

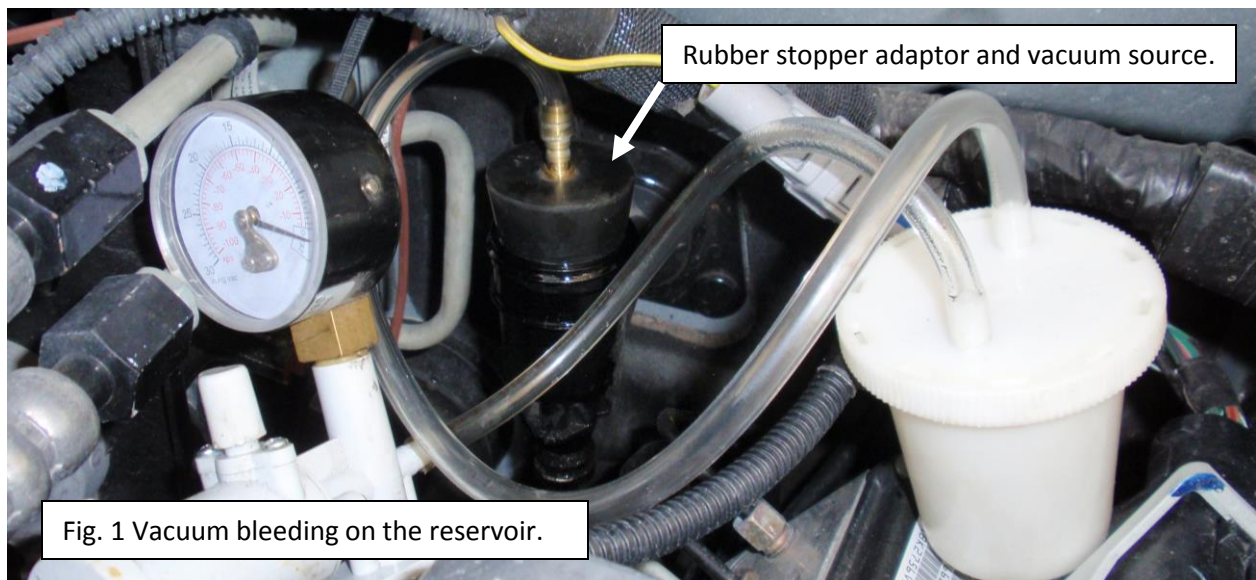
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Dry Vacuum Bleeding Procedure

This procedure is a dry vacuum technique applying vacuum on top of the fluid reservoir to pull air bubbles up and out of the brake fluid. This procedure is suitable for clutch slave cylinders without a bleed screw or check valve type line quick connections. **It may not be successful** on systems with significant air traps in the line routing or master cylinder mounting angle, for example the Ford Ranger.

Figure 1. shows a rubber stopper on the reservoir and Fig. 2. shows the vacuum hose and tapered adaptor inserted directly into the reservoir supply port.

1. Tools required: Hand operated vacuum pump, fluid reservoir bottle and reservoir cap adaptor or tapered adaptor.
2. Clean the area around the cap on the fluid reservoir.
3. Assemble the vacuum pump, fluid reservoir, lines and adaptor plug as shown.
4. Insert the cap adaptor on the reservoir opening plugging it as shown.
5. Hold the reservoir adaptor in position and pump the vacuum tool to 15-20 in. Hg. Apply vacuum for 5-10 minutes. Observe for fluid level dropping or air bubbles in the tubing or reservoir.
6. Release the vacuum, remove adaptor and fill the reservoir with DOT 3 brake fluid to the full line.
7. Push the clutch pedal several times. In some cases it may take several pedal applications to position the piston seal in place and release the clutch.
8. It may be necessary to repeat the process more than once to achieve normal clutch operation.

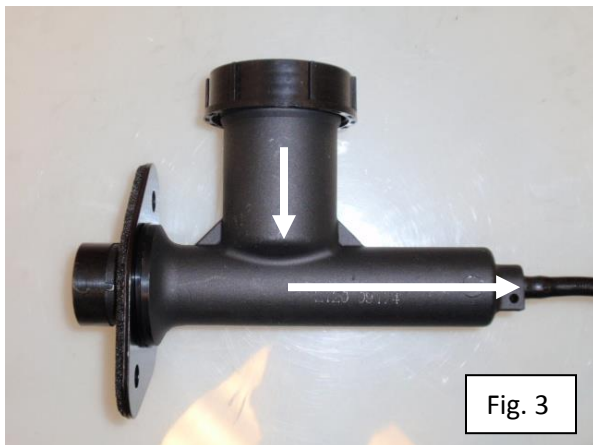


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Fig. 2 Vacuum bleeding in the reservoir connection.



The master cylinder in Fig. 3 is a Piston Port design and a good choice for Dry Vacuum Bleeding. Notice the distance between reservoir fluid inlet to fluid discharge connection. The master cylinder in Fig. 4 is a Tappet Valve design and in general is not a good choice for Dry Vacuum bleeding. Notice that the reservoir fluid inlet is just slightly offset from the fluid discharge connection. This creates an air trap in the master cylinder.



PLEASE REFER TO FACTORY SERVICE MANUALS FOR DETAILED APPLICATION SPECIFIC PROCEDURES.

This bulletin is to assist in the safe and effective servicing of this application. Transmissions, transaxles and transfer cases are heavy and their safe removal and replacement requires the use of proper tools, equipment and procedures to prevent injury and damage. Always read and follow instruction bulletins and factory service manuals for detailed clutch servicing procedures.

Bulletins and any additional information: www.clutchtechsupport.com