
MOTORVAC
TECHNOLOGIES INC.

BrakeVac EBB1000
Brake Service System

Operator Manual
PDF VERSION

200-8342
EBB 1000
BRAKEVAC

Why should the Brake system be Flushed?

Brake fluid is hygroscopic meaning it can absorb moisture from the air resulting in a dangerous reduction of its boiling point. Water contaminated brake fluid under repeated working pressure boils and creates air bubbles. Under severe conditions, this can result in complete brake system failure.

Water contaminated brake fluid causes electrolysis to occur inside the brake system. The oxygen contained in the water droplets cause oxidation. Electrolysis and oxidation corrodes the hydraulic master cylinders and wheel cylinders, and steel brake lines from the inside. Pressure bleeding has been proven the most effective method in flushing and bleeding hydraulic brake systems. Flushing the brake system and replacing the dirty and contaminated brake fluid with new fresh brake fluid can often avoid expensive repairs.

Congratulations you now own the cleanest, most efficient and user friendly brake fluid service equipment available today. Your new electric pressure brake bleeder is designed specifically for today's complex hydraulic brake and clutch systems. It is advised that only professional technicians perform brake system service.

The MotorVac BrakeVac EBB1000 equipment has been designed for use on all hydraulic brake and clutch systems especially Anti-Lock Braking Systems. The simplicity of our pressure bleeder makes it very user friendly and eliminates the need for hands on training.

The large capacity (2.5 gallon) reservoir allows you to perform multiple brake fluid services between refills. The bleeder reservoir is sealed eliminating the possibility of brake fluid contamination.

The MotorVac BrakeVac EBB 1000 System allows year of clean, safe one-man operation brake services.

MotorVac Safety Instructions

- The following safety instructions should be observed at all times when opening the MotorVac EBB1000.
- Perform a visual inspection before each use. If the unit shows defects or damage, do not use! Have your equipment repaired by an authorized MotorVac Service Center.
- The MotorVac BrakeVac EBB1000 is to be used only in accordance with the written instruction booklet.
- The MotorVac BrakeVac EBB1000 is to be used only for the maintenance and repair of hydraulic brake fluid and clutch systems.
- Fill the MotorVac BrakeVac EBB1000 with **BRAKE FLUID ONLY!** Use **DOT 3, 4 or 5** only. Do not mix the different **DOT** standards together. Never fill the bleeder with any fluid other than **BRAKE FLUID!**
- Follow all instructions from the Brake Fluid Manufacturer. Read all cautions on the container. Use proper precautions when coming into contact with brake fluid.
- Keep your MotorVac BrakeVac EBB1000 clean. Wipe your bleeder with a clean rag and non-flammable solvent. Wipe all residual fluids from the bleeder before use.
- Do not put oil, gasoline, or solvent soaked rags on the bleeder, as this will create a fire hazard.
- Use only manufacturer's recommended adapters and accessories. Always follow the vehicle manufacturers' service and maintenance instructions.

Operating Instructions

1. Remove the fill cap from the MotorVac BrakeVac EBB1000 and fill with new brake fluid. You can observe the fluid level by looking at the level indicator tube at the side of the unit. Replace the fill cap.
2. Plug the power cord into electrical outlet.
3. Install the proper cylinder reservoir adapter and connect the pressure hose coupling.
4. Turn the power switch to the **ON** position and check for leaks at the master cylinder adapter.
5. Adjust the pressure regulator until the desired pressure is reached.
6. Bleed the brake system according to manufacturer's recommended procedure.
7. When finished, turn the power switch to the **OFF** position. This relieves the pressure in the fluid hose allowing a clean disconnection from the master cylinder adapter.
8. Reinstall the original master cylinder cover.

Note: If the Pressure Bleeder does not operate when the switch is in the **ON** position, check the fuse mounted in the top of the unit. Replace if necessary or contact your MotorVac BrakeVac EBB1000 service center.

Adjusting the pressure regulator

The pressure regulator lock nut is set at **30 PSI/ or 2 bar** by the manufacturer. In some cases the recommended procedure many call for a lower pressure. This can be adjusted by turning the regulator knob clockwise (when starting form 0 PSI on the pressure gauge) until the proper pressure is reached. If more than the factory preset **30 PSI/ or 2 bar** is needed the lock nuts must be loosened and the knob turned clockwise until the desired pressure is reached.

Low-pressure leak down test

A low-pressure leak down test can be performed with the MotorVac BrakeVac EBB1000. Fill the master cylinder reservoir with brake fluid connect pressure hose to the appropriate bleeder adaptor. Make sure all bleeder valves are securely closed. Turn bleeder on. The system is now under working pressure. Close the regulator by rotating the knob counter clockwise until no more resistance is felt. The pressure regulator is now closed. The pressure indicated on the gauge should not drop over a period of 5 minutes. If the pressure falls during this period, the brake system has a leak. After completing the test be sure to evacuate the excess brake fluid from the reservoir.

Automatic low fluid level warning system and shut off

The MotorVac BrakeVac EBB1000 will shut off automatically when the fluid level reaches 0.8 liters. This ensures that no air will be injected into the brake system. When the unit shuts down the low level warning light will activate and an audio buzzer will sound alerting you to the low level condition. Remove fill cap add fluid and replace cap. Begin bleeding where you left off as a diaphragm keeps the master cylinder under constant pressure eliminating depressurization of the braking system.

