

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

INFOID:0000000011489378

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

| Reference page | | | BR-15, BR-18 | BR-15, BR-18 | BR-16, BR-18 | BR-16, BR-18 | BR-16, BR-18 | BR-16, BR-18 | BR-16, BR-18 | BR-16, BR-18 | NVH in PB section | NVH in DLN section | NHV in DLN section | NVH in FAX, RAX and FSU, RSU section | NVH in WT section | NVH in WT section | NVH in FAX and/or RAX section | NVH in ST section |
|------------------------------------|-------|----------------|----------------|--------------------|-----------------|--------------|-------------------|------------------|--------------|---------------------------|-------------------|--------------------|--------------------|--------------------------------------|-------------------|-------------------|-------------------------------|-------------------|
| Possible cause and SUSPECTED PARTS | | | Pads - damaged | Pads - uneven wear | Rotor imbalance | Rotor damage | Rotor deformation | Rotor deflection | Rotor rust | Rotor thickness variation | Drum out of round | PROPELLER SHAFT | DIFFERENTIAL | AXLE AND SUSPENSION | TIRE | ROAD WHEEL | DRIVE SHAFT | STEERING |
| Symptom | BRAKE | Noise | × | × | | | | | | | | × | × | × | × | × | × | × |
| | | Shake | | | × | | | | | | | × | | × | × | × | × | × |
| | | Shimmy, Judder | | | × | × | × | × | × | × | | | | × | × | × | | × |

×: Applicable

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PRECAUTIONS

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PRECAUTION

PRECAUTIONS

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

INFOID:000000011489379

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.

Precautions Necessary for Steering Wheel Rotation After Battery Disconnection

INFOID:000000011489380

CAUTION:

Comply with the following cautions to prevent any error and malfunction.

- Before removing and installing any control units, first turn the ignition switch to the LOCK position, then disconnect both battery cables.
- After finishing work, confirm that all control unit connectors are connected properly, then re-connect both battery cables.
- Always use CONSULT to perform self-diagnosis as a part of each function inspection after finishing work. If a DTC is detected, perform trouble diagnosis according to self-diagnosis results.

For vehicle with steering lock unit, if the battery is disconnected or discharged, the steering wheel will lock and cannot be turned.

If turning the steering wheel is required with the battery disconnected or discharged, follow the operation procedure below before starting the repair operation.

OPERATION PROCEDURE

1. Connect both battery cables.

NOTE:

Supply power using jumper cables if battery is discharged.

2. Turn the ignition switch to ACC position.
(At this time, the steering lock will be released.)
3. Disconnect both battery cables. The steering lock will remain released with both battery cables disconnected and the steering wheel can be turned.

PRECAUTIONS

< PRECAUTION >

4. Perform the necessary repair operation.
5. When the repair work is completed, re-connect both battery cables. With the brake pedal released, turn the ignition switch from ACC position to ON position, then to LOCK position. (The steering wheel will lock when the ignition switch is turned to LOCK position.)
6. Perform self-diagnosis check of all control units using CONSULT.

Precaution for Battery Service

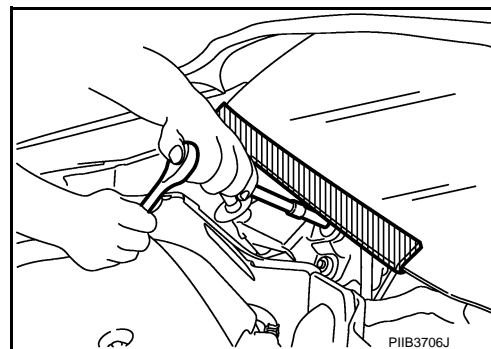
INFOID:0000000011489381

Before disconnecting the battery, lower both the driver and passenger windows. This will prevent any interference between the window edge and the vehicle when the door is opened/closed. During normal operation, the window slightly raises and lowers automatically to prevent any window to vehicle interference. The automatic window function will not work with the battery disconnected.

Precaution for Procedure without Cowl Top Cover

INFOID:0000000011489382

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



Precautions for Removing Battery Terminal

INFOID:0000000011489383

- 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.

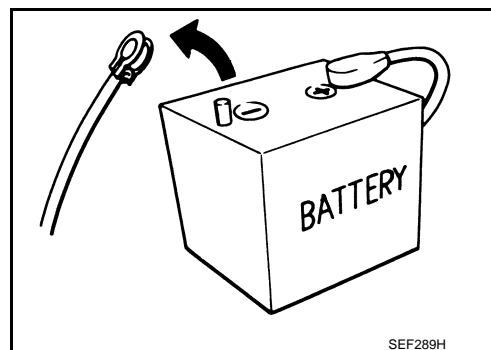
NOTE:

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.



Titanium Muffler Handling

INFOID:0000000011489384

CAUTION:

- **Never touch the titanium muffler directly with bare hands or allow oils to adhere to it during inspection, removal, and installation.**
- **Always wear new thick cotton gloves or working gloves. (Never use oil-adhered gloves.)**
- **After oil adhesion, wait until the titanium muffler cools and immediately remove oil with parts cleaner.**
- **Always use genuine parts cleaner (dry type) or the equivalent.**
- **When cleaning oil in on-board condition, apply parts cleaner to a waste to wipe out oil. By doing so, peripheral parts can be protected from parts cleaner adhesion.**
- **Be careful not to cut fingers with the insulator edge or the main muffler cooling fin.**

General Precautions

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CAUTION:

PRECAUTIONS

< PRECAUTION >

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

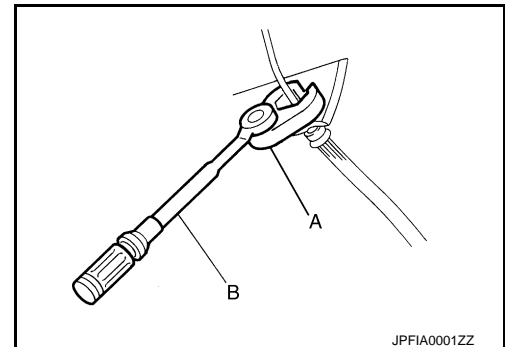
Precaution for Brake System

INFOID:000000011489386

WARNING:

Since dust covering the front and rear brakes has an affect on human body, the dust must be removed with a dust collector. Never splatter the dust with an air blow gun.

- Brake fluid use refer to [MA-21. "Fluids and Lubricants"](#).
- Never reuse drained brake fluid.
- The brake fluid used for this vehicle has a higher boiling point and readily absorbs moisture in the air. Accordingly, when brake temperature rises, water in brake fluid vaporizes with the higher potential of vapor lock and uncomfortable brake pedal feeling (increase in pedal stroke). Therefore, the following items must be carefully observed.
 - Never change, bleed, or fill with brake fluid under humid conditions such as rainy or foggy days, in principle, because the brake fluid absorbs moisture in the air. (Vapor lock occurs more easily during performance driving because brake temperature becomes higher, compared with normal driving.)
 - If it is necessary to change, bleed, or fill with brake fluid under humid conditions such as rainy or foggy days, perform this in a place with low humidity in minimal time.
 - When it is necessary to change, bleed, or fill with brake fluid, explain the customer the precautions on brake fluid before deciding the place and schedule of the work.
 - Always discard residual brake fluid remaining in the container because the fluid is deteriorated by moisture.
- Before performing High Performance Driving, always wipe MOLYKOTE® 7439 or equivalent off the brake pad. After performing High Performance Driving, be sure to apply MOLYKOTE® 7439 or equivalent to the brake pad.
- Never spill or splash brake fluid on painted surfaces. Brake fluid may seriously damage paint. Wipe it out immediately and wash with water if it gets on a painted surface.
- Never scratch the flare nut and the brake caliper.
- After pressing the brake pedal more deeply or harder than normal driving, such as when air bleeding, check each item of brake pedal. Adjust brake pedal if it is outside the standard condition.
- Always clean with new brake fluid when cleaning the master cylinder, brake caliper and other components.
- Never use mineral oils such as gasoline or light oil to clean. They may damage rubber parts and cause a malfunction.
- Always loosen the brake tube flare nut with a flare nut wrench.
- Tighten the brake tube flare nut to the specified torque with a crow-foot (A) and torque wrench (B).
- Always confirm the specified tightening torque when installing the brake pipes.
- Turn the ignition switch OFF and disconnect the ABS actuator and electric unit (control unit) connector or the battery negative terminal before performing the work.
- Check that no brake fluid leakage is present after replacing the parts.
- Burnish the brake contact surfaces after refinishing or replacing rotors, after replacing pads, or if a soft pedal occurs at very low mileage.
- Front brake pad: refer to [BR-15. "BRAKE PAD : Inspection and Adjustment"](#).
- Front disc rotor: refer to [BR-16. "DISC ROTOR : Inspection and Adjustment"](#).
- Rear brake pad: refer to [BR-18. "BRAKE PAD : Inspection and Adjustment"](#).
- Rear disc rotor: refer to [BR-18. "DISC ROTOR : Inspection and Adjustment"](#).



PREPARATION

< PREPARATION >

PREPARATION

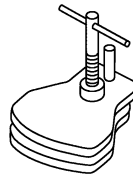
PREPARATION

Special Service Tools (GT-R certified NISSAN dealer)

INFOID:0000000011489387

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 |
|---|-------------------|
| KV991112S0 (J-49023) Brake caliper wrench | Return the piston |

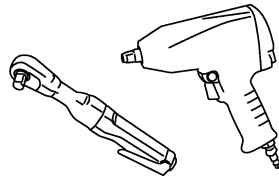


NNFIA0040ZZ

Commercial Service Tool

INFOID:0000000011489388

| Tool name | Description |
|------------|--------------------------|
| Power tool | Loosening bolts and nuts |



PBIC0190E

BRAKE PEDAL

< PERIODIC MAINTENANCE >

PERIODIC MAINTENANCE

BRAKE PEDAL

Inspection and Adjustment

INFOID:000000011489389

INSPECTION

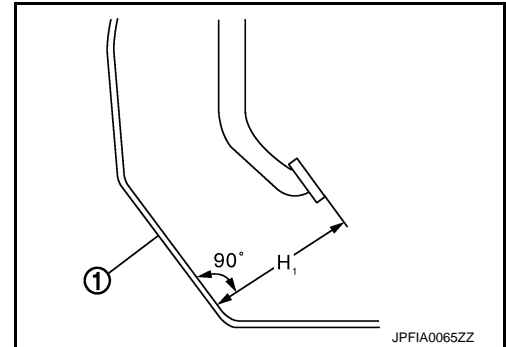
Brake Pedal Height

Check the height between the dash lower panel (1) and the top face of the brake pedal (H_1).

H₁ : Refer to [BR-51, "Brake Pedal"](#).

CAUTION:

Perform it with the floor trim removed.



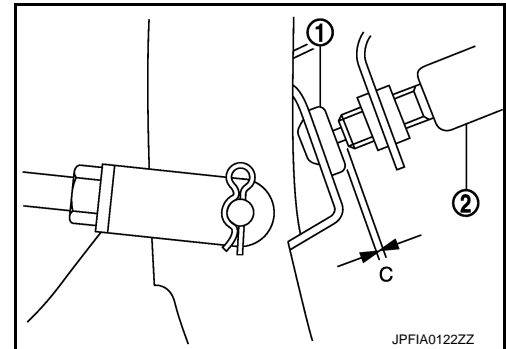
ASCD Brake Switch and Stop Lamp Switch

Check the clearance (C) between the stopper rubber (1) and the tip of the ASCD brake switch and stop lamp switch (2) unit.

C : Refer to [BR-51, "Brake Pedal"](#).

CAUTION:

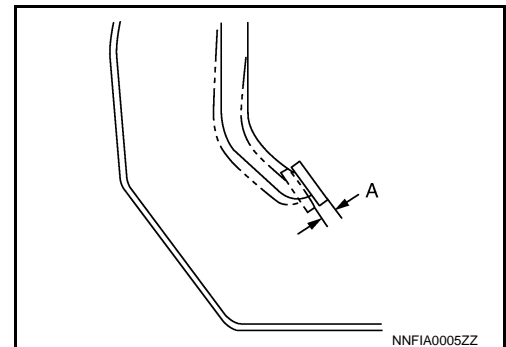
The stop lamp must turn off when the brake pedal is released.



Brake Pedal Play

Press the brake pedal (pad), check the brake pedal play (A) (dimension until the fluid pressure occurs).

A : Refer to [BR-51, "Brake Pedal"](#).



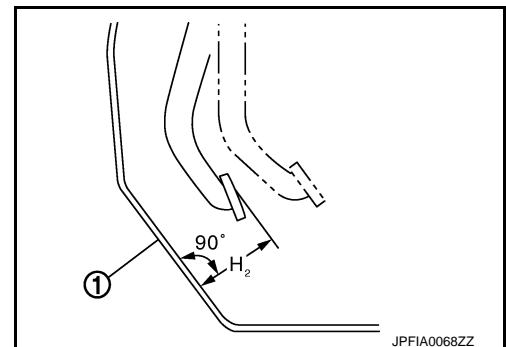
Depressed Brake Pedal Height

Check the height between the dash lower panel (1) and the top face of the brake pedal (H_2) when depressing the brake pedal with a force of 490 N (50 kg, 110lb) while the engine is running.

H₂ : Refer to [BR-51, "Brake Pedal"](#).

CAUTION:

Perform it with the floor trim removed.



ADJUSTMENT

BRAKE PEDAL

< PERIODIC MAINTENANCE >

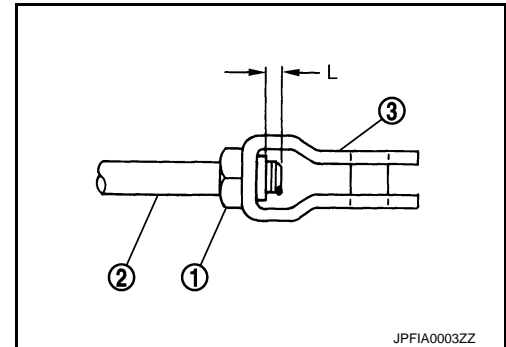
Brake Pedal Height

1. Disconnect the ASCD brake switch and stop lamp switch connector.
2. Loosen the ASCD brake switch and stop lamp switch by turning it 45° counterclockwise.
3. Adjust the brake pedal height with the following procedure.

- a. Loosen the lock nut (1) of the input rod.

CAUTION:

The threaded end (2) of the input rod must project to the inner side (L) of the clevis (3).



- b. Rotate the input rod, adjust the brake pedal to the specified height (H₁).

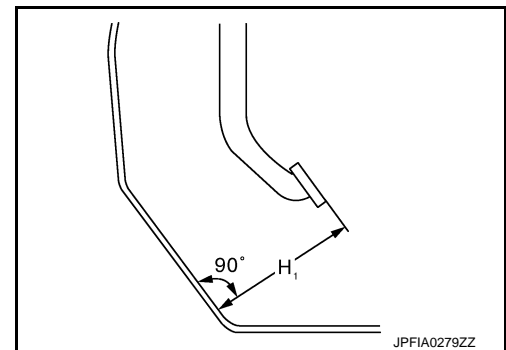
H₁ : Refer to [BR-51, "Brake Pedal"](#).

- c. Tighten the lock nut. Refer to [BR-31, "Exploded View \(GT-R certified NISSAN dealer\)"](#).

CAUTION:

The threaded end (2) of the input rod must project to the inner side (L) of the clevis (3).

4. Adjust the clearance between the stopper rubber and the tip of ASCD brake pedal and stop lamp switch unit after adjusting the brake pedal height.



ASCD Brake Switch and Stop lamp Switch (Brake Pedal Play)

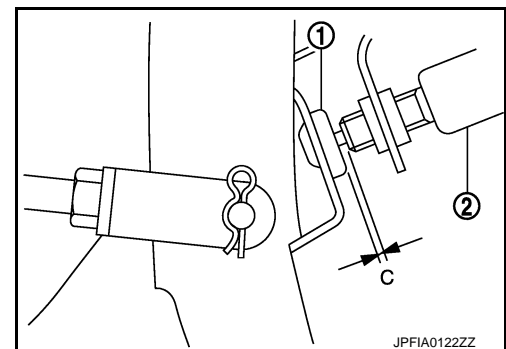
1. Disconnect the ASCD brake switch and stop lamp switch connector.
2. Loosen the ASCD brake switch and stop lamp switch by turning it 45° counterclockwise.
3. Press the ASCD brake switch and stop lamp switch (2) until the tip of the unit contacts with the stopper rubber (1).

CAUTION:

- The clearance (C) between the stopper rubber and the tip of ASCD brake switch and stop lamp switch unit must be within the specified value.

C : Refer to [BR-51, "Brake Pedal"](#).

- The stop lamp must turn off when the brake pedal is released.



BRAKE FLUID

< PERIODIC MAINTENANCE >

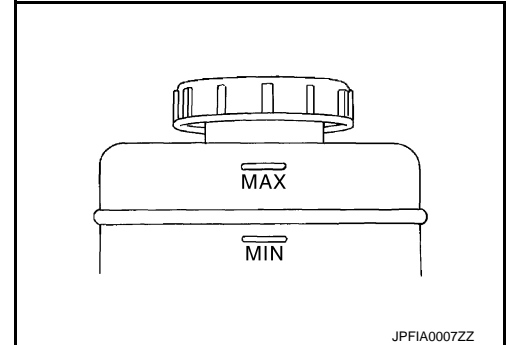
BRAKE FLUID

Inspection

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BRAKE FLUID LEVEL

- Check that the fluid level in the reservoir tank is within the specified range (MAX – MIN lines).
- Visually check for any brake fluid leakage around the reservoir tank.
- Check the brake system for any leakage if the fluid level is extremely low (lower than MIN).
- Check the brake system for fluid leakage if the warning lamp remains illuminated even after the parking brake lever is released.
- Check the reservoir tank for the mixing of foreign matter (e.g. dust) and oils other than brake fluid.



BRAKE LINE

1. Check the brake line (tube and hose) for any cracks or damage.
CAUTION:
Replace with new ones if necessary.
2. Depress the brake pedal with a force of 785 N (80 kg, 176 lb) and hold down the pedal for approximately 5 seconds with the engine running. Check for any fluid leakage.
CAUTION:
Retighten each part to the specified torque and repair any abnormal (damaged, worn, or deformed) part if any fluid leakage is present.

