<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>VACUUM LINES</td>
<td>28</td>
</tr>
<tr>
<td>Exploded View</td>
<td>28</td>
</tr>
<tr>
<td>Removal and Installation</td>
<td>28</td>
</tr>
<tr>
<td>FRONT DISC BRAKE</td>
<td>30</td>
</tr>
<tr>
<td>Exploded View of Brake Pads</td>
<td>30</td>
</tr>
<tr>
<td>Removal and Installation of Brake Pads</td>
<td>30</td>
</tr>
<tr>
<td>Brake Burnishing Procedure</td>
<td>31</td>
</tr>
<tr>
<td>Exploded View of Brake Caliper</td>
<td>32</td>
</tr>
<tr>
<td>Removal and Installation of Brake Caliper and Rotor</td>
<td>32</td>
</tr>
<tr>
<td>REAR DISC BRAKE</td>
<td>35</td>
</tr>
<tr>
<td>Exploded View of Brake Pads</td>
<td>35</td>
</tr>
<tr>
<td>Removal and Installation of Brake Pads</td>
<td>35</td>
</tr>
<tr>
<td>Brake Burnishing Procedure</td>
<td>36</td>
</tr>
<tr>
<td>Exploded View of Brake Caliper</td>
<td>37</td>
</tr>
<tr>
<td>Removal and Installation of Brake Caliper and Rotor</td>
<td>37</td>
</tr>
<tr>
<td>UNIT DISASSEMBLY AND ASSEMBLY</td>
<td>39</td>
</tr>
<tr>
<td>FRONT DISC BRAKE</td>
<td>39</td>
</tr>
<tr>
<td>Disassembly and Assembly</td>
<td>39</td>
</tr>
<tr>
<td>REAR DISC BRAKE</td>
<td>42</td>
</tr>
<tr>
<td>Disassembly and Assembly</td>
<td>42</td>
</tr>
<tr>
<td>SERVICE DATA AND SPECIFICATIONS (SDS)</td>
<td>45</td>
</tr>
<tr>
<td>General Specifications</td>
<td>45</td>
</tr>
<tr>
<td>Brake Pedal</td>
<td>45</td>
</tr>
<tr>
<td>Check Valve</td>
<td>46</td>
</tr>
<tr>
<td>Brake Booster</td>
<td>46</td>
</tr>
<tr>
<td>Front Disc Brake</td>
<td>46</td>
</tr>
<tr>
<td>Rear Disc Brake</td>
<td>46</td>
</tr>
</tbody>
</table>

Revision: August 2012
**PRECAUTIONS**

**PRECAUTIONS**

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

The Supplemental Restraint System such as "AIR BAG" and "SEAT BELT PRE-TENSIONER", used along with a front seat belt, helps to reduce the risk or severity of injury to the driver and front passenger for certain types of collision. This system includes seat belt switch inputs and dual stage front air bag modules. The SRS system uses the seat belt switches to determine the front air bag deployment, and may only deploy one front air bag, depending on the severity of a collision and whether the front occupants are belted or unbelted. Information necessary to service the system safely is included in the SR and SB section of this Service Manual.

**WARNING:**

- To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision which would result in air bag inflation, all maintenance must be performed by an authorized NISSAN/INFINITI dealer.
- Improper maintenance, including incorrect removal and installation of the SRS, can lead to personal injury caused by unintentional activation of the system. For removal of Spiral Cable and Air Bag Module, see the SR section.
- Do not use electrical test equipment on any circuit related to the SRS unless instructed to in this Service Manual. SRS wiring harnesses can be identified by yellow and/or orange harnesses or harness connectors.

**PRECAUTIONS WHEN USING POWER TOOLS (AIR OR ELECTRIC) AND HAMMERS**

**WARNING:**

- When working near the Airbag Diagnosis Sensor Unit or other Airbag System sensors with the Ignition ON or engine running, DO NOT 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.

Precaution for Procedure without Cowl Top Cover

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

Precaution for Brake System

- Clean dust on front brake and rear brake with a vacuum dust collector. Do not blow with compressed air.
- Always use recommended brake fluid. Refer to MA-18, "FOR USA AND CANADA : Fluids and Lubricants" (for United States and Canada) or, MA-19, "FOR MEXICO : Fluids and Lubricants" (for Mexico).
- Never reuse drained brake fluid.
- Be careful not to splash brake fluid on painted areas; it may cause paint damage. If brake fluid is splashed on painted areas, wash it away with water immediately.
- Use clean brake fluid to clean or wash all parts of master cylinder and disc brake caliper, etc.
- Never use mineral oils such as gasoline or kerosene. They will ruin rubber parts of the hydraulic system.
PRECAUTIONS

< PRECAUTION >

- Use flare nut torque wrench when installing brake tube.
- When installing brake tube and hose, be sure to check torque.
- Before working, turn ignition switch OFF and disconnect connectors of ABS actuator and electric unit (control unit) or battery cable from the negative terminal.
- Burnish the brake contact surfaces after refinishing or replacing rotors, after replacing pads, or if a soft pedal occurs at very low mileage. Refer to BR-31, "Brake Burnishing Procedure".

WARNING:
- Clean brake pads and shoes with a waste cloth, then wipe with a dust collector.
The actual shapes of Kent-Moore tools may differ from those of special service tools illustrated here.

<table>
<thead>
<tr>
<th>Tool number (Kent-Moore No.)</th>
<th>Tool name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>—</td>
<td>(J-46532) Brake and clutch pedal height measurement tool</td>
<td>Measuring brake pedal height</td>
</tr>
<tr>
<td>38-PFM90.5</td>
<td>( — ) Pro-Cut PFM90 On-Car Brake Lathe</td>
<td>Refinishing rotors</td>
</tr>
</tbody>
</table>

### Commercial Service Tool

<table>
<thead>
<tr>
<th>Tool name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Flare nut crowfoot</td>
<td>Installing brake tubes and hoses</td>
</tr>
<tr>
<td>2. Torque wrench</td>
<td>a:10 mm (0.39 in) / 12 mm (0.47 in)</td>
</tr>
<tr>
<td>Power tool</td>
<td>Loosening nuts, screws and bolts</td>
</tr>
</tbody>
</table>
## NVH Troubleshooting Chart

