

# ***PURE BRAKE***® **Brake-Fluid Exchanger**

**OPERATION MANUAL**  
**Read All Operating Instructions Before Use**



**MODEL #1000 MER**

**U.S. PATENT NO. 6,206,055**

**PART# 98119** rev 05/10

# INDEX

<b>Advisories (Warnings)</b> .....	1
Safety Requirements	
Precautions	
<b>Packaged With Your Machine</b> .....	2
<b>Machine Specifications</b> .....	3
Specifications	
<b>Starting The Service</b> .....	4
Defining Service Descriptions	
<b>Access Code</b> .....	5
Access Code	
Incorrect Code Entries	
<b>Getting Started</b> .....	6
Procedure For Connecting The Machine	
<b>Performing The Service</b> .....	8
Quick-Service Procedure	
Manual-Service Procedures	
OEM-Service Procedures	
<b>Draining The Fluid Tank</b> .....	19
Procedure For Draining The Used-Fluid Tank	
<b>Adapter Identification</b> .....	20
<b>Replacement-Parts List</b> .....	22
<b>Getting Help</b> .....	25

# ADVISORIES

## SAFETY REQUIREMENTS:

- Safety goggles and gloves should be worn during the entire servicing of the vehicle.
- Never raise a vehicle when it is occupied.
- Always verify that the car is operating correctly and has the parking brake set before starting a brake service.
- Perform all repairs and maintenance procedures before starting a service. Inspect the vehicle for fluid leaks, damaged belts, damaged hoses and engine noise or unsafe conditions.

## PRECAUTIONS:

This equipment is designed to be used *only* with brake fluid supplied by an authorized distributor.

Before starting a service, inspect the equipment for damage to; hoses, adapters or display system. Repairs to the system must be completed before the equipment can be used.

Cover all painted surfaces with fender covers before starting the service.

When lifting a vehicle, always verify that all safety locks and precautions are followed to the manufacturer's specifications.

# PACKAGED WITH YOUR MACHINE

- A standard set of Master-Cylinder Adapters (see page 21 for list).
- Waste-storage container (located in the front storage area of the Chassis).
- Fluid extractor with valve.
- Lookup OEM manual / operation manual.

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**Waste Container**



**Fluid Extractor**

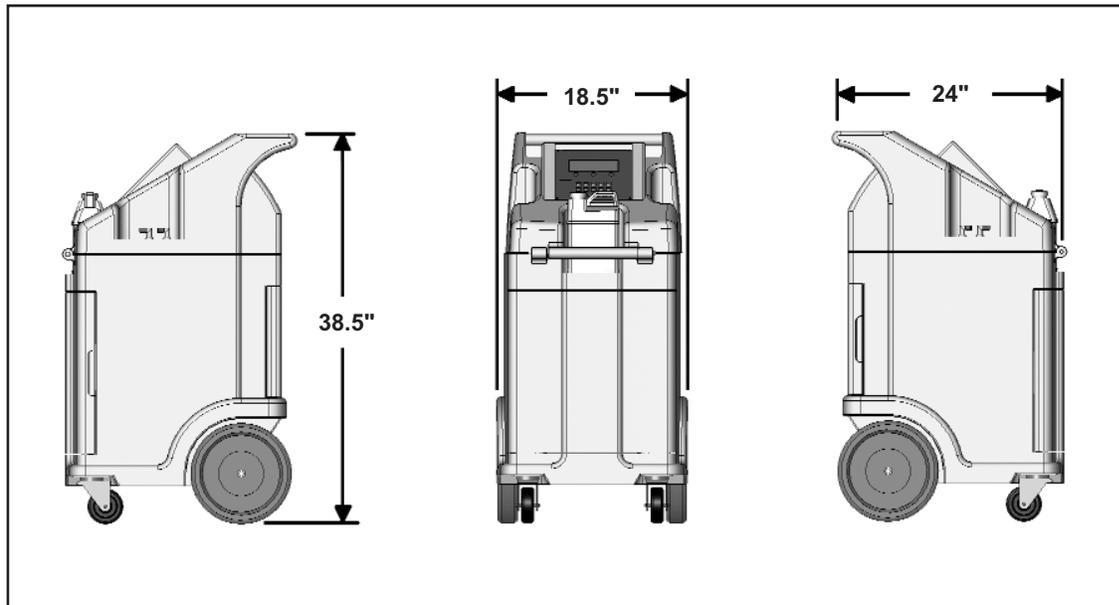


# MACHINE SPECIFICATIONS

## SPECIFICATIONS:

Dimensions:	38.5" H x 18.5" W x 24" D
Weight:	80 lbs. w/adapters
Chassis:	Linear low-density Polyethylene
Power:	12V DC - 15 Amps max (non-polarity-sensitive)
Used Fluid Capacity:	5 Gallons

Machine Dimensions:



# STARTING THE SERVICE

## THE FOLLOWING ITEM WILL BE NEEDED TO PERFORM THE SERVICE:

- One bottle of Brake Fluid (Depending on the vehicle fluid requirements);
  - Heavy-Duty DOT 3 Brake Fluid.
  - Premium Plus DOT 4 Brake Fluid.
- Locate the proper master-cylinder adapter. (See Page 20, *Adapter-identification Chart*)
- A line wrench that will fit the bleeder valves.
- Safety glasses must be worn at all times.
- Gloves must be worn at all times.
- Fender covers must be placed to protect all painted surfaces.

## DEFINING SERVICE DESCRIPTIONS:

**QUICK-SERVICE MODE** – The Quick-Service Mode will simultaneously remove fluid from all four wheel cylinders as fluid is being supplied to the Master Cylinder, resulting in a service that is only 10-12 minutes long and removes virtually all of the old fluid.

**MANUAL MODE** – The technician operating the **Pure Brake® Machine** can operate the unit as a single-draw machine, turn off and on the pressure and vacuum at any time, having full control of the operation at all times for bleeding brake systems.

