grease or silicone-based grease

2: Rubber grease

: Brake fluid

Removal and Installation (Pads)

INFOID:000000001346273

REMOVAL

WARNING:

Clean dust on caliper and brake pad with a vacuum dust collector to minimize the hazard of air borne particles or other materials.

CAUTION:

- While removing cylinder body, do not depress brake pedal because piston will pop out.
- It is not necessary to remove bolts on torque member and brake hose except for disassembly or replacement of caliper assembly. In this case, hang cylinder body with a wire so as not to stretch brake hose.
- Do not damage piston boot.
- If any shim is subject to serious corrosion, replace it with a new one.
- Always replace shim and shim covers as a set when replacing brake pads.
- Keep rotor free from brake fluid.

REAR DISC BRAKE

< ON-VEHICLE REPAIR >

- **Burnish the brake pads and disc rotor mutually contacting surfaces after refinishing or replacing rotors, after replacing pads, or if a soft pedal occurs at very low mileage. Refer to [BR-6, "BRAKE PAD : Brake Burnishing Procedure"](#).**

1. Remove rear tires using power tool.
2. Remove upper sliding pin bolt.
3. Remove pads, pad retainers, shims, and shim cover from torque member.

CAUTION:

Deform pad retainer when removing pad retainer from torque member.

INSTALLATION

WARNING:

Clean dust on caliper and brake pad with a vacuum dust collector to minimize the hazard of air borne particles or other materials.

CAUTION:

- While removing cylinder body, do not depress brake pedal because piston will pop out.
- It is not necessary to remove bolts on torque member and brake hose except for disassembly or replacement of caliper assembly. In this case, hang cylinder body with a wire so as not to stretch brake hose.
- Do not damage piston boot.
- If any shim is subject to serious corrosion, replace it with a new one.
- Always replace shim and shim covers as a set when replacing brake pads.
- Keep rotor free from brake fluid.
- **Burnish the brake pads and disc rotor mutually contacting surfaces after refinishing or replacing rotors, after replacing pads, or if a soft pedal occurs at very low mileage. Refer to [BR-6, "BRAKE PAD : Brake Burnishing Procedure"](#).**

1. Apply Molykote M-77 grease or equivalent to between shim cover and shim. Install inner shim, inner shim cover to inner pad, and outer multilayered shim to outer pad.
2. Apply Molykote M-77 grease or equivalent to between pad retainer and pad. Install pad retainers and pads to torque member.
3. Press in piston until pads can be installed, and then install cylinder body to torque member.

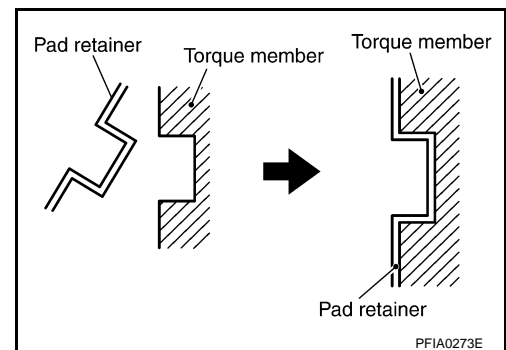
CAUTION:

In the case of replacing a pad with new one, check a brake fluid level in the reservoir tank because brake fluid returns to master cylinder reservoir tank when pressing piston in.

NOTE:

Press piston into cylinder body, using suitable tool.

4. Install upper sliding pin bolt and tighten to the specified torque. Refer to [BR-30, "Exploded View"](#).
5. Check rear disc brake for drag.
6. Install rear tires.



Removal and Installation (Rotor)

INFOID:000000001346275

REMOVAL

WARNING:

Clean dust on caliper and brake pad with a vacuum dust collector to minimize the hazard of air borne particles or other materials.

CAUTION:

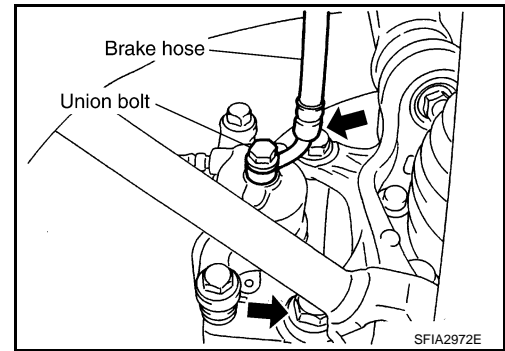
- While removing cylinder body, do not depress brake pedal because piston will pop out.
- Do not damage piston boot.
- Keep rotor free from brake fluid.

1. Remove rear tires using power tool.
2. Fasten disc rotor using wheel nut.
3. Drain brake fluid. Refer to [BR-14, "Draining"](#).

