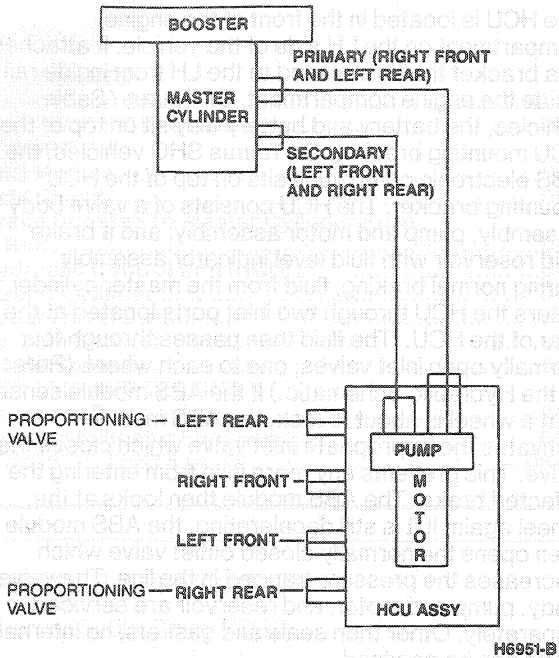


DESCRIPTION (Continued)

Hydraulic Schematic



Under normal driving conditions, the microprocessors produce short test pulses to the solenoid valves that check the electrical system without any mechanical reaction. Impending wheel lock conditions trigger signals from the ABS module that open and close the appropriate solenoid valves. This results in moderate pulsations in the brake pedal. If brake pedal travel exceeds a preset dimension determined by the pedal travel switch setting, the ABS module will send a signal to the pump to turn on and provide high pressure to the brake system. When the pump starts to run, a gradual rise in pedal height will be noticed. This rise will continue until the pedal travel switch closes and the pump will shut off until the pedal travel exceeds the travel switch setting again. During normal braking, the brake pedal feel will be identical to a standard brake system.

Most malfunctions which occur to the anti-lock brake system will be stored as a coded number in the keep-alive memory of the ABS module. The codes can be retrieved by following the on-board diagnostic procedures. Refer to Diagnosis and Testing.

ABS Module

The ABS Module is located in the engine compartment. On Taurus/Sable vehicles it is located on the front RH side next to the washer bottle. On the Taurus SHO vehicle it is mounted on top of the HCU mounting bracket.

It is an on-board diagnostic non-repairable unit consisting of two microprocessors and the necessary circuitry for their operation. These microprocessors are programmed identically. The ABS module monitors system operation during normal driving as well as during anti-lock braking.

Wheel Sensors

The anti-lock brake system uses four sets of variable-reluctance sensors and toothed speed indicator rings to determine the rotational speed of each wheel. The sensors operate on magnetic induction principal. As the teeth on the speed indicator ring rotate past the stationary sensor, a signal proportional to the speed of the rotation is generated and sent to the ABS module through a coaxial cable and shielded wiring harness.

The front sensors are attached to the suspension knuckles, and the front speed indicators are pressed onto the outer CV joints. The rear sensors are attached to the rear caliper adapter plates, and the rear speed indicator rings are pressed onto the rear wheel hub assemblies.

- Vacuum modulator and master cylinder
- Hydraulic Control Unit (HCU)
- ABS module
- Wheel sensors
- Pedal travel switch

The vacuum modulator is used to assist in normal braking. The hydraulic control unit (HCU) is the main component of the ABS system.

If the brake booster is damaged or inoperative, the vehicle will have a hard time stopping. The brake booster is located in the engine compartment.