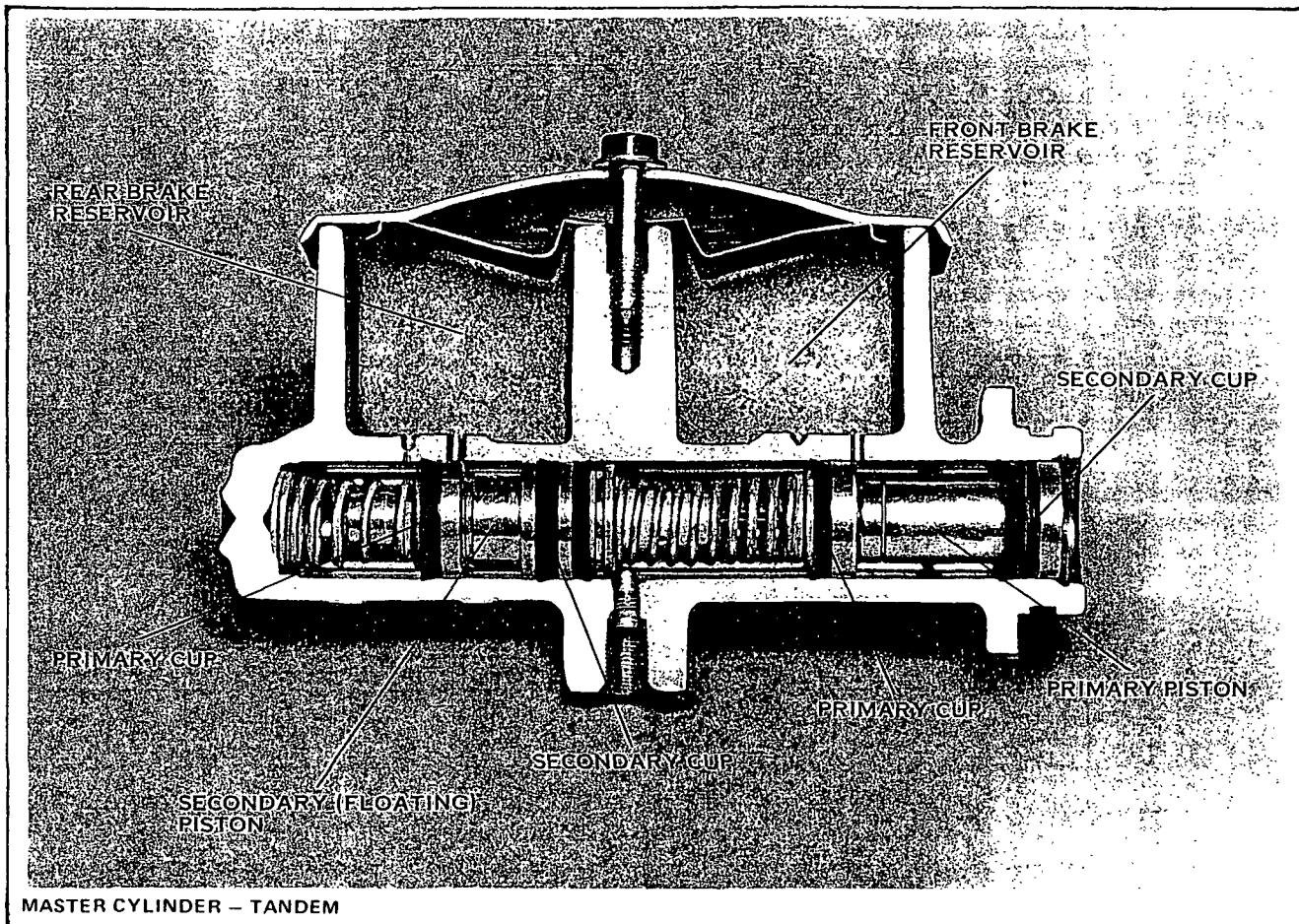


NAPA AUTOMOTIVE CAREER TRAINING

Master Cylinder (Tandem)



Dual system (tandem) master cylinders have been used on some American vehicles since 1962. Starting with 1967 models, dual system master cylinders are used on all American made passenger cars and light trucks.

The operation of a tandem master cylinder is basically the same as a single system master cylinder. The dual unit, however, has two pistons, two separate fluid reservoirs, and two output ports. Each piston has a primary and secondary cup, but there is an additional secondary cup on the secondary piston which isolates the two hydraulic systems.

Thus, the tandem master cylinder has two separate hydraulic pressure systems. One of the systems normally is connected to the front brakes and the other is connected to the rear brakes.

When one portion of the system loses pressure, a drop in the brake pedal will result, alerting the driver of the loss. This will also activate a warning light on the

vehicle's dash panel signaling a loss of pressure in one part of the system. The other part of the system will remain operational.

Tandem master cylinders are also used for disc brake equipped vehicles, with the exception that the fluid reservoir is much larger. In addition, the output port to the disc brakes does not contain a residual check valve.

Internal conditions of corrosion, rusting and pitting make it necessary to overhaul the master cylinder. Frequently master cylinders are overlooked because it is thought that they are not subject to the same high temperatures found in the drum brake. This is not true today, as engine compartment temperatures become quite high. With every brake job, it is highly recommended that the master cylinder be either rebuilt or replaced.