**OEM SERVICE** – The **Pure Brake® Machine** will flush the vehicle's brake system using the recommended bleeding sequences recommended by the OEM (Original Equipment Manufacturer).

# ACCESS CODE

## ACCESS CODE:

The **Pure Brake® Machine** utilizes an “Access-Code” system to activate the machine before it can be used to service vehicle brake systems. The access codes are located on the front of each bottle of brake fluid.

- Heavy-Duty DOT 3 Brake Fluid.
  - Premium Plus DOT 4 Brake Fluid.
- (Ask your representative for more information.)

Once a code has been entered into the machine, it will allow up to fifty (50) minutes for the service to be completed (average services will only take 7-10 minutes). If the service is not completed in the allotted time, the machine will indicate an error has occurred and will stop the service. The used code will not reactivate the machine. To reactivate the machine, a new code from a new bottle will need to be entered.

## INCORRECT CODE ENTRIES:

The **Pure Brake® Machine** will allow a maximum of twelve (12) incorrect codes to be entered per day. After the twelfth incorrect code is entered during a calendar day, the machine will become disabled.

To reactivate the machine, you will be required to enter a password. The passwords can only be obtained by reaching Equipment Technical-Service at (866) 244-6621, from 7:00 am - 3:30 P.M. PST. When you call, you will be asked to supply the technician with the following information:

- The system code from the machine’s display screen.
- The serial number of the machine (located below the handle).
- The location of the store.
- A phone number where the operator of the machine can be reached.

Once the password is entered, the machine will reset and be ready for use.

**NOTE:** AFTER ENTERING A FEW WRONG PASSWORDS, THE MACHINE WILL LOCK AND WILL REQUIRE A VISIT FROM ONE OF OUR TECHNICIANS TO REPROGRAM THE MACHINE.

# GETTING STARTED

## PROCEDURE FOR CONNECTING THE MACHINE:

### STEP 1 - SAFETY

Ensure that the vehicle's engine is off, and that the parking brake has been securely set. Inspect the vehicle for leaks and any damaged hoses or belts. Make any repairs prior to exchanging/flushing brake fluid. Place fender covers over any painted surfaces close to the master cylinder area, and where any hoses may hang over the fender or come in contact with the vehicle. Safety glasses and gloves should be worn during the service.

### STEP 2 - BRAKE SYSTEM INSPECTION

Inspect the master cylinder for leaks, cracks or any other damage. Note the condition and level of the brake fluid prior to starting the service. If empty, read the following note.

**NOTE:** IF THE MASTER CYLINDER IS EMPTY DO NOT START A SERVICE. AIR MAY HAVE ENTERED THE BRAKING SYSTEM OF THE VEHICLE. FOLLOW THE MANUFACTURERS RECOMMENDED BLEEDING PROCEDURE AND METHODS BEFORE CONTINUING WITH THE SERVICE.

### STEP 3 - IDENTIFY THE CORRECT BRAKE FLUID

Use the vehicle's owner manual, or the vehicle's "under hood" Brake-Information Sticker, to identify which type of fluid is required for the vehicle's brake system. If the vehicle brake system requires DOT 3 brake fluid, use **Heavy-Duty Brake Fluid DOT 3**. If the vehicle brake system requires DOT 4 brake fluid, use **Premium Plus Brake Fluid DOT 4**.

The **Pure Brake® Machine** will not perform services on vehicles requiring DOT 5, Hydraulic System Mineral Oil (HSMO), or any other type of brake fluid.

### STEP 4 - ATTACH THE BOTTLE TO THE MACHINE

Remove the cap and the foil seal from the bottle. Insert the pickup-tube assembly into the new bottle of brake fluid and secure it with the pick-up-tube ring. Place the bottle into the tray on the front of the machine.

# GETTING STARTED

## STEP 5 - POWERING-UP THE UNIT

Attach both of the black battery clamps to a 12V DC power supply (preferably the vehicle's 12V DC battery). **Do not use a battery charger to power the machine.** If the bottle has not been installed, at this time the machine will require that you do so.

Once the **Pure Brake® Machine** is powered-up, the system will automatically start a self-diagnostic test. If the machine does identify a system error, the system will give a warning and inform the user. The machine will not operate until the problem has been corrected (see the *Getting-Help* section, page 26, if an error code is found).

## STEP 6 - START THE SERVICE

Once the **Pure Brake® Machine** has completed the self-test, the unit will display the option to start the service.

**FULL INSTRUCTIONS** – Step-by-step on-board instructions requiring the technician to use the next button to verify the service is completed correctly.

**MINIMUM INSTRUCTIONS** – For use by technicians that already know what steps need to be performed and just need to start the service without the hookup instruction.

Start a service  
1- Full Instructions  
2- Min. Instructions

## STEP 7 - ENTER THE ACCESS CODE

The display to the right will show up and you will be asked to enter the eight-digit access code. The eight-digit access code is located at the top of the label on the brake fluid bottle. Enter the code to activate the machine. Once the code has been entered, the machine will be activated for fifty (50) minutes, and the code will no longer be valid. The system will require a new code from a new bottle in order to reactivate the machine.

Enter access code  
-----  
BACK ENTER RESET

**NOTE:** SEE PAGE 5 FOR MORE INFORMATION REGARDING THE ACCESS-CODE SYSTEM.

# PERFORMING THE SERVICE

Once the access code has been entered into the **Pure Brake® Machine**, the display will read:

The unit will allow for one of the following services to be performed:

- **QUICK SERVICE** – For procedure see below steps 1-11
- **MANUAL SERVICE** – For procedures see page 12 steps 1-9
- **OEM SERVICE** – For procedures see page 15 steps 1-12

1 Quick Service 2 Manual Service 3 OEM Service  ESC
---

**NOTE:** ALL THREE OF THE SERVICE PROCEDURES (QUICK SERVICE, MANUAL SERVICE, AND OEM SERVICE) WILL REQUIRE STEPS 1-7 OF THE **GETTING-STARTED** SECTION TO BE PERFORMED BEFORE CONTINUING WITH THE SERVICE PROCEDURES.