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

|----------------|------------|------------|------------|------------|------------|-------------|-------------|-------------|--------------------------------|--------------------------------|--------------------------------|-------------------------------|

<table>
<thead>
<tr>
<th>Possible cause and SUSPECTED PARTS</th>
<th>Pads - damaged</th>
<th>Pads - uneven wear</th>
<th>Shims damaged</th>
<th>Rotor imbalance</th>
<th>Rotor damage</th>
<th>Rotor runout</th>
<th>Rotor deformation</th>
<th>Rotor deflection</th>
<th>Rotor rust</th>
<th>Rotor thickness variation</th>
<th>WHEEL HUB</th>
<th>SUSPENSION</th>
<th>TIRES</th>
<th>ROAD WHEEL</th>
<th>DRIVE SHAFT</th>
<th>STEERING</th>
</tr>
</thead>
<tbody>
<tr>
<td>Symptom</td>
<td>Noise</td>
<td>×</td>
<td>×</td>
<td>×</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>×</td>
<td>×</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Shake</td>
<td>×</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>×</td>
<td>×</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Shimmy, Shudder</td>
<td>×</td>
<td>×</td>
<td>×</td>
<td>×</td>
<td>×</td>
<td>×</td>
<td>×</td>
<td>×</td>
<td></td>
<td>×</td>
<td>×</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

×: Applicable
BASIC INSPECTION
FRONT DISC BRAKE
BRAKE PAD

BRAKE PAD : Inspection of Pad

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

Standard thickness : Refer to BR-46, "Front Disc Brake".
Repair limit thickness : Refer to BR-46, "Front Disc Brake".

DISC ROTOR
DISC ROTOR : Inspection of Rotor

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

RUNOUT
1. Attach disc rotor to wheel hub using wheel nuts (at two or more positions).
2. Inspect runout using a dial gauge placed at 10 mm (0.39 in) inside the disc edge.

Runout limit : Refer to BR-46, "Front Disc Brake".
(with it attached to the vehicle)

NOTE:
Before measuring, make sure that wheel bearing axial end play is within the specification. Refer to FAX-5, "Inspection".
3. When runout exceeds limit value, displace mounting positions of disc rotor by one hole. Then find a position of the minimum value for runout.
4. If runout is outside the specified value after performing the above operation, refinish disc rotor using Tool.

Tool number : 38-PFM90.5

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

Standard thickness : Refer to BR-46, "Front Disc Brake".
Repair limit thickness : Refer to BR-46, "Front Disc Brake".
Thickness variation : Refer to BR-46, "Front Disc Brake".
(Measured at 8 positions)
< BASIC INSPECTION >

REAR DISC BRAKE

BRAKE PAD

BRAKE PAD : Inspection of Pad

PAD WEAR

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

  **Standard thickness** : Refer to BR-46, "Rear Disc Brake".

  **Repair limit thickness** : Refer to BR-46, "Rear Disc Brake".

DISC ROTOR

DISC ROTOR : Inspection of Rotor

VISUAL

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

RUNOUT

1. Attach disc rotor to wheel hub using wheel nuts (at two or more positions).
2. Inspect runout using dial gauge placed at 10 mm (0.39 in) inside disc edge.

   **Runout limit** : Refer to BR-46, "Rear Disc Brake".

   *(With it attached to the vehicle)*

**NOTE:**
Before measuring, make sure that wheel bearing axial end play is within the specification. Refer to RAX-5, "Inspection".

3. When runout exceeds limit value, displace mounting positions of disc rotor by one hole. Then find a position of the minimum value for runout.
4. If runout is outside the specified value after performing the above operation, refinish the disc rotor using Tool.

   **Tool number** : 38-PFM90.5

THICKNESS

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

  **Standard thickness** : Refer to BR-46, "Rear Disc Brake".

  **Repair limit thickness** : Refer to BR-46, "Rear Disc Brake".

  **Thickness variation** : Refer to BR-46, "Rear Disc Brake".

  *(Measured at 8 positions)*
< BASIC INSPECTION >

BRAKE BOOSTER

Inspection

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

AIR TIGHT

• Run engine at idle for approximately 1 minute, and stop it after applying vacuum to booster. Depress brake pedal normally to change vacuum to atmospheric pressure. Make sure that distance at intervals of 5 seconds between brake pedal and floor panel gradually increases.

• Depress brake pedal while engine is running, and stop engine with pedal depressed. The pedal stroke should not change after holding pedal down for 30 seconds.
< BASIC INSPECTION >

VACUUM LINES

Inspection

VISUAL INSPECTION
Check for improper assembly, damage and deterioration. Replace as necessary.

CHECK VALVE INSPECTION

Airtightness Inspection
Use a suitable tool to check the built-in check valve. Replace the vacuum hose with the built-in check valve as an assembly if the vacuum hose is out of specification.

When suitable tool (A) is connected to booster side (B)
When suitable tool (A) is connected to engine side (C)
Refer to BR-46, "Check Valve".
Refer to BR-46, "Check Valve".
BRAKE MASTER CYLINDER

< BASIC INSPECTION >

BRAKE MASTER CYLINDER

Inspection

LEAK INSPECTION
Check for leaks at master cylinder to brake booster attachment point, reservoir tank, and brake tube connections.
CAUTION:

- All hoses and piping (tubes) must be free from excessive bending, twisting and pulling.
- Make sure there is no interference with other parts when turning the steering wheel both clockwise and counterclockwise.
- The brake piping is an important safety part. If a brake fluid leak is detected, always disassemble the parts. Replace applicable part with a new one, if necessary.
- Be careful not to splash brake fluid on painted areas; it may cause paint damage. If brake fluid is splashed on painted areas, wash it away with water immediately.
- Do not bend or twist brake hose sharply, or strongly pull it.
- When removing components, cover connections so that no dirt, dust, or other foreign matter gets in.
- Refill with new specified brake fluid. Refer to MA-18, "FOR USA AND CANADA : Fluids and Lubricants" (for United States and Canada) or MA-19, "FOR MEXICO : Fluids and Lubricants" (for Mexico).
- Do not reuse drained brake fluid.