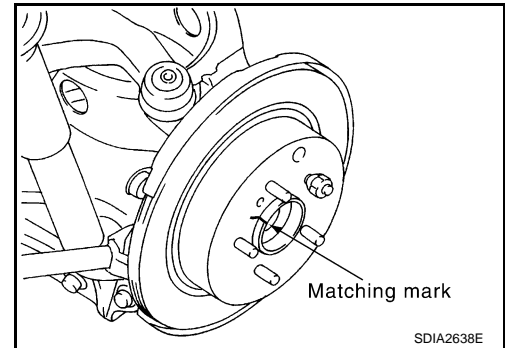
REAR DISC BRAKE

< ON-VEHICLE REPAIR >

4. Remove union bolt and then disconnect brake hose from caliper assembly.
5. Remove torque member bolts, and remove brake caliper assembly.
CAUTION:
Do not drop brake pad.



6. Remove disc rotor.
CAUTION:
Put matching marks on wheel hub assembly and disc rotor, if it necessary to remove disc rotor.



INSTALLATION

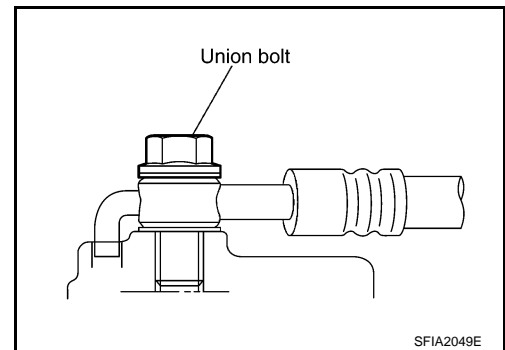
WARNING:

Clean dust on caliper and brake pad with a vacuum dust collector to minimize the hazard of air borne particles or other materials.

CAUTION:

- While removing cylinder body, do not depress brake pedal because piston will pop out.
- Do not damage piston boot.
- Keep rotor free from brake fluid.
- Refill with new brake fluid "DOT 3".
- Never reuse drained brake fluid.

1. Install disc rotor.
CAUTION:
Alignment marks of disc rotor and wheel hub put at the time of removal when reusing disc rotor.
2. Install brake caliper assembly vehicle, and tighten torque member mounting bolts to the specified torque.
CAUTION:
Before installing caliper assembly, wipe off oil and moisture on all mounting surfaces of rear axle and caliper assembly and threads, bolts and washers.
3. Install L-shaped pin of brake hose and then tighten union bolt to the specified torque. Refer to [BR-18, "REAR BRAKE : Removal and Installation"](#).
4. Refill with new brake fluid and bleed air. Refer to [BR-15, "Bleeding Brake System"](#).
5. Check rear disc brake for drag.
6. Install rear tires.



