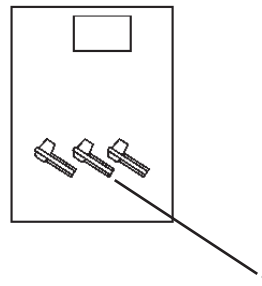
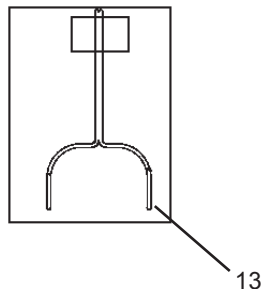
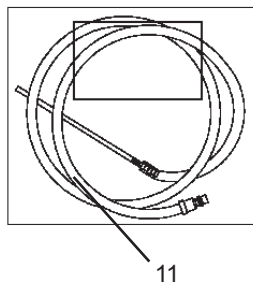
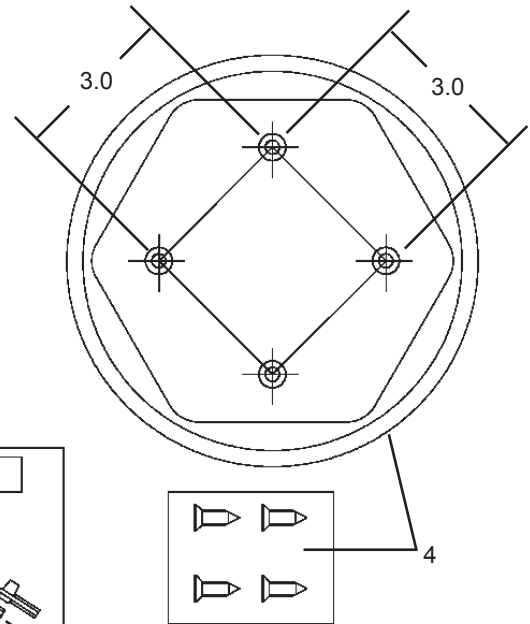
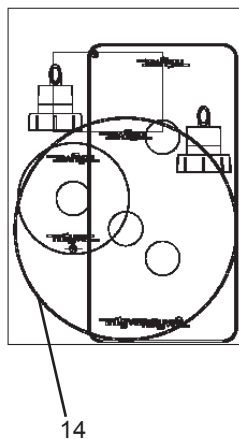
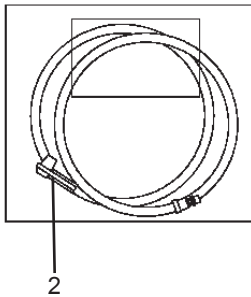
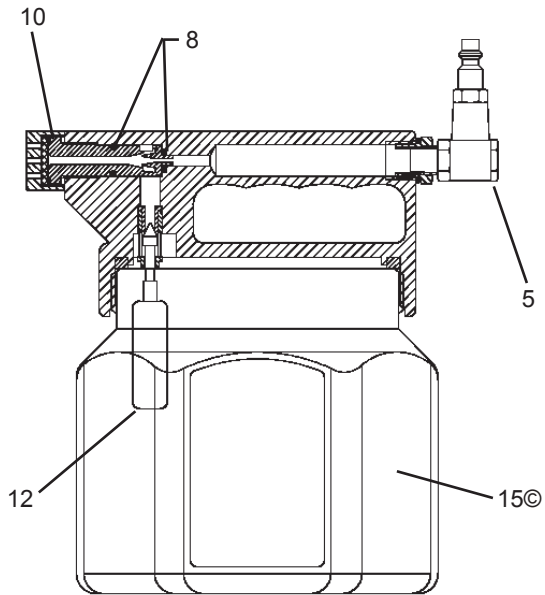
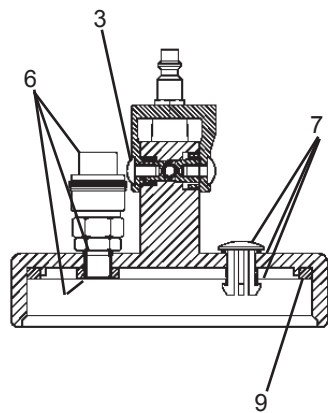