Draining

INFOID:0000000011489391

CAUTION:

- Never spill or splash brake fluid on painted surfaces. Brake fluid may seriously damage paint. Wipe it out immediately and wash with water if it gets on a painted surface.
- Turn the ignition switch OFF and disconnect the ABS actuator and electric unit (control unit) connector or the battery negative terminal before performing work.
- Wrap the flare nut wrench with waste cloth to protect the caliper from damage.
- If the brake fluid adheres to the caliper or disc rotor, quickly wipe it out.

1. Remove tires with power tool. Refer to [WT-74, "EXCEPT NISMO : Exploded View"](#) (Except NISMO), [WT-74, "NISMO : Exploded View"](#) (NISMO).

NOTE:

Check the vehicle type. Refer to [WT-4, "How to Check Vehicle Type"](#).

2. Connect a vinyl tube to the bleeder valve.
3. Depress the brake pedal and loosen the bleeder valve to gradually discharge brake fluid.

Refilling

INFOID:0000000011489392

CAUTION:

- Never spill or splash brake fluid on painted surfaces. Brake fluid may seriously damage paint. Wipe it out immediately and wash with water if it gets on a painted surface.
- Turn the ignition switch OFF and disconnect the ABS actuator and electric unit (control unit) connector or the battery negative terminal before performing work.
- Wrap the flare nut wrench with waste cloth to protect the caliper from damage.
- If the brake fluid adheres to the caliper or disc rotor, quickly wipe it out.
- Never allow foreign matter (e.g. dust) and oils other than brake fluid to enter the reservoir tank.
- Since brake fluid is susceptible to deterioration from moisture, discard brake fluid remaining in the container.

1. Check that there is no foreign material in the reservoir tank, and refill the brake fluid with new one.

CAUTION:

Never reuse drained brake fluid.

BRAKE FLUID

< PERIODIC MAINTENANCE >

- Loosen the bleeder valve, slowly depress the brake pedal to the full stroke, and then release the pedal. Repeat this operation at intervals of 2 or 3 seconds until all of the brake fluid is discharged. Then close the bleeder valve with the brake pedal depressed. Repeat the same work on each wheel.
- Perform the air bleeding. Refer to [BR-11. "Bleeding Brake System"](#).

Bleeding Brake System

INFOID:000000011489393

AFTER DISASSEMBLY OF BRAKE LINE AND CALIPER

CAUTION:

- Never spill or splash brake fluid on painted surfaces. Brake fluid may seriously damage paint. Wipe it out immediately and wash with water if it gets on a painted surface.
- Turn the ignition switch OFF and disconnect the ABS actuator and electric unit (control unit) connector or the battery negative terminal before performing work.
- Wrap the flare nut wrench with waste cloth to protect the caliper from damage.
- If the brake fluid adheres to the caliper or disc rotor, quickly wipe it out.
- Monitor the fluid level in the reservoir tank while performing the air bleeding.
- Always fill with new brake fluid. Never reuse the drained brake fluid.
- Never allow foreign matter (e.g. dust) and oils other than brake fluid to enter the reservoir tank.
- Since brake fluid is susceptible to deterioration from moisture, discard brake fluid remaining in the container.

- Remove tires with power tool. Refer to [WT-74. "EXCEPT NISMO : Exploded View"](#) (Except NISMO), [WT-74. "NISMO : Exploded View"](#) (NISMO).

NOTE:

Check the vehicle type. Refer to [WT-4. "How to Check Vehicle Type"](#).

- Connect a vinyl tube to the bleeder valve of the rear right brake.
- Fully depress the brake pedal 4 to 5 times.
- Loosen the bleed valve and bleed air with the brake pedal depressed, and then quickly tighten the bleeder valve.
 - Front disc brake: refer to [BR-39. "BRAKE CALIPER ASSEMBLY : Exploded View \(GT-R certified NIS-SAN dealer\)"](#).
 - Rear disc brake: refer to [BR-46. "BRAKE CALIPER ASSEMBLY : Exploded View \(GT-R certified NIS-SAN dealer\)"](#).
- Repeat steps 3 to 4 until all of the air is out of the brake line.
- Repeat steps 2 to 5. Occasionally fill with the brake fluid in order to keep the reservoir tank at least half full. Bleed air in the following order: rear right → rear left → front right → front left.
- Check that the fluid level in the reservoir tank is within the specified range after air bleeding.
- Check each item of brake pedal. Adjust if outside the specification. Refer to [BR-8. "Inspection and Adjustment"](#).
- Run the vehicle until the surface temperature of caliper reaches 70 to 80°C (158 to 176°F), and then perform the stops 2 to 8 with the caliper heated.

CAUTION:

- Be careful because the temperature of caliper is very hot.
- Depress the brake pedal rapidly to drain the brake fluid quickly.

- Check each item of brake pedal again. Adjust if outside the specification. Refer to [BR-8. "Inspection and Adjustment"](#).

AFTER REPLACING BRAKE PAD AND DISC ROTOR

CAUTION:

- Never spill or splash brake fluid on painted surfaces. Brake fluid may seriously damage paint. Wipe it out immediately and wash with water if it gets on a painted surface.
- Turn the ignition switch OFF and disconnect the ABS actuator and electric unit (control unit) connector or the battery negative terminal before performing work.
- Wrap the flare nut wrench with waste cloth to protect the caliper from damage.
- If the brake fluid adheres to the caliper or disc rotor, quickly wipe it out.
- Monitor the fluid level in the reservoir tank while performing the air bleeding.
- Always fill with new brake fluid. Never reuse the drained brake fluid.
- Never allow foreign matter (e.g. dust) and oils other than brake fluid to enter the reservoir tank.
- Since brake fluid is susceptible to deterioration from moisture, discard brake fluid remaining in the container.

BRAKE FLUID

< PERIODIC MAINTENANCE >

1. Remove tires with power tool. Refer to [WT-74, "EXCEPT NISMO : Exploded View"](#) (Except NISMO), [WT-74, "NISMO : Exploded View"](#) (NISMO).

NOTE:

Check the vehicle type. Refer to [WT-4, "How to Check Vehicle Type"](#).

2. Perform the running-in of brake pad and disc rotor.
 - Front disc brake: refer to [BR-15, "BRAKE PAD : Inspection and Adjustment"](#).
 - Rear disc brake: refer to [BR-18, "BRAKE PAD : Inspection and Adjustment"](#).

3. Connect a vinyl tube to the bleeder valve of the rear right brake.

4. Fully depress the brake pedal 5 to 6 times.

CAUTION:

Depress the brake pedal quickly.

5. Loosen the bleed valve and bleed air with the brake pedal depressed, and then quickly tighten the bleeder valve.

- Front disc brake: refer to [BR-39, "BRAKE CALIPER ASSEMBLY : Exploded View \(GT-R certified NIS-SAN dealer\)"](#).
- Rear disc brake: refer to [BR-46, "BRAKE CALIPER ASSEMBLY : Exploded View \(GT-R certified NIS-SAN dealer\)"](#).

CAUTION:

- **Be careful because the temperature of caliper is very hot.**
- **Drain the brake fluid swiftly.**

6. Repeat steps 4 to 5 until all of the air is out of the brake line.

7. Repeat steps 3 to 6. Occasionally fill with the brake fluid in order to keep the reservoir tank at least half full. Bleed air in the following order: rear right → rear left → front right → front left.

8. Check each item of brake pedal. Adjust if outside the specification. Refer to [BR-8, "Inspection and Adjustment"](#).

BRAKE MASTER CYLINDER

< PERIODIC MAINTENANCE >

BRAKE MASTER CYLINDER

Inspection

INFOID:0000000011489394

FLUID LEAK

Check for brake fluid leakage from the master cylinder assembly mounting surface, reservoir tank mounting surface and brake tube connection.

- A
- B
- C
- D
- E
- BR
- G
- H
- I
- J
- K
- L
- M
- N
- O
- P

BRAKE BOOSTER

< PERIODIC MAINTENANCE >

BRAKE BOOSTER

Inspection

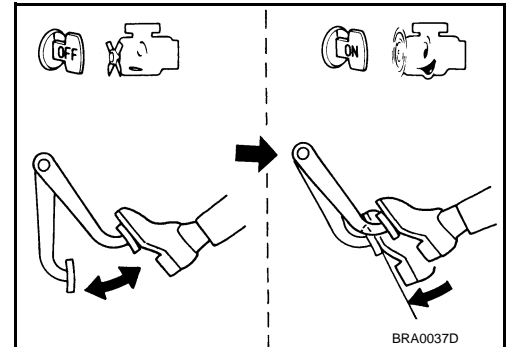
INFOID:000000011489395

OPERATION

Depress the brake pedal several times at 5-second intervals with the engine stopped. Start the engine with the brake pedal fully depressed. Check that the clearance between brake pedal and dash lower panel decreases.

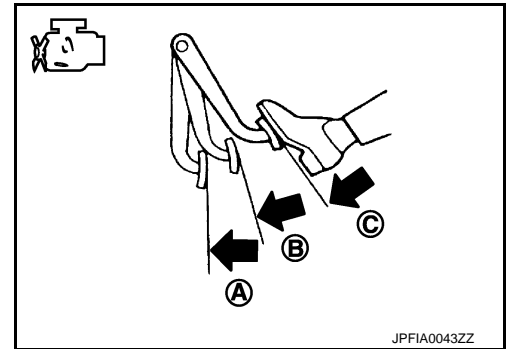
NOTE:

A slight impact with a small click may be felt on the pedal when the brake pedal is fully depressed. This is a normal phenomenon due to the brake system operation.



AIR TIGHT

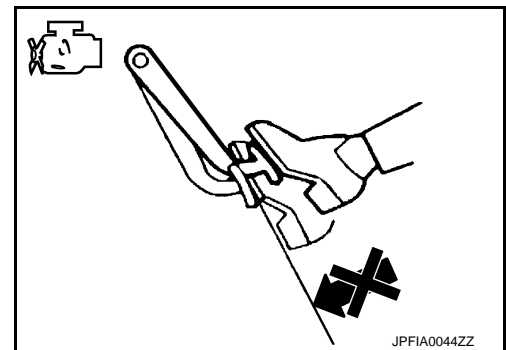
- Idle the engine for 1 minute to apply vacuum to the brake booster, and stop the engine. Then depress the brake pedal several times at 5-second intervals until the accumulated vacuum is released to atmospheric pressure. Check that the clearance between brake pedal and dash lower panel gradually increases (A → B → C) each time the brake pedal is depressed during this operation.



- Depress the brake pedal with the engine running. Then stop the engine while holding down the brake pedal. Check that the brake pedal stroke does not change after holding down the brake pedal for 30 seconds or more.

NOTE:

A slight impact with a small click may be felt on the pedal when the brake pedal is fully depressed. This is a normal phenomenon due to the brake system operation.



FRONT DISC BRAKE

< PERIODIC MAINTENANCE >

FRONT DISC BRAKE

BRAKE PAD

BRAKE PAD : Inspection and Adjustment

INFOID:000000011489396

INSPECTION

Check brake pad for wear

1. Remove tires with power tool. Refer to [WT-74. "EXCEPT NISMO : Exploded View"](#) (Except NISMO), [WT-74. "NISMO : Exploded View"](#) (NISMO).

NOTE:

Check the vehicle type. Refer to [WT-4. "How to Check Vehicle Type"](#).

2. Check the thickness of brake pad from the inspection hole on caliper. Use a scale to check if necessary.

Wear thickness : Refer to [BR-51. "Front Disc Brake"](#).

3. Check the brake pad for whitening (carbonizing), uneven wear and crack. Replace if necessary. Refer to [BR-36. "BRAKE PAD : Exploded View \(GT-R certified NISSAN dealer\)"](#).

CAUTION:

When replacing brake pad, replace all four brake pads together. (Replacement depends on inspection results shown below.)

- Front brake pads (a set of right and left) can be replaced alone only when a certified technician checks for scratches and cracks and judges that the rear brake pads are reusable and when there is no history of sport driving. Refer to [BR-18. "BRAKE PAD : Inspection and Adjustment"](#).
- Replace right and left front brake pads together with disc rotors if the replacement of front brake pad for a front disc rotor is a second replacement.
- Replace right and left front brake pads together with front disc rotors if there is a judder.

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

NOTE:

Check the vehicle type. Refer to [WT-4. "How to Check Vehicle Type"](#).

Check brake pad

- Check that MOLYKOTE® 7439 or equivalent is applied to brake pad.

CAUTION:

Before performing High Performance Driving, always wipe MOLYKOTE® 7439 or equivalent off the brake pad. After performing High Performance Driving, be sure to apply MOLYKOTE® 7439 or equivalent to the brake pad.

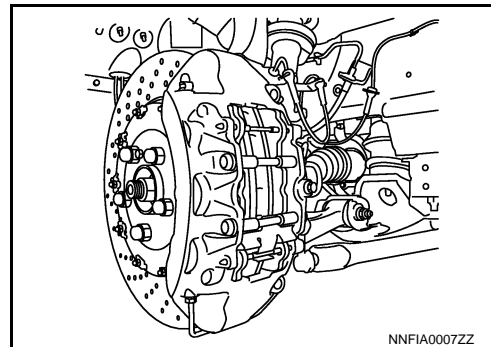
ADJUSTMENT

Perform the following procedure when replacing the brake pad and disc rotor.

CAUTION:

- Be careful of the vehicle speed, because the effectiveness of the brake is decreased by the anti-corrosion paint (silver color) applied for the contact surface with the brake pad for new disc rotor.
- Perform the procedure only on a safe road and be careful of the traffic conditions.

1. Drive on flat straight roads.
2. Depress the brake pedal to stop the vehicle within 3 to 5 seconds.
3. Cool the brake.
4. Repeat the above steps 1 to 3 until the operational feeling of brake pedal becomes equal to the pre-operation condition.
5. Check that the anti-corrosion paint (silver color) of disc rotor is eliminated. If the anti-corrosion paint (silver color) remains, repeat the above steps 1 to 3.
6. If brake noise occurs, loosen the caliper mounting bolts after checking that the anti-corrosion paint (silver color) does not remain at the disc rotor, and then perform the caliper position adjustment by tightening to



FRONT DISC BRAKE

< PERIODIC MAINTENANCE >

the specified torque. Refer to [BR-40, "BRAKE CALIPER ASSEMBLY : Removal and Installation \(GT-R certified NISSAN dealer\)"](#).

CAUTION:

If the anti-corrosion paint (silver color) remains on the surface of brake pad, polish it with sandpaper until completely eliminated.

7. Use a brake tester to check that it is within the normal range.

DISC ROTOR

DISC ROTOR : Inspection and Adjustment

INFOID:0000000011489397

INSPECTION

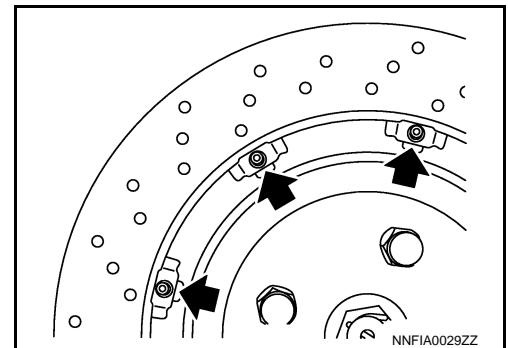
Appearance

- If the drilled hole of disc rotor is clogged by the brake pad wear particles, clean the dust with a brush or a vacuum dust collector.
- Check the following item and then replace the disc rotor if necessary.

CAUTION:

When replacing front disc rotors, replace them together with right and left front brake pads. (Replacement depends on inspection results shown below.)

- Front disc rotors (a set of right and left) can be replaced alone only when a certified technician checks for scratches and cracks and judges that the front brake pads are reusable and when there is no history of sport driving. Refer to [BR-15, "BRAKE PAD : Inspection and Adjustment"](#).
- Replace right and left front brake pads together with front disc rotors if there is a judder.
- The surface of the disc rotor for over burnt, uneven wear, cracks, serious damage, peel-off, remarkable groove or vertical streaks.
- Confirm if there is no crack larger than 4mm around drilled hole of a disc rotor.
- The floating pin and nut for wear or damage.
- Any different groove in 0.3 mm (0.012 in) for disc rotor with brake noise.
- Check disc rotor nut (◀) for rust.
- Check that brake pad replacement is not performed twice for a single disc rotor.



Thickness

1. Remove tires with power tool. Refer to [WT-74, "EXCEPT NISMO : Exploded View"](#) (Except NISMO), [WT-74, "NISMO : Exploded View"](#) (NISMO).

NOTE:

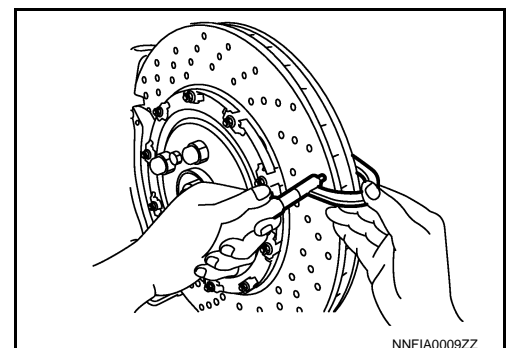
Check the vehicle type. Refer to [WT-4, "How to Check Vehicle Type"](#).

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

CAUTION:

When replacing front disc rotors, replace them together with right and left front brake pads. (Replacement depends on inspection results shown below.)

- Front disc rotors (a set of right and left) can be replaced alone only when a certified technician checks for scratches and cracks and judges that the front brake pads are reusable and when there is no history of sport driving. Refer to [BR-15, "BRAKE PAD : Inspection and Adjustment"](#).
- Replace right and left front brake pads together with front disc rotors if there is a judder.



FRONT DISC BRAKE

< PERIODIC MAINTENANCE >

Wear thickness : Refer to [BR-51, "Front Disc Brake"](#).

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

NOTE:

Check the vehicle type. Refer to [WT-4, "How to Check Vehicle Type"](#).

ADJUSTMENT

Perform the following procedure when replacing the brake pad and disc rotor.

