

Electric Servo Brake System Bleeding

Bleeding

NOTICE

- [Review the Service Precautions before doing repairs or service.](#)
- There are three different methods used for bleeding brake systems. The method shown in this procedure is the preferred method for removing the air from the system. For pressure or vacuum bleeding, refer to the tool manufacturer's instructions included with the tool. If you use a commercially available pressure feed bleeder and operate the brake pedal, excessive hydraulic pressure will be applied to the cup inside the master cylinder causing damage. Do not use these methods together.
- Whenever you do any of these actions, or the brake master cylinder reservoir tank is empty, first bleed the brake system using the normal bleed procedure. Then apply and release the parking brake 5 times and bleed the rear brakes again.
 - Removing the pedal feel simulator.
 - Removing the tandem motor cylinder.
 - Removing the rear brake caliper.
 - Removing the rear brake hose.
 - Removing the VSA modulator-control unit.

NOTE:

- The procedure of bleeding brake system is different from that of replacing brake fluid. Refer to the procedure of [Brake Fluid Replacement](#) as needed.
- The brake fluid level must be at the MAX (upper) level mark of the reservoir at the start of the bleeding procedure and checked after bleeding each wheel location. Add fluid as required.
- Before beginning the bleeding procedure, remove the reservoir cap and strainer, and remove any dirt and debris then reinstall the strainer only.
- Bleed the brake system in the following order: front-driver's, front-passenger's, rear-passenger's, and rear-driver's.

1. Vehicle - Lift

2. Wheel - Remove

1. If necessary remove the wheels.

- [Front wheel](#)
- [Rear wheel](#)

3. 12 Volt Battery Terminal - Disconnect

1. Open the driver's door, and wait 3 minutes or more.

NOTICE

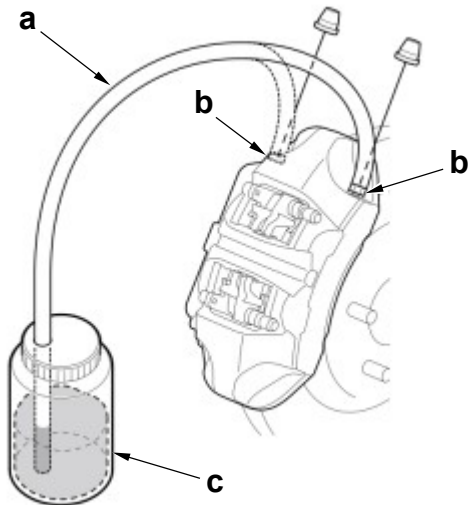
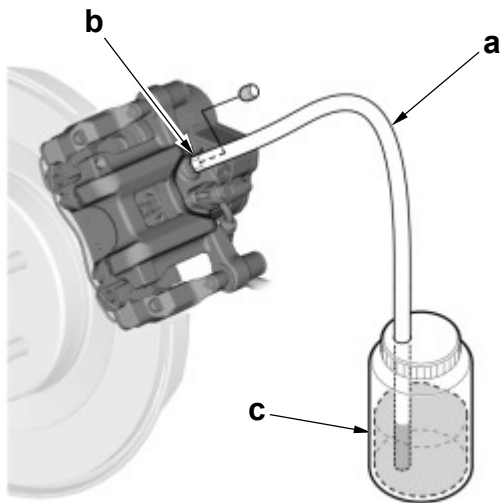
Do not turn the vehicle to the ON mode.

2. [Do the 12 volt battery terminal disconnection procedure.](#)

4. Windshield Wiper Cover - Remove**5. Front Strut Brace Assembly - Remove****6. Expansion Tank - Move**

1. [Move the expansion tank aside.](#)

