

1965 Corvette: Service News: Corvette Disc Brakes Service Procedures Revised

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SHOE REPLACEMENT

When the brake shoe pads are replaced, it is necessary to first remove fluid from the master cylinder reservoir to avoid spillage when moving the caliper pistons. Removal of all the fluid in the reservoir can allow air to enter the master cylinder during the shoe replacement time if the pistons move toward the disc and, therefore, a bleeding operation would be required. To avoid this, remove only about 2/3 of the fluid in the master cylinder reservoir.

BLEEDING PROCEDURE

The operation of bleeding the disc brake hydraulic system is more involved than that required for the conventional shoe and drum type brake.

Either the pressure method or manual method can be used to bleed the disc brake system. The following procedure is recommended for each method and is adaptable to either the power (split) or manual (single) brake system.

PRESSURE METHOD

1. Remove master cylinder cover and install pressure bleeding adapter tool #J-21994 as shown in figure 4, Page5-2 of the 1965 Corvette Shop Manual and connect an air pressure bleeder tank to it. For power brakes, which incorporate a split main cylinder, install this adapter over the rear opening for bleeding the rear brakes (fig. 8) and over the front opening for bleeding the front brakes.

2. Raise car and remove both rear wheels.
3. Position bleeder wrench (J-21472) and a length of bleeder hose (clear plastic, if available) to either bleeder valve at the right rear caliper. Place loose end of bleeder hose in a transparent container. Pour a sufficient volume of brake fluid into a container to ensure that end of bleeder hose will remain submerged. The purpose of this is to aid in visually determining the condition of the fluid leaving the calipers.
4. With low air pressure (10-20 psi) applied to the system, open the bleeder valve to allow the trapped air to escape. Maintain the above pressure and bleeder opening until clear fluid appears. Tapping the caliper with a rubber mallet during the later stages of the bleeding operation may assist in obtaining a good bleed job. After one side of the caliper has been satisfactorily bled, repeat this procedure for the other side. *NOTE: It is important that low air pressure be utilized to prevent aeration of the fluid in the hydraulic system due to excessive fluid agitation caused by higher inlet pressures.*
5. Repeat steps 3 and 4 on the left rear caliper.
6. Repeat steps 3 and 4 for the right front and the left front caliper assemblies. Only one bleeder screw is used on each front caliper on the inboard side and is accessible with front wheel in place. *CAUTION: This bleeding procedure necessitates the use of a considerable quantity fluid and, therefore, the supply of fluid in the bleeder tank should be checked periodically to ensure that the level does not drop to the point that air begins to enter.*

MANUAL METHOD

The same basic procedure should be utilized for this method as that used for the pressure method. The only difference being that pressure is supplied manually by pumping the brake pedal and applying a constant, moderate pressure while the bleeder valve is opened.

NOTE: On manual brakes, to insure that outside air is not sucked back into the hydraulic system, the bleeder valve should be closed before the brake pedal reaches the floor.

SPLIT BRAKE SYSTEM DIAGNOSIS

To aid Field personnel in determining if both front and rear brakes of the split (Power brake) system are operating properly, this short explanation of the operation is provided. The split system consists basically of two separate brake systems. When a failure is encountered on either, the other is adequate to stop the vehicle. If one system is not functioning, it is normal for the brake pedal lash and pedal effort to substantially increase. This occurs because of the design of the master cylinder which incorporates an actuating piston for each system. When one of the systems loses fluid and takes in air, its piston will bottom against the piston of the functioning system. This is felt at the brake pedal by an apparent lack of brakes for most of the brake travel and then, when the pistons are bottomed against one another, an extremely hard pedal. If a vehicle displays these symptoms, it is a good indication that one of the systems contains air. To determine which system is at fault, the car can be driven and braked hard enough to skid the wheels. The wheels that lock are functioning properly.

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