BRAKE MASTER CYLINDER

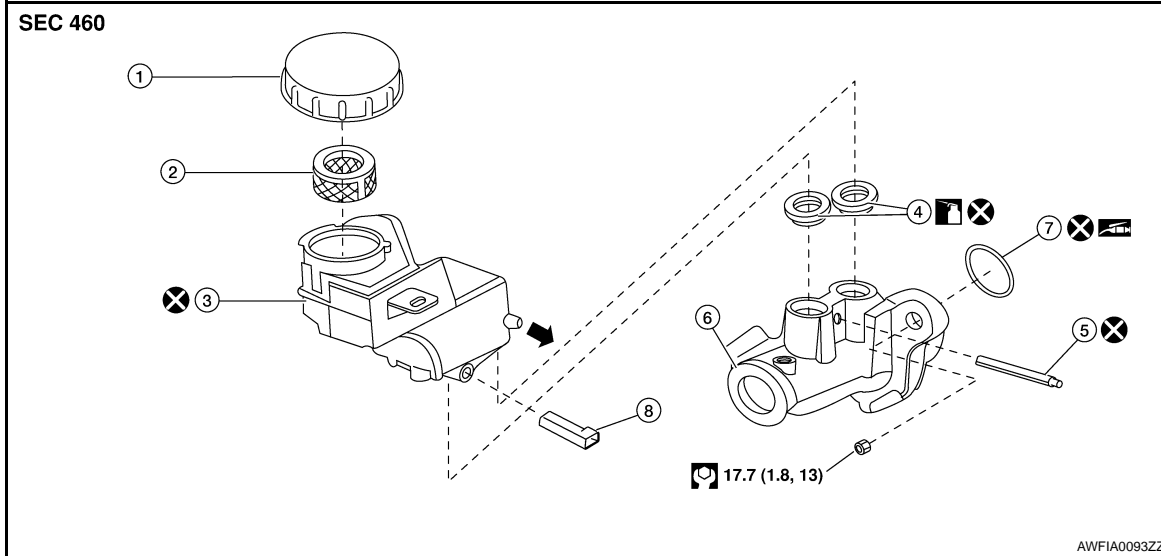
< DISASSEMBLY AND ASSEMBLY >


DISASSEMBLY AND ASSEMBLY


BRAKE MASTER CYLINDER

Exploded View

INFOID:000000001346276



- | | | |
|------------------|---------------------------------------|---|
| 1. Reservoir cap | 2. Oil strainer | 3. Reservoir tank |
| 4. Grommet | 5. Pin | 6. Master cylinder assembly |
| 7. O-ring | 8. Brake fluid level switch connector |  Brake fluid |

 : PBC (Poly Butyl Cuprysil) grease or silicone-based grease

Disassembly

INFOID:000000001346277

DISASSEMBLY

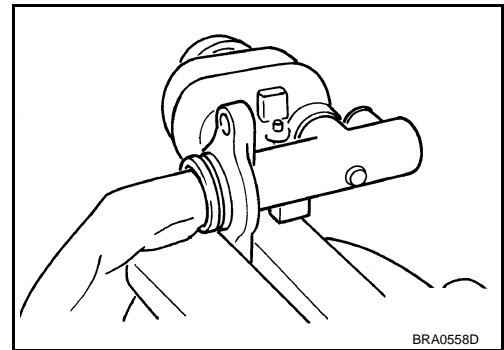
CAUTION:

While working, cover primary piston rod with cloth to prevent it from being damaged.

1. Secure flange of cylinder body in vise as shown.

CAUTION:

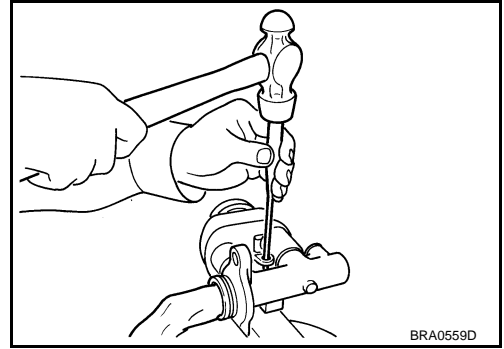
- Using copper plate or cloth to cover flange for securing vise.
- When securing master cylinder assembly in a vise, be sure not to over tighten.



BRAKE MASTER CYLINDER

< DISASSEMBLY AND ASSEMBLY >

2. Remove pin from reservoir tank, using suitable tool [approx diameter 4 mm (016 in)].
3. Remove master cylinder assembly from vise.
4. Remove reservoir tank and grommet from cylinder body.



Assembly

INFOID:000000001346278

Assembly is in the reverse order of disassembly.