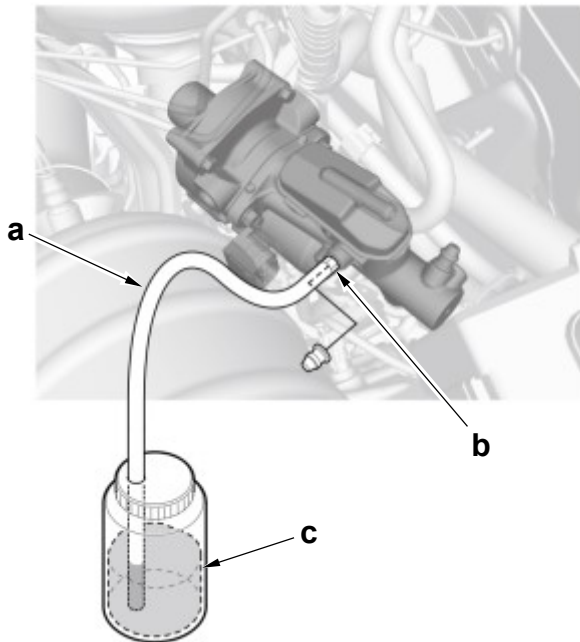
7. Engine Heat Baffle - Remove**8. Expansion Tank Bracket - Remove****9. Engine Heat Baffle Lower Bracket - Remove****10. Tandem Motor Cylinder Heat Baffle - Remove****11. Brake System - Normal Bleed 1 (Between Pedal Feel Simulator and Brake Caliper)**

Figure 1 (Front Brake)**Figure 2 (Rear Brake)**

NOTE: If a large amount of air is introduced into the system from a brake system component replacement, first drain the brake fluid into a container from each caliper by pumping the brake pedal slowly before starting the normal brake system bleed.

1. Attach a length of clear tube (a) to the bleed screw (b). (Figure 1 and 2)
2. Submerge the other end of the clear tube into a clear plastic catch bottle of brake fluid (c). (Figure 1 and 2)
3. Have an assistant slowly pump the brake pedal several times then apply steady continuous pressure.
4. Loosen the bleed screw slowly to bleed the fluid into the plastic catch bottle. The brake pedal will travel toward the floor as the fluid is bled from the system.
5. When the brake pedal reaches the floor, have the assistant hold the pedal in that position, then tighten the bleed screw. The brake pedal can now be released.
6. Repeat steps 3 thru 5 until the brake fluid in the clear tube appears fresh and there are no air bubbles in the fluid. Then tighten the bleed screw to the specified torque.
 - [Front](#)
 - [Rear](#)
7. Repeat this procedure for each brake in the bleeding sequence.

12.Brake System - Normal Bleed 2 (Between Pedal Feel Simulator and Tandem Motor Cylinder)

Figure 1 (Rear bleed screw)

1. Attach a length of clear tube (a) to the bleed screw (b). (Figure 1 and 2)
2. Submerge the other end of the clear tube into a clear plastic catch bottle of brake fluid (c). (Figure 1 and 2)
3. Have an assistant slowly pump the brake pedal several times then apply steady continuous pressure.
4. Loosen the bleed screw slowly to bleed the fluid into the plastic catch bottle. The brake pedal will travel toward the floor as the fluid is bled from the system.
5. When the brake pedal reaches the floor, have the assistant hold the pedal in that position, then tighten the bleed screw. The brake pedal can now be released.
6. Repeat steps 3 thru 5 until the brake fluid in the clear tube appears fresh and there are no air bubbles in the fluid. [Then tighten the bleed screw to the specified torque.](#)
7. Repeat this procedure for each bleed screw of the tandem motor cylinder in the bleeding sequence.