## QUICK-SERVICE PROCEDURE:

### STEP 1 - SELECT QUICK SERVICE

To perform a “Quick Service,” press the number-1 button on the face panel of the unit.

### STEP 2 - DRAINING THE MASTER CYLINDER

Remove the cap and any filter strainers that might be in the Brake-Fluid Reservoir. Attach the extraction tool to the suction hose (the suction hose can be identified by the red color-coded sleeve). Once the extraction tool has been installed, press the “Start” button. Place the tip of the extraction tool into the master-cylinder reservoir. Squeeze the trigger to start the removal of the used fluid (in some cases, not all of the used fluid will be accessible to be removed). Once you have removed most of the fluid from the reservoir, press the “Stop” button, and then the “Next” button to proceed to the next step.

[START] – Will start the vacuum pump.

[NEXT] – Will skip the draining process and will bring you to step 3.

# PERFORMING THE SERVICE

## STEP 3 - ATTACH THE ADAPTER

Locate the correct adapter by using the adapter chart (see pages 20 and 21). Attach the correct adapter to the vehicle. Once this is completed press the “Next” button to proceed.

**[HELP]** – Will refer you to the adapter list.

**[NEXT]** – Will proceed to the next step.

**[ESC]** – Will bring you back to the select-service screen.

**NOTE:** WHEN INSTALLING RESERVOIR ADAPTERS WITH A TIE-DOWN CHAIN, BE SURE THAT ALL WIRES, SENSORS, BRAKE LINES AND HOSES ARE CLEAR OF THE CHAIN'S LOOPS GOING AROUND THE MASTER CYLINDER, BEFORE TIGHTENING THE ADAPTER IN PLACE.

## STEP 4 - ATTACHING THE SERVICE HOSE

The screen will direct the user to attach the service hose with the **black** color-coded sleeve to the Reservoir Adapter. Once the hose has been attached, verify that the coupler is properly engaged onto the adapter. Once this is completed, press the “Next” button to proceed to the leak test.

**[NEXT]** – Will proceed to the next step.

**[ESC]** – Will bring you back to the select-service screen.

Attach the BLACK  
service hose and  
install adapter

NEXT    ESC

## STEP 5 - LEAK TEST

The screen will direct the user to begin the leak test by pressing the “Start” button. During the leak test, the **Pure Brake® Machine** will fill the master cylinder and purge any air from the service hoses and the master-cylinder reservoir.

Once the brake system is filled, the unit will pressurize the brake system for 45 seconds, allowing the technician to inspect the adapters and hoses for any leaks. **Immediately Press the “Stop” button if a leak is found.** Correct any leak by readjusting the adapter or reconnecting the supply hose to the adapter. Press the “Start” button to restart the leak test.

Press start to begin  
leak test

START    ESC

Leak test started  
check for leaks  
press stop if found

STOP    ■■

# PERFORMING THE SERVICE

**NOTE:** IF A LEAK TEST FAILS, THE MACHINE WILL RESET THE TIME FOR A FIFTY (50) MINUTE FLUSH FROM THIS POINT, GIVING YOU SOME EXTRA TIME TO FIX THE LEAK.

**NOTE:** IF A PROPER SEAL CANNOT BE MADE USING A VEHICLE-SPECIFIC ADAPTER, IT MAY BECOME NECESSARY TO USE ONE OF THE THREE UNIVERSAL ADAPTERS. REMOVE ALL OF THE STORED HOSES AND POWER CABLE FROM THE MACHINE BEFORE RAISING THE VEHICLE.

[HELP] – Will begin the leak test.

[STOP] – Will stop the leak test to allow the user to correct any leaks and then restart the test.

[ESC] – Will bring you back to the select-service screen.

[BYPASS] – After Checking for leaks, performing any needed repairs, and the Pure Brake Machine is still failing “leak check” you have the option to “BYPASS” the LEAK TEST MODE.

## STEP 6 - ATTACHING THE WHEEL-CYLINDER ADAPTERS

Place the machine so that it is located between the two axles. The machine should be facing to the rear. The screen will direct the user to attach the wheel-cylinder adapters and the hoses to the wheel cylinder’s bleed screws. The wheel-cylinder adapters are all color-coded indicating to which wheel cylinder they are to be attached. The following information can also be accessed by pressing the “Help” button on the screen.

System is ready for service. Attach hoses to wheel cyl's.  
HELP NEXT CANCEL

### Hose-Adapters Installation Guide.

The **Yellow** Hose Adapter = **(RF)** Right-Front Wheel Cylinder

The **Green** Hose Adapter = **(LF)** Left-Front Wheel Cylinder

The **Blue** Hose Adapter = **(RR)** Right-Rear Wheel Cylinder

The **White** Hose Adapter = **(LR)** Left-Rear Wheel Cylinder

Attach the wheel-cylinder adapters to the vehicle’s correct wheel cylinder as described above. Press the “Next” button to continue.

[HELP] – Will bring up the online adapter list.

[NEXT] – Will proceed to the next step.

[ESC] – Will bring you back to the select-service screen.

## STEP 7 - OPENING THE BLEED SCREWS

Now that the wheel-cylinder adapters are attached, the wheel-cylinder bleed screws will need to be opened approximately ¼ of a turn. Press the “Next” button to continue.

[NEXT] – Will proceed to the next step.

[ESC] – Will bring you back to the attach-wheel-cylinder-adapter screen (Step #6).