FRONT BRAKE

FRONT BRAKE : Inspection

INSPECTION AFTER REMOVAL

CAUTION:

Brake tubes and hoses are important safety parts. Always disassemble the parts and retighten their fittings, if a brake fluid leak is detected. Replace applicable part with a new one, if damaged part is detected.
1. Check brake lines (tubes and hoses) and connections for fluid leaks, damage, twists, deformation, contacts with other parts, and loose connections. Replace any parts as necessary. Refer to BR-20, "Removal and Installation of Front Brake Piping and Brake Hose".

2. While depressing brake pedal under a force of 785 N (80 kg-f, 177 lb-f) with engine running for approximately 5 seconds, check each part for fluid leaks.

REAR BRAKE

REAR BRAKE : Inspection

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

1. Check brake lines (tubes and hoses) and connections for fluid leaks, damage, twists, deformation, contacts with other parts, and loose connections. Replace any parts as necessary. Refer to BR-21, "Removal and Installation of Rear Brake Piping and Brake Hose".

2. While depressing brake pedal under a force of 785 N (80 kg-f, 177 lb-f) with engine running for approximately 5 seconds, check each part for fluid leaks.
PERIODIC MAINTENANCE
BRAKE PEDAL

Inspection and Adjustment

INSPECTION

1. Inspect the brake pedal free height (H) from the floor using Tool at a 90° angle to the floor as shown.

   Tool number: — (J-46532)

2. Adjust the brake pedal free height (H) to specifications.

ADJUSTMENT

1. Loosen the stop lamp switch and ASCD cancel switch by turning 45° counterclockwise.

<table>
<thead>
<tr>
<th>Brake pedal free height (H)</th>
<th>Refer to BR-45, “Brake Pedal”.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brake pedal full stroke (S)</td>
<td>Refer to BR-45, “Brake Pedal”.</td>
</tr>
<tr>
<td>Clearance between brake pedal bracket and threaded end of stop lamp switch (C1) and ASCD cancel switch (C2)</td>
<td>Refer to BR-45, “Brake Pedal”.</td>
</tr>
</tbody>
</table>
BRAKE PEDAL

< PERIODIC MAINTENANCE >

2. Loosen lock nut (A) on the input rod, then turn input rod to adjust the brake pedal to specified height. When finished adjusting, tighten lock nut (A) to specification.

   Lock nut (A)  : 18.7 N·m (1.9 kg-m, 14 ft-lb)

   **CAUTION:**
   Make sure that the screw portion of the end of input rod is located inside the clevis.

3. With the brake pedal pulled up and held by hand, press the stop lamp switch and the ASCD cancel switch in until threaded ends contact the brake pedal bracket.

4. With the threaded ends of the stop lamp switch and ASCD cancel switch contacting the pedal bracket, turn the switches 45° clockwise to lock in place. Check that the stop lamp switch and ASCD cancel switch threaded end to brake pedal bracket gap (C) is within specifications.

   **CAUTION:**
   Make sure that the gap (C) between the brake pedal bracket and stop lamp switch and ASCD cancel switch threaded ends are within specification.

5. Check the brake pedal for smooth operation.

   **CAUTION:**
   Make sure that the stop lamp goes off when the brake pedal is released.

---

Revision: August 2012

2012 Maxima
BRAKE FLUID

< PERIODIC MAINTENANCE >

BRAKE FLUID

Inspection

LEVEL CHECK

- Make sure that a brake fluid level in reservoir tank is between MAX and MIN lines as shown.
- Visually check around reservoir tank for fluid leakage.
- If the level is excessively low, check brake system for leaks.
- If brake warning lamp remains illuminated after parking brake pedal is released, check brake system for fluid leaks.

Drain and Refill

CAUTION:

- Refill with new brake fluid. Refer to MA-18, "FOR USA AND CANADA : Fluids and Lubricants" (for United States and Canada) or MA-19, "FOR MEXICO : Fluids and Lubricants" (for Mexico).
- Do not reuse drained brake fluid.
- Do not let brake fluid splash on the painted surfaces of the body. This might damage the paint. If brake fluid is splashed on painted areas, wash it away with water immediately.
- Before working, disconnect ABS actuator and electric unit (control unit) connector or battery negative terminal.

1. Turn ignition switch OFF and disconnect ABS actuator and electric unit (control unit) connector or battery negative terminal.
2. Connect a vinyl tube to bleed valve.
3. Depress brake pedal, loosen bleed valve, and gradually remove brake fluid.
4. Make sure there is no foreign material in the reservoir tank, and refill with new brake fluid.
5. Rest foot on brake pedal. Loosen bleed valve. Slowly depress brake pedal until it stops. Tighten bleed valve. Release brake pedal. Repeat the process a few times, then pause to add new brake fluid to master cylinder. Continue until the new brake fluid flows out of bleed valve.

Bleeding the air out of the brake hydraulic system. Refer to BR-16, "Bleeding Brake System".

Bleeding Brake System

BLEEDING BRAKE SYSTEM

CAUTION:

- While bleeding, pay attention to master cylinder fluid level.
• Before working, disconnect ABS actuator and electric unit (control unit) connectors or battery negative terminal.

1. Turn ignition switch OFF and disconnect ABS actuator and electric unit (control unit) connector or battery negative terminal.
2. Connect a vinyl tube to rear right brake caliper bleed valve.
3. Fully depress brake pedal 4 or 5 times.
4. With brake pedal depressed, loosen bleed valve to bleed air in brake line, and then tighten it immediately.
5. Repeat steps 3 and 4 until all of the air is out of the brake line.
6. Tighten the bleed valve to the specified torque. Refer to BR-32, "Exploded View of Brake Caliper" (front disc brake), BR-37, "Exploded View of Brake Caliper" (rear brake).
7. Repeat steps 2 through 6, with master cylinder reservoir tank filled at least halfway, bleed the air in order from the front left, rear left, front right bleed valves.
NOTE:
The clevis pin must be installed from the RH side as shown.

Removal and Installation

REMOVAL

1. Remove instrument lower cover (LH) and lower knee protector. Refer to IP-10, "Exploded View".
2. Remove the accelerator pedal assembly. Refer to ACC-3, "Removal and Installation".
3. Disconnect stop lamp switch and ASCD cancel switch connector.
4. Remove stop lamp switch and ASCD cancel switch from brake pedal assembly.
5. Remove snap pin and clevis pin from brake booster clevis.
6. Disconnect the steering column upper joint and reposition it out of the way.
7. Remove brake pedal assembly to brake booster nuts. Pull brake booster toward engine room to the extent that does not deform the brake tubes.

