

BRAKE SERVICE
RX • 555

Reference Manual



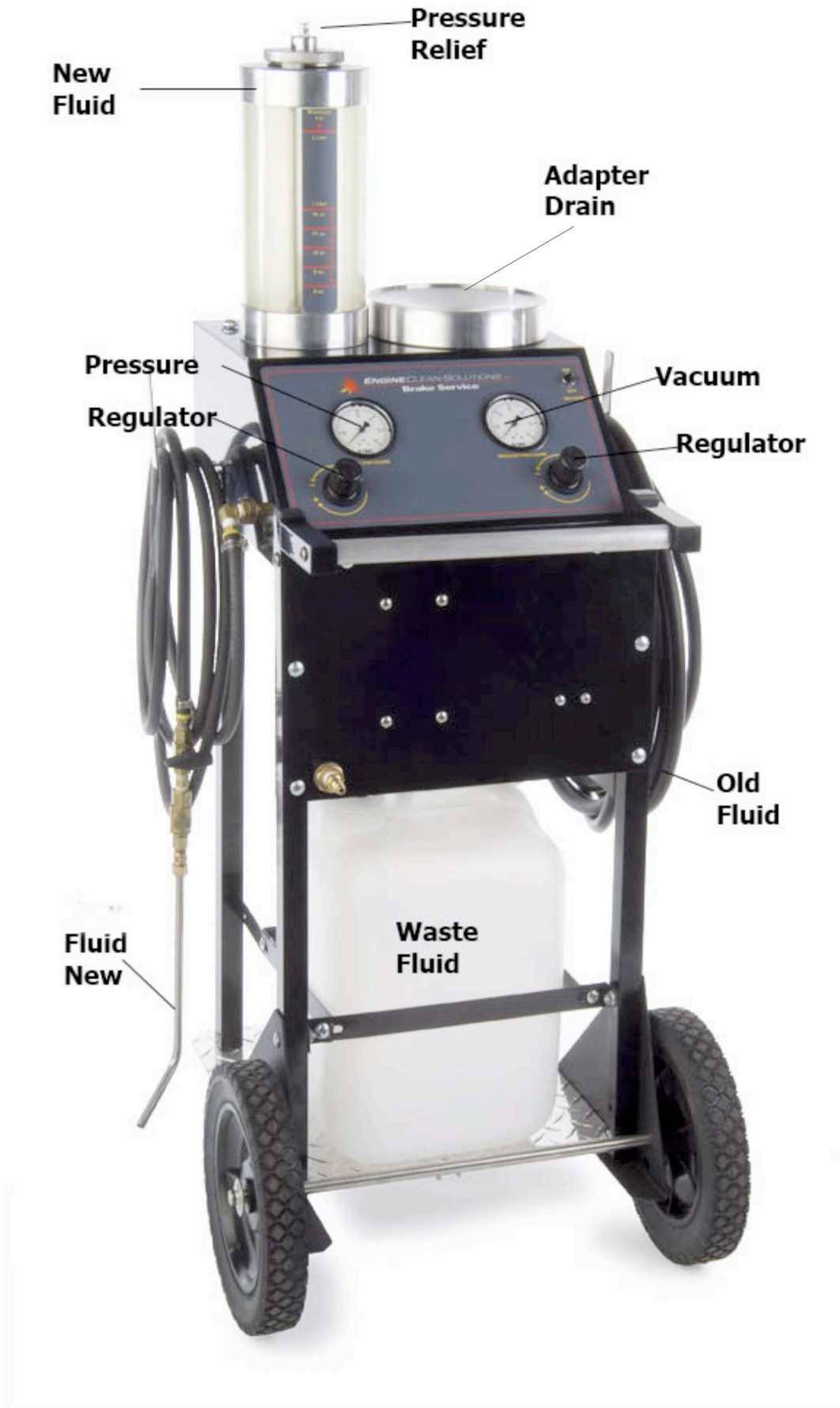
ENGINE CLEAN HYBRID BRAKE SERVICE

Engine Cleans' new Hybrid brake service machine provides variable air pressure for both fluid pressure and fluid vacuum. This highly visual, and technician friendly machine, will service previous generation braking systems. It also services the newest generation of hybrid and electrical vehicle wheel systems with regenerative braking. Many of these new systems require higher pressures than conventional brake systems.

SAFETY INFORMATION

THIS EQUIPMENT IS TO BE OPERATED BY QUALIFIED PERSONNEL. IT SHOULD ONLY BE OPERATED AFTER READING THE INSTRUCTION MANUAL AND UNDERSTANDING THE SAFETY RULES.