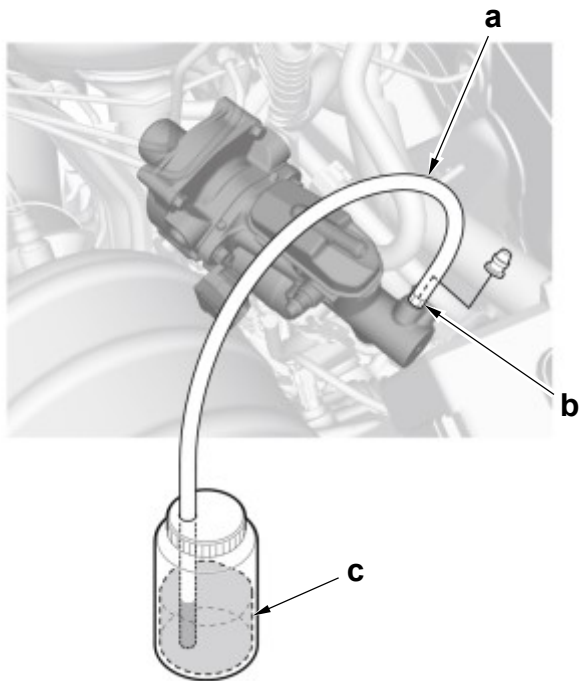
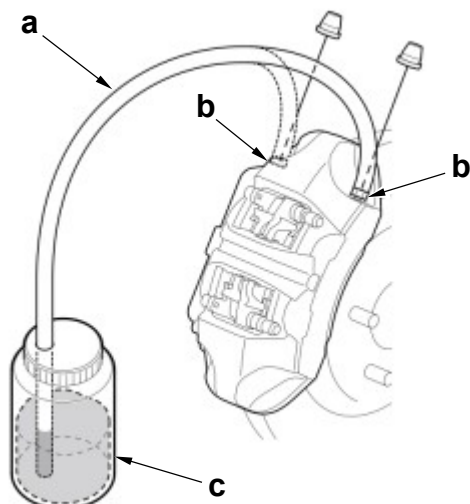
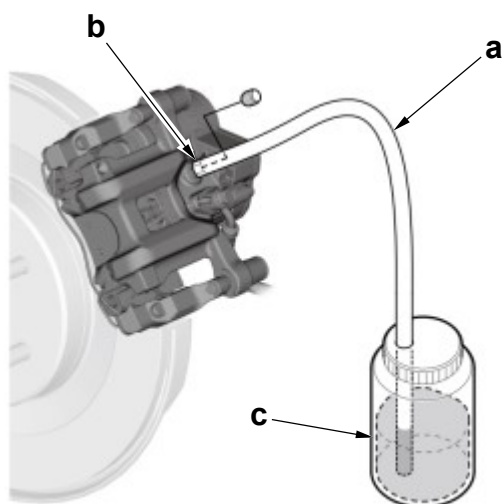
Figure 2 (Front bleed screw)**13.Brake System - Normal Bleed 3 (Between Pedal Feel Simulator and Brake Caliper)**

Figure 1 (Front Brake)**Figure 2 (Rear Brake)**

1. Attach a length of clear tube (a) to the bleed screw (b). (Figure 1 and 2)
2. Submerge the other end of the clear tube into a clear plastic catch bottle of brake fluid (c). (Figure 1 and 2)
3. Have an assistant slowly pump the brake pedal several times then apply steady continuous pressure.
4. Loosen the bleed screw slowly to bleed the fluid into the plastic catch bottle. The brake pedal will travel toward the floor as the fluid is bled from the system.
5. When the brake pedal reaches the floor, have the assistant hold the pedal in that position, then tighten the bleed screw. The brake pedal can now be released.
6. Repeat steps 3 thru 5 until the brake fluid in the clear tube appears fresh and there are no air bubbles in the fluid. Then tighten the bleed screw to the specified torque.
 - [Front](#)
 - [Rear](#)
7. Repeat this procedure for each bleed screw of the brake caliper in the bleeding sequence.

14. Brake System - Rear Caliper Bleed

1. Apply and release the parking brake 5 times, then bleed the rear brakes again.

NOTE: When bleeding the brake system, air can get trapped inside the rear calipers. This is due to the complex fluid path inside electric parking brake calipers. Therefore this procedure is necessary.

15. Tandem Motor Cylinder Heat Baffle - Install

16. Engine Heat Baffle Lower Bracket - Install

17. Expansion Tank Bracket - Install**18. Engine Heat Baffle - Install****19. Expansion Tank - Install****20. Front Strut Brace Assembly - Install****21. Windshield Wiper Cover - Install****22. 12 Volt Battery Terminal - Reconnect****23. Wheel - Install**

1. Install the wheels.

- [Front wheel](#)
- [Rear wheel](#)

24. After Bleeding - Check

1. Turn the vehicle to the ON mode.

2. Check that the brake system indicator does not come on.