WARNING:
Do not bend the brake tubing.

8. Remove brake booster clevis from input rod.
9. Remove top nut and then remove brake pedal assembly.
   • Temporarily install the brake pedal assembly to brake booster nuts by hand to support the brake booster.

CAUTION:
Avoid damage from dropping the brake pedal assembly during handling.

INSPECTION AFTER REMOVAL
Check the brake assembly for the following items:
• Crack or deformation of the clevis pin.
• Crack of any welded portion of the brake pedal assembly.
• Brake pedal bend or deformation.
INSTALLATION
Installation is in the reverse order of removal.
• Check the brake pedal for smooth operation. There should be no binding or sticking when applying or releasing the brake pedal.
• Adjust brake pedal height after installing brake pedal assembly. Refer to BR-14, "Inspection and Adjustment".
CAUTION:
- All hoses and piping (tubes) must be free from excessive bending, twisting and pulling.
- Make sure there is no interference with other parts when turning the steering wheel both clockwise and counterclockwise.
- The brake piping is an important safety part. If a brake fluid leak is detected, always disassemble the parts. Replace applicable part with a new one, if necessary.
- Be careful not to splash brake fluid on painted areas; it may cause paint damage. If brake fluid is splashed on painted areas, wash it away with water immediately.
- Do not bend or twist brake hose sharply, or strongly pull it.
- When removing components, cover connections so that no dirt, dust, or other foreign matter gets in.
- Refill with new specified brake fluid. Refer to MA-18, "FOR USA AND CANADA: Fluids and Lubricants" (for United States and Canada) or MA-18, "FOR USA AND CANADA: Fluids and Lubricants" (for Mexico).
- Do not reuse drained brake fluid.

Removal and Installation of Front Brake Piping and Brake Hose

NOTE:
When removing components such as hoses, tubes/lines, etc., cap or plug openings to prevent fluid from spilling.

REMOVAL
1. Remove the front wheel and tire. Refer to WT-60, "Adjustment".
2. Remove the reservoir cap.
BRAKE TUBE AND HOSE

< REMOVAL AND INSTALLATION >

3. Disconnect brake hose from brake tube, using a suitable tool.
4. Remove lock plate and then remove brake hose from bracket.

5. Remove union bolt (A) and then remove brake hose and copper sealing washers from brake caliper assembly.
   **CAUTION:**
   Do not reuse copper sealing washers.

INSTALLATION

1. Install brake hose by aligning with the protrusion on brake caliper assembly, then install the union bolt (A) and new copper sealing washers (1) and tighten union bolt (A) to specification. Refer to BR-20, "Hydraulic Circuit".
   **CAUTION:**
   Do not reuse copper sealing washers.

2. Connect brake hose to brake tube, partially tighten flare nut by hand as much as possible, then secure it to the bracket with lock plate.
3. Tighten flare nut to the specified torque, using a suitable tool. Refer to BR-20, "Hydraulic Circuit".

4. Refill brake fluid and bleed air. Refer to BR-16, "Bleeding Brake System".
5. Install the front wheel and tire. Refer to WT-60, "Adjustment".

Removal and Installation of Rear Brake Piping and Brake Hose

**NOTE:**
When removing components such as hoses, tubes/lines, etc., cap or plug openings to prevent fluid from spilling.

**REMOVAL**
1. Remove the rear wheel and tire. Refer to WT-60, "Adjustment".

Revision: August 2012

BR-21

2012 Maxima
< REMOVAL AND INSTALLATION >

2. Remove the reservoir cap.
3. Disconnect brake hose from brake tube, using a suitable tool.
4. Remove lock plate and then remove brake hose from bracket.

5. Remove union bolt (A), and then remove brake hose and copper sealing washers from brake caliper assembly.

   CAUTION:
   Do not reuse copper sealing washers.

INSTALLATION

1. Install brake hose by aligning with the protrusion on brake caliper assembly, then install the union bolt (A) and new copper sealing washers (1) and tighten union bolt (A) to specification. Refer to BR-20, "Hydraulic Circuit".

   CAUTION:
   Do not reuse copper sealing washers.

2. Connect brake hose to brake tube, partially tighten flare nut by hand as much as possible, then secure it to the bracket with lock plate.
3. Tighten flare nut to the specified torque, using a suitable tool. Refer to BR-20, "Hydraulic Circuit".

4. Refill brake fluid and bleed air. Refer to BR-16, "Bleeding Brake System".
5. Install the rear wheel and tire. Refer to WT-60, "Adjustment".

Inspection After Installation

CAUTION:
Brake tubes and hoses are important safety parts. Always disassemble the parts and retighten their fittings if a brake fluid leak is detected. Replace applicable part with a new one, if a damaged part is detected.
1. Check brake lines (tubes and hoses), and connections for fluid leaks, damage, twist, deformation, contact with other parts, and loose connections. Replace any parts as necessary. Refer to BR-20, "Hydraulic Circuit".

2. While depressing brake pedal under a force of 785 N (80 kg-f, 177 lb-f) with engine running for approximately 5 seconds, check each part for fluid leaks.
Removal and Installation

**CAUTION:**
- Do not to splash brake fluid on painted areas; it may cause paint damage. If brake fluid is splashed on painted areas, wash it away with water immediately.
- Refill with new brake fluid.
- Never reuse drained brake fluid.

**NOTE:**
When removing components such as hoses, tubes/lines, etc., cap or plug openings to prevent fluid from spilling.

**REMOVAL**
1. Remove the engine room cover.
2. Remove the air cleaner and air duct. Refer to **EM-24, "Removal and Installation"**.
3. Disconnect brake fluid level switch harness connector.
4. Disconnect master cylinder brake tubes, using a suitable tool.
5. Remove master cylinder nuts, master cylinder assembly and O-ring.