# PERFORMING THE SERVICE

## STEP 8 - THE FLUSH

The screen will direct the user to press the “*Start*” button to begin the service. Once the service has started, inspect the lines attached to the wheel cylinders for flow and color of fluid being removed. Fluid should be flowing through all four hoses at this time. If fluid is not flowing through all the hoses, it may be an indication that the bleed screw is blocked; open the bleed screw by not more than  $\frac{1}{2}$  a turn. If fluid will still not flow through the bleed screw, press the “*Pause*” button and repair or replace the bleed screw. After the repair is complete, press the “*Resume*” button to continue or, if necessary, you can cancel the service.

**NOTE:** CANCELING A SERVICE DOESN'T RESET THE SERVICE TIME.

After the **Pure Brake® Machine** has performed a “Pulse Flush,” the unit will instruct the user to close the bleed screws in the following order:

1. *Front-left* bleed screw
2. *Front-right* bleed screw
3. *Rear-left* bleed screw
4. *Rear-right* bleed screw

After all of the bleed screws have been closed, remove the hoses from the wheel cylinders. Once the service is complete, the system will automatically remove the pressure from the Brake-Fluid Reservoir.

**NOTE:** LOWER THE VEHICLE BEFORE CONTINUING.

**[PAUSE]** – Will stop the service to allow the user to correct leaks.

**[NEXT]** – Will proceed to the next step.

## STEP 9 - TESTING THE BRAKE PEDAL

The display will instruct the user of the equipment to push down on the brake pedal and check if the pedal is firm and is operating correctly.

## STEP 10 - REMOVING THE BRAKE-FLUID-RESERVOIR ADAPTER

Remove the adapter from the Brake-Fluid Reservoir and press the “*Next*” button.

## STEP 11 - ADJUSTING THE FLUID LEVEL

To add fluid, press the “*Add*” button; to remove fluid, press the “*Remove*” button. After the fluid level is at the proper level, press the “*Next*” button. The service is now complete. Remove the battery clamps from the power supply, and reinstall the Brake-Fluid-Reservoir Cap.

# PERFORMING THE SERVICE

## MANUAL-SERVICE PROCEDURE:

### STEP 1 - SELECT MANUAL SERVICE

To perform a “Manual Service,” press the number-2 button on the face panel.

### STEP 2 - DRAINING THE MASTER CYLINDER

Remove the cap and any filter strainers that might be in the Brake-Fluid Reservoir. Attach the extraction tool to the suction hose (the suction hose can be identified by the red color-coded sleeve). Once the extraction tool has been installed, press the “Start” button. Place the tip of the extraction tool into the Master-Cylinder Reservoir. Squeeze the trigger to start the removal of the used fluid (in some cases, not all of the used fluid will be accessible to be removed). Once you have removed most of the fluid from the reservoir, press the “Stop” button, and then the “Next” button to proceed.

[START] – Will start the vacuum pump.

[NEXT] – Will skip the draining process and will bring you to step 3.

### STEP 3 - ATTACH THE ADAPTER

Locate the correct adapter by using the adapter chart (see page 20 and 21) or by using the online “Help” button. Attach the correct adapter to the vehicle. Once this is completed, press the “Next” button to proceed.

[Help] – Will refer you to the adapter list.

[Next] – Will proceed to the next step.

[ESC] – Will bring you back to the select-service screen (Step #1).

### STEP 4 - ATTACHING THE SERVICE HOSE

The screen will direct the user to attach the service hose with the **black** color-coded sleeve to the Master-Cylinder Adapter. Once the hose has been attached, verify that the coupler is properly engaged onto the adapter. Once this is completed, press the “Next” button to proceed to the leak test.

Attach the BLACK  
service hose and  
install adapter

NEXT    ESC

[NEXT] – Will proceed to the next step.

[ESC] – Will bring you back to the select-service screen.

# PERFORMING THE SERVICE

## STEP 5 - LEAK TEST

The screen will direct the user to begin the leak test by pressing the “Start” button. During the leak test, the **Pure Brake® Machine** will fill the master cylinder and purge any air from the service hoses and the Master-Cylinder Reservoir.

Press start to begin  
leak test

START

ESC

Once the brake system is filled, the unit will pressurize the brake system for 45 seconds, allowing the technician to inspect the adapters and hoses for any leaks. **Immediately Press the “Stop” button if a leak is found.** Correct any leak by readjusting the adapter, or reconnecting the supply hose to the adapter. Press the “Start” button to restart the Leak Test.

Leak test started  
check for leaks  
press stop if found

STOP



**NOTE:** IF A PROPER SEAL CANNOT BE MADE USING A VEHICLE-SPECIFIC ADAPTER, IT MAY BECOME NECESSARY TO USE ONE OF THE THREE UNIVERSAL ADAPTERS.

[HELP] – Will begin the leak test.

[STOP] – Will stop the leak test to allow the user to correct any leaks and then restart the test.

[ESC] – Will bring you back to the select-service screen.

[BYPASS] – After Checking for leaks, performing any needed repairs, and the Pure Brake Machine is still failing “leak check” you have the option to “BYPASS” the LEAK TEST MODE.

## STEP 6 - ACTIVATING THE VACUUM LINES

Once the leak test is completed, the system will then allow you to manually activate the service hoses. Select the hose that you will be working with by pressing the number 1 and 2, then press the “Start” button to activate the vacuum pump and the supply pump.

[#1] – Will turn off/on the vacuum supply to the blue hose.

[#2] – Will turn off/on the vacuum supply to the white hose.

[DONE] – Will complete the service.

[START/STOP] – Will turn off the pumps.

[ESC] – Will return you to the select-service screen.

Press the “Done” button when the service is complete. The system will automatically release the pressure from the master cylinder.

# PERFORMING THE SERVICE

**NOTE:** LOWER THE VEHICLE BEFORE CONTINUING.

## **STEP 7 - TESTING THE BRAKE PEDAL**

The display will instruct the user of the equipment to push down on the brake pedal and check if the pedal is firm and is operating correctly.

