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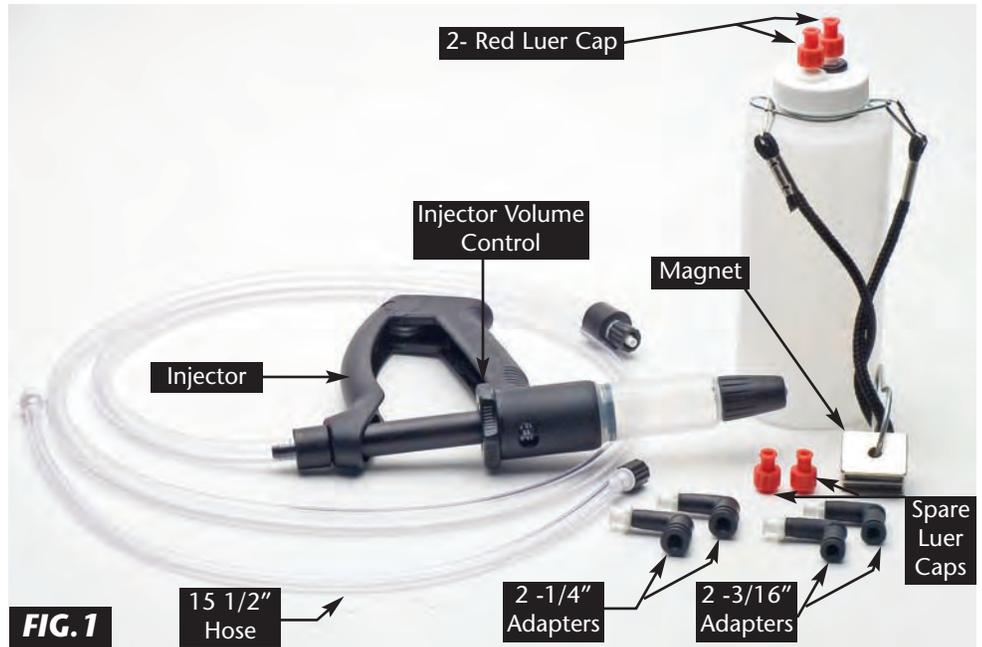
INSTRUCTION SHEET FOR TOOL NO. 738

JIMS REVERSE BRAKE BLEEDING TOOL BY PHOENIX SYSTEMS

No. 738 - Use on all hydraulic brake and clutch systems.

This tool can be used to flush brake systems or to bleed Hydraulic systems when replacing lines, calipers, master cylinder, or brake light switch.

Note: On most Harley – Davidson ABS systems, the final bleeding procedure must be done by an authorized Harley-Davidson dealer using a Digital Technician II.



Important Note: Read complete instructions thoroughly before using this tool.

ALWAYS WEAR SAFETY GLASSES OR OTHER FACE AND EYE PROTECTION SUCH AS FULL FACE SHIELD. JIMS IS NOT RESPONSIBLE FOR DAMAGE, INJURY, OR THE QUALITY AND SAFETY OF YOUR WORK.

WARNING:

Before tool use, verify the type of brake fluid that your bike uses. Mixing DOT 4 and DOT 5 brake fluid will cause damage to your brake system. Check the master cylinder lid if you are not certain which type of brake fluid your bike uses, or check appropriate H-D service manual for the model and year of your bike. DOT 4 brake fluid is harmful to painted surfaces, body panels, and is an eye irritant. Always use caution and protect all painted surfaces from spills. When switching brake fluids from Dot 5 to Dot 4 or reverse, always flush tool system using denatured alcohol. Flush tool after each job is performed to prevent cross contamination.

After service, always check that brakes are functioning properly before entering public roadways. Failure to properly bleed brake systems could leave air in the hydraulic brake system, which reduces brake efficiency and could result in death or serious injury.

