

Brake Servicing

HYDRAULIC BRAKE BLEEDING

DESCRIPTION

Hydraulic system bleeding is necessary any time air has been introduced into system. Bleed brakes at all four wheels if master cylinder lines have been disconnected or master cylinder has been run dry. Bleeding may be done either by using pressure bleeding equipment or by manually pumping brake pedal while using bleeder tubes.

HYDRAULIC CONTROL VALVES

On disc brake equipped vehicles, metering section of hydraulic control valve must be deactivated before bleeding to permit fluid flow to front brakes. Disable metering valve by holding in the open position using suitable tool (C-4121, Chrysler Corp.; J-22472, Ford Motor Co.; J-23709, General Motors and Jeep). There is no tool for International Harvester, therefore valve must be held open by hand. **CAUTION** - Do not use "C" clamp or other non-yielding device to hold valve in open position.

PRESSURE TANK BLEEDING

Clean master cylinder cap and surrounding area, then remove cap. With pressure tank at least 1/3 full, connect to master cylinder using suitable adapters. Attach bleeder hose to first bleeder valve to be serviced. See *Bleeding Sequence*. Place other end of hose in clean glass jar partially filled with clean brake fluid so end of hose is submerged in fluid. Open release valve on pressure bleeder. **NOTE** - Follow equipment manufacturers pressure specifications except if noted below. Unscrew bleeder valve 3/4 -1 turn noting fluid flow. When fluid flowing from cylinder to jar is free of bubbles, close bleeder valve securely. Bleed remaining cylinders in correct sequence and in the same manner. Remove tool from control valve.

Pressure Bleeder Settings

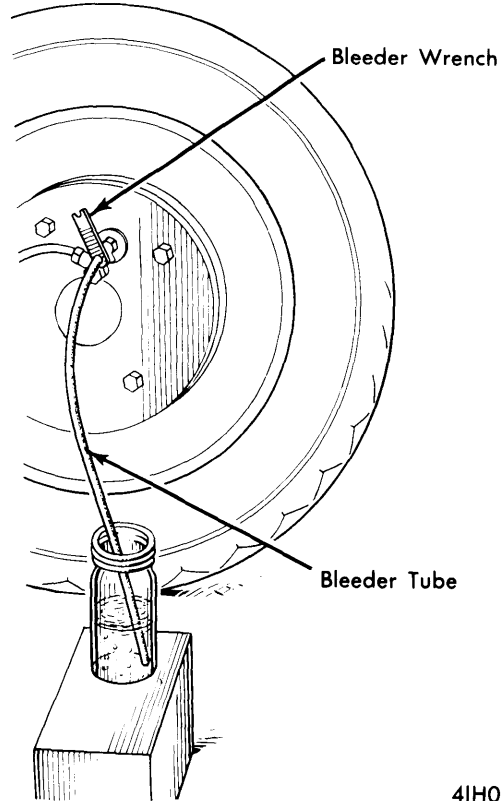
| Application | Psi |
|------------------------------|-------|
| Chrysler Corp. | 35 |
| Ford Motor Co. | 10-30 |
| General Motors | 20-30 |
| International Harvester | 10-30 |
| Jeep | |

MANUAL BLEEDING

CAUTION - During bleeding on disc brakes, air may tend to cling to caliper walls; therefore, lightly tapping caliper will assist in removal of this air.

Fill master cylinder, then install bleeder hose to first bleeder valve to be serviced. See *Bleeding Sequence*. Place other end of hose in clean glass jar partially filled with clean brake fluid so end of hose is submerged in fluid. Open bleeder valve 3/4 -1

turn. Depress brake pedal slowly through its full travel. Close bleeder valve, then release pedal. Repeat procedure until flow of fluid shows no signs of air bubbles. **NOTE** - Check fluid level in master cylinder frequently during bleeding to ensure air does not enter system.



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BLEEDING WHEEL CYLINDER

BLEEDING SEQUENCE

Before bleeding system, exhaust all vacuum from power unit by depressing brake pedal several times. Bleed master cylinder if equipped with bleeder screws, then bleed slave cylinder on vehicles equipped with remote mount power assist units. Bleed wheel cylinders and calipers in following sequence:

| Application | Sequence |
|------------------------------|--------------------|
| Chrysler Corp. | RR, LR, RF, LF |
| Ford Motor Co. | Longest Line First |
| General Motors | LF, RF, LR, RR |
| International Harvester | Longest Line First |
| Jeep | LF, RF, LR, RR |