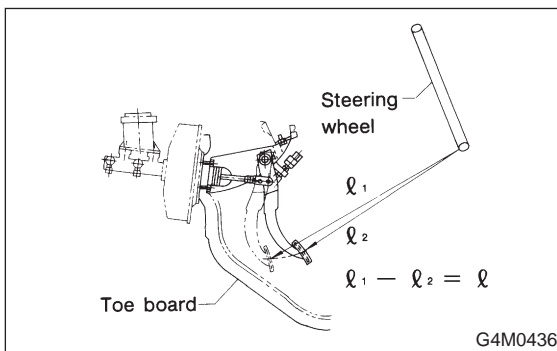


7) Check the pedal stroke.

While the engine is idling, depress the brake pedal with a 490 N (50 kg, 110 lb) load and measure the distance between the brake pedal and steering wheel. With the brake released, measure the distance between the pedal and steering wheel again. The difference between the two measurements must be more than specified.



**Specified pedal stroke:**

**Without ABS**

**90 mm (3.54 in)**

**With ABS**

**95 mm (3.74 in)**

**When depressing brake pedal with a 490 N (50 kg, 110 lb) load.**

(1) Models without ABS

If the distance is more than specifications, there is a possibility that air is in the brake line.

Bleed air from the brake line.

(2) Models with ABS

If the distance is more than specifications, there is a possibility air is in the inside of the hydraulic unit. Therefore, air must be bled from the inside of the hydraulic unit to the brake pipes in accordance with the bleeding sequence control.

<Ref. to 4-4 [W15D0].>

8) Add brake fluid to the required level (MAX. level) of reserve tank.

9) As a final step, test run the vehicle at low speed and apply brakes relatively hard 2 to 3 times to ensure that brakes provide normal braking action on all four wheels without dragging and uneven braking.

## 12. Brake Fluid

### A: REPLACEMENT

**CAUTION:**

- To always maintain the brake fluid characteristics, replace the brake fluid according to maintenance schedule or earlier than that when used in severe condition.
- The FMVSS No. 116, fresh DOT3 or 4 brake fluid must be used.
- Cover bleeder with waste cloth, when loosening it, to prevent brake fluid from being splashed over surrounding parts.
- Avoid mixing different brands of brake fluid to prevent degrading the quality of the fluid.
- Be careful not to allow dirt or dust to get into the reservoir tank.

**NOTE:**

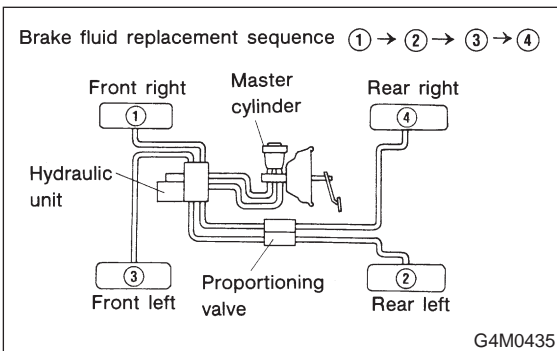
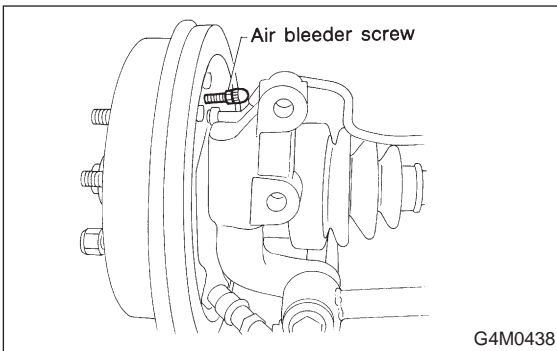
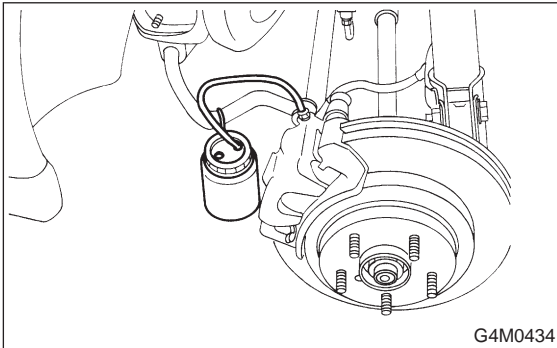
- During bleeding operation, keep the brake reserve tank filled with brake fluid to eliminate entry of air.
- Brake pedal operating must be very slow.
- For convenience and safety, it is advisable to have two men working.
- The amount of brake fluid required is approximately 500 ml (16.9 US fl oz, 17.6 Imp fl oz) for total brake system.

- 1) Either jack-up vehicle and place a safety stand under it, or lift-up vehicle.
- 2) Remove both front and rear wheels.
- 3) Draw out the brake fluid from reserve tank with syringe.
- 4) Refill reservoir tank with recommended brake fluid.

**Recommended brake fluid:**

**FMVSS No. 116, fresh DOT3 or 4 brake fluid**

5) Install one end of a vinyl tube onto the air bleeder of and insert the other end of the tube into a container to collect the brake fluid.



6) Instruct your co-worker to depress the brake pedal slowly two or three times and then hold it depressed.

7) Loosen bleeder screw approximately 1/4 turn until a small amount of brake fluid drains into container, and then quickly tighten screw.

8) Repeat again from the two former procedures until there are no air bubbles in drained brake fluid and new fluid flows through vinyl tube.

**CAUTION:**

**Add brake fluid as necessary while performing the air bleed operation, in order to prevent the tank from running short of brake fluid.**

9) After completing the bleeding operation, hold brake pedal depressed and tighten screw and install bleeder cap.

**Tightening torque (Bleeder screw):**

**$8 \pm 1 \text{ N}\cdot\text{m}$  ( $0.8 \pm 0.1 \text{ kg}\cdot\text{m}$ ,  $5.8 \pm 0.7 \text{ ft}\cdot\text{lb}$ )**

10) Bleed air from each wheel cylinder using the same procedures as described in before.

11) Depress brake pedal with a force of approximately 294 N (30 kg, 66 lb) and hold it there for approximately 20 seconds. At this time check pedal to see if it shows any unusual movement. Visually inspect bleeder screws and brake pipe joints to make sure that there is no fluid leakage.

12) Install wheels, and drive vehicle for a short distance between 2 to 3 km (1 to 2 miles) to make sure that brakes are operating properly.