**CAUTION: WEAR SAFETY GLASSES OVER YOUR EYE'S.
SEE JIMS® CATALOG FOR HUNDREDS OF TOP QUALITY PROFESSIONAL TOOLS.
THE LAST TOOLS YOU WILL EVER NEED TO BUY.**

Performance Parts For Harley-Davidson Motorcycles



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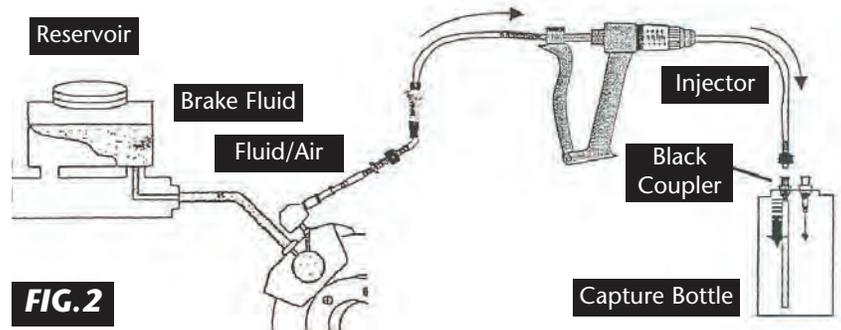
Some ABS models require final bleeding using a Digital Technician II. This service is only provided by authorized Harley-Davidson dealers. Check your H-D service manual.

Recommended tools and supplies

- Phillips screwdriver
- Denatured Alcohol
- 3/8 box wrench
- Model specific brake fluid
- Safety glasses
- H-D Service Manual per year and model being serviced
- Replacement master cylinder gasket

Setting the Volume of the Injector

The Injector tool has an adjustable volume selector that can pump from one to twelve milliliters per stroke. Use the maximum setting of 12 ml. If the fitting pops off of the bleeder screw, turn the selector down.



Performing brake fluid Flush

1. Hook up JIMS injector tool so it is pulling brake fluid from brake caliper bleeder screw and injecting fluid into the bottle. Install 15 1/2" hose to nose of injector to black coupler of capture bottle. **See Fig. 2.**
2. Remove master cylinder lid and top off reservoir. Loosen bleeder screw and attach 1/4" adapter fitting for most OEM applications. 3/16" Adapter is included for other applications. **See Fig. 1.**
3. Pump injector until clean brake fluid is coming out of the caliper(s) using caution that the master cylinder reservoir does not run dry. **See Fig. 2.**
4. Tighten bleeder screw. Top off master cylinder reservoir to H-D Factory Specifications. Install lid and new gasket.
5. Check for proper brake function. If brake lever or pedal is spongy follow instructions for Bleeding Procedure below.
6. Clean entire JIMS tool with denatured alcohol after use to prevent cross contamination between DOT 4 and DOT 5 brake fluids.

Initial Bleeding Procedure

1. Remove master cylinder lid and make sure reservoir is nearly empty. Turn handlebar so the master cylinder sits in a near level position. If banjo fitting is higher than the master cylinder, it will trap air.
2. Fill JIMS bottle with the brake fluid specified for your bike. A magnet is supplied on the bottle holder to hang in a convenient place near the brake caliper. **See Fig. 1.**
3. Prime the hose before attaching to the bleeder valve. Connect inlet hose from the coupler with the

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black ring on the bottle to the vacuum side of the injector. Connect the 15 1/2" hose to the white coupler of the bottle and pump tool until all air is evacuated from the tool and lines. Disconnect the hose from the white fitting, and replace the red Luer cap. **See Fig. 3.**

4. Connect the proper bleeder fitting to the end of the hose outlet. It should fit snugly onto the bleeder screw. (Most Harley-Davidsons use the 1/4" fitting)

