

# **Component Procedures: Brake Proportioning/Combination Valve**

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# Component Procedures: Brake Proportioning/Combination Valve

## Parts and Labor (itype\_189)

### Parts

Qualifier	Part #	Name	Price	Note
Hydraulic System > Pressure ?	5083808AA	Pressure Metering Valve	521.00	
Hydraulic System > Pressure ?	5083807AA	Pressure Metering Valve	0.00	

### Labor

Operation	Qualifier Path	Skill	Std Hrs	Wty Hrs
Replace	Pressure Metering Valve With ATC, R&R	B	0.9	0.7

## Combination Valve (Article 2026894)

The combination valve contains a pressure differential valve and switch and a rear brake proportioning valve

. The valve is not repairable and must be replaced as an assembly if diagnosis indicates this is necessary.

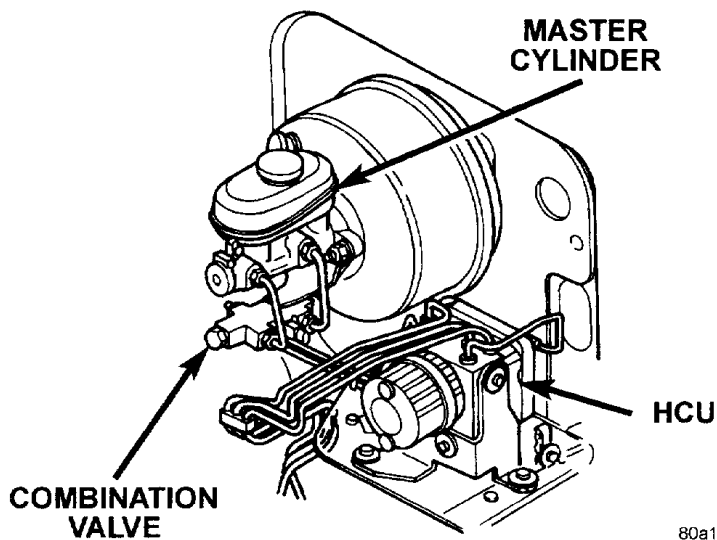
### PRESSURE DIFFERENTIAL VALVE

The pressure differential switch is connected to the brake warning light. The switch is actuated by movement of the switch valve. The switch monitors fluid pressure in the separate front/rear brake hydraulic circuits. A decrease or loss of fluid pressure in either hydraulic circuit will cause the switch valve to shuttle to the low pressure side. Movement of the valve pushes the switch plunger upward. This action closes the switch internal contacts completing the electrical circuit to the red warning light. The switch valve will remain in an actuated position until repairs to the brake system are made.

### PROPORTIONING VALVE

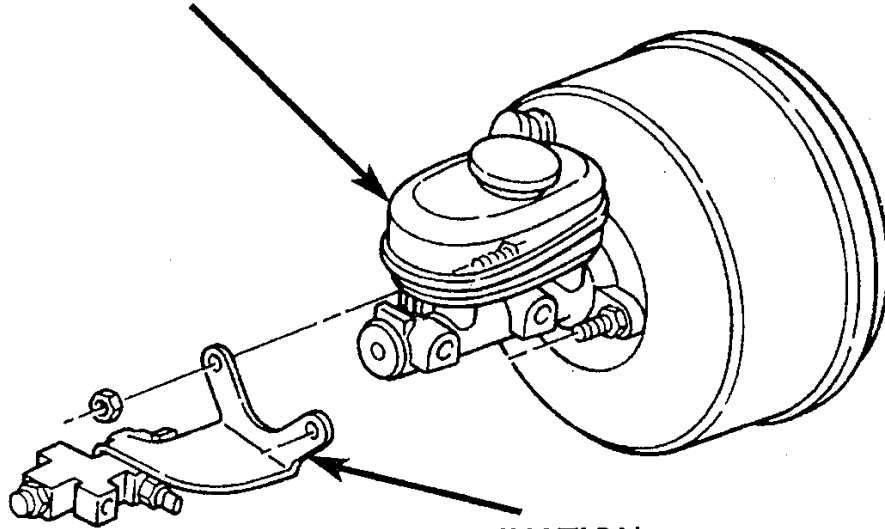
The proportioning valve is used to balance front-rear brake action at high decelerations. The valve allows normal fluid flow during moderate braking. The valve only controls fluid flow during high decelerations brake stops.