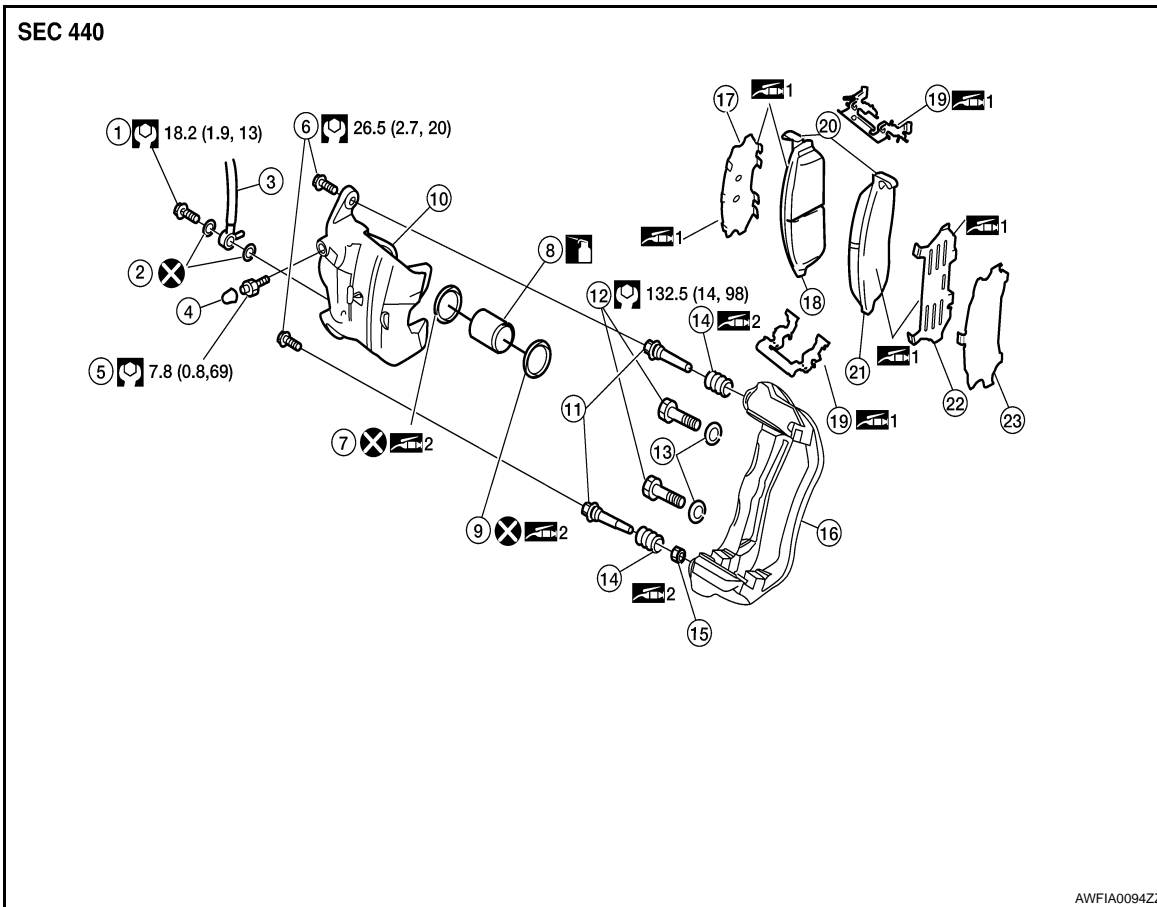
FRONT DISC BRAKE

< DISASSEMBLY AND ASSEMBLY >

FRONT DISC BRAKE

Exploded View

INFOID:000000001346279



- | | | |
|-------------------|-----------------------------|------------------------|
| 1. Union bolt | 2. Copper washer | 3. Brake hose |
| 4. Cap | 5. Bleed valve | 6. Sliding pin bolt |
| 7. Piston seal | 8. Piston | 9. Piston boot |
| 10. Cylinder body | 11. Sliding pin | 12. Torque member bolt |
| 13. Washer | 14. Sliding pin boot | 15. Bushing |
| 16. Torque member | 17. Inner multilayered shim | 18. Inner pad |
| 19. Pad retainer | 20. Pad wear sensor | 21. Outer pad |
| 22. Outer shim | 23. Outer shim cover | |
- 1: Molykote M-77 grease
 2: Rubber grease
 : Brake fluid

Disassembly

INFOID:000000001346280

DISASSEMBLY

NOTE:

Do not remove torque member, pads, shims, shim covers, and pad retainers when disassembling and assembling cylinder body assembly.

1. Remove sliding pin bolt, and then remove cylinder body from torque member.

CAUTION:

Do not drop pads, shims, shim cover and pad retainers from torque member.

2. Remove sliding pins and sliding pin boots from torque member.

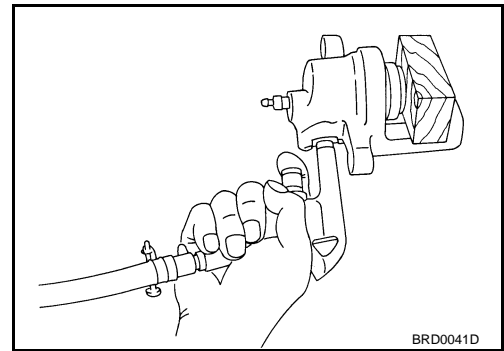
FRONT DISC BRAKE

< DISASSEMBLY AND ASSEMBLY >

3. Place a wooden block as shown, and blow air from union bolt hole to remove piston and piston boot.

CAUTION:

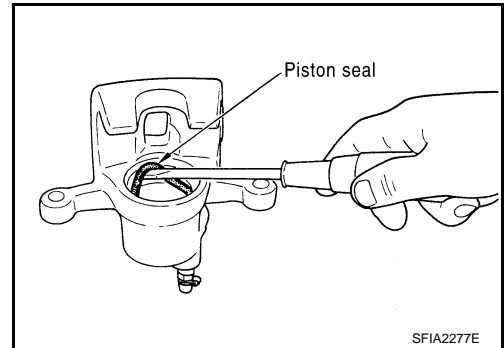
Do not get fingers caught in the pistons.



4. Remove piston seal from cylinder body using a suitable tool.

CAUTION:

Be careful not to damage a cylinder inner wall.