- Use DOT 3 or DOT 4 brake fluid. Do not use DOT 5 brake fluid.
- Read the MSDS sheet from your brake fluid vendor.
- Use only unopened brake fluid. Brake fluid absorbs water and may become contaminated during storage.
- Wear safety glasses and gloves for protection.
- Brake fluids may damage paint, rubber and plastic parts. Avoid fluid spills and clean up immediately.
- Perform the service in a well-ventilated area.
- Avoid contact with moving engine parts.
- Inspect brake lines hoses, shoes, pads, drums and calipers and rotors for any abnormal wear.
- Always follow vehicle manufacturer's recommended brake service procedures.
- Dispose of brake fluid in compliance with hazardous waste regulations.
- Do not use any cleaning compound in this machine unless recommended by the manufacturer.





**Waste
Hose**

**New
Fluid**

OPERATING INSTRUCTIONS BRAKE SERVICE

MACHINE PREPARATION

1. The Brake fluid tube pressure gauge should be at zero.
2. Depress the air pressure relief valve on top of the fluid fill cap to release any pressure.
3. The fluid flow valve should be in the off position.
4. Connect the machine to shop air.
5. Remove the fluid fill cap and fill with up to 64 ounces of brake fluid.
6. Replace the fluid fill cap and hand-tighten.

BRAKE FLUSH SERVICE

1. Flip the vacuum switch to the on position. Increase the vacuum air to 10-20 psi and use the flexible suction hose to empty the master cylinder brake fluid.
2. Flip the vacuum switch to the off position and attach the secure the appropriate adapter onto the master cylinder.
3. Connect the new fluid hose to the master cylinder adapter. Set the pressure for new fluid at the Manufacturer's specification. Twelve (12) PSI is normal for most vehicles. Hybrid brake systems may require up to 40 psi.
4. Open the ball valve on the new fluid hose. The reservoir will fill with new fluid.
5. Lift the vehicle to access the brake bleeder valves. Conventional wisdom suggests that the wheel furthest from the master cylinder should be bled first. However if you are servicing a modern vehicles with ABS and/or dynamic stability control systems, it doesn't really matter if you start with the front or rear wheels of the car as they are on separate circuits. Always follow factory procedures.
6. Turn the vacuum switch to on and match the vacuum setting with the pressure setting. Push the silicon vacuum hose over the nipple on the bleed screw. Crack the bleed screw and allow new fluid to flow from the master cylinder as the used brake fluid is being vacuumed from the brake line.

VEHICLE PREPARATION

1. Place vehicle on a lift to access brake bleeder valves.
2. Crack the valve on each wheel and check for proper opening and closing.
3. Return vehicle to shop floor and access master cylinder reservoir.

Bleeding is performed one wheel at a time. To bleed all four corners of the car it will take between ½ and one liter of brake fluid -- or 5-10 ounces of brake fluid per wheel. Close the bleeder valve when new fluid appears.

4. Once the 4 wheels have been serviced flip the suction switch to off and decrease the pressure until the gauge is at zero. Depress the pressure relief valve to release any pressure in the system.
5. Remove the master cylinder adapter and place it on the waste collecting plate on the top of the machine cabinet.
6. Add additional fluid if needed. Attach the master cylinder cap
7. Recheck the brake system before driving the vehicle.

LIMITED WARRANTY

This product is warranted by **ENGINE CLEAN SOLUTIONS, INC.** to be free of defects in workmanship and materials for a period of one year from date of purchase by original purchaser. If the product fails within this period, it will be repaired or replaced at seller's option; provided (1) the product is submitted with proof of purchase date and (2) transportation charges are prepaid to the nearest Service Center. Liability under this warranty is expressly limited to repairing or replacing the product or parts thereof. This warranty does not apply to product or parts broken by accident, negligence, overload, abuse, or if they have been tampered with in any way. This warranty does not apply to service hoses and adapters which may need replacing do to normal wear. If this warranty does not apply, then the purchaser shall pay all costs for labor, material and transportation. Note: The use of this apparatus for any purpose other than the services described will render this warranty null and void. No other warranties are expressed or implied.

OWNER REGISTRATION CARD

IN ORDER FOR THIS MACHINE TO BE COVERED BY THE WARRANTY, THE OWNER REGISTRATION CARD MUST BE FILLED OUT BY THE END-USER AND RETURNED TO THE FACTORY WITHIN 30 DAYS FROM THE DATE OF DELIVERY.

DATE OF PURCHASE: _____

MACHINE SERIAL NUMBER: _____

MACHINE MODEL NUMBER: _____

NAME OF PURCHASER: _____

COMPANY NAME: _____

STREET ADDRESS: _____

CITY, STATE, COUNTRY: _____

TELEPHONE NUMBER: _____

FAX NUMBER: _____

RETURN THIS REGISTRATION CARD TO:

ENGINE CLEAN SOLUTIONS, Inc.

5112 Heintz Street

Baldwin Park, CA 91706

FAX: (626) 814-8738