## With Antilock Brakes (Article 2027508)



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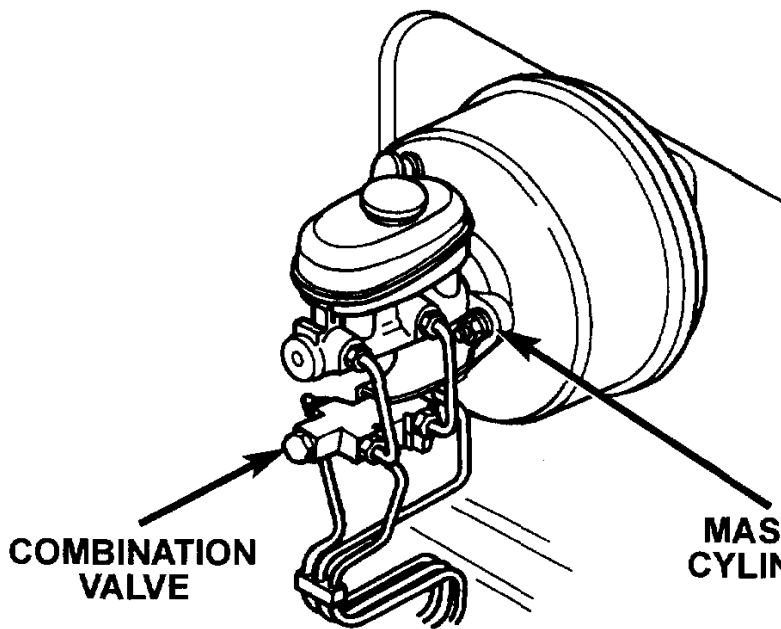
**MASTER CYLINDER**



**COMBINATION  
VALVE BRACKET**

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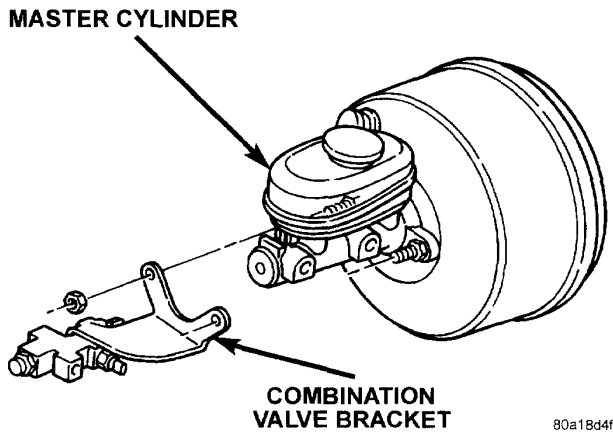
**Without Antilock Brakes (Article 2027511)**



**COMBINATION  
VALVE**

**MASTER  
CYLINDER**

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### Combination Valve Testing (Article 2026910)

1. Have helper sit in drivers seat to apply brake pedal and observe red brake warning light.
2. Raise vehicle on hoist.
3. Connect bleed hose to a rear wheel cylinder and immerse hose end in container partially filled with brake fluid.
4. Have helper press and hold brake pedal to floor and observe warning light.
  - a. If warning light illuminates, switch is operating correctly.
  - b. If light fails to illuminate, check circuit fuse, bulb, and wiring. The parking brake switch can be used to aid in identifying whether or not the brake light bulb and fuse is functional. Repair or replace parts as necessary and test differential pressure switch operation again.
5. If warning light still does not illuminate, switch is faulty. Replace combination valve assembly, bleed brake system and verify proper switch and valve operation.