Inspection After Disassembly

INFOID:000000001346282

INSPECTION AFTER DISASSEMBLY

Cylinder Body

Check the inner wall of cylinder for corrosion, wear, and damage. If a malfunction is detected, replace cylinder body.

CAUTION:

Clean cylinder body using new brake fluid. Never use mineral oils such as gasoline or kerosene.

Torque Member

Check torque member for wear, cracks, and damage. Replace if necessary.

Piston

Check the piston surface for corrosion, wear, and damage. If a malfunction is detected, replace applicable part.

CAUTION:

A piston sliding surface is plated. Do not polish with sandpaper.

Sliding Pin, Sliding Pin Bolt, and Sliding Pin Boot

Check sliding pin, sliding pin bolt, and sliding pin boot for wear, damage, and cracks. Replace if necessary.

Assembly

INFOID:000000001346281

ASSEMBLY

CAUTION:

Never use Nissan Rubber Grease (KRE00 00010, KRE00 00010 01) during assembly.

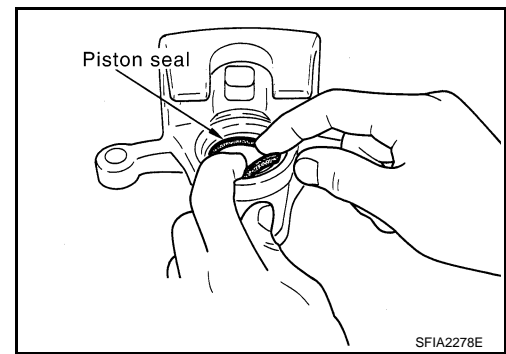
FRONT DISC BRAKE

< DISASSEMBLY AND ASSEMBLY >

1. Apply rubber lubricant to piston seal, and install into cylinder body.

CAUTION:

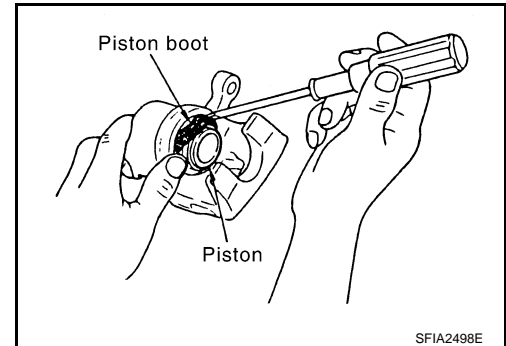
Do not reuse piston seal.



2. Apply rubber lubricant to piston boot. Cover the piston end with piston boot, and then install cylinder side lip on piston boot securely into a groove on cylinder body.

CAUTION:

Do not reuse piston boot.

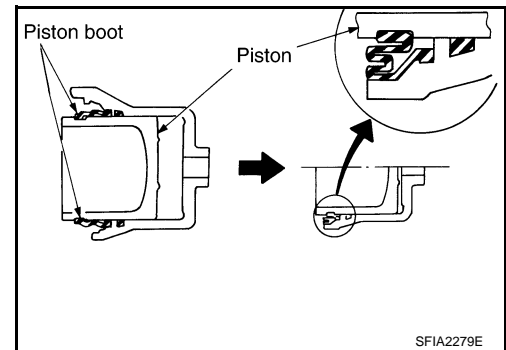


3. Apply brake fluid to piston. Push piston into cylinder body by hand and push piston boot piston-side lip into the piston groove.

CAUTION:

Press the piston evenly and vary the pressing point to prevent cylinder inner wall from being rubbed.

4. Install sliding pins and sliding pin boots to torque member.



5. Install torque member to steering knuckle, and tighten bolts to the specified torque. Refer to [BR-26, "Exploded View"](#).

CAUTION:

Do not allow oil or any moisture on all contact surfaces between steering knuckle and brake caliper assembly.

6. Press in piston until pads can be installed, and then install cylinder body to torque member.
7. Tighten sliding pin bolts to the specified torque. Refer to [BR-26, "Exploded View"](#).