## **STEP 8 - REMOVING THE BRAKE-FLUID-RESERVOIR ADAPTER**

Remove the adapter from the Brake-Fluid Reservoir and press the “Next” button.

## **STEP 9 - ADJUSTING THE FLUID LEVEL**

To add fluid, press the “Add” button; to remove fluid, press the “Remove” button. After the fluid level is at the proper level, press the “Next” button. The service is now complete. Remove the battery clamps from the power supply, and reinstall the Brake-Fluid-Reservoir Cap.

# PERFORMING THE SERVICE

## OEM-SERVICE PROCEDURE:

### STEP 1 - SELECT OEM SERVICE

To perform an “OEM Service,” press the number-3 button on the face panel.

### STEP 2 - ENTERING THE OEM-PROCEDURE NUMBER

The screen will request the user to enter an OEM-Procedure Code. The OEM Codes are located in the Brake-System-Bleeding-Sequence Guide, P/N 89021. Locate the specific vehicle the service is to be performed on in the guide, and enter the appropriate procedure number into the **Pure Brake® Machine**. The system will require you to confirm your selection.

### STEP 3 - DRAINING THE MASTER CYLINDER

Remove the cap and any filter strainers that might be in the Brake-Fluid Reservoir. Attach the extraction tool to the suction hose (the suction hose can be identified by the red color-coded sleeve). Once the extraction tool has been installed, press the “*Start*” button. Place the tip of the extraction tool into the Master-Cylinder Reservoir. Squeeze the trigger to start the removal of the used fluid (in some cases, not all of the used fluid will be accessible to be removed). Once you have removed most of the fluid from the reservoir, press the “*Stop*” button, and then the “*Next*” button to proceed.

[**START**] – Will start the vacuum pump.

[**NEXT**] – Will skip the draining process and will bring you to step 5.

### STEP 4 - ATTACH THE ADAPTER

Locate the correct adapter by using the adapter chart (see page 20 and 21) or by using the online “*Help*” button. Attach the correct adapter to the vehicle. Once this is completed, press the “*Next*” button to proceed.

[**HELP**] – Will refer you to the adapter list.

[**NEXT**] – Will proceed to the next step.

[**ESC**] – Will bring you back to the select-service screen.

# PERFORMING THE SERVICE

## STEP 5 - ATTACHING THE SERVICE HOSE

The screen will direct the user to attach the service hose with the **black** color-coded sleeve to the reservoir adapter. Once the hose has been attached, verify that the coupler is properly engaged onto the adapter. Once this is completed, press the “Next” button to proceed to the leak test.

[NEXT] – Will proceed to the next step.

[ESC] – Will bring you back to the select-service screen.

Attach the BLACK  
service hose and  
install adapter

NEXT      ESC

## STEP 6 - LEAK TEST

The screen will direct the user to begin the leak test by pressing the “Start” button. During the leak test, the **Pure Brake® Machine** will fill the master cylinder and purge any air from the service hoses and the Master-Cylinder Reservoir.

Once the brake system is filled, the unit will pressurize the brake system for 45 seconds, allowing the technician to inspect the adapters and hoses for any leaks. **Immediately Press the “Stop” button if a leak is found.** Correct any leak by readjusting the adapter, or reconnecting the supply hose to the adapter. Press the “Start” button to restart the leak test.

Press start to begin  
leak test

START      ESC

Leak test started  
check for leaks  
press stop if found

STOP      

**NOTE:** IF THE LEAK TEST FAILS, THE MACHINE WILL RESET THE TIME FOR A FIFTY (50) MINUTE FLUSH FROM THIS POINT; GIVING YOU SOME EXTRA TIME TO FIX THE LEAK.

**NOTE:** IF A PROPER SEAL CANNOT BE MADE USING A VEHICLE-SPECIFIC ADAPTER, IT MAY BECOME NECESSARY TO USE ONE OF THE THREE UNIVERSAL ADAPTERS.

[HELP] – Will begin the leak test.

[STOP] – Will stop the leak test to allow the user to correct any leaks and then restart the test.

[ESC] – Will bring you back to the select-service screen.

[BYPASS] – After Checking for leaks, performing any needed repairs, and the Pure Brake Machine is still failing “leak check” you have the option to “BYPASS” the LEAK TEST MODE.

# PERFORMING THE SERVICE

## STEP 7 - ATTACHING THE WHEEL-CYLINDER ADAPTERS

The screen will direct the user to attach the wheel-cylinder adapters and the hoses to the wheel cylinder's bleed screws. The wheel-cylinder adapters are all color-coded indicating to which wheel cylinder they are to be attached. The following information can also be accessed by pressing the "Help" button on the screen.

System is ready for service. Attach hoses to wheel cyl's.  
HELP NEXT CANCEL

**WARNING: WHEN YOU ARE USING THE PURE BRAKE® UNIT IN THE OEM MODE, YOU MUST REFERENCE THE HOSES TO THE PROPER BLEED POINT BY USING THE HELP OPTION. THE BLEED POINTS WILL CHANGE IN DIFFERENT CODES.**

### Hose-Adapters Installation Guide

The **Yellow** Hose Adapter = **(RF)** *Right-Front* Wheel Cylinder

The **Green** Hose Adapter = **(LF)** *Left-Front* Wheel Cylinder

The **Blue** Hose Adapter = **(RR)** *Right-Rear* Wheel Cylinder

The **White** Hose Adapter = **(LR)** *Left-Rear* Wheel Cylinder

Attach the wheel-cylinder adapters to the vehicle's correct wheel cylinder as described above. Press the "Next" button to continue.