CAUTION:

- **Be careful of the vehicle speed, because the effectiveness of the brake is decreased by the anti-corrosion paint (silver color) applied for the contact surface with the brake pad for new disc rotor.**
- **Perform the procedure only on a safe road and be careful of the traffic conditions.**

1. Drive on flat straight roads.
2. Depress the brake pedal to stop the vehicle within 3 to 5 seconds.
3. Cool the brake.
4. Repeat the above steps 1 to 3 until the operational feeling of brake pedal becomes equal to the pre-operation condition.
5. Check that the anti-corrosion paint (silver color) of disc rotor is eliminated. If the anti-corrosion paint (silver color) remains, repeat the above steps 1 to 3.
6. If brake noise occurs, loosen the caliper mounting bolts after checking that the anti-corrosion paint (silver color) does not remain at the disc rotor, and then perform the caliper position adjustment by tightening to the specified torque. Refer to [BR-40, "BRAKE CALIPER ASSEMBLY : Removal and Installation \(GT-R certified NISSAN dealer\)"](#).
7. Use a brake tester to check that it is within the normal range.

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REAR DISC BRAKE

< PERIODIC MAINTENANCE >

REAR DISC BRAKE

BRAKE PAD

BRAKE PAD : Inspection and Adjustment

INFOID:000000011489398

INSPECTION

1. Remove tires with power tool. Refer to [WT-74, "EXCEPT NISMO : Exploded View"](#) (Except NISMO), [WT-74, "NISMO : Exploded View"](#) (NISMO).

NOTE:

Check the vehicle type. Refer to [WT-4, "How to Check Vehicle Type"](#).

2. Check the thickness of brake pad from the inspection hole on caliper. Use a scale to check if necessary.

Wear thickness : Refer to [BR-51, "Rear Disc Brake"](#).

3. Check the brake pad for whitening (carbonizing), uneven wear and crack. Replace if necessary. Refer to [BR-44, "BRAKE PAD : Exploded View \(GT-R certified NISSAN dealer\)"](#).

CAUTION:

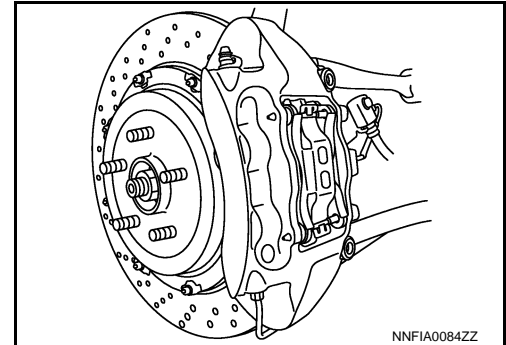
When replacing brake pad, replace all four brake pads together. (Replacement depends on inspection results shown below.)

- Replace four brake pads together with four disc rotors if the replacement of rear brake pad for a rear disc rotor is the second one.
- Replace right and left rear brake pads together with rear disc rotors if there is a judder.

4. Install tires with power tool. Refer to [WT-74, "EXCEPT NISMO : Exploded View"](#) (Except NISMO), [WT-74, "NISMO : Exploded View"](#) (NISMO).

NOTE:

Check the vehicle type. Refer to [WT-4, "How to Check Vehicle Type"](#).



ADJUSTMENT

Perform the following procedure when replacing the brake pad and disc rotor.

CAUTION:

- Be careful of the vehicle speed, because the effectiveness of the brake is decreased by the anti-corrosion paint (silver color) applied for the contact surface with the brake pad for new disc rotor.
- Perform the procedure only on a safe road and be careful of the traffic conditions.

1. Drive on flat straight roads.
2. Depress the brake pedal to stop the vehicle within 3 to 5 seconds.
3. Cool the brake.
4. Repeat the above steps 1 to 3 until the operational feeling of brake pedal becomes equal to the pre-operation condition.
5. Check that the anti-corrosion paint (silver color) of disc rotor is eliminated. If the anti-corrosion paint (silver color) remains, repeat the above steps 1 to 3.
6. If brake noise occurs, loosen the caliper mounting bolts after checking that the anti-corrosion paint (silver color) does not remain at the disc rotor, and then perform the caliper position adjustment by tightening to the specified torque. Refer to [BR-47, "BRAKE CALIPER ASSEMBLY : Removal and Installation \(GT-R certified NISSAN dealer\)"](#).

CAUTION:

If the anti-corrosion paint (silver color) remains on the surface of brake pad, polish it with sandpaper until completely eliminated.

7. Use a brake tester to check that it is within the normal range.

DISC ROTOR

DISC ROTOR : Inspection and Adjustment

INFOID:000000011489399

INSPECTION

Appearance

REAR DISC BRAKE

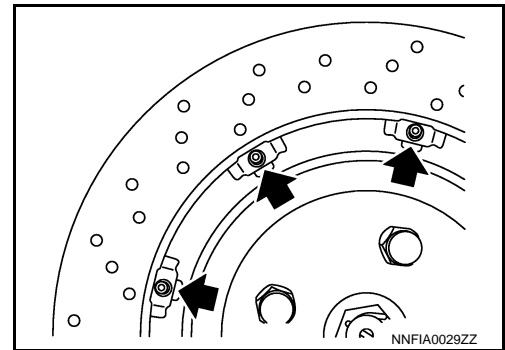
< PERIODIC MAINTENANCE >

- If the drilled hole of disc rotor is clogged by the brake pad wear particles, clean the dust with a brush or a vacuum dust collector.
- Check the following item and then replace the disc rotor if necessary.

CAUTION:

When replacing rear disc rotors, replace them together with right and left rear brake pads. (Replacement depends on inspection results shown below.)

- Rear disc rotors (a set of right and left) can be replaced alone only when a certified technician checks for scratches and cracks and judges that the rear brake pads are reusable and when there is no history of sport driving. Refer to [BR-18. "BRAKE PAD : Inspection and Adjustment"](#).
- Replace right and left rear brake pads together with rear disc rotors if there is a judder.
- The surface of the disc rotor for over burnt, uneven wear, cracks, serious damage, peel-off, remarkable groove or vertical streaks.
- Confirm if there is no crack larger than 4mm around drilled hole of a disc rotor.
- The floating pin and nut for wear or damage.
- Any different groove in 0.3 mm (0.012 in) for disc rotor with brake noise.
- Check disc rotor nut (⬅) for rust.
- Check that brake pad replacement is not performed twice for a single disc rotor.



Thickness

1. Remove tires with power tool. Refer to [WT-74. "EXCEPT NISMO : Exploded View"](#) (Except NISMO), [WT-74. "NISMO : Exploded View"](#) (NISMO).

NOTE:

Check the vehicle type. Refer to [WT-4. "How to Check Vehicle Type"](#).

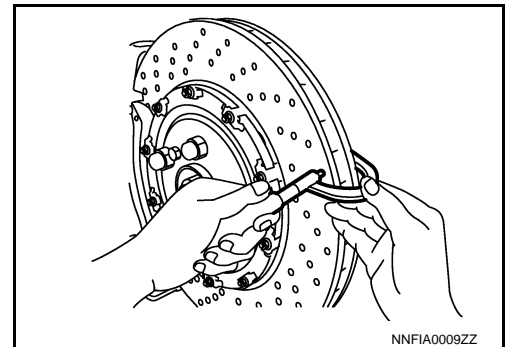
2. Check the thickness of the disc rotor using a micrometer. Replace the disc rotor if the thickness is below the wear limit.

CAUTION:

When replacing rear disc rotors, replace them together with right and left rear brake pads. (Replacement depends on inspection results shown below.)

- Rear disc rotors (a set of right and left) can be replaced alone only when a certified technician checks for scratches and cracks and judges that the rear brake pads are reusable and when there is no history of sport driving. Refer to [BR-18. "BRAKE PAD : Inspection and Adjustment"](#).

- Replace right and left rear brake pads together with rear disc rotors if there is a judder.



Wear thickness : Refer to [BR-51. "Rear Disc Brake"](#).

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

NOTE:

Check the vehicle type. Refer to [WT-4. "How to Check Vehicle Type"](#).

ADJUSTMENT

Perform the following procedure when replacing the brake pad and disc rotor.

CAUTION:

- Be careful of the vehicle speed, because the effectiveness of the brake is decreased by the anti-corrosion paint (silver color) applied for the contact surface with the brake pad for new disc rotor.
- Perform the procedure only on a safe road and be careful of the traffic conditions.

1. Drive on flat straight roads.
2. Depress the brake pedal to stop the vehicle within 3 to 5 seconds.

REAR DISC BRAKE

< PERIODIC MAINTENANCE >

3. Cool the brake.
4. Repeat the above steps 1 to 3 until the operational feeling of brake pedal becomes equal to the pre-operation condition.
5. Check that the anti-corrosion paint (silver color) of disc rotor is eliminated. If the anti-corrosion paint (silver color) remains, repeat the above steps 1 to 3.
6. If brake noise occurs, loosen the caliper mounting bolts after checking that the anti-corrosion paint (silver color) does not remain at the disc rotor, and then perform the caliper position adjustment by tightening to the specified torque. Refer to [BR-47, "BRAKE CALIPER ASSEMBLY : Removal and Installation \(GT-R certified NISSAN dealer\)"](#).
7. Use a brake tester to check that it is within the normal range.

BRAKE PEDAL

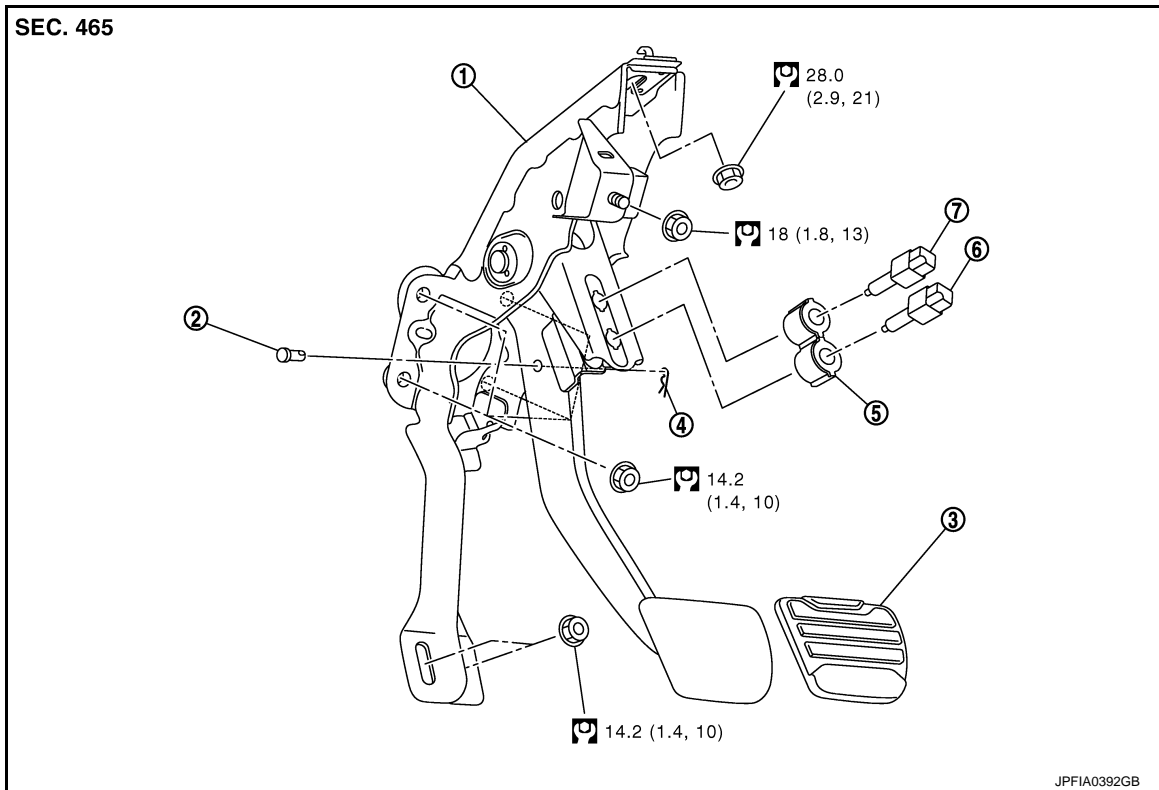
< REMOVAL AND INSTALLATION >

REMOVAL AND INSTALLATION

BRAKE PEDAL

Exploded View

INFOID:0000000011489400



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

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

Removal and Installation (GT-R certified NISSAN dealer)

INFOID:0000000011489401

REMOVAL

1. Remove instrument lower panel (driver). Refer to [IP-12, "Exploded View"](#).
2. Remove the footrest. Refer to [INT-22, "Exploded View"](#).
3. Remove the kicking plate inner, dash side finisher and floor trim. Refer to [INT-15, "Exploded View"](#).
4. Disconnect the harness connectors of ASCD brake switch and stop lamp switch.
5. Rotate ASCD brake switch and stop lamp switch counterclockwise to remove.
6. Remove the snap pin, and then remove the clevis pin from the clevis of brake booster.
7. Remove the brake pedal assembly.

INSTALLATION

Install in the reverse order of removal.

Inspection and Adjustment (GT-R certified NISSAN dealer)

INFOID:0000000011489402

INSPECTION AFTER REMOVAL

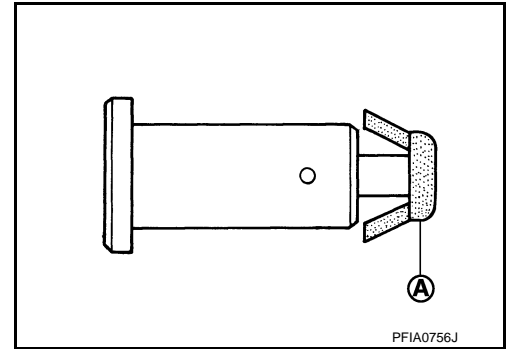
Check the following items and replace the brake pedal assembly if necessary.

- Check the brake pedal for bend, damage, or cracks on the welded parts.

BRAKE PEDAL

< REMOVAL AND INSTALLATION >

- Check clevis pin and plastic stopper (A) for damage or deformation. If any damage is found, replace clevis pin.



ADJUSTMENT AFTER INSTALLATION

- Adjust each item of brake pedal after installing the brake pedal assembly to the vehicle. Refer to [BR-8, "Inspection and Adjustment"](#).
- Perform the release position learning of the accelerator pedal. Refer to [EC-23, "ACCELERATOR PEDAL RELEASED POSITION LEARNING : Special Repair Requirement \(GT-R certified NISSAN dealer\)"](#).

BRAKE PIPING

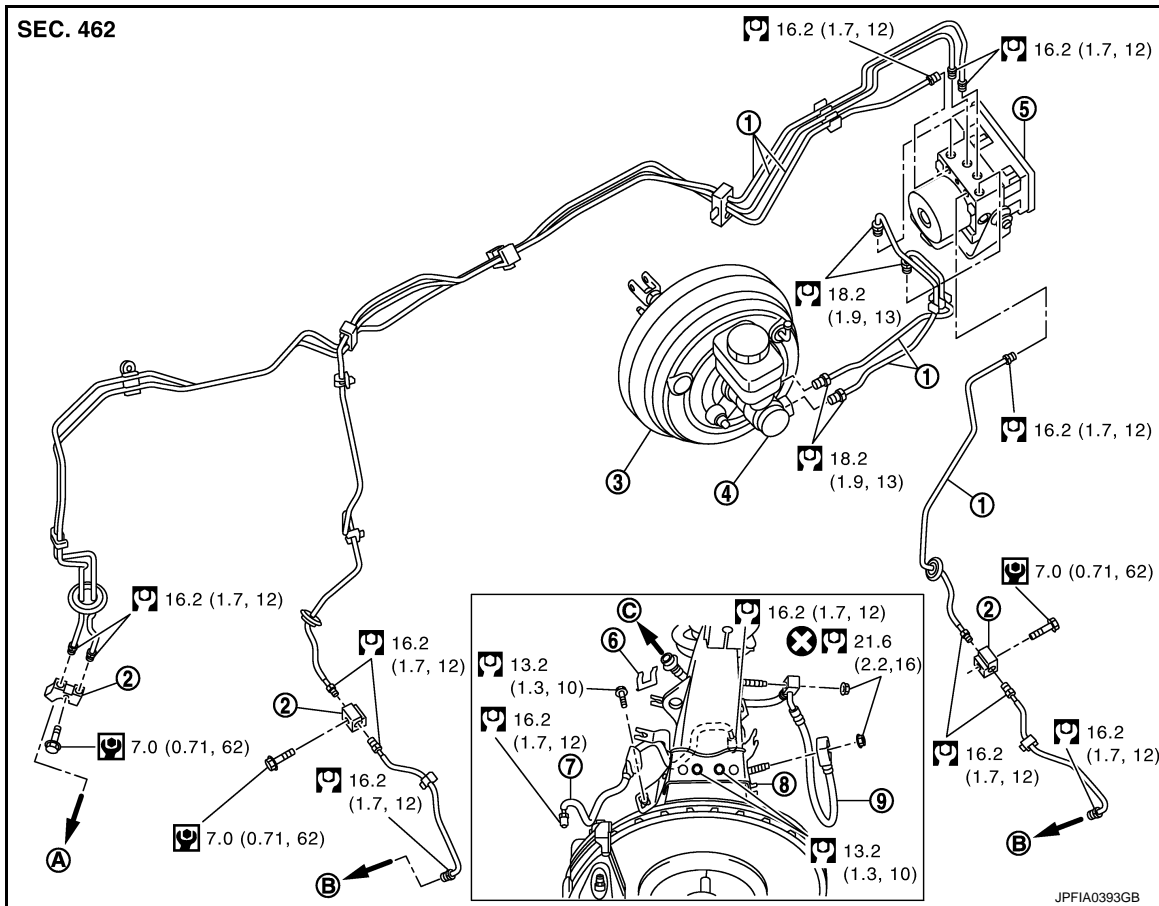
< REMOVAL AND INSTALLATION >

BRAKE PIPING

FRONT

FRONT : Exploded View

INFOID:0000000011489403



- | | | |
|-----------------------|--|------------------------|
| 1. Brake tube | 2. Connector | 3. Brake booster |
| 4. Master cylinder | 5. ABS actuator and electric unit (control unit) | 6. Lock plate |
| 7. Brake tube | 8. Brake hose bracket | 9. Brake hose |
| A. To rear brake tube | B. To front brake hose | C. To front brake tube |

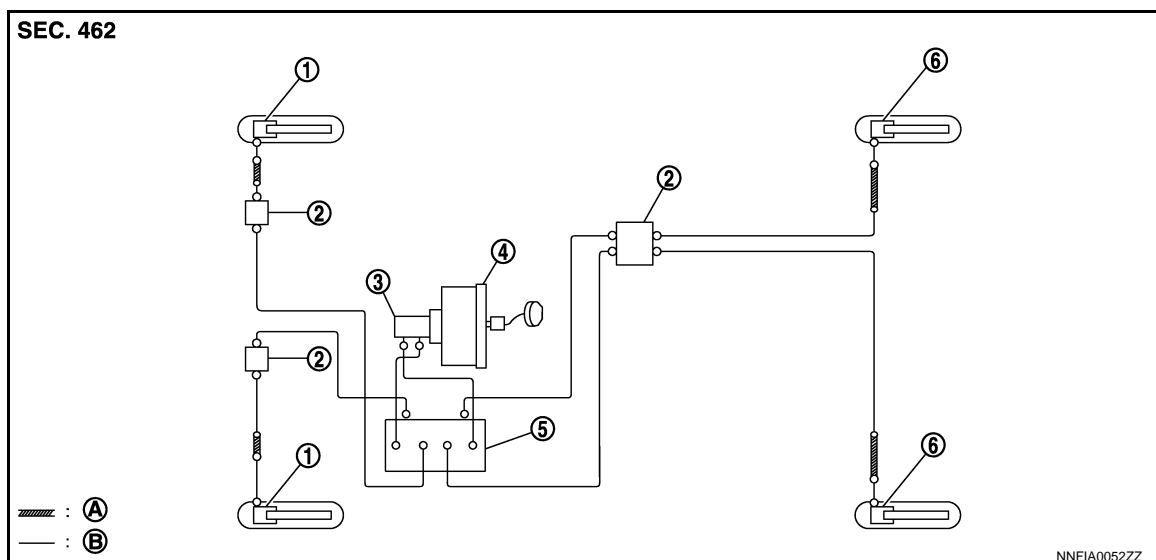
Refer to [GI-4, "Components"](#) for the symbols in the figure.

