

BRAKE SYSTEM BLEEDING

1986 Isuzu Trooper II

BRAKE SERVICING
Hydraulic Brake Bleeding

DESCRIPTION

Hydraulic system bleeding is necessary any time air has been introduced into the system. Bleed brakes at all 4 wheels if master cylinder lines have been disconnected or master cylinder has run dry.

WARNING: If master cylinder has run dry, inspect entire system for leaks. See appropriate BRAKE SYSTEM article.

Bleeding may be done either by using pressure bleeding equipment or by manually pumping brake pedal and using bleeder tubes.

NOTE: For vehicles equipped with Anti-Lock Brake Systems (ABS), see ANTI-LOCK BRAKE SYSTEM article in this section.

MANUAL BLEEDING

1) On Isuzu and Jaguar models, start engine and run at idle. On all other models, exhaust all vacuum from power unit by depressing brake pedal several times.

2) Fill master cylinder, then install clear vinyl bleeder hose onto first bleeder valve to be serviced.

NOTE: On manual transmission vehicles where clutch master cylinder feeds from brake master cylinder, bleed clutch cylinder first.

See BRAKE LINE BLEEDING SEQUENCE table. Place other end of hose in clear glass jar.

3) Partially fill jar with clean brake fluid, so end of hose is submerged in fluid. Open bleeder valve 1-2 turns. Depress brake pedal slowly through its full travel.

4) Close bleeder valve, then release pedal. Pump pedal several times to push air toward wheel cylinders. Repeat procedure until flow of brake fluid is clear, and shows no signs of air bubbles. Proceed to next bleeder valves.

NOTE: Check fluid level in master cylinder frequently during the bleeding sequence.

PRESSURE TANK BLEEDING

1) On Isuzu and Jaguar models, start engine and run at idle. On all other models, exhaust all vacuum from power unit by depressing brake pedal several times.

2) Clean the master cylinder cap and surrounding area, then remove cap. With pressure tank at least 1/3 full, connect tank to master cylinder using proper fitting adapter(s).

3) Attach bleeder hose to first bleeder valve to be serviced.

NOTE: On manual transmission vehicles where clutch master cylinder feeds from brake master cylinder, bleed clutch cylinder first.

See BRAKE LINE BLEEDING SEQUENCE table. Place other end of

hose in a clean glass jar. Partially fill jar with clean brake fluid, until end of hose is submerged in fluid.

4) Open release valve on pressure bleeder. Unscrew bleeder valve 1-2 turns, noting fluid flow. When fluid flow into container is clear, and free of bubbles close bleeder valve securely.

5) Bleed remaining cylinders in correct sequence and in the same manner. Remove pressure tank from master cylinder and check fluid level of master cylinder reservoir.

BLEEDING PRESSURES (1)

Application	psi (kg/cm ²)
BMW	
735i	56 (3.9)
All Others	28 (2.0)
Porsche	32 (2.3)
Renault	30 (2.1)

(1) - For models not listed, refer to pressure tank manufacturer's specifications.

BLEEDING SEQUENCE

See BRAKE LINE BLEEDING SEQUENCE table for proper bleeding sequence.

BRAKE LINE BLEEDING SEQUENCE

Application	Sequence
Acura & Honda	LF, RR, RF, LR
Audi & Volkswagon (1)	RR, LR, RF, LF
BMW (2)	Longest Line First
Chrysler Corp. Imports	
Colt & Colt Vista	LR, RF, RR, LF
Models W/Load Sensing	
Proportioning Valve	RR, LR, RF, LF
All Others (3)	RR, LR, RF, LF
General Motors Imports	
Chevrolet Spectrum	LF, RR, RF, LR
Chevrolet Sprint	LR, RF, RR, LF
Isuzu	
I-Mark, P'UP & Trooper II (4)	LF, RR, RF, LR
Impulse	RR, LR, RF, LF
Jaguar (4)	LR, RR, Front
Mazda	Longest Line First
Mercedez-Benz	Longest Line First
Mitsubishi	
Cordia, Tredia	LR, RF, RR, LF
All Others	RR, LR, RF, LF
Nissan	
Maxima	RR, LR, RF, LF
Pickup	Master Cyl., Comb Valve, Longest Line First
Pulsar & Sentra	RR, LF, LR, RF
200SX & 300ZX	LR, RR, RF, LF
All Others	Master Cyl., Longest Line First
Peugeot (5)	Longest Line First
Porsche (6)	LR, RR, RF, LF
Renault	Longest Line First

Saab LR, RF, RR, LF
Subaru Master Cylinder, FR, RF, RR, LF
Suzuki LR, RF, RR, LF
Toyota Longest Line First
Volvo (7) RR, LR, RF, LF

- (1) - Before bleeding rear brakes, push brake pressure regulator in direction of rear axle.
 - (2) - If equipped with 3 bleeder valves on each front caliper, bleed lower inboard valve first, then other 2 simultaneously.
 - (3) - Pickup models do not require bleeding of RR
 - (4) - Engine running at idle speed
 - (5) - If pressure tank is used, bleed all wheels simultaneously.
 - (6) - If equipped with inner and outer caliper bleeder valves, bleed outer valves first, then inner valves.
 - (7) - Raise rear wheels a few inches higher than front wheels. Bleed all 3 valves simultaneously.
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