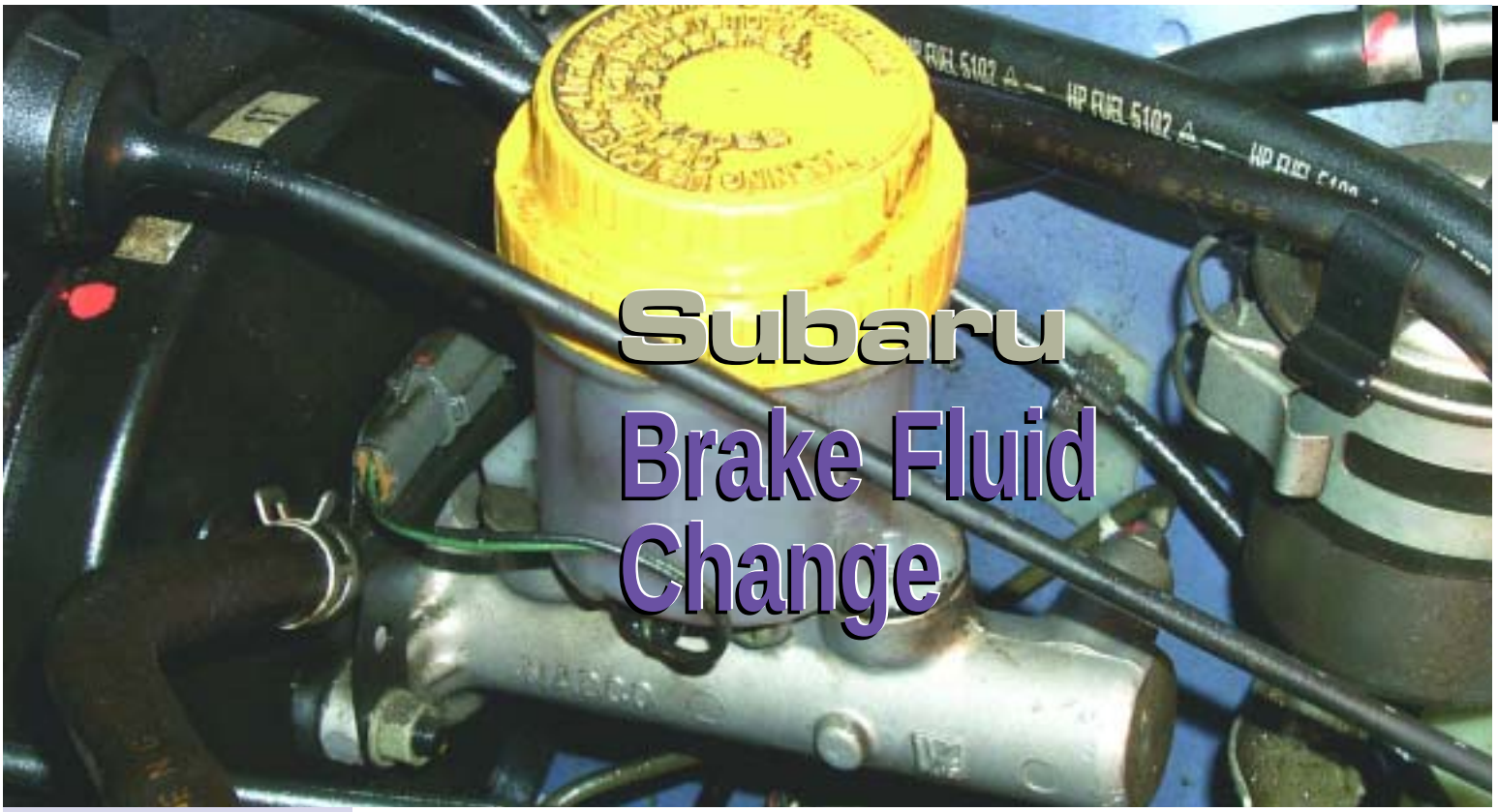


Subaru Brake Fluid Change

General Rules For Effective Brake Bleeding

1. Start with the brakes connecting to the secondary chamber of the master cylinder.
2. The time interval between two brake pedal operations (from the time when the pedal is released to the time when it is depressed another time) shall be approximately 3 seconds.
3. The air bleeder on each brake shall be released for 1 to 2 seconds.

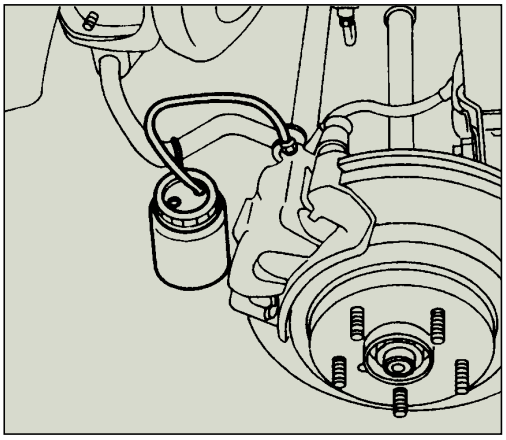
Bleeding Procedure

Caution: Fresh DOT 3 or 4 brake fluid, such as Genuine Subaru Brake Fluid P/N SOA868V9220, 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.