BRAKE PIPING

< REMOVAL AND INSTALLATION >

FRONT : Hydraulic Piping (GT-R certified NISSAN dealer)

INFOID:000000011489404



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

INFOID:000000011489405

REMOVAL

CAUTION:

- Never spill or splash brake fluid on painted surfaces. Brake fluid may seriously damage paint. Wipe it out immediately and wash with water if it gets on a painted surface.
- Wrap the flare nut wrench with waste cloth to protect the caliper from damage.
- If the brake fluid adheres to the caliper or disc rotor, quickly wipe it out.

1. Remove tires with power tool. Refer to [WT-74, "EXCEPT NISMO : Exploded View"](#) (Except NISMO), [WT-74, "NISMO : Exploded View"](#) (NISMO).

NOTE:

Check the vehicle type. Refer to [WT-4, "How to Check Vehicle Type"](#).

2. Drain brake fluid. Refer to [BR-10, "Draining"](#).
3. Loosen the flare nut with a flare nut wrench and separate the brake tube from the hose and caliper.

CAUTION:

- Never scratch the flare nut and the brake tube.
- Never bend sharply, twist or strongly pull out the brake hoses and tubes.
- Cover open end of brake tubes and hoses when disconnecting to prevent entrance of dirt.

4. Remove brake tube mounting bolt.
5. Remove brake hose mounting nut.
6. Remove the lock plate and remove the brake hose.

INSTALLATION

CAUTION:

- Never spill or splash brake fluid on painted surfaces. Brake fluid may seriously damage paint. Wipe it out immediately and wash with water if it gets on a painted surface.
- Wrap the flare nut wrench with waste cloth to protect the caliper from damage.
- If the brake fluid adheres to the caliper or disc rotor, quickly wipe it out.
- Never allow foreign matter (e.g. dust) and oils other than brake fluid to enter the reservoir tank.
- Since brake fluid is susceptible to deterioration from moisture, discard brake fluid remaining in the container.

BRAKE PIPING

< REMOVAL AND INSTALLATION >

1. Install the brake tube to the brake hose, temporarily tighten the flare nut by hand until it does not rotate further, and fix the brake hose to the bracket with the lock plate.
CAUTION:
Check that all brake hoses and tubes are not twisted or bent.
2. Install brake hose mounting nut.
CAUTION:
Never reuse brake hose mounting nut.
3. Install brake tube mounting bolt.
4. Tighten the flare nut to the specified torque with a flare nut crowfoot and a torque wrench.
CAUTION:
Never scratch the flare nut and the brake tube.
5. Refill with new brake fluid and perform the air bleeding. Refer to [BR-11, "Bleeding Brake System"](#).
CAUTION:
Never reuse drained brake fluid.

FRONT : Inspection (GT-R certified NISSAN dealer)

INFOID:0000000011489406

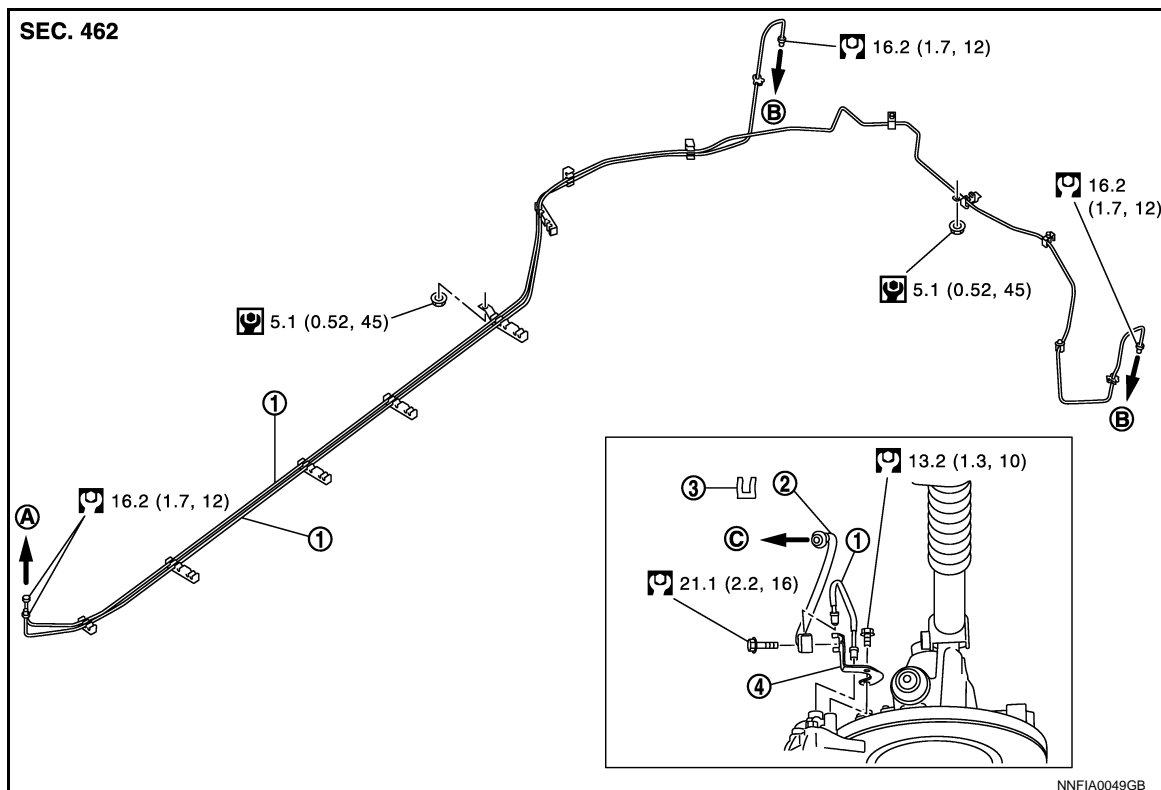
INSPECTION AFTER INSTALLATION

1. Check the brake hoses and tubes for the following: no scratches; no twist and deformation; no interference with other components when turning the steering wheel; no looseness at connections.
2. Depress the brake pedal with a force of 785 N (80 kg, 177 lb) and hold down the pedal for approximately 5 seconds with the engine running. Check for any fluid leakage.
CAUTION:
Retighten the applicable connection to the specified torque and repair any malfunctioning (damaged, worn or deformed) parts if any brake fluid leakage is present.

REAR

REAR : Exploded View

INFOID:0000000011489407



1. Brake tube
2. Brake hose
3. Lock plate
4. Brake hose bracket

BRAKE PIPING

< REMOVAL AND INSTALLATION >

A. To connector

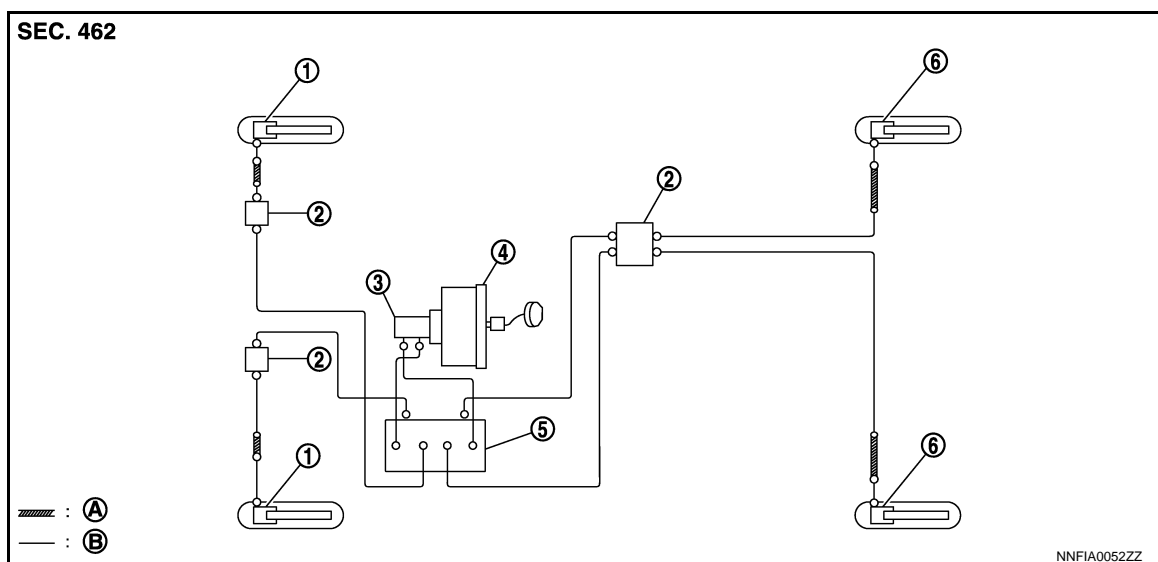
B. To rear brake hose

C. To rear brake tube

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

REAR : Hydraulic Piping (GT-R certified NISSAN dealer)

INFOID:000000011489408



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

INFOID:000000011489409

REMOVAL

CAUTION:

- Never spill or splash brake fluid on painted surfaces. Brake fluid may seriously damage paint. Wipe it out immediately and wash with water if it gets on a painted surface.
- Wrap the flare nut wrench with waste cloth to protect the caliper from damage.
- If the brake fluid adheres to the caliper or disc rotor, quickly wipe it out.

1. Remove tires with power tool. Refer to [WT-74, "EXCEPT NISMO : Exploded View"](#) (Except NISMO), [WT-74, "NISMO : Exploded View"](#) (NISMO).

NOTE:

Check the vehicle type. Refer to [WT-4, "How to Check Vehicle Type"](#).

2. Drain brake fluid. Refer to [BR-10, "Draining"](#).
3. Loosen the flare nut with a flare nut wrench and separate the brake tube from the hose and caliper.

CAUTION:

- Never scratch the flare nut and the brake tube.
- Never bend sharply, twist or strongly pull out the brake hoses and tubes.
- Cover open end of brake tubes and hoses when disconnecting to prevent entrance of dirt.

4. Remove brake hose mounting bolt.
5. Remove the lock plate and remove the brake hose.

INSTALLATION

CAUTION:

- Never spill or splash brake fluid on painted surfaces. Brake fluid may seriously damage paint. Wipe it out immediately and wash with water if it gets on a painted surface.
- Wrap the flare nut wrench with waste cloth to protect the caliper from damage.
- If the brake fluid adheres to the caliper or disc rotor, quickly wipe it out.
- Never allow foreign matter (e.g. dust) and oils other than brake fluid to enter the reservoir tank.

BRAKE PIPING

< REMOVAL AND INSTALLATION >

- **Since brake fluid is susceptible to deterioration from moisture, discard brake fluid remaining in the container.**
- 1. Install the brake tube to the brake hose, temporarily tighten the flare nut by hand until it does not rotate further, and fix the brake hose to the bracket with the lock plate.
CAUTION:
Check that all brake hoses and tubes are not twisted or bent.
- 2. Install brake hose mounting bolt.
- 3. Tighten the flare nut to the specified torque with a flare nut crowfoot and a torque wrench.
CAUTION:
Never scratch the flare nut and the brake tube.
- 4. Refill with new brake fluid and perform the air bleeding. Refer to [BR-11, "Bleeding Brake System"](#).
CAUTION:
Never reuse drained brake fluid.

REAR : Inspection (GT-R certified NISSAN dealer)

INFOID:0000000011489410

INSPECTION AFTER INSTALLATION

1. Check the brake hoses and tubes for the following: no scratches; no twist and deformation; no interference with other components when turning the steering wheel; no looseness at connections.
2. Depress the brake pedal with a force of 785 N (80 kg, 177 lb) and hold down the pedal for approximately 5 seconds with the engine running. Check for any fluid leakage.
CAUTION:
Retighten the applicable connection to the specified torque and repair any malfunctioning (damaged, worn or deformed) parts if any brake fluid leakage is present.

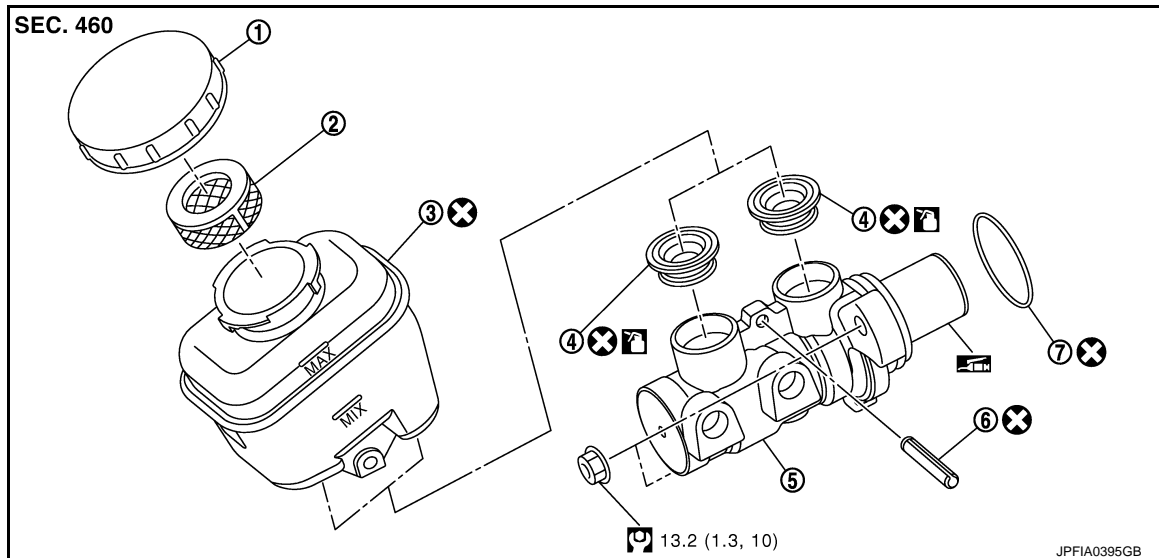
BRAKE MASTER CYLINDER

< REMOVAL AND INSTALLATION >

BRAKE MASTER CYLINDER

Exploded View (GT-R certified NISSAN dealer)

INFOID:000000011489411



- | | | |
|------------------|------------------|-------------------|
| 1. Reservoir cap | 2. Oil strainer | 3. Reservoir tank |
| 4. Grommet | 5. Cylinder body | 6. Pin |
| 7. O-ring | | |

Apply polyglycol ether based lubricant.

Brake fluid

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

Removal and Installation (GT-R certified NISSAN dealer)

INFOID:000000011489412

REMOVAL

CAUTION:

Never spill or splash brake fluid on painted surfaces. Brake fluid may seriously damage paint. Wipe it out immediately and wash with water if it gets on a painted surface.

1. Remove the brake master cylinder cover and hood ledge cover LH. Refer to [EXT-28, "Exploded View"](#).
2. Drain brake fluid. Refer to [BR-10, "Draining"](#).
3. Separate the brake fluid level switch harness connector.
4. Separate the brake tube from the master cylinder assembly with a flare nut wrench.

CAUTION:

Never scratch the flare nut and the brake tube.

5. Depress the brake pedal several times to release the vacuum pressure from the brake booster. Then remove the master cylinder assembly.

CAUTION:

- **Never depress the brake pedal after the master cylinder assembly is removed.**
- **The piston of the master cylinder assembly is exposed. Never damage it when removing the master cylinder.**
- **The piston may drop off when pulled out strongly. Never hold the piston. Hold the cylinder body when handling the master cylinder assembly.**

INSTALLATION

CAUTION:

Never spill or splash brake fluid on painted surfaces. Brake fluid may seriously damage paint. Wipe it out immediately and wash with water if it gets on a painted surface.

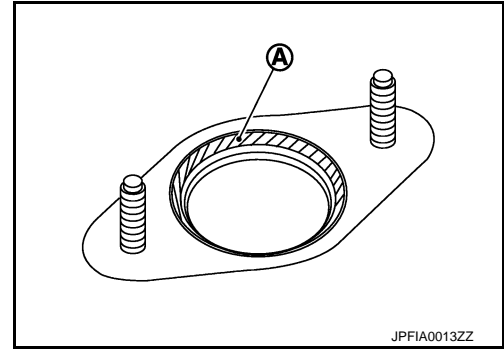
Note the following, and install in the reverse order of removal.