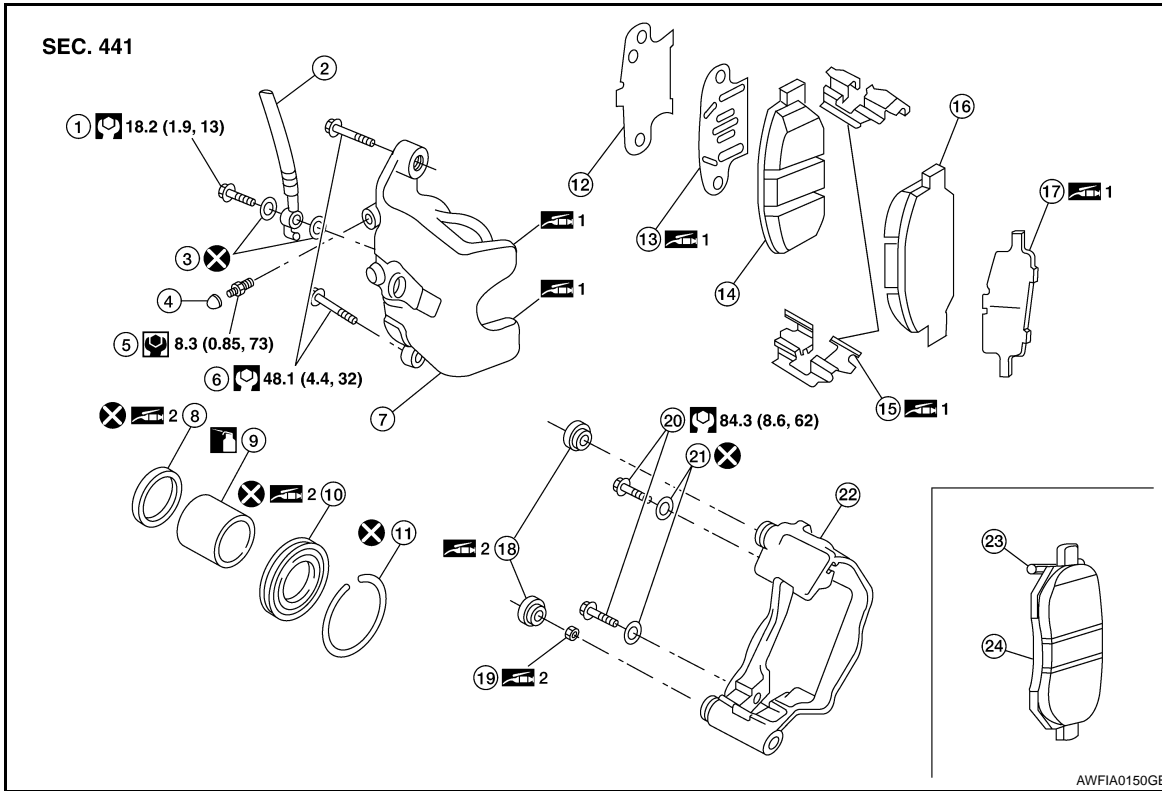
REAR DISC BRAKE

< DISASSEMBLY AND ASSEMBLY >

REAR DISC BRAKE

Exploded View

INFOID:000000001346283



- | | | |
|-------------------|-----------------------------|----------------------|
| 1. Union bolt | 2. Brake hose | 3. Copper washer |
| 4. Cap | 5. Bleed valve | 6. Sliding pin bolt |
| 7. Cylinder body | 8. Piston seal | 9. Piston |
| 10. Piston boot | 11. Retaining ring | 12. Inner shim cover |
| 13. Inner shim | 14. Inner pad | 15. Pad retainer |
| 16. Outer pad | 17. Outer multilayered shim | 18. Sliding pin boot |
| 19. Bushing | 20. Torque member bolt | 21. Washer |
| 22. Torque member | 23. Pad wear sensor | 24. Inner pad (RH) |
- 1: PBC (Poly Butyl Cuprysil) grease or silicone-based grease
 2: Rubber grease
 : Brake fluid

Disassembly

INFOID:000000001346284

DISASSEMBLY

NOTE:

Do not remove torque member, pads, shims, shim covers, and pad retainers when disassembling and assembling cylinder body assembly.

1. Remove sliding pin bolt, and then remove cylinder body from torque member.

CAUTION:

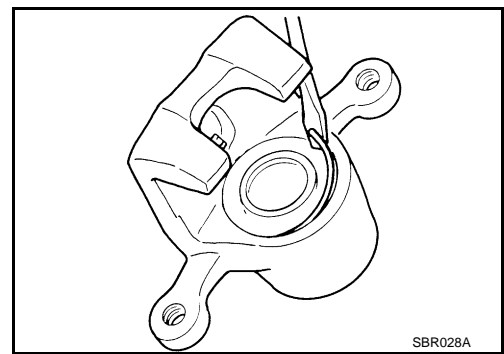
Do not drop pads, shims, shim cover and pad retainers from torque member.