**CAUTION:**
Do not reuse O-ring.

**INSTALLATION**
Installation is in the reverse order of removal.

**CAUTION:**
• Apply silicone grease to brake booster at position (A) as shown, be sure the O-ring is in proper position when installing master cylinder to brake booster.
• Do not reuse O-ring.
• Tighten brake tube flare nut to the specified torque using a suitable tool. Refer to BR-20, "Hydraulic Circuit".
• Refill the brake hydraulic system with new brake fluid and bleed brake system. Refer to BR-16, "Bleeding Brake System".

Revision: August 2012

BR-25

2012 Maxima
Removal and installation

NOTE:
When removing components such as hoses, tubes/lines, etc., cap or plug openings to prevent fluid from spilling.

REMOVAL
1. Release the fuel pressure. Refer to EC-587, "Inspection".
2. Disconnect the battery negative terminal.
3. Remove the engine room cover.
4. Remove the air cleaner and air duct. Refer to EM-24, "Removal and Installation".
5. Remove cowl top and cowl top extension LH. Refer to EXT-21, "Removal and Installation".
6. Disconnect fuel line from engine, clip and main line and reposition out of the way.
7. Disconnect the brake lines and brake fluid level switch connector.
8. Remove master cylinder from booster assembly. Refer to BR-24, "Removal and Installation".
9. Disconnect vacuum hose from brake booster.
10. Remove instrument lower panel LH. Refer to IP-10, "Exploded View".
11. Disconnect the accelerator pedal connector.
12. Remove snap pin and clevis pin from inside vehicle.
13. Disconnect the steering column upper joint and reposition it out of the way.
14. Disconnect the ASCD cancel switch and stop lamp switch connectors.
15. Remove nuts on brake booster and brake pedal assembly, then remove brake pedal. Refer to BR-18, "Exploded View".
16. Remove brake booster from dash panel on engine room side.

CAUTION:
Be careful not to deform or bend brake tube while removing brake booster.
INSTALLATION

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

1. Loosen lock nut to adjust input rod length (B) to the specified value as shown.

   Input rod length (B) : Refer to BR-46, "Brake Booster".

2. After adjusting input rod length (B), temporarily tighten the lock nut to install the booster assembly. At this time, make sure that a gasket between booster assembly and dash panel is installed.
   CAUTION:
   Always install gasket between brake booster and dash panel.

3. Install and connect brake pedal with clevis of input rod.
4. Install brake pedal bracket nuts and tighten them to the specified torque. Refer to BR-18, "Exploded View".
5. Connect the ASCD cancel switch and stop lamp switch connectors.
6. Connect the steering column upper joint.
7. Connect the accelerator pedal connector.
8. Install instrument lower panel LH. Refer to IP-10, "Exploded View".
9. Install vacuum hose into brake booster.
10. Install master cylinder to booster assembly. Refer to BR-24, "Removal and Installation".
11. Connect the brake lines and brake fluid level switch connector.
12. Position fuel line and connect to engine, clip and main line.
13. Install the air cleaner and air duct. Refer to EM-24, "Removal and Installation".
14. Install the engine room cover.
15. Install cowl top and cowl top extension LH. Refer to EXT-21, "Removal and Installation".
16. Connect the battery negative terminal.
17. Adjust the brake pedal height of the brake pedal. Refer to BR-14, "Inspection and Adjustment".
18. Tighten lock nut of input rod to the specified torque. Refer to BR-26, "Exploded View".
19. Refill new brake fluid and bleed air. Refer to BR-16, "Bleeding Brake System".
Removal and Installation

REMOVAL
1. Disconnect the vacuum hose from the brake booster.
2. Disconnect the vacuum hose from the intake manifold.
3. Release the clips and remove the vacuum pipe with the vacuum hoses attached.
4. Remove the vacuum hoses from the vacuum pipe.

INSPECTION AFTER REMOVAL

Visual Inspection
Check for correct installation, damage and deterioration of the vacuum hoses and pipe.

Valve Air-tightness Check
• Connect a suitable tool (hand vacuum pump) at each end of the vacuum hose to inspect the check valve operation.

  Vacuum applied at booster end : Refer to BR-46, "Check Valve".
  Vacuum applied at intake manifold end : Refer to BR-46, "Check Valve".

• Replace the vacuum hose with check valve if out of specification.

INSTALLATION
Installation is in the reverse order of removal.

CAUTION:

Revision: August 2012
Because the vacuum hose contains a check valve, the vacuum hose must be installed in the correct position for proper operation. Refer to the stamp on the end of the vacuum hose to confirm correct installation. The brake booster will not operate normally if the vacuum hose with the check valve is installed in the wrong direction.

- Insert the vacuum pipe into the vacuum hose at least 24 mm (0.94 in) as shown.
- Do not use lubricating oil during installation.
WARNING:
Clean dust on caliper and brake pad with a vacuum dust collector to minimize the hazard of air borne particles or other materials.

CAUTION:
- While removing brake pads, do not depress brake pedal because piston will pop out.
- It is not necessary to remove bolts on torque member and brake hose except for disassembly or replacement of caliper assembly. For brake pad removal, hang cylinder body with a wire so as not to stretch brake hose.
- Do not damage piston boot.
- If any shim is subject to serious corrosion, replace it with a new one.
- Always replace shim and shim cover as a set when replacing brake pads.
- Keep rotor free from grease and brake fluid.
- Burnish the brake pads and disc rotor contacting surfaces, after refinishing or replacing rotors, after replacing pads, or if a soft pedal occurs at very low mileage. Refer to BR-31, "Brake Burnishing Procedure".

REMOVAL
1. Remove front wheel and tire.
2. Partially drain brake fluid from master cylinder.
3. Remove upper and lower sliding pin bolts (2) without disconnecting the union bolt (1).

4. Hang cylinder body with a wire, and do not twist or stretch the brake hose.
5. Remove anti-rattle clips, pads, shims, and shim covers from torque member.