### USER'S MANUAL



#### SPECIFICATIONS

<b>Reservoir Capacity:</b>	1.9 quarts (1.8 liters)
<b>Bleed Tube Length:</b>	72 in. (1830 cm)
<b>Evac Tube Length:</b>	48 in. (1220 cm)
<b>Working Pressure:</b>	60 to 150 psi (4.1 to 10.3 bar)
<b>Air Consumption:</b>	4.3 scfm @ 90 psi (2.0 l/s @ 6.2 bar)
<b>Vacuum</b>	
@ 30 psi (2.0 bar):	6.5 in. hg (22 kpa)
@ 60 psi (4.1 bar):	16.5 in. hg (56 kpa)
@90 psi (6.2 bar):	26.5 in. hg (90 kpa)
@150 psi (10.3 bar):	27 in. hg (91 kpa)
<b>Fill Rate</b>	
@ 30 psi (2.0 bar):	24.5 oz/min (725 ml/min.)
@ 60 psi (4.1 bar):	49.5 oz/min (1460 ml/min.)
@90 psi (6.2 bar):	70.5 oz/min (2095 ml/min.)
@150 psi (10.3 bar):	70.5 oz/min (2095 ml/min.)



### BRAKE BLEEDER KIT COMPONENTS

Item	Part No.	Description	Item	Part No.	Description
1	822664	BRAKE BLEEDING ADAPTER	8	822705	O-RING KIT
2	822694	BLEEDING TUBE KIT	9	822706	RESERVOIR GASKET KIT
3	822700	VALVE KIT	10	822709	MUFFLER KIT
4	822701	BASE KIT	11	822722	SUCTION TUBE KIT
5	822702	COUPLER SWIVEL KIT	12	822731	FLOAT KIT
6	822703	COUPLER KIT	13	822753	HOOK KIT
7	822704	VENT KIT	14	MVA6825	FLUID REFILL KIT
			15©	822842	RESERVOIR

© Indicates change

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## Important Precautions

- Always read carefully and understand instructions prior to using this equipment
- Brake fluid is highly corrosive. Wear gloves and approved safety goggles at all times, and prevent contact of the fluid with painted surfaces.
- Consult and follow the vehicle manufacturer's recommended procedures when servicing any hydraulic system.
- Do not use this unit with flammable liquids or with fluids at temperatures above 175° Fahrenheit (80° Celsius).
- Properly dispose of old fluids, and replenish hydraulic systems with new brake fluid from freshly opened containers.
- Do not attempt to pressurize the bleeder/evacuator. It is designed for vacuum use only.
- This unit is equipped with an automatic shut-off device that will prevent fluid from entering the compressed air stream and ejecting through the exhaust. However, if the unit is continuously operated when the reservoir is full, residual pressure will allow the reservoir to completely fill with fluid, creating the potential for spillage when the lid is removed. To prevent this situation, empty or turn the unit off prior to filling the reservoir completely full.
- © • The screws included in Base Kit 822701 are provided to secure the base to a work surface. Do not use the screws to attach the base to the reservoir.

## Principal of Operation

This unit is designed for use as a vacuum brake or clutch bleeder, or fluid evacuator. It utilizes compressed air between 60 psi (4.1 bar) and 150 psi (10.3 bar), and a venturi system, to build vacuum in the reservoir. By attaching the proper accessory to the coupler located on the top of the unit, the vacuum can be used to drain brake fluid from a hydraulic system such as the brake or clutch systems on an automobile. It can also be used to evacuate a variety of fluids from reservoirs including the master cylinder or those for power steering fluid or engine coolant.

An automatic master cylinder refill kit is included with this unit. It is conveniently designed for use with a standard bottle of brake fluid, to maintain an adequate fluid level in the master cylinder while the hydraulic system is bled. Instructions are included with the kit for its use.