• Make sure there is no leak from the joints and connections of the brake system.
• Fit one end of vinyl tube into the air bleeder and put the other end into a brake fluid container.
• Slowly depress the brake pedal and keep it depressed. Then, open the air bleeder to discharge air together with the fluid.
• Release air bleeder for 1-2 seconds.
• Next, with the bleeder closed, slowly release the brake pedal.
• Repeat these steps until there are no more air bubbles in the vinyl tube.
• Allow 3-4 seconds between two brake pedal applications.



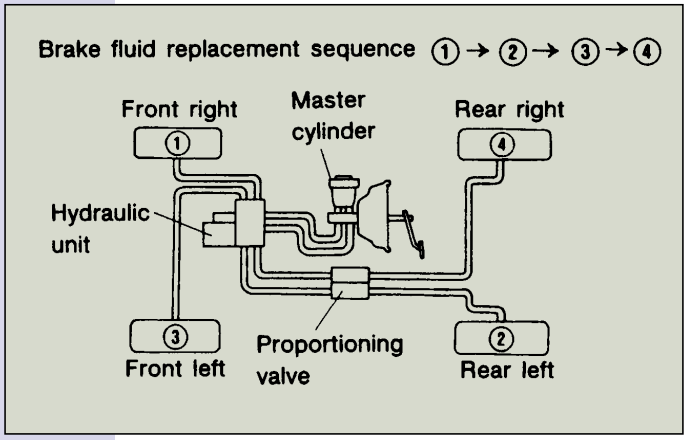
Bleeder Hose

Subaru Brake Fluid Change

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

Note: Pump the brake pedal slowly.

• Tighten the air bleeder securely when no air bubbles are visible.
• Perform these steps for the brakes connecting to the secondary chamber of master cylinder, first, and then for the ones connecting to the primary chamber.
• With all procedures completed, fully depress the brake pedal and keep it in that position for approximately 20 seconds to make sure there is no leak evident in the entire system.



Fluid Replacement Sequence

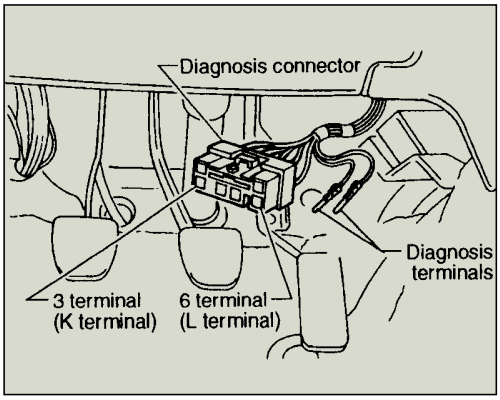
• For models with ABS, perform sequence control.

Sequence Control (ABS models)

Under the sequence control, after the hydraulic unit solenoid valve is driven, the operation of the hydraulic unit can be checked by means of the brake tester or a pressure gauge.

Sequence Control Operational Guidelines

• Connect diagnosis terminals to 3 terminals (K) and 6 terminals (L) of the diagnosis connector located under the driver's side of the instrument panel.
• Set the speed of all wheels at 2 MPH or less.
• Within 0.5 seconds after the ABS warning lamp goes out, immediately after the ignition switch is turned to on, depress the brake pedal and hold.



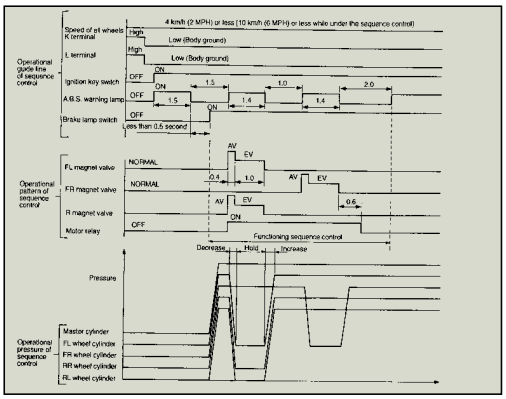
Diagnostic Connector

Caution: Do not depress the clutch pedal.

Note: When the ignition switch is set to on, the brake pedal must not be depressed. The engine must not operate.