**INSTALLATION**

1. Apply Molykote AS-880N grease or equivalent between the inner and outer shims and the back of the brake pads.
2. Install the inner and outer shims and shim covers to the inner pad and outer pad.
   **CAUTION:**
   Do not get grease on the inner and outer pad friction surfaces.
3. Apply Molykote 7439 grease (A) or equivalent to the pad retainer and attach the pad retainer to the torque member.
4. Install the assembled inner and outer shims, shim covers, pads and anti-rattle clips to the torque member.
   **CAUTION:**
   Do not get grease on the inner and outer pad or rotor friction surfaces.
5. Press piston into cylinder body using suitable tool, then install the cylinder body on the torque member.
   **CAUTION:**
   When replacing pads with new set, check the brake fluid level in the reservoir tank because brake fluid returns to the master cylinder reservoir tank when pressing in the piston.
6. Install the upper and lower sliding pin bolts (2) and tighten it to the specified torque.
   - Union bolt (1)

7. Check front disc brakes for drag.
8. Install the front wheel and tire. Refer to WT-60, "Adjustment".
9. Check brake fluid level and refill as necessary. Refer to BR-16, "Inspection".

**Brake Burnishing Procedure**

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

**CAUTION:**
- Be careful of vehicle speed because the brake does not operate easily until pad and disc rotor are securely fitted.
Only perform this procedure under safe road and traffic conditions. Use extreme caution.

1. Drive vehicle on straight, flat road.
2. Depress brake pedal with the power to stop vehicle within 3 to 5 seconds until the vehicle stops.
3. Drive without depressing brake for a few minutes to cool the brake.
4. Repeat steps 1 to 3 until pad and disc rotor are securely fitted.

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

CAUTION:
- When removing and installing the cylinder body, do not depress the brake pedal because the piston will pop out.
- Do not damage the piston boot.
- Keep the brake rotor free from grease and brake fluid.
- Refill the brake reservoir with new brake fluid only.
- Never reuse the drained brake fluid.

NOTE:
When removing components such as hoses, tubes/lines, etc., cap or plug openings to prevent fluid from spilling.

REMOVAL
1. Remove front wheel and tire.
FRONT DISC BRAKE

< REMOVAL AND INSTALLATION >

2. Secure the disc rotor using a wheel nut.
3. Remove the reservoir cap.
4. Remove the union bolt (1) and then disconnect the brake hose from the caliper assembly. Discard the copper sealing washers.  
   **CAUTION:**
   Do not reuse copper sealing washers.
5. Remove the torque member bolts (2), and remove the brake caliper assembly.  
   **CAUTION:**
   Do not drop the brake pads.

6. Remove the disc rotor. If reusing the disc rotor, apply a matching mark as shown for installation.  
   **CAUTION:**
   Put matching marks on wheel hub assembly and disc rotor, if reusing the disc rotor.

INSTALLATION

1. Install the disc rotor. If reusing the disc rotor, align the matching mark on the disc rotor and wheel hub assembly for installation as shown.  
   **CAUTION:**
   Align the matching marks on wheel hub assembly and disc rotor, if reusing the disc rotor.

2. Install the brake caliper assembly, and tighten the torque member bolts to the specified torque.  
   **CAUTION:**
   Do not allow oil or any moisture on all contact surfaces between steering knuckle and caliper assembly, bolts, and washer.

3. Install the brake hose with two new copper sealing washers (1), using the L-shaped pin for alignment as shown, then tighten the union bolt (A) to the specified torque.  
   **CAUTION:**
   Do not reuse copper sealing washers.

4. Refill the brake hydraulic system with new brake fluid and bleed brake system. Refer to BR-16, "Bleeding Brake System".
5. Check the front disc brakes for drag.
6. Install the front wheel and tire. Refer to WT-60, "Adjustment".
REMOTION AND INSTALLATION

REAR DISC BRAKE

Exploded View of Brake Pads

1. Inner shim cover 2. Inner shim 3. Inner pad
4. Pad retainer 5. Outer pad 6. Outer shim
7. Outer shim cover A. Molykote AS-880N grease B. Molykote 7439 grease

Removal and Installation of Brake Pads

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

CAUTION:
• While removing and installing cylinder body, do not depress brake pedal because piston will pop out.
• It is not necessary to remove bolts on torque member and brake hose except for disassembly or replacement of caliper assembly. For pad removal and installation, hang cylinder body with a wire so as not to stretch brake hose.
• Do not damage piston boot.
• If any shim is subject to serious corrosion, replace it with a new one.
• Always replace shim and shim covers as a set when replacing brake pads.
• Keep rotor free from grease and brake fluid.
• Burnish the brake pads and disc rotor mutually contacting surfaces after refinishing or replacing rotors, after replacing pads, or if a soft pedal occurs at very low mileage. Refer to BR-31, "Brake Burning Procedure".

REMOVAL
1. Remove the rear wheel and tire.
2. Remove the upper sliding pin bolt and loosen the lower sliding pin bolt to swing the cylinder body down.
3. Remove the pads, pad retainers, shims, and shim covers from the torque member.

CAUTION:
REAR DISC BRAKE

< REMOVAL AND INSTALLATION >

Do not deform the pad retainers when removing them from the torque member.

INSTALLATION

1. Apply Molykote AS-880N grease or equivalent to between shim covers and shims. Install inner shim, inner shim cover to inner pad. Install outer shim and outer shim cover to outer pad.

2. Apply Molykote 7439 grease (A) or equivalent to between pad retainer and pad. Install pad retainers and pads to torque member.

3. Press in piston using suitable tool, until the pads can be installed, and then install the cylinder body in the torque member.

   CAUTION:
   When replacing pads with new set, check the brake fluid level in the reservoir tank because brake fluid returns to the master cylinder reservoir tank when pressing in the piston.

4. Install upper sliding pin bolt and tighten the upper and lower sliding pin bolts to the specified torque.

5. Check the rear disc brakes for drag.

6. Install the rear wheel and tire. Refer to WT-60, "Adjustment".

7. Check brake fluid level and refill as necessary. Refer to BR-16, "Inspection".

Brake Burnishing Procedure

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

   CAUTION:
   • Be careful of vehicle speed because the brake does not operate easily until pad and disc rotor are securely fitted.
   • Only perform this procedure under safe road and traffic conditions. Use extreme caution.