## Instructions for Bleeding Brakes

**IMPORTANT:** This unit is designed for servicing a variety of vehicles in a safe, convenient manner. However, options such as load sensors or anti-lock brakes, available on many automobiles, may require additional steps or equipment to perform a proper service job. The procedures below are to serve as guidelines for the use of this equipment, in addition to these guidelines, always follow the manufacturer's recommended procedures when servicing each unique vehicle.

### Removing old fluid from the brake master cylinder

1. Properly park the vehicle on level ground and turn the engine off.
2. Clean the exterior of the master cylinder and master cylinder cap to prevent dirt from entering the master cylinder when the cap is removed.
3. Remove the cap from the master cylinder reservoir.
4. Connect clean, regulated (60 psi (4.1 bar) to 150 psi (10.3 bar)) compressed air to the male quick disconnect nipple attached to the swivel air inlet, located on one end of the vacuum bleeder handle.
5. Connect the appropriate end of the evac tube assembly to the female quick disconnect coupler located on top of the vacuum bleeder.
6. Insert the other end of the evac tube assembly into the master cylinder fluid reservoir, and push the vacuum bleeder throttle forward to start the vacuum (allow a few seconds for vacuum to build in the bleeder reservoir before suction occurs). While evacuating the old fluid, stir it up to break loose and remove any sludge that has accumulated on the bottom and walls of the master cylinder.
7. Once all fluid is removed, turn off the bleeder and refill the master cylinder with new manufacturer's recommended brake fluid.

© Indicates change

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## Vacuum bleed brake lines and wheel brake cylinders

**Note:** Prior to bleeding, ensure the master cylinder is full of new manufacture's recommended brake fluid. An automatic master cylinder refill kit is included with the vacuum bleeder to maintain the level of new fluid in the master cylinder during the brake bleeding process. Follow the instructions included with the kit to prevent air from being sucked into the master cylinder pistons, brake lines, and wheel cylinders while bleeding the brakes. Additional automatic refill kits are available from Mityvac.

1. Properly position the vehicle for safe convenient access to the brake bleed screw located on each wheel brake cylinder.
2. Make sure that all bleed screws are clean.
3. Connect clean, regulated (60 psi (4.1 bar) to 150 psi (10.3)) compressed air to the male quick disconnect nipple attached to the swivel air inlet, located on one end of the vacuum bleeder handle.
4. Connect the appropriate end of the bleed tube assembly to the female quick disconnect coupler located on top of the vacuum bleeder.

**Note:** Consult the vehicle manufacturer's guidelines for the proper wheel bleeding sequence and vacuum bleeding procedure.

5. Slip the bleed screw adapter located on the opposite end of the bleed tube assembly, over the nipple of the bleed screw.
6. Operate the vacuum bleeder by pushing the throttle forward (allow a few seconds for vacuum to build in the bleeder reservoir before suction occurs), and with the appropriate wrench, loosen/open the bleed screw slightly, until fluid is visibly draining through the bleed hose and into the reservoir.

**Note:** During the bleeding process, as brake fluid is being vacuumed through the bleed screw, air will also be sucked into the bleed tube from around the bleed screw threads. This can give the misconception that air is bleeding from the lines, however it is normal and does not

indicate a malfunction. To prevent or reduce this introduction of air, coat the bleed screw threads with silicon grease prior to bleeding.

7. Keep the bleed screw open until new fluid is visibly flowing through the bleed tube (typically 20 to 30 seconds).
8. Close the bleed screw firmly, without over tightening, prior to removing the bleed screw adapter or shutting off the bleeder.

**Note:** It is important to ensure that the bleed screw adapter remains connected to the bleed screw, and the bleeder is still pulling a vacuum while the bleed screw is closed. This prevents air from being sucked back into the wheel cylinder from around the bleed screw threads, before the bleed screw is tightened and sealed.

**Note:** If an automatic refiller such as the one provided with this unit, is not used, be sure to periodically check the level and top off the brake fluid in the master cylinder.