- **Never depress the brake pedal after the master cylinder assembly is removed.**

BRAKE MASTER CYLINDER

< REMOVAL AND INSTALLATION >

- Never reuse the O-ring.
- Apply polyglycol ether based lubricant to the brake booster [see (A) in the figure] when installing the master cylinder assembly to the brake booster.
- The piston of the master cylinder assembly is exposed. Never damage it when handling the master cylinder and check that no dirt and dust are present on the piston before installation. Clean it with new brake fluid if necessary.
- The piston may drop off when pulled strongly. Never hold the piston. Hold the cylinder body when handling the master cylinder assembly.
- Temporarily tighten the brake tube flare nut to the master cylinder assembly by hand. Then tighten it to the specified torque with a flare nut crowfoot and torque wrench. Refer to [BR-23, "FRONT : Exploded View"](#).



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CAUTION:

Never scratch the flare nut and the brake tube.

- Never allow foreign matter (e.g. dust) and oils other than brake fluid to enter the reservoir tank.
- Since brake fluid is susceptible to deterioration from moisture, discard brake fluid remaining in the container.
- After installation, perform the air bleeding. Refer to [BR-11, "Bleeding Brake System"](#).

CAUTION:

Never reuse drained brake fluid.

Disassembly and Assembly (GT-R certified NISSAN dealer)

INFOID:0000000011489413

DISASSEMBLY

CAUTION:

- **Never disassemble the cylinder body.**
- **Remove the reservoir tank only when necessary.**

1. Fix the master cylinder assembly to a vise.

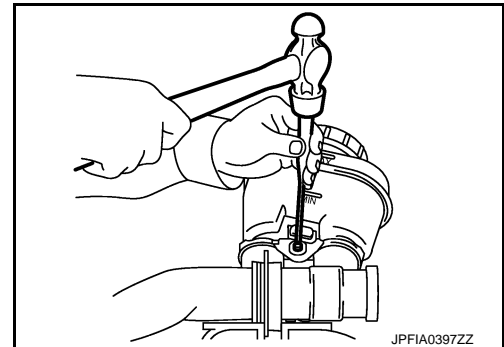
CAUTION:

- **Always set copper plates or cloth between vise jaws when fixing the cylinder body to a vise.**
- **Never overtighten the vise.**

2. Remove the reservoir tank mounting pin with a pin punch.
3. Remove the reservoir tank and grommet from the cylinder body.

CAUTION:

Never drop the removed parts. The parts must not be reused if they are dropped.



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ASSEMBLY

CAUTION:

- **Never use mineral oils such as kerosene or gasoline and rubber grease during the cleaning and assembly process.**
- **Never drop the parts when installing. The parts must not be reused if they are dropped.**
- **Never allow foreign matter (e.g. dust) and oils other than brake fluid to enter the reservoir tank.**

1. Apply new brake fluid to the grommet and install it to the cylinder body.

CAUTION:

Never reuse grommet.

2. Install the reservoir tank to the cylinder body.

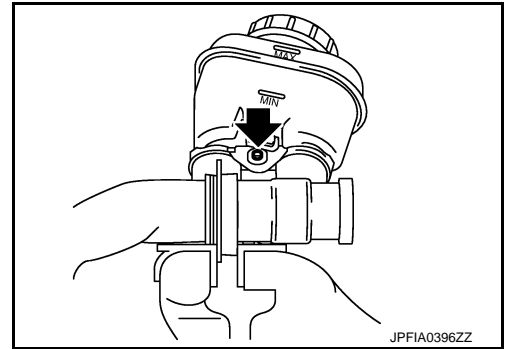
BRAKE MASTER CYLINDER

< REMOVAL AND INSTALLATION >

3. Fix the cylinder body to a vise.

CAUTION:

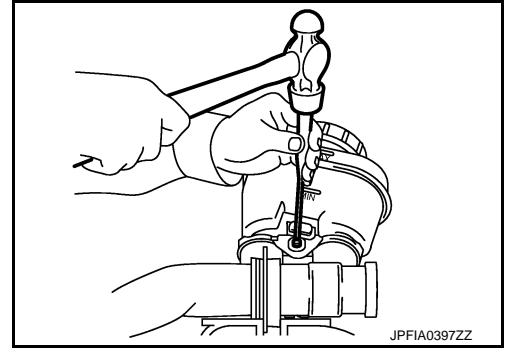
- Place the reservoir tank with the chamfered pin hole (↔) facing up.
- Always set copper plates or cloth between vise jaws when fixing the cylinder body to a vise.
- Never overtighten the vise.



4. Tilt the reservoir tank so that a mounting pin can be inserted. Insert a mounting pin. Return the reservoir tank to the horizontal position. Insert another mounting pin into the pin hole on the opposite side in the same manner after the mounting pin passes through the cylinder body pin hole.

CAUTION:

Never reuse pin.



Inspection (GT-R certified NISSAN dealer)

INFOID:000000011489414

INSPECTION AFTER INSTALLATION

- Check for fluid leakage from connections, damage, twists, deformation or contact with other parts. Replace if necessary.
- CAUTION:**
If the looseness of connection or fluid leakage is present, retighten to the specified torque. Replace if necessary.
- Depress the brake pedal with a force of 785 N (80 kg, 176 lb) and hold down the pedal for approximately 5 seconds with the engine running. Check for any fluid leakage.

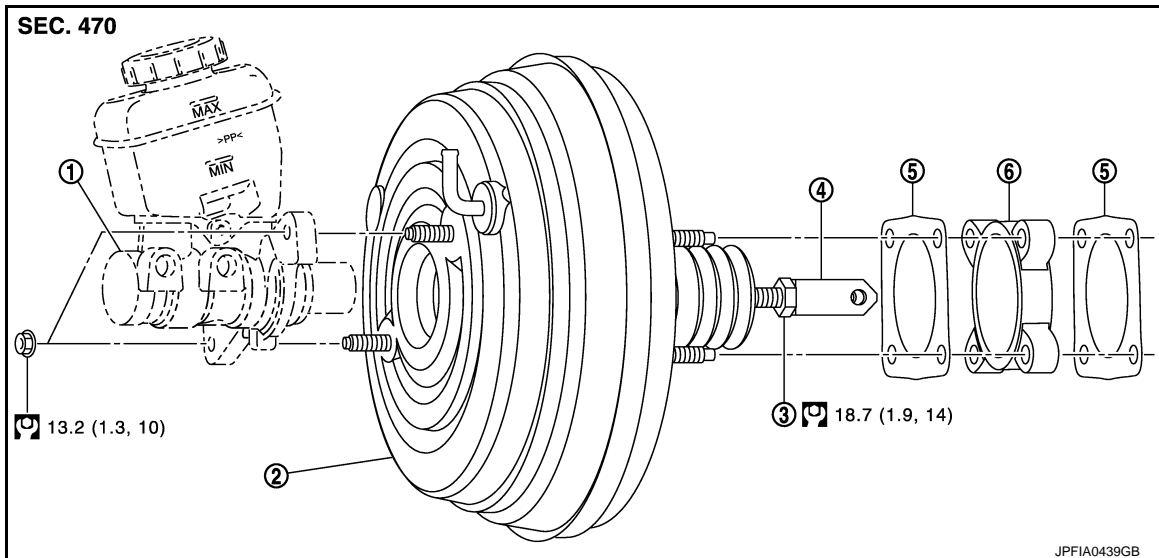
BRAKE BOOSTER

< REMOVAL AND INSTALLATION >

BRAKE BOOSTER

Exploded View (GT-R certified NISSAN dealer)

INFOID:000000011489415



- | | | |
|-----------------------------|------------------|-------------|
| 1. Master cylinder assembly | 2. Brake booster | 3. Lock nut |
| 4. Clevis | 5. Gasket | 6. Spacer |

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

Removal and Installation (GT-R certified NISSAN dealer)

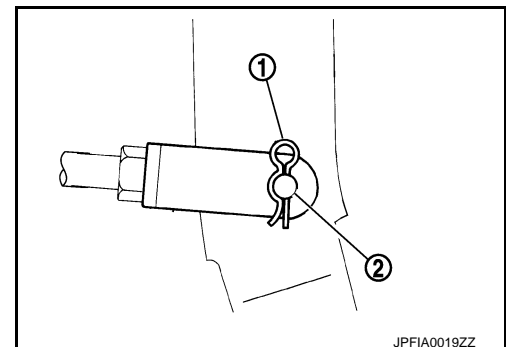
INFOID:000000011489416

REMOVAL

- Remove the brake master cylinder cover and hood ledge cover LH. Refer to [EXT-28, "Exploded View"](#).
- Remove cowl top cover. Refer to [EXT-28, "Exploded View"](#).
- Remove master cylinder assembly. Refer to [BR-28, "Exploded View \(GT-R certified NISSAN dealer\)"](#).
CAUTION:
 - Depress the brake pedal several times to release the vacuum pressure from the brake booster. Then remove the master cylinder assembly.
 - Never depress the brake pedal after the master cylinder assembly is removed.
 - The piston of the master cylinder assembly is exposed. Never damage it when removing the master cylinder.
 - The piston may drop off when pulled out strongly. Never hold the piston. Hold the cylinder body when handling the master cylinder assembly.
- Remove vacuum hose from brake booster. Refer to [BR-34, "Exploded View \(GT-R certified NISSAN dealer\)"](#).
- Remove snap pin (1) and clevis pin (2).
- Disconnect the brake tube from the ABS actuator electric unit (control unit). Refer to [BR-23, "FRONT : Exploded View"](#).
- Remove the clip from the brake tube. Refer to [BR-23, "FRONT : Exploded View"](#).
- Remove the brake tube [between ABS actuator electric unit (control unit) and master cylinder]. Refer to [BR-23, "FRONT : Exploded View"](#).
- Remove the relay box and bracket.
- Remove brake booster, spacer and gasket.

CAUTION:

Never deform or bend the brake tubes.



INSTALLATION

BRAKE BOOSTER

< REMOVAL AND INSTALLATION >

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

- Be careful not to damage brake booster stud bolt threads. If brake booster is tilted during installation, the dash panel may damage the threads.
- Never deform or bend the brake tubes when installing the brake booster.
- Always use a new gasket between the brake booster and the dash panel.
- Replace the clevis pin if it is damaged. Refer to [BR-21, "Inspection and Adjustment \(GT-R certified NISSAN dealer\)"](#).
- Never allow foreign matter (e.g. dust) and oils other than brake fluid to enter the reservoir tank.
- Since brake fluid is susceptible to deterioration from moisture, discard brake fluid remaining in the container.
- After installation, perform the air bleeding. Refer to [BR-11, "Bleeding Brake System"](#).

CAUTION:

Never reuse drained brake fluid.

Inspection and Adjustment (GT-R certified NISSAN dealer)

INFOID:000000011489417

INSPECTION BEFORE REMOVAL

Air Tight

CAUTION:

Check the air tight condition when the master cylinder and the brake booster is installed.

1. With a handy vacuum pump, apply vacuum pressure of -66.7 kPa (-500 mmHg, -19.70 inHg) to the brake booster.
2. If the air tight condition cannot be maintained, perform the following operation.
 - a. Check the no dirt and dust are present on the brake booster and brake master cylinder mating faces. Clean it if necessary.
 - b. Check O-ring on the master cylinder. If anything is found, replace the O-ring.
 - c. Check the air tight condition again. If the condition still cannot be maintained, replace the brake booster.

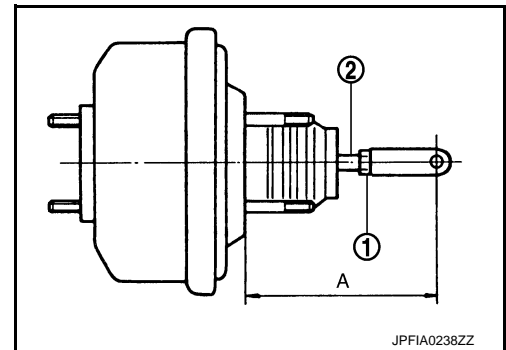
ADJUSTMENT AFTER REMOVAL

Input Rod Length adjustment

1. Loosen the lock nut (1) and adjust the input rod (2) to the specified length (A).

A : Refer to [BR-51, "Brake Booster \(GT-R certified NISSAN dealer\)"](#).

2. Tighten the lock nut to the specified torque.



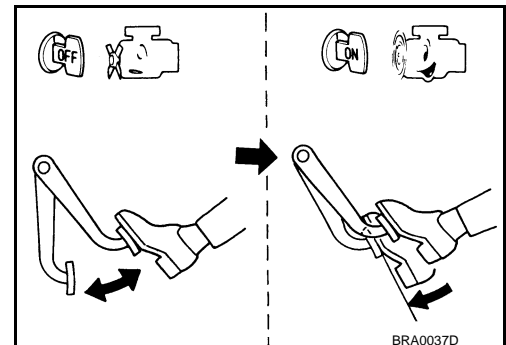
INSPECTION AFTER INSTALLATION

Operation

Depress the brake pedal several times at 5-second intervals with the engine stopped. Start the engine with the brake pedal fully depressed. Check that the clearance between brake pedal and dash lower pane decreases.

NOTE:

A slight impact with a small click may be felt on the pedal when the brake pedal is fully depressed. This is a normal phenomenon due to the brake system operation.

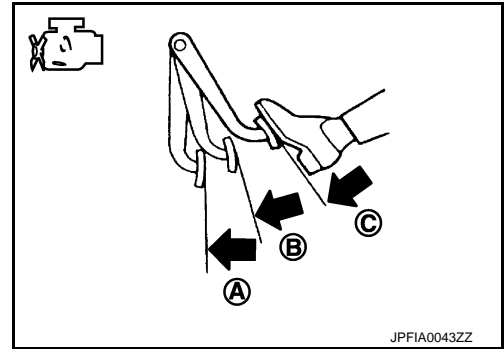


Air Tight

BRAKE BOOSTER

< REMOVAL AND INSTALLATION >

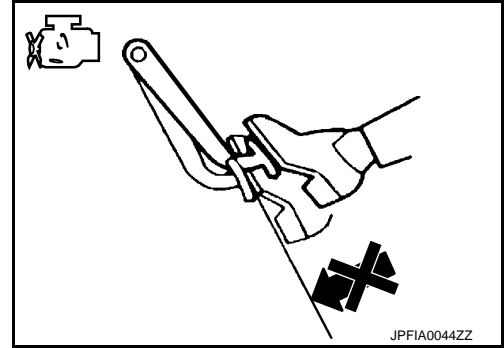
- Idle the engine for 1 minute to apply vacuum to the brake booster, and stop the engine. Then depress the brake pedal several times at 5-second intervals until the accumulated vacuum is released to atmospheric pressure. Check that the clearance between brake pedal and dash lower panel gradually increases (A → B → C) each time the brake pedal is depressed when performing this operation.



- Depress the brake pedal with the engine running. Then stop the engine while holding down the brake pedal. Check that the brake pedal stroke does not change after holding down the brake pedal for 30 seconds or more.

NOTE:

A slight impact with a small click may be felt on the pedal when the brake pedal is fully depressed. This is a normal phenomenon due to the brake system operation.



ADJUSTMENT AFTER INSTALLATION

Perform the brake pedal adjustment after installing the brake pedal assembly. Refer to [BR-8, "Inspection and Adjustment"](#).

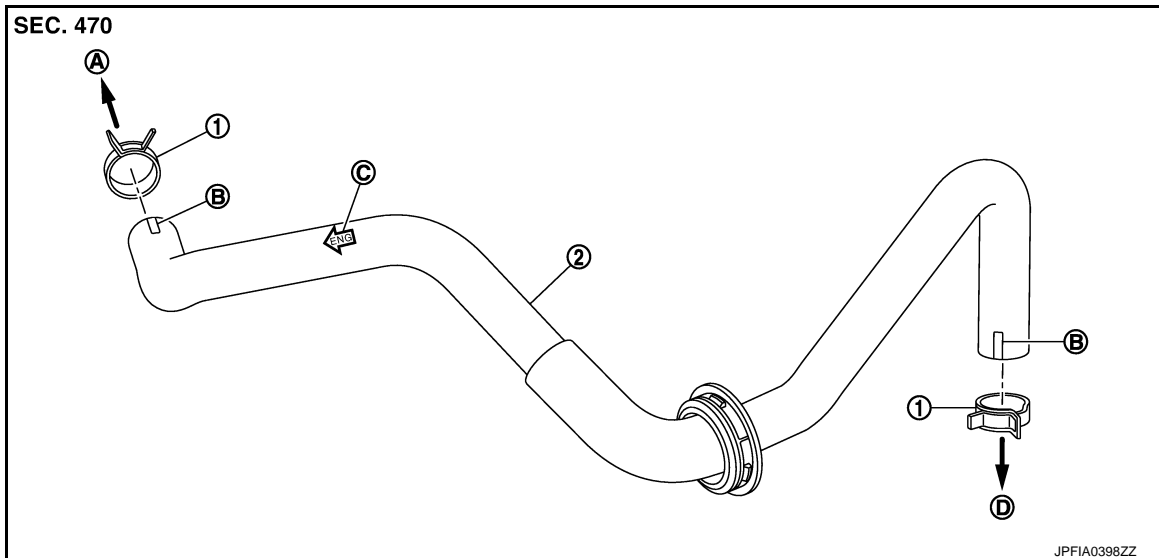
VACUUM LINES

< REMOVAL AND INSTALLATION >

VACUUM LINES

Exploded View (GT-R certified NISSAN dealer)

INFOID:0000000011489418



- | | | |
|-----------------------|---------------------------------------|--------------------------------------|
| 1. Clamp | 2. Vacuum hose (built in check valve) | |
| A. To intake manifold | B. Paint mark | C. Stamp indicating engine direction |
| D. To brake booster | | |

Removal and Installation (GT-R certified NISSAN dealer)

INFOID:0000000011489419

REMOVAL

1. Remove master cylinder cover and food ledge cover. Refer to [EXT-28, "Exploded View"](#).
2. Remove vacuum hose.

INSTALLATION

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

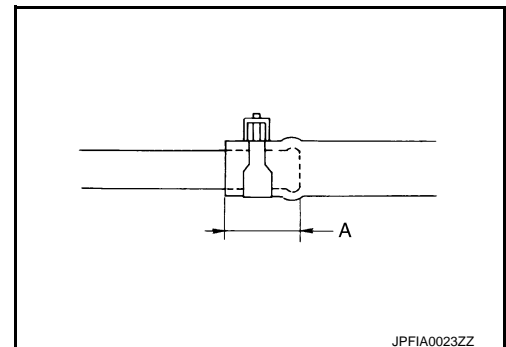
- Because vacuum hose contains a check valve, it must be installed in the correct position. Refer to the stamp to confirm correct installation. Brake booster will not operate normally if the hose is installed in the wrong direction.
- When installing vacuum hose, insert it until its tip reaches the back-end of the length (A) or further as shown in the figure.

