

95 HYDRAULIC VALVES AND SWITCHES

TECH TIP

Always Inspect Both Front and Rear Brakes

If a vehicle tends to lock up the rear brakes during a stop, many technicians may try to repair the problem by replacing the proportioning valve or servicing the rear brakes. Proportioning valves are simple spring-loaded devices that are usually trouble-free. If the rear brakes lock up during braking, carefully inspect the rear brakes looking for contaminated linings or other problems that can cause the rear brakes to grab. Do not stop there—always inspect the front brakes, too. If the front brakes are rusted or corroded, they cannot operate efficiently and greater force must be exerted by the driver to stop the vehicle. Even if the proportioning valve is functioning correctly, the higher brake pedal pressure by the driver could easily cause the rear brakes to lock up.

A locked wheel has less traction with the road than a rotating wheel. As a result, if the rear wheels become locked, the rear of the vehicle often “comes around” or “fish-tails,” causing the vehicle to skid. Careful inspection of the entire braking system is required to be assured of a safe vehicle.

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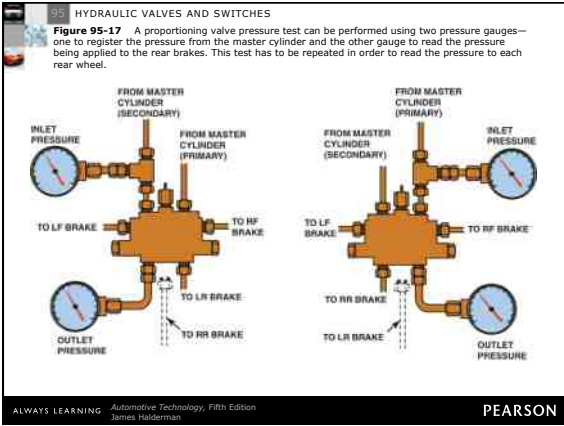
Figure 95-15 A height-sensing proportioning valve provides the vehicle with variable brake balance. The valve allows higher pressure to be applied to the rear brakes when the vehicle is heavily loaded and less pressure when the vehicle is lightly loaded.

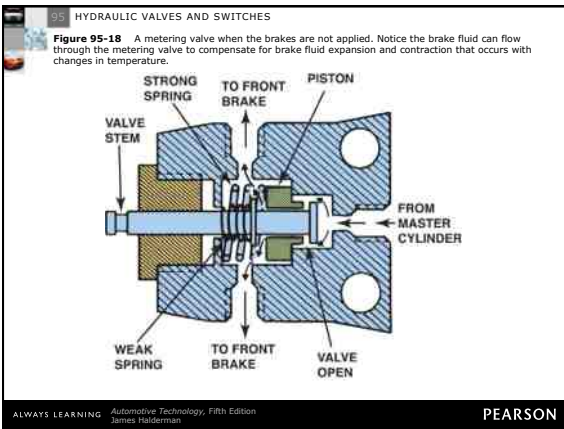
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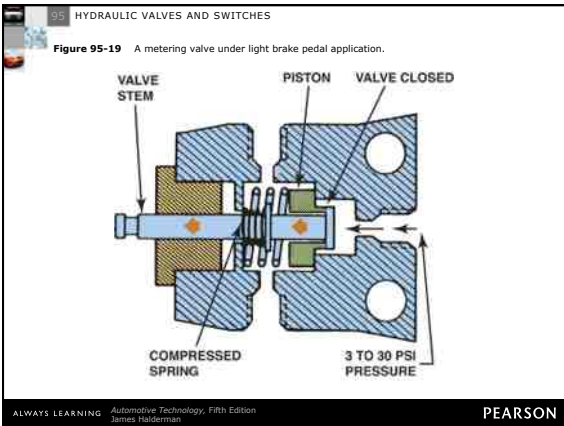
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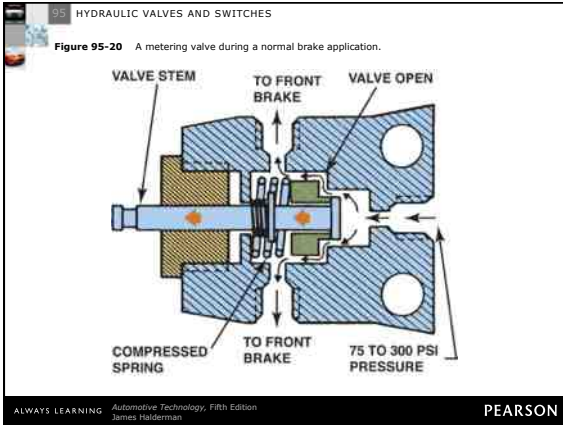
Figure 95-16 A stepped cam is used to alter the split point of this height-sensing proportioning valve.

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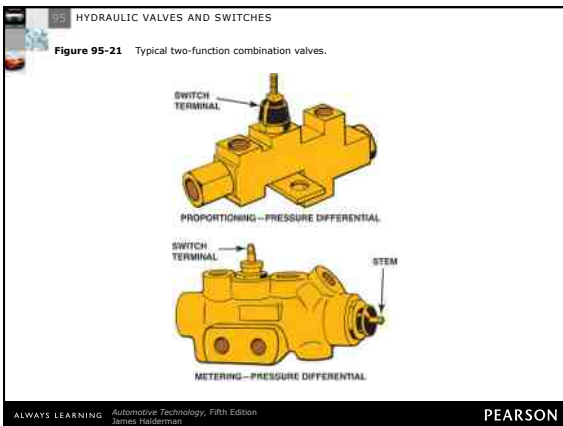












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TECH TIP

No Valves Can Cause a Pull

When diagnosing a pull to one side during braking, some technicians tend to blame the metering valve, proportional valve, the pressure-differential switch, or the master cylinder itself.

Just remember that if a vehicle pulls during braking that the problem has to be due to an individual wheel brake or brake line. The master cylinder and all the valves control front or rear brakes together or diagonal brakes and cannot cause a pull if not functioning correctly.

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