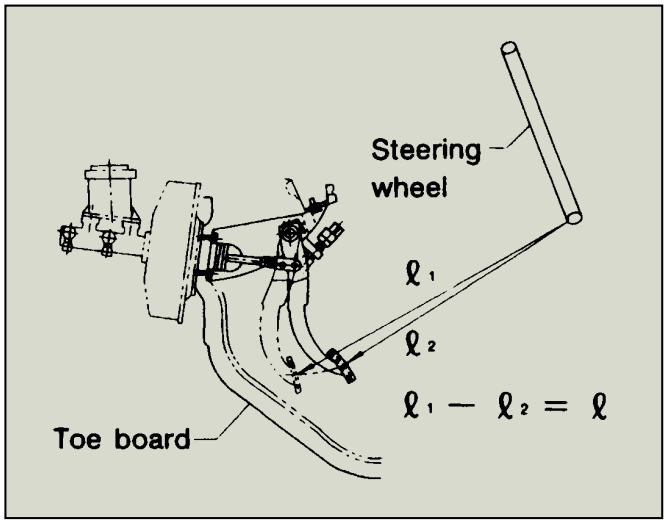
Conditions For Completion Of Sequence Control

• When the speed of at least one wheel reaches 6 MPH, the operation is returned to the normal control mode.
• When the L terminal is separated from ground, the operation is returned to the normal control mode.
• When the K terminal is separated from ground, the operation goes to the trouble code display mode.
• When the brake pedal is released during sequence control and the braking lamp switch is set to OFF, the operation is returned to the normal control mode.



Sequence Control

• After completion of the sequence control, the operation is returned to the normal control mode.
• Check the pedal stroke.
• While the engine is idling, depress the brake pedal with a 110 lb load and measure the distance between the brake pedal and steering wheel.
• With the brake pedal released, measure the distance between the pedal and steering wheel again.
• The difference between the two measurements must be more than specified.



Brake Pedal Pressure Test

Specified pedal stroke:
Without ABS: 90 mm (3.54 in)
With ABS: 95 mm (3.74 in)

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.

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.

• Add brake fluid to the required level (MAX level) of reserve tank.
• As a final step, test run the vehicle at low speed and apply brakes relatively hard 2 -3 times to ensure that brakes provide normal braking action on all four wheels without dragging and uneven braking.

Continued next page

Subaru Brake Fluid Change

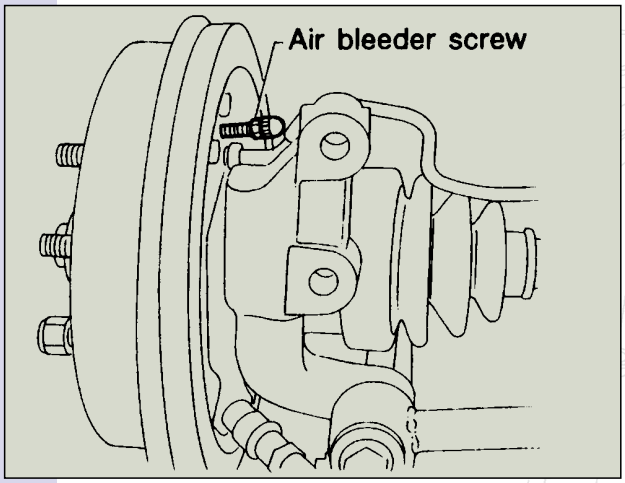
Brake Fluid Replacement

To maintain the brake fluid characteristics, replace the brake fluid according to maintenance schedule or earlier than that when used in severe condition.

Caution: Fresh DOT 3 or 4 brake fluid, such as Genuine Subaru Brake Fluid P/N SOA868V9220, must be used.

Replacement

• 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.



Air Bleeder Screw

Note: During bleeding operation, keep the brake reserve tank filled with brake fluid to eliminate entry of air. Pump the brake pedal slowly. For convenience and safety, it is advisable to have two men working.

• The amount of brake fluid required for the total brake system is approximately 16.9 US fl oz.
• Either jack-up vehicle and place a safety stand under it, or lift-up vehicle.
• Remove both front and rear wheels.
• Draw out the brake fluid from reserve tank with syringe.
• Refill reservoir tank with recommended brake fluid.
• 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.
• Instruct your co-worker to depress the brake pedal slowly two or three times and then hold it depressed.
• Loosen bleeder screw approximately 1/4 turn until a small amount of brake fluid drains into container, and then quickly tighten screw.
• Repeat the previous two steps above 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.

Master Cylinder

• After completing the bleeding operation, hold the brake pedal depressed, tighten the screw and install the bleeder cap. Bleeder screw tightening torque: 5.8 ±0.7 ft-lb.
• Bleed air from each wheel cylinder using the same procedures as described above.
• Depress brake pedal with a force of approximately 294 N (30 kg, 66 lb) and hold it 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.
• Install wheels, and drive vehicle for a short distance (1 to 2 miles) to make sure the brakes are operating properly.