5. Never let the fluid level get below one inch from the bottom of the bottle.

6. Loosen the bleeder valve approximately 3/4 turn.

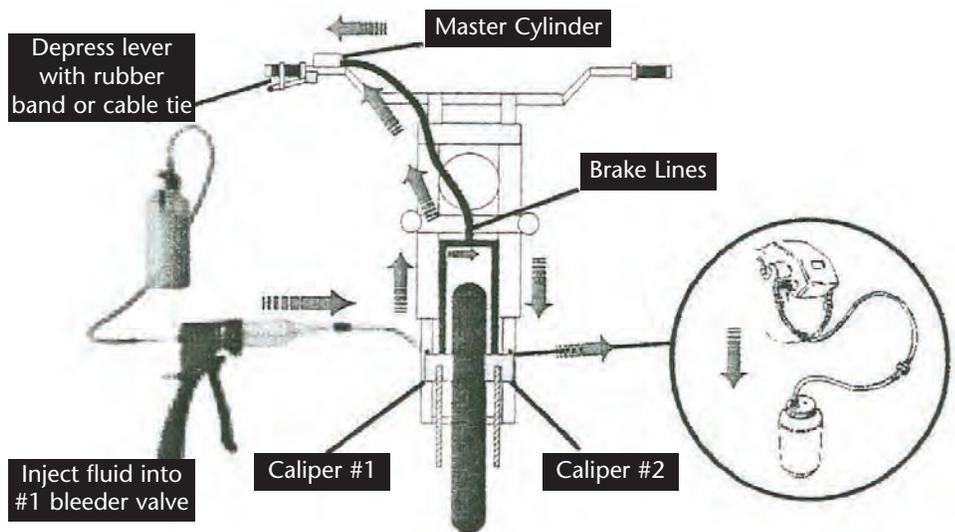
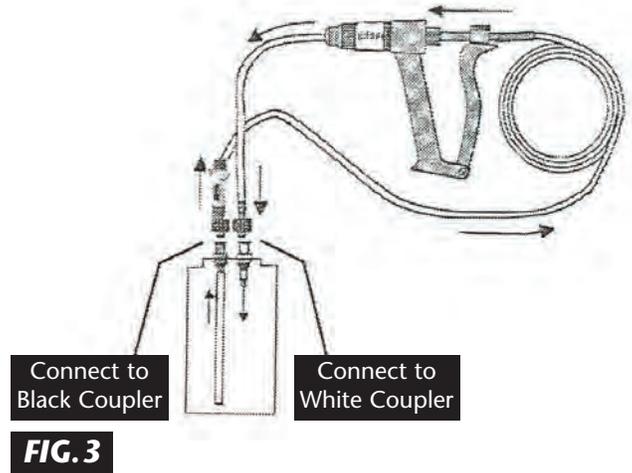
7. Connect the adapter to bleeder valve.

8. Pump brake fluid into the bleeder valve, observing the master cylinder reservoir for air bubbles escaping from the vent port. Make sure brake fluid does not overflow the master cylinder reservoir. If fitting pops off bleeder valve, the injection volume is too high. Turn down the setting on the JIMS injection tool. **See Fig 1.**

9. When air bubbles have stopped and only fluid is filling the reservoir, remove fitting from the bleeder screw, wait a moment until all air escapes and only fluid comes out, tighten bleeder to the torque specification per year and model in the H-D service manual.

10. Check pedal or lever for firmness. If lever is soft or spongy, repeat procedure until firm.

11. Top off brake fluid in master cylinder reservoir to H-D service manual specifications. Install new master cylinder gasket and lid. Tighten screws per service manual torque specifications. Verify brake lamp operation. Test for proper brake function before entering public roads.





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Dual Caliper Techniques

1. Follow basic guidelines from initial bleeding procedure above.
2. Depress brake lever about half way using a zip tie or tie strap. (This prevents fluid from entering the master cylinder).
3. Open bleeder valve on caliper #2 and attach a hose and catch bottle. (not supplied) **See Fig 4.**
4. Prime the JIMS injector tool as listed in **Fig 3** on page 3.
5. Loosen bleeder on caliper #1 and attach fitting. **See Fig 4.**
6. Squeeze the handle to force fluid into caliper #1, through brake line to caliper #2 and finally into the catch bottle. Repeat until no air is noticed in the clear tube attached to caliper #2. **See Fig. 4.**
7. Remove the device that is depressing the brake lever and continue injecting brake fluid until air bubbles in master cylinder reservoir cease. **See Fig 4.**
8. Disconnect adapter from bleeder on caliper #1, wait until only fluid leaks out and tighten bleeder screws on both calipers
9. Check for proper operation.
10. If lever is spongy, reverse procedure and inject fluid into caliper #2.
11. Top off brake fluid in master cylinder reservoir to H-D service manual specification; install new master cylinder gasket and lid. Tighten screws per service manual torque specifications. Verify brake lamp operation. Test ride the bike to verify proper brake function before entering public roads.

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