2. Remove sliding pin boot from torque member.

REAR DISC BRAKE

< DISASSEMBLY AND ASSEMBLY >

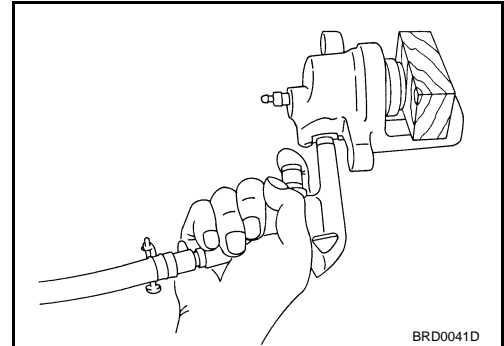
3. Remove retaining ring from cylinder body using a suitable tool as shown.



4. Place a wooden block as shown, and blow air from union bolt hole to remove piston and piston boot.

CAUTION:

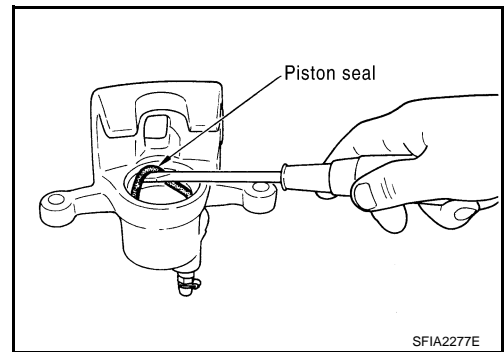
Do not get fingers caught in the piston.



5. Remove piston seal from cylinder body using a suitable tool.

CAUTION:

Be careful not to damage a cylinder inner wall.



Assembly

INFOID:000000001346285

ASSEMBLY

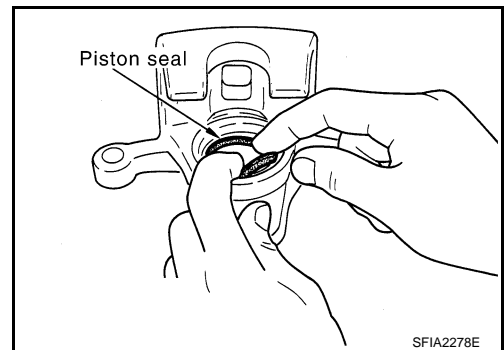
CAUTION:

Never use Nissan Rubber Grease (KRE00 00010, KRE00 00010 01) during assembly.

1. Apply rubber lubricant to piston seal, and install them to cylinder body.

CAUTION:

Do not reuse piston seal.



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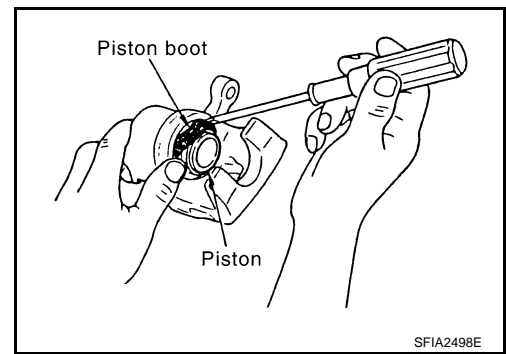
REAR DISC BRAKE

< DISASSEMBLY AND ASSEMBLY >

2. Apply rubber lubricant to piston boot. Cover the piston end with the piston boot, and then install cylinder side lip on the piston boot securely into the groove on cylinder body.

CAUTION:

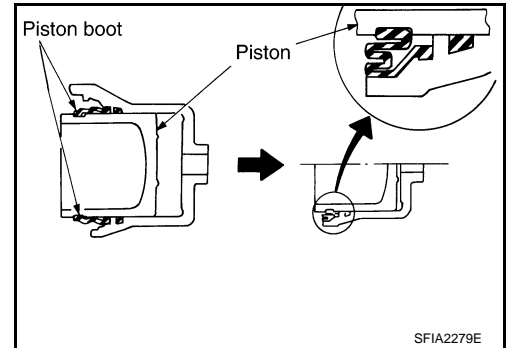
Do not reuse piston boot.



3. Apply brake fluid to piston. Push piston into cylinder body by hand and push piston boot piston side lip into the piston groove.

CAUTION:

Press the piston evenly and vary the pressing point to prevent cylinder inner wall from being rubbed.

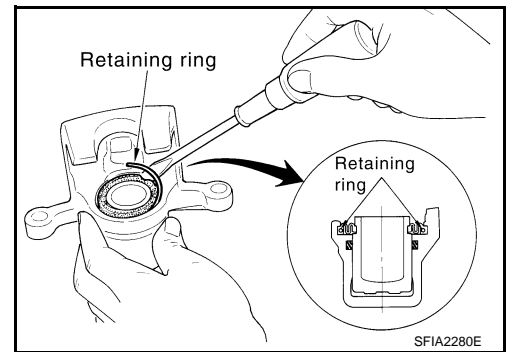


4. Secure piston boot with retaining ring.

CAUTION:

- Make sure that boot is securely engaged in the groove on cylinder body.
- Do not reuse retainer ring.