Tips for hydraulic brake bleeding

After installing the correct master cylinder reservoir adapter and connecting the MotorVac BrakeVac EBB1000 you can begin the bleeding process. Open one bleeder at a time until the brake fluid flows clean and free of air bubbles.

To better observe the brake fluid flow and insure cleanliness of the shop we recommend using the MotorVac recovery. This will help allow you to observe the fluid color, keep the fluid off the shop floor and allow for easy fluid disposal.

After a complete hydraulic brake system overhaul we recommend that all bleeders be opened simultaneously so the air can escape by the path of least resistance. This process eliminates backpressure and the possibility of the new fluid mixing with contaminated brake fluid remaining in the system. When the fluid flows clean and free from bubbles, close the bleeder nipples and tighten them one after the other and double check tightness.

We recommend during this pressure bleeding process to slowly press the brake or clutch pedal a few times to insure complete purging of air and fluid between the primary and secondary master cylinder chamber. Fixed calipers can be equipped with multiple bleeder valves, which can require a larger volume of brake fluid. Each bleeder valve must be bled one after another.

In brake systems with load sensitive brake force regulators, the hydraulic flow to the wheel cylinders may be restricted when the axles are hanging during lifting. In this case, the axles must be put under load. Consult manufacture's repair manual for proper brake bleeding or brake fluid replacement procedures.

Caution:

In brake systems with a *hydraulic* brake booster, the brake system operates with brake fluid and the hydraulic booster system operates on hydraulic fluid. The two fluids must not be interchanged!

Tips for hydraulic clutch bleeding

When bleeding hydraulic clutch systems, we recommend using the reverse bleeding hose # **060-6014** (available as an optional accessory). When used this hose connects to the bleeder valve at the slave cylinder and pushes the old dirty fluid back up to the master cylinder. Remove the old fluid from the master cylinder and repeat the procedure until all air has been bled from the system.

BrakeVac - System Accessories

Basic Adaptor Kit: 200-3118

Standard Adapter kit for BrakeVac – EBB1000

The following is a list of the adaptors included with your BrakeVac unit.

MOTORVAC PART & NUMBER	QTY	DESCRIPTION
 <p style="text-align: center; border: 1px solid black; display: inline-block; padding: 2px;">066-6000</p>	1	<p>Chrysler with twin caps, 2 piece, 3 tabs, expandable o-rings. (BA-01)</p>
 <p style="text-align: center; border: 1px solid black; display: inline-block; padding: 2px;">066-6002</p>	1	<p>3 Tab twist on with expandable o-ring. Fits Ford, Hyundai, Chrysler, Kia, Mazda, Pontiac, Nissan and Subaru. (BA-03)</p>
 <p style="text-align: center; border: 1px solid black; display: inline-block; padding: 2px;">066-6003</p>	1	<p>Three tab twist on with expandable o-ring. Fits GM, Chevrolet, Cadillac, Mazda, Pontiac and Daewoo. (BA-04)</p>

 <p style="text-align: center;">066-6004</p>	1	<p>Threaded screw cap. Fits all European makes as well as domestics with Bosch or Teves master Cylinders. (BA-05)</p>
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KIT 200-3118 CONTINUED

MOTORVAC PART & NUMBER	QTY	DESCRIPTION
 <p style="text-align: center;">066-6005</p>	1	<p>Universal round adapter With chain tension hold down. Fits round master cylinders with a diameter of .800" to 3.150". (BA-07)</p>
 <p style="text-align: center;">066-6006</p>	1	<p>Expandable O-ring with hold down chain. Fits Honda with diameter of 2.91" and some Isuzu. (BA-08)</p>
 <p style="text-align: center;">066-6007</p>	1	<p>Fits Honda master cylinders with and inside diameter of 2.11" to 2.17". (BA-09)</p>

 <p>066-6008</p>	<p>1</p>	<p>Expandable o-ring with adjustable hold down tabs. Fits Toyota & Lexus with diameter of 1.69" (BA-10)</p>
<p>KIT 200-3118 CONTINUED MOTORVAC PART NUMBERS</p>		
 <p>066-6009</p>	<p>1</p>	<p>Expandable o-ring with adjustable hold down tabs. Fits Toyota & Lexus with diameter of 2.75". (BA-11)</p>
 <p>066-6010</p>	<p>1</p>	<p>Twin cylinders with rubber cones connected together with common hose. Chain tension hold downs. Fits into the inlet hold at the bottom of GM and Chrysler plastic master cylinders. (ST100)</p>
 <p>066-6012</p>	<p>1</p>	<p>Twist on 2 tab with expandable o-ring. Fits Ford. (BA-02)</p>

OPTIONAL ADAPTORS (NOT INCLUDED IN KIT 200-3118.)

MOTORVAC PART & NUMBER	QTY	DESCRIPTION
 <p data-bbox="407 621 597 678">066-6013</p>	1	NISSAN ALTIMA, EXTERRA (BA-13)
 <p data-bbox="431 1003 618 1060">066-6011</p>	1	Plate adapter with 2 hold down chains for rectangular cast iron master cylinders. (BA-12)
 <p data-bbox="456 1318 643 1375">066-6014</p>	1	Clutch master/slave adapter. (ST-67)

ORDERING PARTS

Parts for the unit may be ordered by calling
 Customer Service, have your model and serial numbers available:
 Call: 800.841.8810, 714.558.8810