A : 24 mm (0.95 in) or more

- Face the marking side vehicle front when assembling. (Brake booster side)
- Face the marking side up when assembling. (Intake manifold side)

CAUTION:

Never use lubricating oil during assembly.



Inspection (GT-R certified NISSAN dealer)

INFOID:0000000011489420

INSPECTION AFTER REMOVAL

Appearance

Check for correct assembly, damage and deterioration.

Check Valve Airtightness

VACUUM LINES

< REMOVAL AND INSTALLATION >

- Use a handy vacuum pump (A) to check.

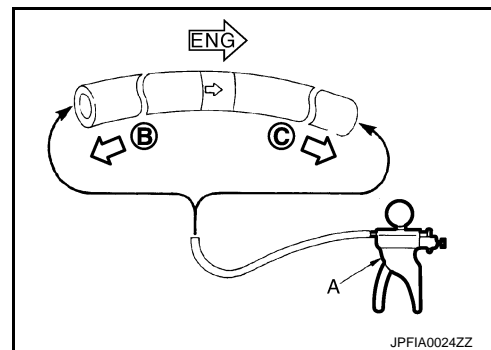
When connected to the booster side (B):

Vacuum must be decrease within 1.3 kPa (9.8 mmHg, 0.38 inHg) for 15 seconds under a vacuum of -66.7 kPa (-500 mmHg, -19.69 inHg).

When connected to the engine side (C):

Vacuum must be not exist.

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



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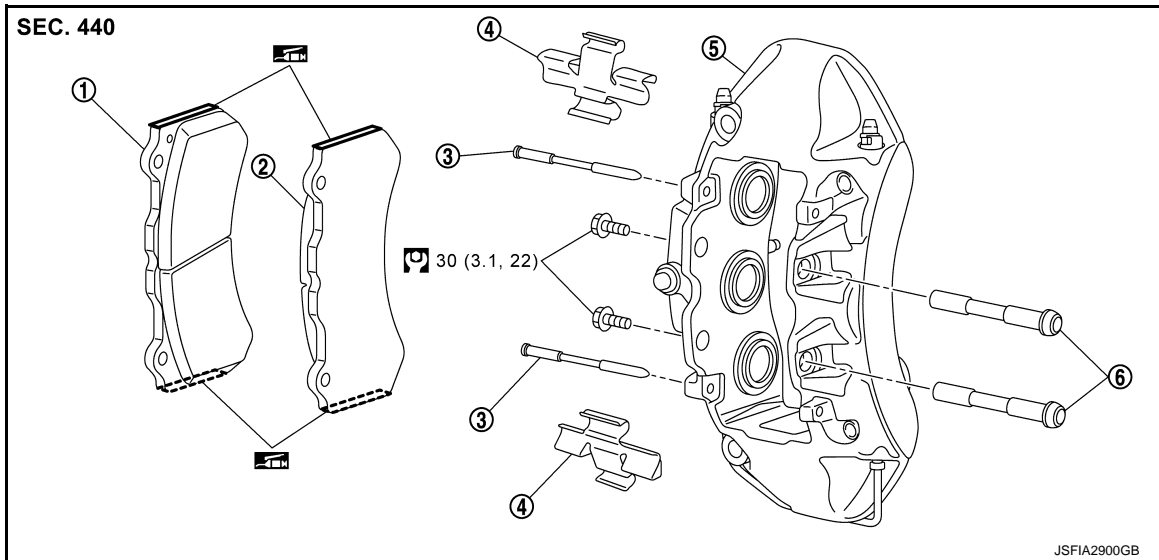
FRONT DISC BRAKE

< REMOVAL AND INSTALLATION >

FRONT DISC BRAKE BRAKE PAD

BRAKE PAD : Exploded View (GT-R certified NISSAN dealer)

INFOID:0000000011489421



- | | | |
|-------------------------------------|--------------|------------|
| 1. Inner pad (with pad wear sensor) | 2. Outer pad | 3. Pad pin |
| 4. Cross spring | 5. Caliper | 6. Tie-rod |

 Apply MOLYKOTE® 7439 or equivalent.

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

CAUTION:

Before performing High Performance Driving, always wipe MOLYKOTE® 7439 or equivalent off the brake pad. After performing High Performance Driving, be sure to apply MOLYKOTE® 7439 or equivalent to the brake pad.

BRAKE PAD : Removal and Installation (GT-R certified NISSAN dealer)

INFOID:0000000011489422

REMOVAL

WARNING:

Since dust covering the front brake has an affect on human body, the dust must be removed with a dust collector. Never splatter the dust with an air blow gun.

CAUTION:

Never depress the brake pedal while removing the brake pads because the piston may pop out.

1. Remove tires with power tool. Refer to [WT-74, "EXCEPT NISMO : Exploded View"](#) (Except NISMO), [WT-74, "NISMO : Exploded View"](#) (NISMO).

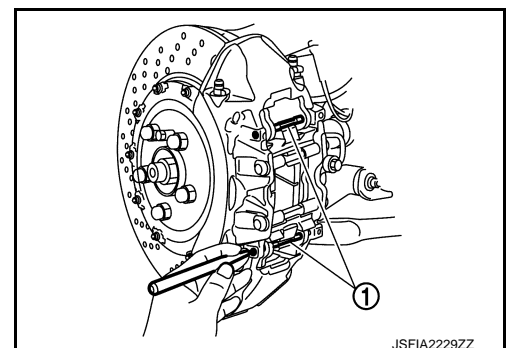
NOTE:

Check the vehicle type. Refer to [WT-4, "How to Check Vehicle Type"](#).

2. Remove the pad pin (1) using a pin punch.

CAUTION:

Never damage the caliper.



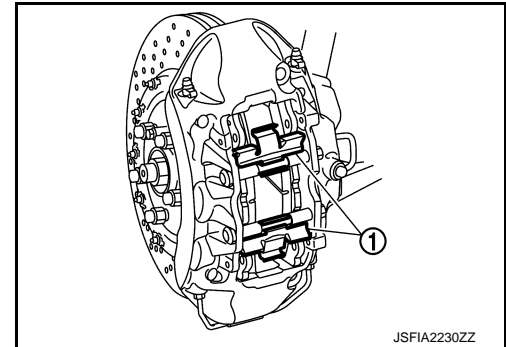
FRONT DISC BRAKE

< REMOVAL AND INSTALLATION >

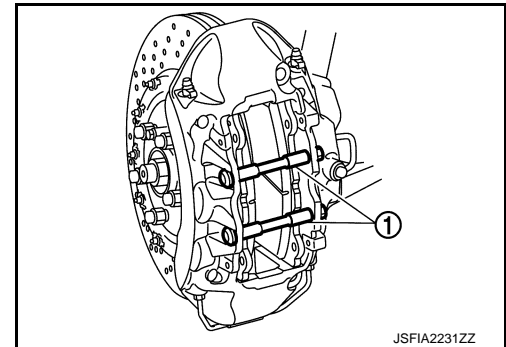
3. Remove cross spring (1).

CAUTION:

Never deform the cross spring.



4. Remove the tie-rod (1).
5. Remove brake pads.
6. Check the piston boots. Refer to [BR-43, "BRAKE CALIPER ASSEMBLY : Inspection \(GT-R certified NISSAN dealer\)"](#).



INSTALLATION

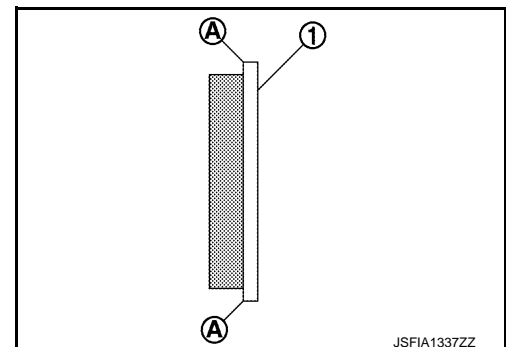
WARNING:

Since dust covering the front brake has an affect on human body, the dust must be removed with a dust collector. Never splatter the dust with an air blow gun.

CAUTION:

- Never depress the brake pedal while removing the brake pads because the piston may pop out.
- Check the brake fluid level in the reservoir tank. Because the brake fluid returns to the reservoir tank of master cylinder when pressing the piston.
- When replacing brake pad, replace all four brake pads together. (Replacement depends on inspection results shown below.)
- Front brake pads (a set of right and left) can be replaced alone only when a certified technician checks for scratches and cracks and judges that the rear brake pads are reusable and when there is no history of sport driving. Refer to [BR-18, "BRAKE PAD : Inspection and Adjustment"](#).
- Replace right and left front brake pads together with disc rotors if the replacement of front brake pad for a front disc rotor is a second replacement.
- Replace right and left front brake pads together with front disc rotors if there is a judder.

1. Use a brake caliper wrench [SST: KV991112S0 (J-49023)] to press back the piston when replacing the brake pad.
2. Apply MOLYKOTE® 7439 or equivalent to the match face (A) of the brake pad (1).
Molykote is a registered trademark of Dow Corning Corporation.



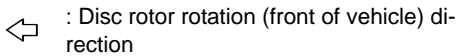
3. Install brake pad to caliper.

CAUTION:

FRONT DISC BRAKE

< REMOVAL AND INSTALLATION >

- The brake pad is directional. Never mistake the direction.

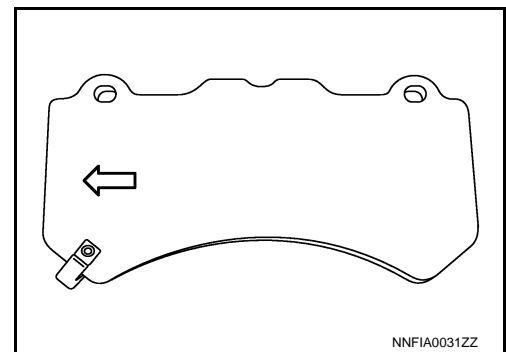


- Never damage the piston boot.

4. Install the tie-rod.

CAUTION:

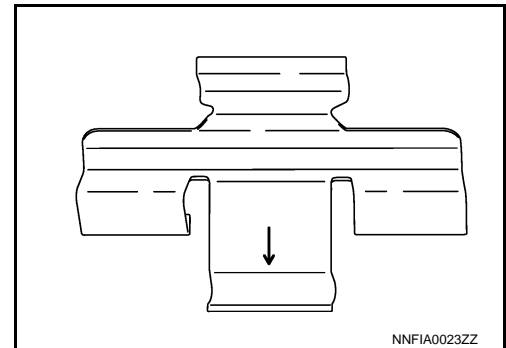
Tighten the tie-rod mounting bolt while it is installed to the tie-rod stopper groove of caliper.



5. Install the cross spring to the tie-rod (lower side).

CAUTION:

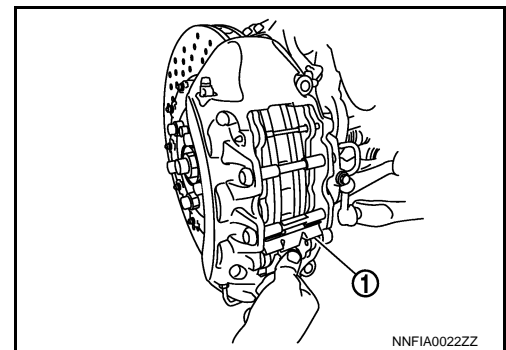
Install the cross spring with the arrow mark facing downward.



6. Insert the pad pin (lower side) from the inner side of caliper while pressing the bottom of the cross spring (1) in, and then install it to the outer side of caliper through the upper hole of brake pad.

CAUTION:

- Never damage the caliper.
- Install the pad pin to fix on the metal bushing.



7. Install the cross spring to the tie-rod (Upper side).

CAUTION:

Install the cross spring with the arrow mark facing upward.

8. In the same way as lower side, insert the pad pin (upper side) from the inner side of caliper while pressing the bottom of the cross spring in, and then install it to the outer side of caliper through the upper hole of brake pad.

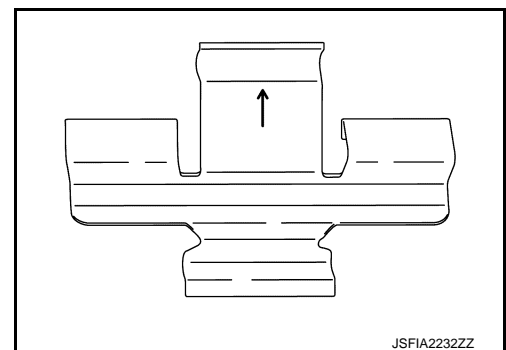
CAUTION:

- Never damage the caliper.
- Install the pad pin to fix on the metal bushing.

9. Depress the brake pedal several times to check that no drag is present for the front disc brake. Refer to [BR-38, "BRAKE PAD : Inspection \(GT-R certified NISSAN dealer\)"](#).

10. Check the fluid level in the master cylinder reservoir tank. Refer to [BR-10, "Inspection"](#).

11. Perform the air bleeding and adjustment when replacing the brake pad and disc rotor. Refer to [BR-11, "Bleeding Brake System"](#), [BR-15, "BRAKE PAD : Inspection and Adjustment"](#).



BRAKE PAD : Inspection (GT-R certified NISSAN dealer)

INFOID:000000011489423

INSPECTION AFTER REMOVAL

FRONT DISC BRAKE

< REMOVAL AND INSTALLATION >

Brake Pad

- Check the following item, and then replace the brake pad.

CAUTION:

When replacing brake pad, replace all four brake pads together. (Replacement depends on inspection results shown below.)

- Front brake pads (a set of right and left) can be replaced alone only when a certified technician checks for scratches and cracks and judges that the rear brake pads are reusable and when there is no history of sport driving. Refer to [BR-18, "BRAKE PAD : Inspection and Adjustment"](#).
- Replace right and left front brake pads together with disc rotors if the replacement of front brake pad for a front disc rotor is a second replacement.
- Replace right and left front brake pads together with front disc rotors if there is a judder.
- Check the brake pad for streaks, cracks or fractures.
- Check the disc rotor contact surface of brake pad for whitening (carbonizing) because it is remarkably burned.
- Peeling paint on the contact surface of piston and brake pad.
- Check that there is not any cracks all-around the brake pad side surface.
- Check that the anti-corrosion paint (silver color) of disc rotor is eliminated.

CAUTION:

If the anti-corrosion paint (silver color) remains on the surface of brake pad, polish it with sandpaper until completely eliminated.

INSPECTION AFTER INSTALLATION

Check the front disc brake for drag. Perform the following procedure if necessary.

1. Remove brake pads. Refer to [BR-36, "BRAKE PAD : Exploded View \(GT-R certified NISSAN dealer\)"](#).
2. Use a brake caliper wrench [SST: KV991112S0 (J-49023)] to return the piston.

CAUTION:

Check the fluid level in the reservoir tank. Because the brake fluid returns to the reservoir tank of master cylinder when pressing the piston.

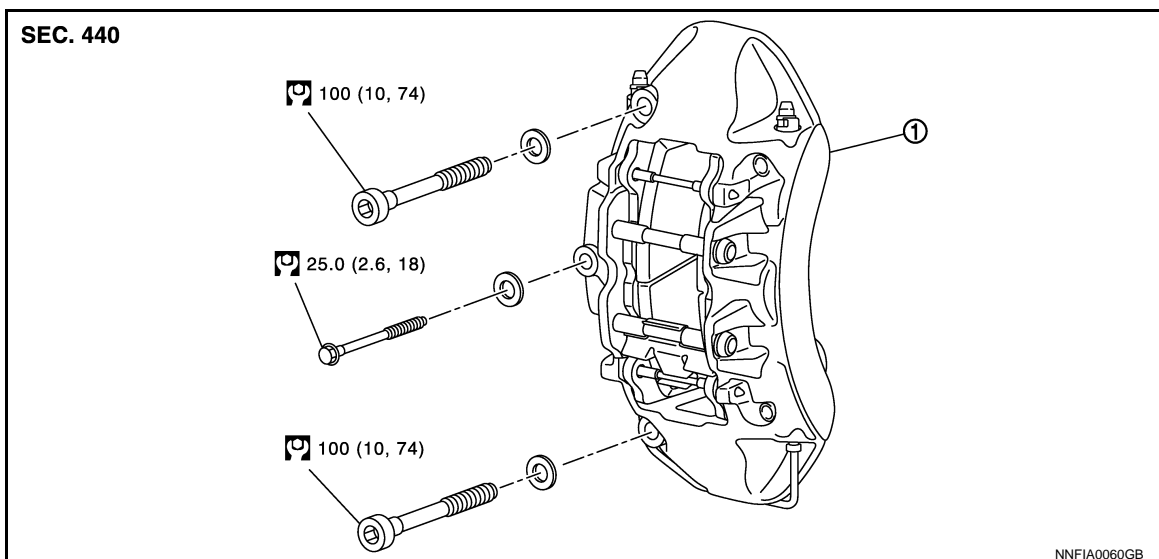
3. Install brake pads. Refer to [BR-36, "BRAKE PAD : Exploded View \(GT-R certified NISSAN dealer\)"](#).
4. Depress the brake pedal several times, check the front disc brake for drag again. Replace the caliper if necessary. Refer to [BR-39, "BRAKE CALIPER ASSEMBLY : Exploded View \(GT-R certified NISSAN dealer\)"](#).