   1. Drive vehicle on straight, flat road.
   2. Depress brake pedal with the power to stop vehicle within 3 to 5 seconds until the vehicle stops.
   3. Drive without depressing brake for a few minutes to cool the brake.
   4. Repeat steps 1 to 3 until pad and disc rotor are securely fitted.
REAR DISC BRAKE

< REMOVAL AND INSTALLATION >
Exploded View of Brake Caliper

1. Union bolt
2. Brake hose
3. Copper sealing washer
4. Cap
5. Bleed valve
6. Sliding pin bolt
7. Cylinder body
8. Piston seal
9. Piston
10. Piston boot
11. Retaining ring
12. Sliding pin boot
13. Bushing
14. Torque member bolt
15. Washer
16. Torque member
A. Molykote AS-880N grease
B. Rubber grease
C. Brake fluid

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

CAUTION:
• While removing and installing the cylinder body, do not depress the brake pedal because the piston will pop out.
• Do not damage the piston boot.
• Keep rotor free from grease and brake fluid.
• Refill the brake reservoir with new brake fluid.
• Never reuse drained brake fluid.

NOTE:
When removing components such as hoses, tubes/lines, etc., cap or plug openings to prevent fluid from spilling.

REMOVAL
1. Remove the rear wheel and tire.
2. Hold the disc rotor in place by installing a wheel nut.
3. Remove the reservoir cap.
4. Remove the union bolt and copper sealing washers, then disconnect the brake hose from the cylinder body. Discard the copper sealing washers.

**CAUTION:**
Do not reuse copper sealing washers.

5. Remove the torque member bolts, and remove the brake caliper assembly.

**CAUTION:**
Do not drop brake the pads.

6. Remove the disc rotor. If reusing the disc rotor, before removing the disc rotor apply matching mark as shown.

**CAUTION:**
Put matching marks on wheel hub assembly and disc rotor, if reusing the disc rotor.

**INSTALLATION**

1. Install the disc rotor. If reusing the disc rotor, align the matching mark to position the disc rotor on the wheel hub assembly.

**CAUTION:**
Align the matching mark on wheel hub assembly and disc rotor, if reusing the disc rotor.

2. Install the brake caliper assembly, and tighten the torque member bolts to the specified torque.

**CAUTION:**
Before installing caliper assembly, wipe off oil and moisture on all mounting surfaces of rear axle and caliper assembly and threads, bolts and washers.

3. Install the brake hose with two new copper sealing washers (1), using the L-shaped pin for alignment as shown, then tighten the union bolt (A) to the specified torque.

**CAUTION:**
Do not reuse copper sealing washers.

4. Refill the brake hydraulic system with new brake fluid and bleed brake system. Refer to BR-16, "Bleeding Brake System".

5. Check the rear disc brakes for drag.

6. Install the rear wheel and tire. Refer to WT-60, "Adjustment".
NOTE:
Do not remove the torque member, pads, shims, shim covers, and anti-rattle clips when disassembling and assembling the cylinder body.

DISASSEMBLY
1. Remove the sliding pin bolts, and then remove the cylinder body from the torque member.
   **CAUTION:**
   Do not drop pads, shims, shim cover and anti-rattle clips from torque member.
2. Remove the sliding pins, bushing and sliding pin boots from the torque member.
3. Remove the cap and the bleed valve from the cylinder body.
4. Place a wooden block in the cylinder body and blow air through the union bolt hole to push out the piston and piston boot as shown. Discard the piston boot.

**WARNING:**
Do not get fingers caught between the piston and cylinder body.

**CAUTION:**
Do not reuse the piston boot.

5. Remove the piston seal from the cylinder body using a suitable tool as shown. Discard the piston seal.

**CAUTION:**
• Be careful not to damage the inner cylinder wall.
• Do not reuse the piston seal.

**INSPECTION AFTER DISASSEMBLY**

**Cylinder Body**
Check the inner cylinder wall for corrosion, wear, and damage. If a defect is detected, replace the cylinder body.

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

**Torque Member**
Check the torque member for wear, cracks, and damage. If a defect is detected, replace the torque member.

**Piston**
Check the piston surface for corrosion, wear, and damage. If a defect is detected, replace the piston.

**CAUTION:**
The piston sliding surface is plated. Do not polish the piston with sandpaper.

**Sliding Pin, Sliding Pin Bolt, and Sliding Pin Boot**
Check the sliding pin, sliding pin bolt, and sliding pin boot for wear, damage, and cracks. If a defect is detected, replace the components as necessary.

**ASSEMBLY**

1. Apply rubber grease to the new piston seal, and install it in the cylinder body.

**CAUTION:**
Do not reuse piston seal.
2. Apply rubber grease to new piston boot and apply brake fluid to the piston. Cover the piston end with the piston boot, and then install the cylinder side lip on the piston boot securely into a groove on the cylinder body. **CAUTION:** Do not reuse piston boot.

3. Push the piston into the cylinder body by hand and push the piston boot piston-side lip into the piston groove. **CAUTION:** Press the piston evenly and vary the pressing point to prevent cylinder inner wall from being rubbed.

4. Install the bleed valve and cap to the cylinder body.
5. Install the sliding pins, bushing and sliding pin boots on the torque member.
6. Install the cylinder body to the torque member, and then tighten the sliding pin bolts to the specified torque.
NOTE:
Do not remove the torque member, pads, shims, shim covers, and pad retainers when disassembling and assembling the cylinder body.

DISASSEMBLY
1. Remove the sliding pin bolts, and then remove the cylinder body from the torque member.
   CAUTION: Do not drop pads, shims, shim cover and pad retainers from torque member.
2. Remove the sliding pin boots from the torque member.
3. Remove the cap and the bleed valve from the cylinder body.
4. Remove the retaining ring from the cylinder body using a suitable tool as shown. Discard the retaining ring.  
**CAUTION:**  
Do not reuse the retaining ring.

5. Place a wooden block in the cylinder body and blow air through the union bolt hole to push out the piston and piston boot as shown. Discard the piston boot.  
**WARNING:**  
Do not get fingers caught between the piston and cylinder body.  
**CAUTION:**  
Do not reuse the piston boot.

6. Remove the piston seal from the cylinder body using a suitable tool as shown. Discard the piston seal.  
**CAUTION:**  
• Be careful not to damage the inner cylinder wall.  
• Do not reuse the piston seal.

**INSPECTION AFTER DISASSEMBLY**

**Cylinder Body**  
Check the inner cylinder wall for corrosion, wear, and damage. If a defect is detected, replace the cylinder body.  
**CAUTION:**  
Clean the cylinder body using new brake fluid. Never use mineral oils such as gasoline or kerosene.

