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Title: Interaction Between the Hydraulic Brake Booster and the Power Steering System in International Vehicles

Applies To: Model: 1652 3000FE 3000RE 3200 3800 4200 4300 4400 4700 4900

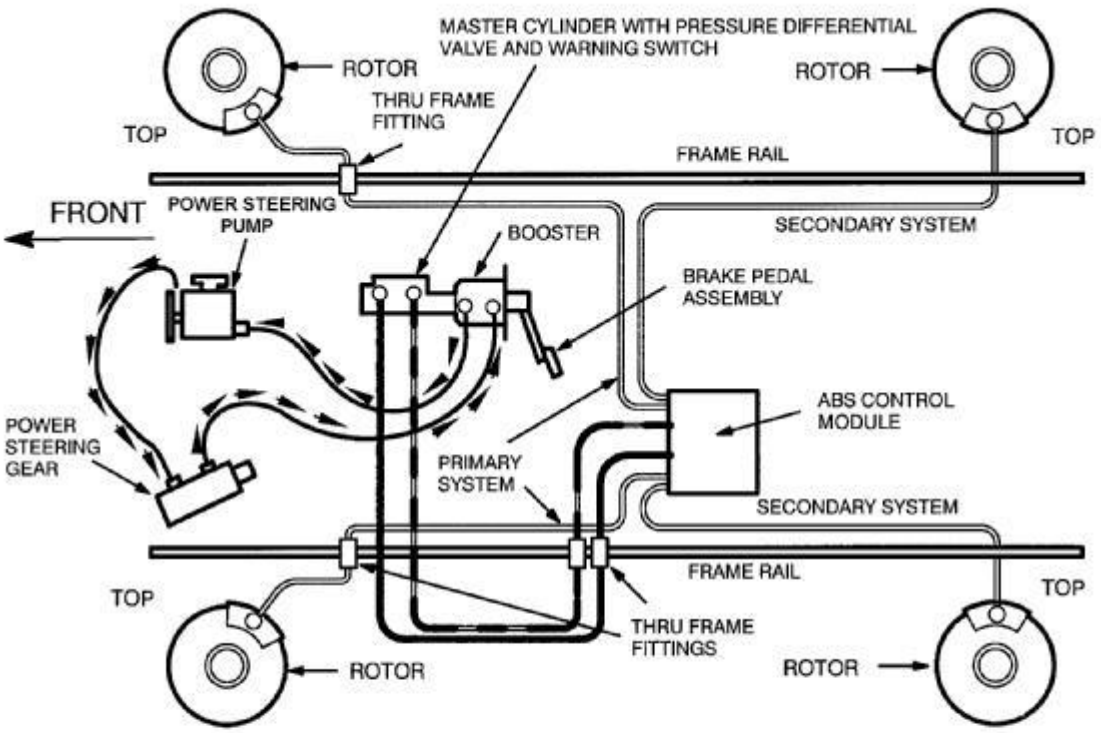

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Figure 1. Hydraulic Brake Booster System

Referring to Figure 1, the hydraulic brake booster operates in series with the power steering gear. The power steering pump supplies the fluid flow and pressure demand to both units during steering and braking. When steering and braking action occurs simultaneously the pressure demand from the steering gear and brakes is additive.

The power steering gear is balanced so that it can handle the pressure generated in the steering gear return line. The power steering gear also has an internal relief valve setting that is lower than the power steering pump relief valve to allow the steering gear to relieve before the power steering pump. This maintains power assist to both brakes and steering.

The hydraulic brake booster has a reserve electric pump which will provide hydraulic pressure boost in the event of an engine shut down. The signal for operation of the electric pump comes from the integral flow switch in the hydraulic brake booster assembly.

The power steering pump receives the greatest demand when the vehicle is stationary, the engine is at idle (low power steering pump RPM), and the service brakes are applied while turning the steering wheel. Under these conditions, the booster pump will supply some assist to the brake and steering system and it is possible to get a warning light and audible warning activation. Under these conditions the brake booster system is still

working and there are no adverse effects to operator vehicle control.

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