BRAKE CALIPER ASSEMBLY

BRAKE CALIPER ASSEMBLY : Exploded View (GT-R certified NISSAN dealer)

INFOID:0000000011489424

REMOVAL



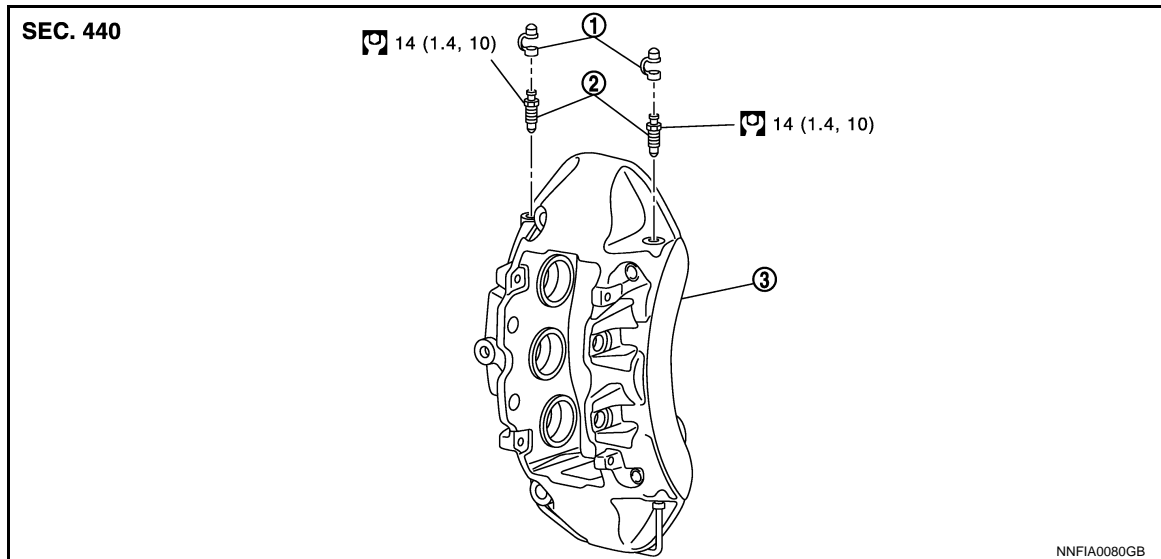
FRONT DISC BRAKE

< REMOVAL AND INSTALLATION >

1. Caliper assembly

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

DISASSEMBLY



1. Cap
2. Bleeder valve
3. Caliper

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

BRAKE CALIPER ASSEMBLY : Removal and Installation (GT-R certified NISSAN dealer)

INFOID:000000011489425

REMOVAL

WARNING:

Since dust covering the front brake has an affect on human body, the dust must be removed with a dust collector. Never splatter the dust with an air blow gun.

CAUTION:

- Never spill or splash brake fluid on painted surfaces. Brake fluid may seriously damage paint. Wipe it out immediately and wash with water if it gets on a protect surface.
- Wrap the flare nut wrench with waste cloth to prevent the caliper from damage.
- If the brake fluid adheres to the caliper or disc rotor, quickly wipe it out.
- Never use an ordinary caliper to this vehicle. It is extremely dangerous as it will interfere with disc rotor. Make sure to use a special caliper to the vehicle.

1. Remove tires with power tool. Refer to [WT-74, "EXCEPT NISMO : Exploded View"](#) (Except NISMO), [WT-74, "NISMO : Exploded View"](#) (NISMO).

NOTE:

Check the vehicle type. Refer to [WT-4, "How to Check Vehicle Type"](#).

2. Fix the disc rotor using wheel nuts.
3. Drain brake fluid. Refer to [BR-10, "Draining"](#).

CAUTION:

Never spill or splash brake fluid on the disc rotor.

4. Loosen the flare nut with a flare nut wrench and separate the brake tube from the caliper.

CAUTION:

- Never depress the brake pedal. Brake fluid may splash while removing the brake tube.
- Never scratch the flare nut and the brake tube.
- Never bend sharply, twist or strongly pull out the brake tubes.
- Cover open end of brake tubes and hoses when disconnecting to prevent entrance of dirt.

5. Remove caliper mounting bolts, and then remove caliper.

CAUTION:

FRONT DISC BRAKE

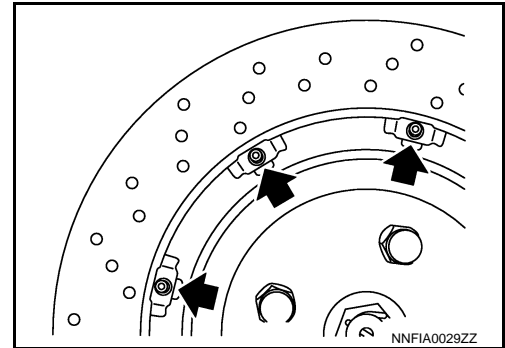
< REMOVAL AND INSTALLATION >

- The steering knuckle is made of aluminum. Rotate the caliper mounting bolt slowly. Never use a power tool.
- The lengths of caliper mounting bolts are different. Check the mounting position.
- Never drop brake pad and caliper assembly.
- The length of caliper mounting bolt is different from an ordinary used bolt. Use bolts applied to the vehicle.
- Never hold the brake tube of caliper.
- Never subject the brake tube of caliper to impact.
- Never contact with the brake tube when the caliper is placed.

6. Remove disc rotor.

CAUTION:

- Put matching marks on the wheel hub and bearing assembly and the disc rotor before removing the disc rotor.
- Never drop disc rotor.
- The disc rotor cannot be disassembled. Never use the nut (←) for loosening or tightening the disc rotor.



INSTALLATION

WARNING:

Since dust covering the front brake has an affect on human body, the dust must be removed with a dust collector. Never splatter the dust with an air blow gun.

CAUTION:

- Never depress the brake pedal. Brake fluid may splash while removing the brake tube.
- Never spill or splash brake fluid on painted surfaces. Brake fluid may seriously damage paint. Wipe it out immediately and wash with water if it gets on a painted surface.
- Wrap the flare nut wrench with waste cloth to protect the caliper from damage.
- If the brake fluid adheres to the caliper or disc rotor, quickly wipe it out.
- When replacing front disc rotors, replace them together with right and left front brake pads. (Replacement depends on inspection results shown below.)
- Front disc rotors (a set of right and left) can be replaced alone only when a certified technician checks for scratches and cracks and judges that the front brake pads are reusable and when there is no history of sport driving. Refer to [BR-15, "BRAKE PAD : Inspection and Adjustment"](#).
- Replace right and left front brake pads together with front disc rotors if there is a judder.
- Never allow foreign matter (e.g. dust) and oils other than brake fluid to enter the reservoir tank.
- Since brake fluid is susceptible to deterioration from moisture, discard brake fluid remaining in the container.

1. Install disc rotor.

CAUTION:

Align the matching marks that have been made during removal when reusing the disc rotor.

2. Install caliper.

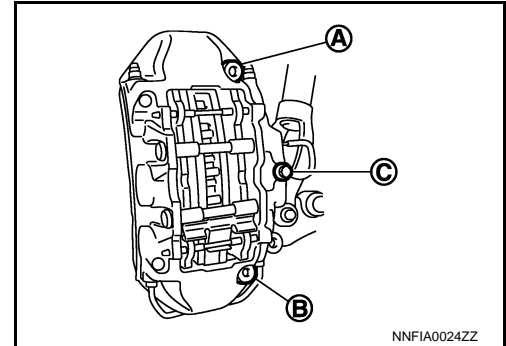
CAUTION:

- Never hold the brake tube of caliper.
- Never subject the brake tube of caliper to impact.
- The length of caliper mounting bolt is different from an ordinary used bolt. Use bolts applied to the vehicle.
- Never spill or splash any grease and moisture on the caliper mounting face, threads, mounting bolts and washers. Wipe out any grease and moisture.
- Check the caliper mounting bolt threads for damage or aluminum powders. Replace or clean if necessary.
- Install the washer and temporarily tighten the caliper mounting bolt.

FRONT DISC BRAKE

< REMOVAL AND INSTALLATION >

- The steering knuckle is made of aluminum. Rotate the caliper mounting bolt slowly. Never use a power tool.
3. Install the brake tube to the caliper, temporarily tighten the flare nut by hand until it does not rotate further, and tighten the flare nut to the specified torque using a flare nut torque wrench.
CAUTION:
 - Never scratch the flare nut and the brake tube.
 - Never bend sharply, twist or strongly pull out the brake tubes.
 4. Fill with new brake fluid and perform the air bleeding. Refer to [BR-11, "Bleeding Brake System"](#).
CAUTION:
 - Perform the air bleeding (after disassembly of brake piping and caliper) with the procedures from 2 to 7.
 - Never reuse drained brake fluid.
 5. Tighten the caliper mounting bolts in order of (A), (B), and (C) to the specified torque while the brake pedal is depressed.
CAUTION:
 - Perform it when the temperature of the caliper is room temperature.
 - The lengths of caliper mounting bolts are different. Be careful for assembly.
 6. Check that no drag is present for the front disc brake. Refer to [BR-43, "BRAKE CALIPER ASSEMBLY : Inspection \(GT-R certified NISSAN dealer\)"](#).
 7. Perform the air bleeding (disassembly of brake piping and caliper) with the procedures from 8 to 10. Refer to [BR-11, "Bleeding Brake System"](#).
 8. Perform the adjustment when the disc rotor and brake pad are replaced. Refer to [BR-16, "DISC ROTOR : Inspection and Adjustment"](#).



BRAKE CALIPER ASSEMBLY : Disassembly and Assembly (GT-R certified NISSAN dealer)

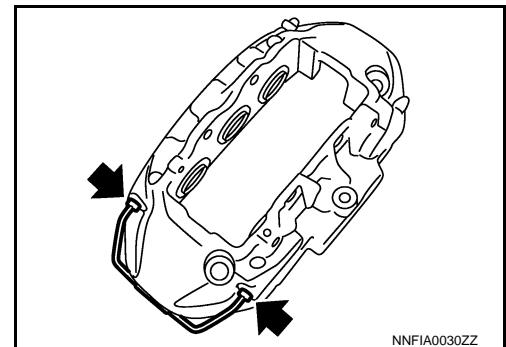
INFOID:000000011489426

DISASSEMBLY

CAUTION:

- Never contact with the brake tube when the caliper is placed.
- Never hold the brake tube of caliper.
- Never subject the brake tube of caliper to impact.
- Never tighten or loosen the flare nut (↔) of caliper unit.
- Never damage the caliper.

Remove cap and bleeder valve.



ASSEMBLY

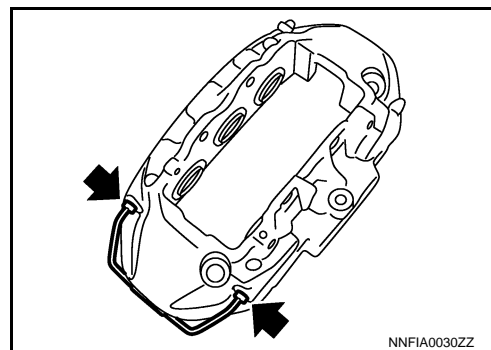
CAUTION:

- Never contact with the brake tube when the caliper is placed.
- Never hold the brake tube of caliper.
- Never subject the brake tube of caliper to impact.

FRONT DISC BRAKE

< REMOVAL AND INSTALLATION >

- **Never tighten or loosen the flare nut (↔) of caliper unit.**
 - **Never damage the caliper.**
- Install bleeder valve and cap.



BRAKE CALIPER ASSEMBLY : Inspection (GT-R certified NISSAN dealer) INFOID:0000000011489427

INSPECTION BEFORE REMOVAL

Check the piston boots for breakage or hardening. Replace the caliper if necessary. Refer to [BR-39. "BRAKE CALIPER ASSEMBLY : Exploded View \(GT-R certified NISSAN dealer\)".](#)

INSPECTION AFTER INSTALLATION

Check the front disc brake for drag. Perform the following procedure if necessary.

1. Remove brake pad. Refer to [BR-36. "BRAKE PAD : Exploded View \(GT-R certified NISSAN dealer\)".](#)
2. Use a brake caliper wrench [SST: KV991112S0 (J-49023)] to return the piston.

CAUTION:

Check the fluid level in the reservoir tank. Because the brake fluid returns to the reservoir tank of master cylinder when pressing the piston.

3. Install brake pad. Refer to [BR-36. "BRAKE PAD : Exploded View \(GT-R certified NISSAN dealer\)".](#)
4. Depress the brake pedal several times, check the front disc brake for drag again. Replace the caliper if necessary. Refer to [BR-39. "BRAKE CALIPER ASSEMBLY : Exploded View \(GT-R certified NISSAN dealer\)".](#)

INSPECTION AFTER DISASSEMBLY

Check the following items and replace if necessary.

Caliper

Check the caliper for cracks or damage.

Pad Pin

- Check the piston pin for corrosion, wear, cracks or damage.
- Check the metal bushing of pad pin for settling and damage.

Tie-rod and Cross Spring

Check the tie-rod and cross spring for wear, cracks or damage.

REAR DISC BRAKE

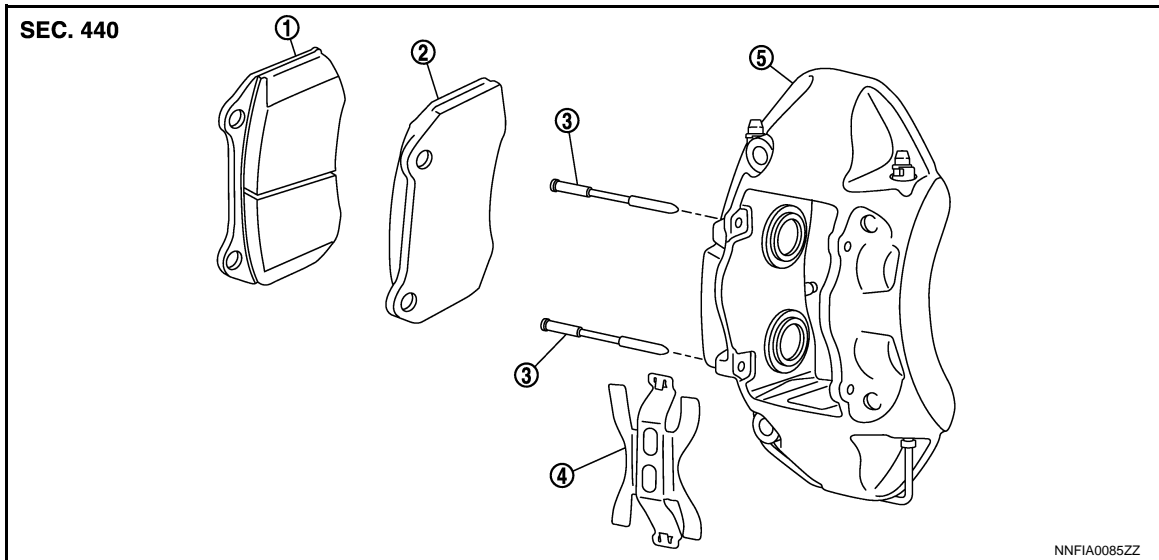
< REMOVAL AND INSTALLATION >

REAR DISC BRAKE

BRAKE PAD

BRAKE PAD : Exploded View (GT-R certified NISSAN dealer)

INFOID:000000011489428



- | | | |
|-------------------------------------|--------------|------------|
| 1. Inner pad (with pad wear sensor) | 2. Outer pad | 3. Pad pin |
| 4. Cross spring | 5. Caliper | |

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

BRAKE PAD : Removal and Installation (GT-R certified NISSAN dealer)

INFOID:000000011489429

REMOVAL

WARNING:

Since dust covering the rear brake has an affect on human body, the dust must be removed with a dust collector. Never splatter the dust with an air blow gun.

CAUTION:

Never depress the brake pedal while removing the brake pads because the piston may pop out.

1. Remove tires with power tool. Refer to [WT-74, "EXCEPT NISMO : Exploded View"](#) (Except NISMO), [WT-74, "NISMO : Exploded View"](#) (NISMO).

NOTE:

Check the vehicle type. Refer to [WT-4, "How to Check Vehicle Type"](#).

2. Remove the pad pin (lower side) (1) using a pin punch.

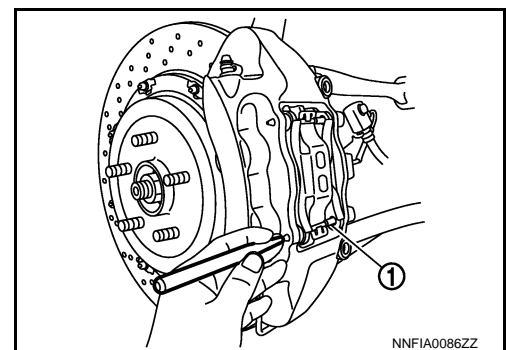
CAUTION:

Never damage the caliper.

3. Remove cross spring

CAUTION:

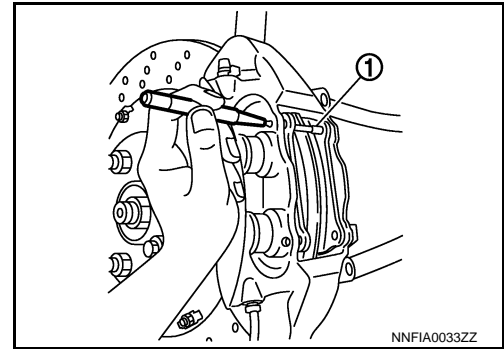
Never deform the cross spring.



REAR DISC BRAKE

< REMOVAL AND INSTALLATION >

4. Remove the pad pin (upper side) (1) using a pin punch.
CAUTION:
Never damage the caliper.
5. Remove brake pad.
6. Check the piston boots. Refer to [BR-49. "BRAKE CALIPER ASSEMBLY : Inspection \(GT-R certified NISSAN dealer\)"](#).



INSTALLATION

WARNING:

Since dust covering the rear brake has an affect on human body, the dust must be removed with a dust collector. Never splatter the dust with an air blow gun.

CAUTION:

- Never depress the brake pedal while removing the brake pads because the piston may pop out.
- Check the fluid level in the reservoir tank. Because the brake fluid returns to the reservoir tank of master cylinder when pressing the piston.
- When replacing brake pad, replace all four brake pads together. (Replacement depends on inspection results shown below.)
- Replace four brake pads together with four disc rotors if the replacement of rear brake pad for a rear disc rotor is the second one.
- Replace right and left rear brake pads together with rear disc rotors if there is a judder.

1. Use a brake caliper wrench [SST: KV991112S0 (J-49023)] to press back the piston when replacing the brake pad.

2. Install brake pad to caliper.

CAUTION:

Never damage the piston boot.

3. Insert the pad pin (upper side) from the inner side of caliper, and then install it to the outer side of caliper through the upper hole of brake pad.

CAUTION:

- Never damage the caliper.
- Install the pad pin to fix on the metal bushing.

4. Install the cross spring.

CAUTION:

Refer to the mark (A) to confirm correct installation.

5. Insert the pad pin (lower side) from the inner side of caliper while pressing the bottom of the cross spring in, and then install it to the outer side of caliper through the upper hole of brake pad.