**Torque Member**  
Check the torque member for wear, cracks, and damage. If a defect is detected, replace the torque member.

**Piston**  
Check the piston surface for corrosion, wear, and damage. If a defect is detected, replace the piston.  
**CAUTION:**  
The piston sliding surface is plated. Do not polish the piston with sandpaper.

**Sliding Pin Bolt and Sliding Pin Boot**  
Check the sliding pin bolt and sliding pin boot for wear, damage, and cracks. If a defect is detected, replace the components as necessary.

**ASSEMBLY**
1. Apply rubber grease to the new piston seal, and install it in the cylinder body.
   **CAUTION:**
   Do not reuse piston seal.

2. Apply rubber grease to the new piston boot and brake fluid to the piston. Cover the piston end with the piston boot, and then install the cylinder side lip on the piston boot securely into the groove on the cylinder body.
   **CAUTION:**
   Do not reuse piston boot.

3. Push the piston into the cylinder body by hand and push the piston boot piston-side lip into the piston groove.
   **CAUTION:**
   Press the piston evenly and vary the pressing point to prevent cylinder inner wall from being rubbed.

4. Secure piston boot with retaining ring.
   **CAUTION:**
   • Make sure that boot is securely engaged in the groove on cylinder body.
   • Do not reuse retainer ring.

5. Install the bleed valve and cap to the cylinder body.
6. Install the sliding pin boots and bushing on the torque member.
7. Install the cylinder body to the torque member, and then tighten the sliding pin bolts to the specified torque.
## General Specifications

### Front brake

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value (Unit: mm (in))</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cylinder bore diameter</td>
<td>57.15 (2.250)</td>
</tr>
<tr>
<td>Pad length $\times$ width $\times$ thickness</td>
<td>123.6 $\times$ 47.5 $\times$ 11 (4.866 $\times$ 1.870 $\times$ 0.433)</td>
</tr>
<tr>
<td>Rotor outer diameter $\times$ thickness</td>
<td>320 $\times$ 28 (12.598 $\times$ 1.102)</td>
</tr>
</tbody>
</table>

### Rear brake

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value (Unit: mm (in))</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cylinder bore diameter</td>
<td>34.93 (1.375)</td>
</tr>
<tr>
<td>Pad length $\times$ width $\times$ thickness</td>
<td>83.0 $\times$ 33.0 $\times$ 8.5 (3.268 $\times$ 1.299 $\times$ 0.335)</td>
</tr>
<tr>
<td>Rotor outer diameter $\times$ thickness</td>
<td>308 $\times$ 16 (12.126 $\times$ 0.630)</td>
</tr>
</tbody>
</table>

### Master cylinder

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value (Unit: mm (in))</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cylinder bore diameter</td>
<td>23.81 (0.937)</td>
</tr>
</tbody>
</table>

### Control valve

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value (Unit: mm (in))</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valve model</td>
<td>Electric brake force distribution</td>
</tr>
</tbody>
</table>

### Brake booster

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value (Unit: mm (in))</th>
</tr>
</thead>
<tbody>
<tr>
<td>Booster model</td>
<td>Bosch</td>
</tr>
</tbody>
</table>

### Recommended brake fluid

Refer to **MA-18, "FOR USA AND CANADA : Fluids and Lubricants"** for United States and Canada, or **MA-19, "FOR MEXICO : Fluids and Lubricants"** for Mexico.

## Brake Pedal

### Brake pedal free height (H)

- Value: 190.7 - 202.7 (7.51 - 7.98)

### Brake pedal full stroke (S)

- Value: 130.0 (5.12)

### Clearance between brake pedal bracket (C1) and threaded end of stop lamp switch and ASCD cancel switch (C2)

- Value: 0.74 - 1.96 (0.0291 - 0.0772)
When suitable tool (A) is connected to booster side (B)  
1.3 kPa (10 mmHg, 0.39 inHg) maximum vacuum loss for 15 seconds at vacuum of \(-26.6 \pm 1.3\) kPa (200 \(\pm\) 1.0 mmHg, -7.87 \(\pm\) 0.04 inHg)

When suitable tool (A) is connected to engine side (C)  
No vacuum should exist.

Brake Booster

<table>
<thead>
<tr>
<th>Input rod installation length (B)</th>
<th>125 (\pm) 0.5 (4.92 (\pm) 0.02)</th>
</tr>
</thead>
</table>

Front Disc Brake

<table>
<thead>
<tr>
<th>Brake model</th>
<th>Kiriu</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brake pad</td>
<td></td>
</tr>
<tr>
<td>Standard thickness (new)</td>
<td>11.0 (0.433)</td>
</tr>
<tr>
<td>Minimum thickness</td>
<td>2.0 (0.079)</td>
</tr>
<tr>
<td>Disc rotor</td>
<td></td>
</tr>
<tr>
<td>Standard thickness (new)</td>
<td>28.0 (1.102)</td>
</tr>
<tr>
<td>Minimum thickness</td>
<td>26.0 (1.024)</td>
</tr>
<tr>
<td>Thickness variation (measured at 8 positions)</td>
<td>0.015 (0.0006)</td>
</tr>
<tr>
<td>Maximum runout (with it attached to the vehicle)</td>
<td>0.035 (0.0014)</td>
</tr>
</tbody>
</table>

Rear Disc Brake

<table>
<thead>
<tr>
<th>Brake model</th>
<th>Kiriu</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brake pad</td>
<td></td>
</tr>
<tr>
<td>Standard thickness (new)</td>
<td>8.5 (0.335)</td>
</tr>
<tr>
<td>Minimum thickness</td>
<td>1.0 (0.039)</td>
</tr>
<tr>
<td>Disc rotor</td>
<td></td>
</tr>
<tr>
<td>----------------------------------</td>
<td>----------</td>
</tr>
<tr>
<td>Standard thickness (new)</td>
<td>16.0 (0.630)</td>
</tr>
<tr>
<td>Minimum thickness</td>
<td>14.0 (0.551)</td>
</tr>
<tr>
<td>Thickness variation (measured at 8 positions)</td>
<td>0.015 (0.0006)</td>
</tr>
<tr>
<td>Maximum runout (with it attached to the vehicle)</td>
<td>0.05 (0.002)</td>
</tr>
</tbody>
</table>