## Instructions for bleeding hydraulic clutch system

**IMPORTANT:** This unit is designed for servicing a variety of vehicles in a safe, convenient manner. However, hydraulic clutch systems vary between vehicles, in design, in components, and even the location and design of the bleed screw. Due to these differences, the following procedures are to serve only as a guideline for the use of this equipment. In addition to these guidelines, always follow the manufacturer's recommended procedures when servicing each unique vehicle.

### Removing old fluid from the clutch master cylinder

1. Properly park the vehicle on level ground and turn the engine off.
2. Clean the exterior of the master cylinder and master cylinder cap to prevent dirt from entering the master cylinder when the cap is removed.
3. Remove the cap from the master cylinder reservoir.

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4. Connect clean, regulated (60 psi (4.1 bar) to 150 psi (10.3 bar)) compressed air to the male quick disconnect nipple attached to the swivel air inlet, located on one end of the vacuum bleeder handle.
  5. Connect the appropriate end of the evac tube assembly to the female quick disconnect coupler located on top of the vacuum bleeder.
  6. Insert the other end of the evac tube assembly into the master cylinder fluid reservoir, and push the vacuum bleeder throttle forward to start the vacuum (allow a few seconds for vacuum to build in the bleeder reservoir before suction occurs). While evacuating the old fluid, stir it up to break loose and remove any sludge that has accumulated on the bottom and walls of the master cylinder.
  7. Once all fluid is removed, turn off the bleeder and refill the master cylinder with new manufacturer's recommended brake fluid.
4. Connect the appropriate end of the bleed tube assembly to the female quick disconnect coupler located on top of the vacuum bleeder.  
**Note:** Consult the vehicle manufacturer's guidelines for the proper clutch vacuum bleeding procedure.
  5. Slip the universal bleed screw adapter located on the opposite end of the bleed tube assembly, over the nipple of the bleed screw.
  6. Operate the vacuum bleeder by pushing the throttle forward (allow a few seconds for vacuum to build in the bleeder reservoir before suction occurs), and with the appropriate wrench, loosen/open the bleed screw slightly, until fluid is visibly draining through the bleed hose and into the reservoir.  
**Note:** During the bleeding process, as brake fluid is being vacuumed through the bleed screw, air will also be sucked into the bleeder hose from around the bleed screw threads. This can give the misconception that air is bleeding from the lines, however it is normal and does not indicate a malfunction. To prevent or reduce this introduction of air, coat the bleed screw threads with silicon grease prior to bleeding.
  7. Keep the bleed screw open until new fluid is visibly flowing through the bleed hose.

### **Vacuum bleed clutch master cylinder, slave cylinder, and hydraulic lines**

**Note:** Prior to bleeding, ensure the master cylinder is full of new manufacturer's recommended brake fluid. An automatic master cylinder refill kit is included with the vacuum bleeder to maintain the level of new fluid in the master cylinder during the clutch bleeding process. Follow the instructions included with the kit to prevent air from being introduced into the master cylinder pistons, slave cylinder, and fluid lines while bleeding the hydraulic clutch system. Additional automatic refill kits are available from Mityvac.

1. Properly position the vehicle for safe convenient access to the clutch bleed screw located on the slave cylinder.
2. Make sure that the slave cylinder bleed screw is clean.
3. Connect clean, regulated (60 psi (4.1 bar) to 150 psi (10.3 bar)) compressed air to the male quick disconnect nipple attached to the swivel air inlet, located on one end of the vacuum bleeder handle.

7. Close the bleed screw firmly, without over tightening, prior to removing the bleed screw adapter or shutting off the bleeder.  
**Note:** It is important to ensure that the bleed screw adapter remains connected to the bleed screw, and the bleeder is still pulling a vacuum while the bleed screw is closed. This prevents air from being sucked back into the slave cylinder from around the bleed screw threads, before the bleed screw is tightened and sealed.
8. Close the bleed screw firmly, without over tightening, prior to removing the bleed screw adapter or shutting off the bleeder.  
**Note:** If an automatic refiller such as the one provided with this unit, is not used, be sure to periodically check the level and top off the brake fluid in the master cylinder.