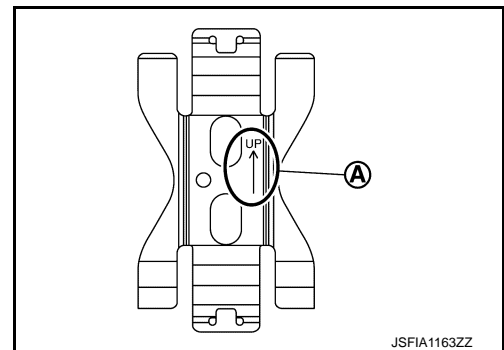
CAUTION:

- Never damage the caliper.
- Install the pad pin to fix on the metal bushing.

6. Depress the brake pedal several times to check that no drag is present for the rear disc brake. Refer to [BR-49. "BRAKE CALIPER ASSEMBLY : Inspection \(GT-R certified NISSAN dealer\)"](#).

7. Check the fluid level in the master cylinder reservoir tank. Refer to [BR-10. "Inspection"](#).

8. Perform the air bleeding and adjustment when replacing the brake pad and disc rotor. Refer to [BR-11. "Bleeding Brake System"](#) and [BR-18. "BRAKE PAD : Inspection and Adjustment"](#).



BRAKE PAD : Inspection (GT-R certified NISSAN dealer)

INFOID:000000011489430

INSPECTION AFTER REMOVAL

Brake Pad

- Check the following item, and then replace the brake pad.

CAUTION:

REAR DISC BRAKE

< REMOVAL AND INSTALLATION >

When replacing brake pad, replace all four brake pads together. (Replacement depends on inspection results shown below.)

- Replace four brake pads together with four disc rotors if the replacement of rear brake pad for a rear disc rotor is the second one.
 - Replace right and left rear brake pads together with rear disc rotors if there is a judder.
- Check the brake pad for streaks, cracks or fractures.
 - Check the disc rotor contact surface of brake pad for whitening (carbonizing) because it is remarkably burned.
 - Peeling paint on the contact surface of piston and brake pad.
 - Check that there is not any cracks all-around the brake pad side surface.
 - Check that the anti-corrosion paint (silver color) of disc rotor is eliminated.

CAUTION:

If the anti-corrosion paint (silver color) remains on the surface of brake pad, polish it with sandpaper until completely eliminated.

INSPECTION AFTER INSTALLATION

Check the rear disc brake for drag. Perform the following procedure if necessary.

1. Remove the brake pad. Refer to [BR-44, "BRAKE PAD : Exploded View \(GT-R certified NISSAN dealer\)"](#).
2. Use a brake caliper wrench [SST: KV991112S0 (J-49023)] to return the piston.

CAUTION:

Check the fluid level in the reservoir tank. Because the brake fluid returns to the reservoir tank of master cylinder when pressing the piston.

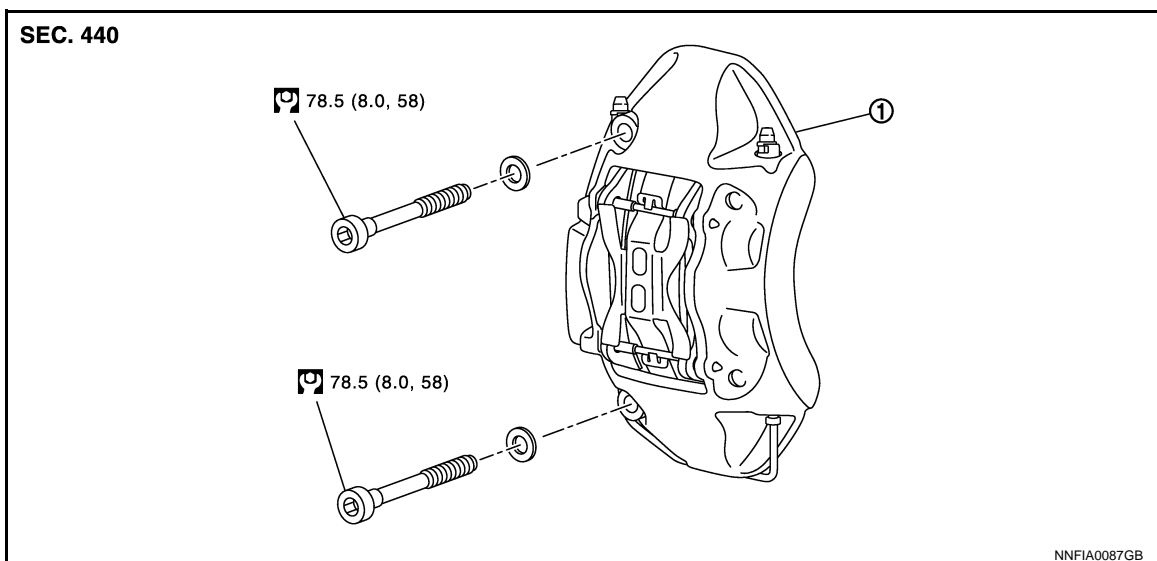
3. Install the brake pad. Refer to [BR-44, "BRAKE PAD : Exploded View \(GT-R certified NISSAN dealer\)"](#).
4. Depress the brake pedal several times, and check the rear disc brake for drag again. Replace the caliper if necessary. Refer to [BR-46, "BRAKE CALIPER ASSEMBLY : Exploded View \(GT-R certified NISSAN dealer\)"](#).

BRAKE CALIPER ASSEMBLY

BRAKE CALIPER ASSEMBLY : Exploded View (GT-R certified NISSAN dealer)

INFOID:0000000011489431

REMOVAL



1. Caliper

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

DISASSEMBLY

< REMOVAL AND INSTALLATION >



- G
-
- H

BRAKE CALIPER ASSEMBLY : Removal and Installation (GT-R certified NISSAN dealer)

INFOID:0000000011489432

I
J
K
L
M

Since dust covering the rear brake has an affect on human body, the dust must be removed with a dust collector. Never splatter the dust with an air blow gun.

- Never spill or splash brake fluid on painted surfaces. Brake fluid may seriously damage paint. Wipe it out immediately and wash with water if it gets on a painted surface.
- Wrap the flare nut wrench with waste cloth to protect the caliper from damage.
- If the brake fluid adheres to the caliper or disc rotor, quickly wipe it out.

1. Return the parking brake lever.
2. Remove tires with power tool. Refer to [WT-74, "EXCEPT NISMO : Exploded View"](#) (Except NISMO), [WT-74, "NISMO : Exploded View"](#) (NISMO).

Check the vehicle type. Refer to [WT-4, "How to Check Vehicle Type"](#).

3. Fix the disc rotor using wheel nuts.
4. Drain brake fluid. Refer to [BR-10, "Draining"](#).

Never spill or splash brake fluid on the disc rotor.

5. Loosen the flare nut with a flare nut wrench and separate the brake tube from the caliper.
- CAUTION:**
- Never depress the brake pedal. Brake fluid may splash while removing the brake tube.
 - Never scratch the flare nut and the brake tube.
 - Never bend sharply, twist or strongly pull out the brake tubes.
 - Cover open end of brake tubes and hoses when disconnecting to prevent entrance of dirt.

6. Remove brake hose bracket. Refer to BR-25, "REAR : Exploded View".

7. Remove caliper mounting bolts, and then remove caliper.

- The steering knuckle is made of aluminum. Rotate the caliper mounting bolt slowly. Never use a power tool.
- Never drop brake pad and caliper assembly.
- Never hold the brake tube of caliper.
- Never subject the brake tube of caliper to impact.

REAR DISC BRAKE

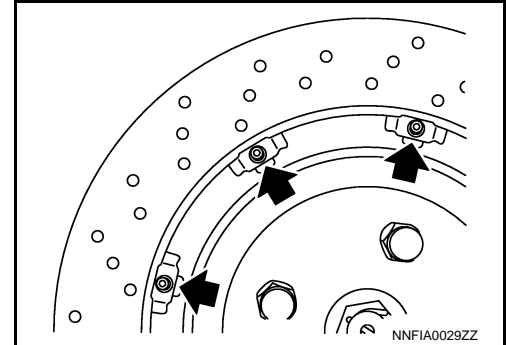
< REMOVAL AND INSTALLATION >

- Never contact with the brake tube when the caliper is placed.

8. Remove disc rotor.

CAUTION:

- Put matching marks on the wheel hub and bearing assembly and the disc rotor before removing the disc rotor.
- Never drop disc rotor.
- The disc rotor cannot be disassembled. Never use the nut (↩) for loosening or tightening the disc rotor.



INSTALLATION

WARNING:

Since dust covering the rear brake has an affect on human body, the dust must be removed with a dust collector. Never splatter the dust with an air blow gun.

CAUTION:

- Never depress the brake pedal. Brake fluid may splash while removing the brake tube.
- Never spill or splash brake fluid on painted surfaces. Brake fluid may seriously damage paint. Wipe it out immediately and wash with water if it gets on a painted surface.
- Wrap the flare nut wrench with waste cloth to protect the caliper from damage.
- If the brake fluid adheres to the caliper or disc rotor, quickly wipe it out.
- When replacing rear disc rotors, replace them together with right and left rear brake pads. (Replacement depends on inspection results shown below.)
- Rear disc rotors (a set of right and left) can be replaced alone only when a certified technician checks for scratches and cracks and judges that the rear brake pads are reusable and when there is no history of sport driving. Refer to [BR-18, "BRAKE PAD : Inspection and Adjustment"](#).
- Replace right and left rear brake pads together with rear disc rotors if there is a judder.
- Never allow foreign matter (e.g. dust) and oils other than brake fluid to enter the reservoir tank.
- Since brake fluid is susceptible to deterioration from moisture, discard brake fluid remaining in the container.

1. Install disc rotor.

CAUTION:

Align the matching marks that have been made during removal when reusing the disc rotor.

2. Install caliper.

CAUTION:

- Never hold the brake tube of caliper.
- Never subject the brake tube of caliper to impact.
- Never spill or splash any grease and moisture on the caliper mounting face, threads, mounting bolts or washers. Wipe out any grease and moisture.
- Check the caliper mounting bolt threads for damage or aluminum powders. Replace or clean if necessary.
- Install the washer and temporarily tighten the caliper mounting bolt.
- The steering knuckle is made of aluminum. Rotate the caliper mounting bolt slowly. Never use a power tool.

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

4. Install the brake tube to the caliper, temporarily tighten the flare nut by hand until it does not rotate further, and tighten the flare nut to the specified torque using a flare nut torque wrench.

CAUTION:

- Never scratch the flare nut and the brake tube.
- Never bend sharply, twist or strongly pull out the brake tubes.

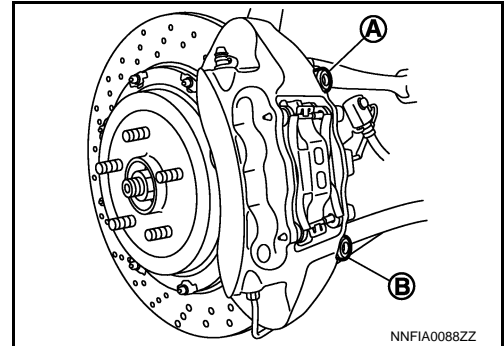
5. Refill with new brake fluid and perform the air bleeding. Refer to [BR-11, "Bleeding Brake System"](#).

CAUTION:

REAR DISC BRAKE

< REMOVAL AND INSTALLATION >

- Perform the air bleeding (after disassembly of brake piping and caliper) with the procedures from 2 to 7.
 - **Never reuse drained brake fluid.**
6. Tighten the caliper mounting bolts in order of (A) to (B) to the specified torque while the brake pedal is depressed.
- CAUTION:**
Perform it when the temperature of the caliper is room temperature.
7. Check that no drag is present for the rear disc brake. Refer to [BR-49. "BRAKE CALIPER ASSEMBLY : Inspection \(GT-R certified NISSAN dealer\)"](#).
8. Perform the air bleeding (disassembly of brake piping and caliper) with the procedures from 8 to 10. Refer to [BR-11. "Bleeding Brake System"](#).
9. Perform the adjustment when the disc rotor and brake pad are replaced. Refer to [BR-18. "DISC ROTOR : Inspection and Adjustment"](#).



BRAKE CALIPER ASSEMBLY : Disassembly and Assembly (GT-R certified NISSAN dealer)

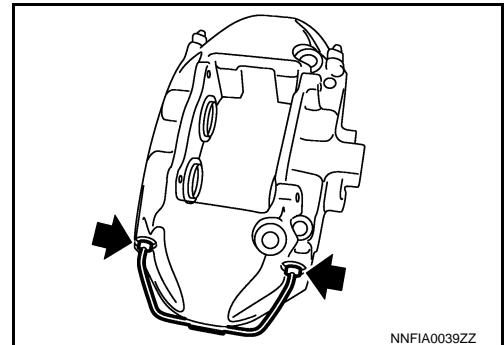
INFOID:0000000011489433

DISASSEMBLY

CAUTION:

- **Never contact with the brake tube when the caliper is placed.**
- **Never hold the brake tube of caliper.**
- **Never subject the brake tube of caliper to impact.**
- **Never tighten or loosen the flare nut (↔) of caliper unit.**
- **Never damage the caliper.**

Remove cap and bleeder valve.

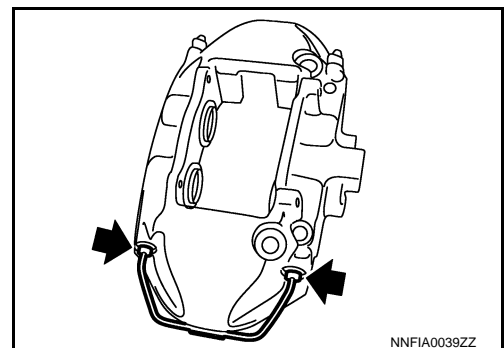


ASSEMBLY

CAUTION:

- **Never hold the brake tube of caliper.**
- **Never subject the brake tube of caliper to impact.**
- **Never tighten or loosen the flare nut (↔) of caliper unit.**
- **Never damage the caliper.**

Install bleeder valve and cap.



BRAKE CALIPER ASSEMBLY : Inspection (GT-R certified NISSAN dealer)

INFOID:0000000011489434

INSPECTION BEFORE REMOVAL

Check the piston boots for breakage or hardening. Replace the caliper if necessary. Refer to [BR-46. "BRAKE CALIPER ASSEMBLY : Exploded View \(GT-R certified NISSAN dealer\)"](#).

REAR DISC BRAKE

< REMOVAL AND INSTALLATION >

INSPECTION AFTER INSTALLATION

Check the rear disc brake for drag. Perform the following procedure if necessary.

1. Remove brake pad. Refer to [BR-44, "BRAKE PAD : Exploded View \(GT-R certified NISSAN dealer\)"](#).
2. Use a brake caliper wrench [SST: KV991112S0 (J-49023)] to return the piston.

CAUTION:

Check the fluid level in the reservoir tank. Because the brake fluid returns to the reservoir tank of master cylinder when pressing the piston.

3. Install brake pad. Refer to [BR-44, "BRAKE PAD : Exploded View \(GT-R certified NISSAN dealer\)"](#).
4. Depress the brake pedal several times, and check the rear disc brake for drag again. Replace the caliper if necessary. Refer to [BR-46, "BRAKE CALIPER ASSEMBLY : Exploded View \(GT-R certified NISSAN dealer\)"](#).

INSPECTION AFTER DISASSEMBLY

Check the following items and replace if necessary.

Caliper

Check the caliper for cracks or damage.

Pad Pin

- Check the piston pin for corrosion, wear, cracks or damage.
- Check the metal bushing of pad pin for settling and damage.

Cross Spring

Check the cross spring for wear, cracks or damage.

SERVICE DATA AND SPECIFICATIONS (SDS)

< SERVICE DATA AND SPECIFICATIONS (SDS)

SERVICE DATA AND SPECIFICATIONS (SDS)

SERVICE DATA AND SPECIFICATIONS (SDS)

General Specifications (GT-R certified NISSAN dealer)

INFOID:0000000011489435

Unit: mm (in.)

| | | |
|-----------------|--|---|
| Front brake | Cylinder bore diameter | $36.0 (1.147) \times 2 + 34.0 (1.339) \times 2 + 30.0 (1.181) \times 2$ |
| | Pad length \times width \times thickness | $184.7 \times 64.0 \times 11.1 (7.27 \times 2.250 \times 0.437)$ |
| | Rotor outer diameter \times thickness | $390 \times 32.6 (15.35 \times 1.283)$ |
| Rear brake | Cylinder bore diameter | $30.0 (1.181) \times 4$ |
| | Pad length \times width \times thickness | $128.7 \times 51.8 \times 12.1 (5.07 \times 2.039 \times 0.476)$ |
| | Rotor outer diameter \times thickness | $380 \times 30.0 (14.96 \times 1.181)$ |
| Master cylinder | Cylinder bore diameter | 28.5 (18/16) |
| Control valve | Valve type | Electric brake force distribution |
| Brake booster | Diaphragm diameter | Primary: 230 (9.06) |
| | | Secondary: 205 (8.07) |

Brake Pedal

INFOID:0000000011489436

Unit: mm (in.)

| Item | Standard |
|--|-----------------------------|
| Brake pedal height | 169.0 – 179.0 (6.65 – 7.05) |
| Clearance between the stop lamp switch and ASCD brake switch threaded end and the stopper rubber | 0.2 – 1.96 (0.008 – 0.0772) |
| Brake pedal play | 3.0 – 11.0 (0.118 – 0.433) |
| Depressed brake pedal height [Depressing 490 N (50 kg, 110 lb) while turning the engine ON] | 100 (3.94) or more |

Brake Booster (GT-R certified NISSAN dealer)

INFOID:0000000011489437

Unit: mm (in.)

| Item | Standard |
|------------------|-----------------------------|
| Input rod length | 129.5 – 130.5 (5.10 – 5.14) |

Front Disc Brake

INFOID:0000000011489438

Unit: mm (in.)

| Item | | Limit |
|------------|----------------|--------------|
| Brake pad | Wear thickness | 4.5 (0.177) |
| Disc rotor | Wear thickness | 30.6 (1.205) |

Rear Disc Brake

INFOID:0000000011489439

Unit: mm (in.)

| Item | | Limit |
|------------|----------------|--------------|
| Brake pad | Wear thickness | 4.5 (0.177) |
| Disc rotor | Wear thickness | 28.0 (1.102) |