

# Brake Servicing

## HYDRAULIC BRAKE BLEEDING

### DESCRIPTION

Hydraulic system bleeding is necessary any time air has been introduced into system. Bleed brakes at all 4 wheels if master cylinder lines have been disconnected or master cylinder has been run dry. Bleed brakes with pressure bleeding equipment or by manually pumping brake pedal while using bleeder tubes.

**NOTE:** Hydro-boost bleeding is a different procedure than hydraulic brake bleeding. See Hydro-boost bleeding in Hydro-boost article in this section.

### HYDRAULIC CONTROL VALVES

On disc brake equipped vehicles, metering section of hydraulic control valve must be deactivated before bleeding to permit fluid to flow to front brakes. This is especially important when pressure bleeding.

Use suitable tool when applicable (C-4121, Chrysler Corp.; J-23709, General Motors and Jeep with "D" type valve; J-26869, for Jeep with "W" type combination valve). If tool is not available, hold valve open by hand. DO NOT use "C" Clamp or other non-yielding device to hold valve open.

### PRESSURE TANK BLEEDING

1) Clean master cylinder cap and surrounding area, then remove cap. With pressure tank at least half full, connect to master cylinder with adapters. Attach bleeder hose to first bleeder valve to be serviced. See *Bleeding Sequence table*.

2) 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. Follow equipment manufacturers pressure instructions unless noted below.

3) 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 (kg/cm <sup>2</sup> )
Chrysler Corp. ....	35 (2.5)
Ford .....	10-30 (.7-2.0)
General Motors .....	20-25 (1.5-1.8)
Jeep .....	.....

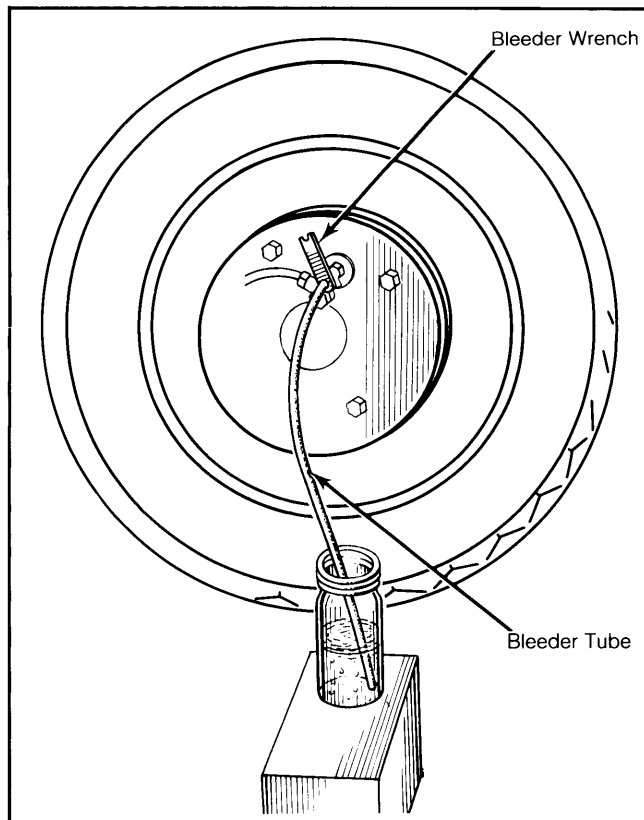
### MANUAL BLEEDING

**NOTE:** When bleeding disc brakes, air may tend to cling to caliper walls. Lightly tap caliper, while bleeding, to aid in removal of this air.

1) Fill master cylinder, then install bleeder hose to first bleeder valve to be serviced. See *Bleeding Sequence table*. Submerge other end of hose in clean glass jar partially filled with clean brake fluid.

2) Open bleeder valve 3/4-1 turn. Depress brake pedal slowly through full travel. Close bleeder valve, then release pedal. Repeat procedure until flow of fluid shows no signs of air bubbles.

Fig. 1: Wheel Cylinder Bleeding Procedure



Bleeder valve must be closed when brake pedal is released.

### 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 power assist units. Bleed wheel cylinders and calipers in correct sequence.

#### BLEEDING SEQUENCE

Application	Sequence
Jeep .....	RR, LR, RF, LF, Master Cyl. Lines
All Other Models .....	RR, LR, RF, LF