

15. Air Bleeding

A: PROCEDURE

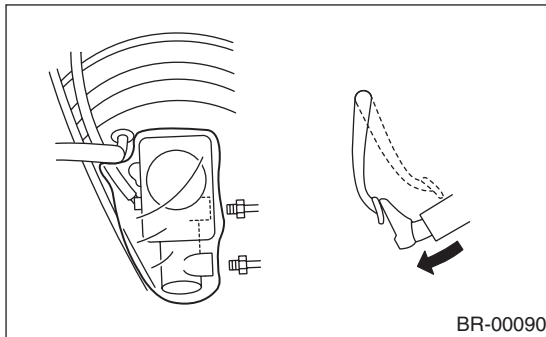
CAUTION:

- The FMVSS No. 116, fresh DOT3 or 4 brake fluid must be used.
- Cover the air bleeder screw with waste cloth, when loosening it, to prevent brake fluid from being splashed over surrounding parts.
- Do not let brake fluid come into contact with the painted surface of the vehicle body. Wash away with water immediately and wipe off if it is spilled by accident.
- Avoid mixing brake fluid of different brands to prevent fluid performance from degrading.
- Be careful not to allow dirt or dust to enter the reservoir tank.

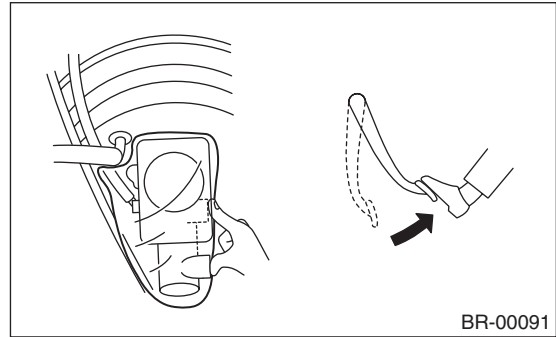
1. MASTER CYLINDER

NOTE:

- When the master cylinder is disassembled or the reservoir tank is empty, bleed the master cylinder.
 - While bleeding air, keep the reservoir tank filled with brake fluid to prevent entry of air.
 - Operate the brake pedal slowly.
 - For convenience and safety, perform work with 2 people.
- 1) Loosen the wheel nuts, jack-up the vehicle, support it with rigid racks, and remove the wheels.
 - 2) Disconnect the brake line at primary and secondary sides.
 - 3) Wrap the master cylinder with a plastic bag.
 - 4) Carefully depress and hold the brake pedal.



- 5) Close the outlet plug with your finger, and then release the brake pedal.



- 6) Repeat step 4) and 5) until brake fluid is completely bled from outlet plug.
- 7) Remove the plastic bag.
- 8) Install the brake pipe to the master cylinder.

Tightening torque:

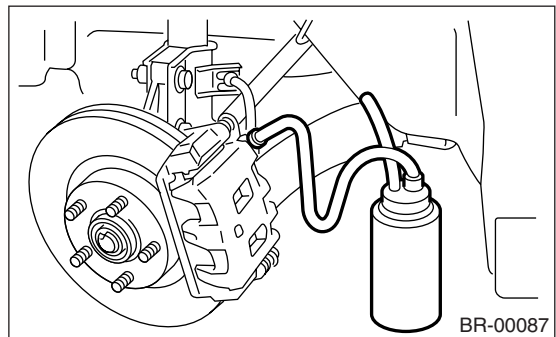
15 N·m (1.5 kgf-m, 10.8 ft-lb)

- 9) Bleed air from the brake line. <Ref. to BR-43, BRAKE LINE, PROCEDURE, Air Bleeding.>

2. BRAKE LINE

NOTE:

- While bleeding air, keep the reservoir tank filled with brake fluid to prevent entry of air.
 - Operate the brake pedal slowly.
 - For convenience and safety, perform work with 2 people.
- 1) Make sure that there is no leak from joints and connections of the brake system.
 - 2) Attach one end of the vinyl tube to the air bleeder and the other end to the brake fluid container.

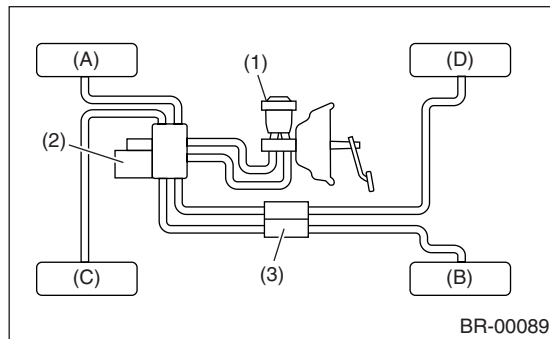


Air Bleeding

BRAKE

CAUTION:

Brake fluid replacement sequence; (A) Front RH → (B) Rear LH → (C) Front LH → (D) Rear RH



- (1) Master cylinder
- (2) Hydraulic unit
- (3) Proportioning valve

3) Slowly depress the brake pedal and keep it depressed. Then, open the air bleeder to discharge air together with the fluid.

Release the air bleeder for 1 to 2 seconds.

Next, with the air bleeder closed, slowly release the brake pedal.

Repeat these steps until there are no more air bubbles in the vinyl tube.

Allow 3 to 4 seconds between two brake pedal operations.

CAUTION:

Cover the air bleeder screw with waste cloth, when loosening it, to prevent brake fluid from being splashed over surrounding parts.

NOTE:

Operate the brake pedal slowly.

4) Tighten the air bleeder screws securely when no air bubbles are visible.

Air bleeder tightening torque:

8 N·m (0.8 kgf-m, 5.8 ft-lb)

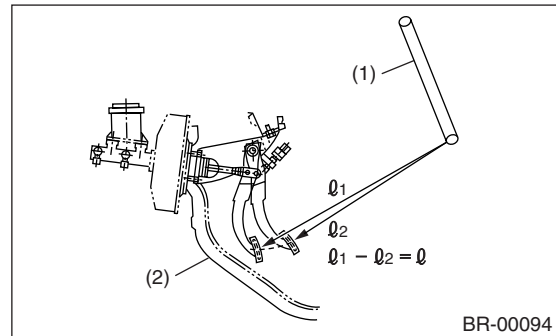
5) Perform these steps for the brakes connecting to secondary chamber of master cylinder first, and then for the brakes connecting to primary chamber. With all procedures completed, fully depress the brake pedal and keep it in that position for approximately 20 seconds to make sure that there is no leak evident in the entire system.

6) Check the pedal stroke.

While the engine is idling, use a pedal force gauge to depress the brake pedal with a 490 N (50 kgf, 110 lb) load and measure the distance between the brake pedal and the steering wheel. Release the pedal, and measure the distance between pedal and steering wheel again. The difference between the two measured values must not be more than specified value.

Specification of pedal stroke:

105 mm (4.13 in) [When pressing the pedal with a force of 490 N (50 kg, 110 lb)]



- (1) Steering wheel
- (2) Toe board

7) If the distance is more than specified, there is a possibility that air is in the brake line. Bleed the brake line of all air until the pedal stroke meets the specification.

8) Operate the hydraulic control unit in the sequence control mode. <Ref. to ABS-11, ABS Sequence Control.>

9) Check the pedal stroke again.

10) If the distance is more than specified, there is a possibility that air is in the inside of the hydraulic unit. Repeat above steps 2) to 9) until pedal stroke meets the specification.

11) Fill brake fluid up to the "MAX" level of reservoir tank.

12) As a final step, test run the vehicle at low speed and ensure that brakes provide normal braking action.