**[HELP]** – Will bring up the online adapter list.

**[NEXT]** – Will proceed to the next step.

**[ESC]** – Will bring you back to the select-service screen.

## STEP 8 - OPENING THE BLEED SCREWS

Now that the wheel-cylinder adapters are attached, the wheel-cylinder bleed screws will need to be opened approximately ¼ of a turn. Press the "Next" button to continue.

**[NEXT]** – Will proceed to the next step.

**[ESC]** – Will bring you back to the attach-wheel-cylinder-adapter screen (Step #7).

# PERFORMING THE SERVICE

## STEP 9 - THE FLUSH

The screen will direct the user to press the “*Start*” button to begin the service. Once the service has started, inspect the lines attached to the wheel cylinders for flow and color of fluid being removed. Fluid should be flowing through all four hoses at this time. If fluid is not flowing through all the hoses, it may be an indication that the bleed screw is blocked; open the bleed screw by not more than ½ a turn. If fluid will still not flow through the bleed screw, press the “*Pause*” button and repair or replace the bleed screw. After the repair is complete, press the “*Resume*” button to continue or, if necessary, you can cancel the service.

**NOTE:** CANCELING A SERVICE DOESN'T RESET THE SERVICE TIME.

After the **Pure Brake® Machine** has performed a “Pulse Flush,” the unit will instruct the user to close the bleed screws in the OEM order:

After all of the bleed screws have been closed, remove the hoses from the wheel cylinders. Once the service is complete, the system will automatically remove the pressure from the Brake-Fluid Reservoir.

**NOTE:** LOWER THE VEHICLE BEFORE CONTINUING.

[PAUSE] – Will stop the service to allow the user to correct leaks.

[NEXT] – Will proceed to the next step.

## STEP 10 - TESTING THE BRAKE PEDAL

The display will instruct the user of the equipment to push down on the brake pedal and check if the pedal is firm and is operating correctly.

## STEP 11 - REMOVING THE BRAKE-FLUID-RESERVOIR ADAPTER

Remove the adapter from the brake-fluid reservoir and press the “*Next*” button.

## STEP 12 - ADJUSTING THE FLUID LEVEL

To add fluid, press the “*Add*” button; to remove fluid, press the “*Remove*” button. After the fluid level is at the proper level, press the “*Next*” button. The service is now complete. Remove the battery clamps from the power supply, and reinstall the Brake-Fluid-Reservoir Cap.

# DRAINING THE FLUID TANK

**NOTE:** : THE PURE BRAKE<sup>®</sup> MACHINE SYSTEM WILL AUTOMATICALLY INFORM THE USER WHEN THE USED-FLUID TANK IS FULL AND REQUIRES DRAINING.

**WARNING: DO NOT COMMINGLE WASTE BRAKE FLUID WITH ANY OTHER LIQUID.**

**WARNING: DO NOT STORE WASTE BRAKE FLUID IN STORAGE CONTAINERS THAT ARE NOT INTENDED FOR WASTE BRAKE FLUID.**

## **PROCEDURE FOR DRAINING THE USED-FLUID TANK:**

Disconnect the hose and wire connector from the used-fluid tank, located behind the front door of the machine. Remove the tank from the **Pure Brake<sup>®</sup> Machine**. Place the old fluid into an approved waste-storage container for brake fluid, and then reattach the tank into the unit. Before operating the unit, verify that all of the connections to the tank are completely secure and engaged.

# ADAPTER APPLICATION CHART

Description	Cone 3 1/2	Cone Short	Cone Long	Chry Cap	Chry Plug	Ford 3 Tab	GM 3 Tab	Toyota Small	3" Di Thread	Multi-Use Tread	For 2 Tab	Nissan	Toyota Large
Color Code	<u>RED CONE</u>	<u>Green Short</u>	<u>Green Long</u>	<u>Gold</u>	<u>GOLD PLUG</u>	<u>BLUE 3TAB</u>	<u>BLUE 2TAB</u>	<u>GOLD</u>	<u>PURPLE</u>	<u>GREEN</u>	<u>BLUE</u>	<u>BRONZE</u>	<u>RED</u>
PART #	98441	98442	98443	98444	98445	98446	98448	98449	98450	98451	98461	98462	98463
Acura	x	x	x										
Audi	x	x	x							x			
BMW	x	x	x							x			
Buick	x	x	x				x						
Cadillac	x	x	x				x						
Chevrolet/GMC	x	x	x				x						
Chrysler/Jeep	x	x	x	x	x	x	x						
Dodge	x	x	x	x	x	x			x				
Eagle/Renault	x	x	x	x	x	x			x		x		
Ford	x	x	x			x				x	x		
Geo-Asian	x	x	x										
*Honda	x	x	x										
Hyundai	x	x	x			x				x			
Infiniti	x	x	x			x							
Isuzu	x	x	x						x				
Jaguar	x	x	x			x				x	x		
KIA	x	x	x			x					x		
Land Rover	x	x	x										
Lexus	x	x	x					x					
Lincoln/Mercury	x	x	x			x				x	x		
Mazda	x	x	x			x	x						
Mercedes-Benz	x	x	x							x			
Mitsubishi	x	x	x			x							
Nissan	x	x	x									x	
Pontiac	x	x	x				x						
Porsche	x	x	x										
Saturn	x	x	x				x			x			
Subaru	x	x	x			x			x				
Suzuki	x	x	x										
Toyota	x	x	x					x			x		x
Volkswagen	x	x	x							x			
Volvo	x	x	x						x				

\*NOTE: New Adapter for Honda 98465 (Not listed above).