5. Install sliding pin boot to torque member.
6. Install the cylinder body to torque member, and then tighten sliding pin bolt to the specified torque. Refer to [BR-30. "Exploded View"](#).



Inspection After Disassembly

INFOID:000000001346286

INSPECTION AFTER DISASSEMBLY

Cylinder Body

Check the inner wall of cylinder for corrosion, wear, and damage. If a malfunction is detected, replace cylinder body.

CAUTION:

Clean cylinder body using new brake fluid. Never use mineral oils such as gasoline or kerosene.

Torque Member

Check torque member for wear, cracks, and damage. Replace as necessary.

Piston

Check the piston surface for corrosion, wear, and damage. If a malfunction is detected, replace applicable part.

CAUTION:

A piston sliding surface is plated. Do not polish with sandpaper.

Sliding Pin Bolt, Sliding Pin Boot

Check sliding pin bolt and sliding pin boot for wear, damage, and cracks. Replace as necessary.

SERVICE DATA AND SPECIFICATIONS (SDS)

< SERVICE DATA AND SPECIFICATIONS (SDS)

SERVICE DATA AND SPECIFICATIONS (SDS)

SERVICE DATA AND SPECIFICATIONS (SDS)

General Specifications

INFOID:0000000001346287

Unit: mm (in)

Front brake	Brake model	Kiriu
	Cylinder bore diameter	57.2 (2.25)
	Pad length × width × thickness	132 × 50 × 11 (5.20 × 1.969 × 0.433)
	Rotor outer diameter × thickness	296 × 26 (11.70 × 1.02)
Rear brake	Brake model	Kiriu
	Cylinder bore diameter	34.93 (1.375)
	Pad length × width × thickness	83.0 × 31.9 × 8.5 (3.268 × 1.256 × 0.335)
	Rotor outer diameter × thickness	292 × 9 (11.50 × 0.35)
Master cylinder	Cylinder bore diameter	25.4 (1)
Control valve	Valve model	Electric brake force distribution
Brake booster	Booster model	Bosch
	Diaphragm diameter	280 (11)
Recommended brake fluid		DOT 3

Brake Pedal

INFOID:0000000001346288

Brake pedal height (from dash lower panel top surface)	CVT	190.7 - 202.7 mm (7.51 - 7.98 in)
	M/T	181.3 - 193.3 mm (7.14 - 7.61 in)
Depressed pedal height [under a force of 490 N (50 kg-f, 110 lb-f) with engine running]	CVT	60.7 - 72.7 mm (2.39 - 2.86 in)
	M/T	51.3 - 63.3 mm (2.02 - 2.49 in)
Clearance between stopper rubber and threaded end of the stop lamp switch and brake switch		0.74 - 1.96 mm (0.0291 - 0.0772 in)
Pedal play		3 - 11 mm (0.12 - 0.43 in)

Check Valve

INFOID:0000000001346289

Vacuum leakage [at vacuum of - 66.7 kPa (- 500 mmHg, - 19.69 inHg)]	Within 1.3 kPa (10 mmHg, 0.39 inHg) of vacuum for 15 seconds
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Brake Booster

INFOID:0000000001346290

Vacuum type

Input rod installation standard dimension	125 mm (4.92 in)
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Front Disc Brake

INFOID:0000000001346291

Brake model		Kiriu
Brake pad	Standard thickness (new)	11.0 mm (0.433 in)
	Repair limit thickness	2.0 mm (0.079 in)
Disc rotor	Standard thickness (new)	26.0 mm (1.024 in)
	Repair limit thickness	24.0 mm (0.945 in)
	Thickness variation (measured at 8 positions)	0.015 mm (0.0006 in)
	Maximum runout (with it attached to the vehicle)	0.035 mm (0.0014 in)

SERVICE DATA AND SPECIFICATIONS (SDS)

< SERVICE DATA AND SPECIFICATIONS (SDS)

Rear Disc Brake

INFOID:000000001346292

Brake model		Kiriu
Brake pad	Standard thickness (new)	8.5 mm (0.335 in)
	Repair limit thickness	1.0 mm (0.039 in)
Disc rotor	Standard thickness (new)	9.0 mm (0.354in)
	Repair limit thickness	8.0 mm (0.315 in)
	Thickness variation (measured at 8 positions)	0.015 mm (0.0006 in)
	Maximum runout (with it attached to the vehicle)	0.05 mm (0.002 in)