# BRAKE MASTER KIT 98440

## STANDARD KIT 98439



98441



98442



98443



98444



98445



98446



98448



98449



98450



98451



98465

## OPTIONAL



98461



98462



98463



98047



98052



98130



98464

Highlighted items are NOT included in the Standard Kit – they are OPTIONAL

# KIT 98440 DESCRIPTION

NEW ADAPTER #	OLD ADAPTER #	ADAPTER DESCRIPTION	
<b>ASIAN / EURO</b>			
-----	98130	ADAPTER MITSUBISHI OVAL 05	2005 / Present
98441	98041	ADAPTER, UNIVERSAL, CONE 3 1/2 DIA	Multiple Years
98442	98042	ADAPTER, UNIVERSAL, CONE, SHORT NECK	Multiple Years
98443	98043	ADAPTER, UNIVERSAL, CONE, LONG NECK	Multiple Years
98446	98046	ADAPTER, EXPANSION, FORD 3 TAB	Multiple Years
98450	98050	ADAPTER, THREADED, 3 DIAMETER	Multiple Years
98451	98051	ADAPTER, THREADED, MULTI-USE	Multiple Years
98464	-----	VOLVO S40	2006/present
<b>CHRYSLER / GM</b>			
-----	98047	DEEP RESERVOIR TOOL (Double Chamber Plastic Adapter)	2000 / Present
	98115	"Y" Assembly for 98047	1 each
	98125	Hold down chains for 98047	2 each
-----	98052	DUEL RESERVOIR METAL ( Double Chamber Metal)	1965 / 2000
98441	98041	ADAPTER, UNIVERSAL, CONE, 3 1/2 DIA	Multiple Years
98442	98042	ADAPTER, UNIVERSAL, CONE, SHORT NECK	Multiple Years
98443	98043	ADAPTER, UNIVERSAL, CONE, LONG NECK	Multiple Years
98444	98044	ADAPTER, EXPANSION, CRYSLER DUAL CAP	Multiple Years
98445	98045	ADAPTER, PLUG, CRYSLER DUAL CAP	Multiple Years
98448	98048	ADAPTER, EXPANSION, GM THREE TAB	Multiple Years
98450	98050	ADAPTER, THREADED, 3 DIAMETER	Multiple Years
<b>FORD KIT</b>			
98441	98041	ADAPTER, UNIVERSAL, CONE 3 1/2 DIA	Multiple Years
98442	98042	ADAPTER, UNIVERSAL, CONE, SHORT NECK	Multiple Years
98443	98043	ADAPTER, UNIVERSAL, CONE, LONG NECK	Multiple Years
98446	98046	ADAPTER, EXPANSION, FORD 3 TAB	Multiple Years
98448	98048	ADAPTER, EXPANSION, GM THREE TAB	Multiple Years
98451	98051	ADAPTER, THREADED, MULTI-USE	Multiple Years
98461	N/A	ADAPTER, EXPANSION, FORD TWO TAB	Multiple Years
<b>HONDA / UNIVERSAL</b>			
98441	98041	ADAPTER, UNIVERSAL, CONE 3 1/2 DIA	Multiple Years
98442	98042	ADAPTER, UNIVERSAL, CONE, SHORT NECK	Multiple Years
98443	98043	ADAPTER, UNIVERSAL, CONE, LONG NECK	Multiple Years
98465	N/A	ADAPTER, THREE TAB	Multiple Years
<b>NISSAN</b>			
98441	98041	ADAPTER, UNIVERSAL, CONE 3 1/2 DIA	Multiple Years
98442	98042	ADAPTER, UNIVERSAL, CONE, SHORT NECK	Multiple Years
98443	98043	ADAPTER, UNIVERSAL, CONE, LONG NECK	Multiple Years
98446	98046	ADAPTER, EXPANSION, FORD 3 TAB	Multiple Years
98462	N/A	ADAPTER, EXPANSION, NISSAN ALTIMA	Multiple Years
<b>TOYOTA</b>			
98441	98041	ADAPTER, UNIVERSAL, CONE 3 1/2 DIA	Multiple Years
98442	98042	ADAPTER, UNIVERSAL, CONE, SHORT NECK	Multiple Years
98443	98043	ADAPTER, UNIVERSAL, CONE, LONG NECK	Multiple Years
98449	98049	ADAPTER, SMALL CAM, TOYOTA	Multiple Years
98451	98051	ADAPTER, THREADED, MULTI-USE	Multiple Years
98463	N/A	ADAPTER, LARGE CAM, TOYOTA	Multiple Years

Highlighted items are NOT included in the Standard Kit – they are OPTIONAL

# REPLACEMENT PARTS LIST

## PURE BRAKE® BRAKE-FLUID EXCHANGER #98200:

PART #	DESCRIPTION	QUANTITY	UNIT
74456	Valve, Check 1/4 m x 1/4 m w/EPDM Seal	1	Each
94005	Bolt, Pan 1/4 20 x 3/4 Coarse Thread	8	Each
94010	Cap, Axel 1/2"	2	Each
94015	Switch, Float, Used Fluid	1	Each
94018	Hinge-Pin Cap	2	Each
94040	Buzzer 12V DC Pezo	1	Each
94065	Cord, Power, Strain Relief	1	Each
94090	Hose Barb, 90° 1/8 MPT	3	Each
94091	Hose Barb, 1/4 FPT x 3/8"	1	Each
94114	Tie, Nylon Cable 3 1/2"	15	Each
94115	Tie, Cable Holder, Adhesive Back	2	Each
94116	Strap, Nylon Loop .38 O.D.	1	Each
94117	Strap, Nylon Loop .50 O.D.	3	Each
94161	Hanger, 94004 & 72123-Safety Pin Closure	1	Each
94171	Tee, Branch 1/4" MPT x 1/4" FPT x 1/4"	1	Each
94203	Bushing, 1/8 FPT to 1/4 MPT, #74400	1	Each
94211	Screw, #8 x 1/2", Cable-Loop Strap	7	Each
94212	Screw, 1/4" x 20" x 1/2"	16	Each
94226	Adapter, 3/8 MPT x 3/8" Barb, 90°	2	Each
94230	Nut, Insert, 8-32	4	Each
94233	Connector, Male EN3L2M	1	Each
94242	Tubing, Black, Shrink, 1/4" Diameter	22	Inches
94260	Gasket, Face Panel	1	Each
94285	Caster, 3 x 1 1/4, Ball Bearing	2	Each
94457	Terminal, Male, Fully INS., 250, 16-14	4	Each
94534	Hanger, Power Cord, Black	1	Each
94563	Bushing, Hex Reducing, 3/8"	2	Each
94569	Washer, 1/4 EXT Tooth L/W PLTD	8	Each
94596	Screw, PanHead, Phil, 8-32 x 1/2 Coarse	4	Each
96080	Single Jack Chain	26	Inches
98001	Clamp, 1/4 Pinch	10	Each
98009	Display, LCD, 20 x 40 Characters	1	Each
98010	Adapter, Bleed Screw, Coupler Fitting	4	Each
98012	Switch, Float Level, Pickup Tube Brass	1	Each

# REPLACEMENT PARTS LIST

PART #	DESCRIPTION	QUANTITY	UNIT
98013	Wheel, Silver, 10" x 1.75", 1/2" Axel	2	Each
98014	Chassis, Top, DK Granite, Brake Fluid	1	Each
98016	Chassis, Back Door, Top, DK Granite	1	Each
98021	Guide, Brake-Bleeding Sequence	1	Each
98022	Chassis, Brake Fluid, Bottom	1	Each
98025	Clamp, 3/4	4	Each
98026	Filter, In-line, 7/8 Hex, 5/8 Diameter	4	Each
98028	Manifold System 7-way solinoid valve	1	Each
98030	In-line New Fluid Filter, Aluminum	1	Each
98061	Rubber Mat, Tool Tray	1	Each
98065	Pump, Pressure Brake	1	Each
98066	Tank Manifold for #98200	1	Each
98067	Pump Vacuum	1	Each
98068	Power Cord for #98200	1	Each
98078	Resistor 15 ohms 35w TO 22	1	Each
98080	Axle 1/2 x 18 1/2 LG Steel	1	Each
98081	Hinge Pin, Top 12 1/2" x 1/4" Diameter	1	Each
98082	Elbow, Brass 90°, 1/4 FPT x 1/4 MPT	1	Each
98084	Coupler, Quick-Disconnect 1/4 MPT (EPDM)	1	Each
98085	Plug, Quick-Disconnect 1/8 MPT	1	Each
98086	Plug, Quick-Disconnect 1/4 MPT	1	Each
98088	Tubing, PU Ester Base 1/8" I.D.	80	Inches
98089	Coupler, Quick-Disconnect 1/4 Barb	2	Each
98090	Reducer, Brass 1/8 MPT x 1/4 Barb	1	Each
98091	Valve, 2 Way Pulse	1	Each
98092	Elbow, Brass, 90°, 1/4 MPT x 1/4 Barb	2	Each
98096	Coupling, Brass, Red using 1/8 Barb x 1/4	4	Each
98102	Screw, #6 x 1 1/2" Sheet Metal Phillips	2	Each
98103	Assembly, Hardness Brake Machine	1	Each
98104	Reducer, Brass, 1/4 FPT x 1/8 FPT	1	Each
98105	Hose, Shrink Tube-Red	3	Inches
98106	Hose, Shrink Tube-Green	3	Inches
98107	Hose, Shrink Tube-Blue	3	Inches
98108	Hose, Shrink Tube-Black	3	Inches
98109	Hose, Shrink Tube-Yellow	3	Inches

# REPLACEMENT PARTS LIST

PART #	DESCRIPTION	QUANTITY	UNIT
98110	Hose, Shrink Tube-White	3	Inches
98119	Manual, Operation, Pure Brake Flush	1	Each
98120	Restraint, Tank, 98000	1	Each
98122	Retaining Ring, Aluminum, New Fluid Sensor	1	Each
98123	Hanger, Hose, #98000	2	Each
98127	Barb, 1/8 x 1/8, Hose Connector Brass	4	Each
98132	Screw, 18-8RND Head Phillips #4-40 x 1/2	8	Each
98133	Tubin, 3/8 Black EPDM	34	Inches
98134	Hose, 1/4 Black EPDM	44	Inches
98135	Tubing, PU EPDM Base, 1/8 ID, Blk, Exterior	483	Inches
98136	Tubing, PU EPDM Base, 1/4 ID, Blk, Exterior	288	Inches
98146	Panel, Interated, IND Ented Overlay	1	Each
98150	Program, Control Board	1	Each
98153	Assembly, Tool, Fill & Evacuator	1	Each
98155	Assembly, Bezel/Bra Ke Machines	1	Each
98174	Spacer, Standoff, NY Lon	4	Each
98175	Tray, Adapter/brake	1	Each
98180	Clamp, Single Pinch, #157,35/64-5/8	9	Each
98308	Chassis Front Door, 98300 No MOC Logo	1	Each
CO221	5-Gal Tighthead Cube w/o Cap, Natural	1	Each

# GETTING HELP

## DIAGNOSTIC CODES:

The diagnostic system looks for open circuits between the board and the component (motor and switch). If an error is found, one of the following codes appears on the screen:

CODE	DESCRIPTION
Code 00	 Dry, normally open float-level switch
Code 03	Dry, normally closed float-level switch
Code 04	Waste sensor
Code 21	Vacuum pump
Code 22	Pressure pump
Code 23	LF valve
Code 24	RF valve
Code 25	LR valve
Code 26	RR valve
Code 27	Purge valve (v5)

**NOTE:** *THE PULSE VALVE IS NOT CHECKED IN THE SELF-DIAGNOSTIC.*

For further assistance, or technical help, you can call the equipment technical-service department at (866) 244-6621, or (818) 896-2258, from 7:00 am - 3:30 P.M. PST.