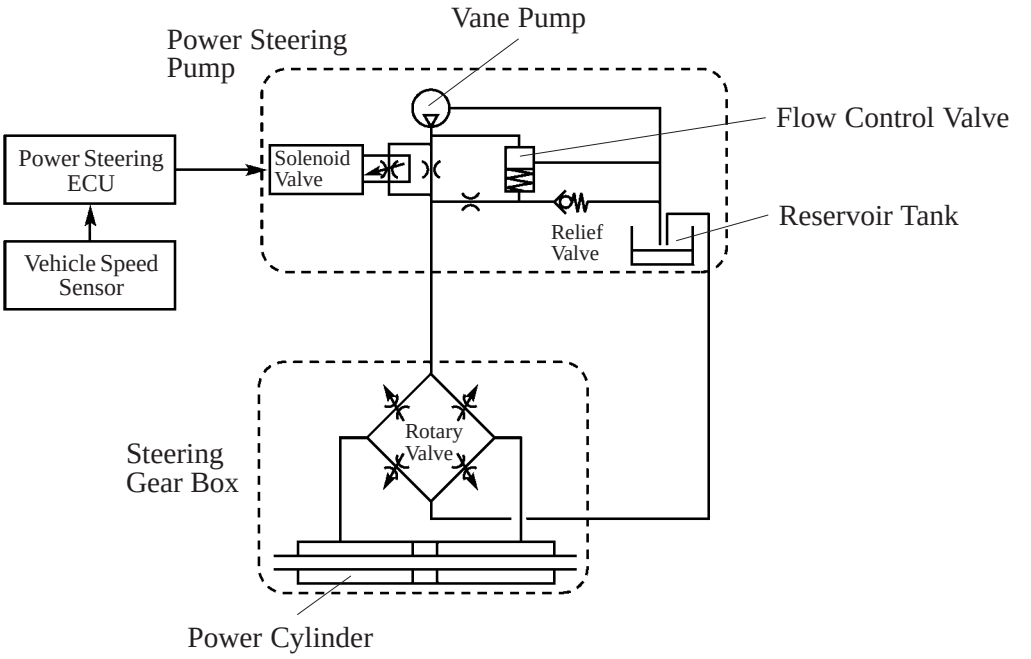
■VEHICLE SPEED SENSING FLOW CONTROL TYPE PPS

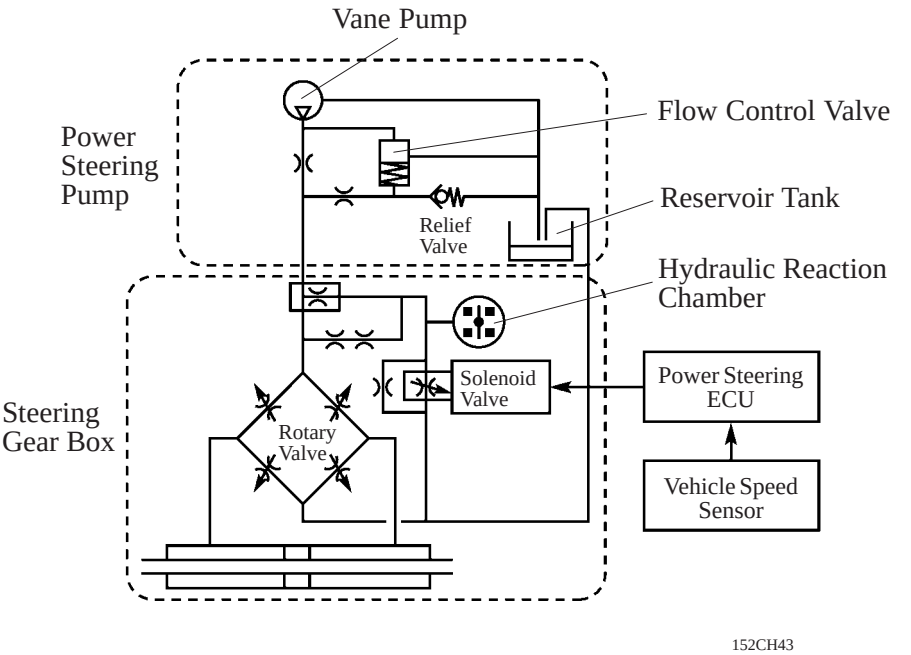
1. General

On the previous model, the PPS controls the hydraulic pressure that is applied to the steering gear's hydraulic reaction chamber according to vehicle speed. However, on the new model, the PPS has been changed to the type that controls the amount of fluid in the power steering pump according to vehicle speed.
This function is carried out by the solenoid valve that has been added to the power steering pump's flow control portion, which is based on the engine revolution sensing type power steering.

2. System Diagram



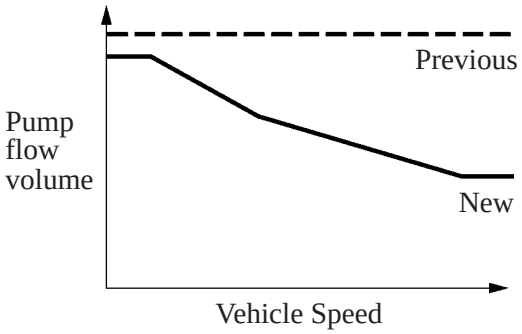
New



Previous

3. Operation

The pump flow volume is reduced as the vehicle speed increases in order to increase the steering effort.
Moreover, the engine load is reduced due to the reduction in the pump flow volume. As a result, fuel economy is improved.



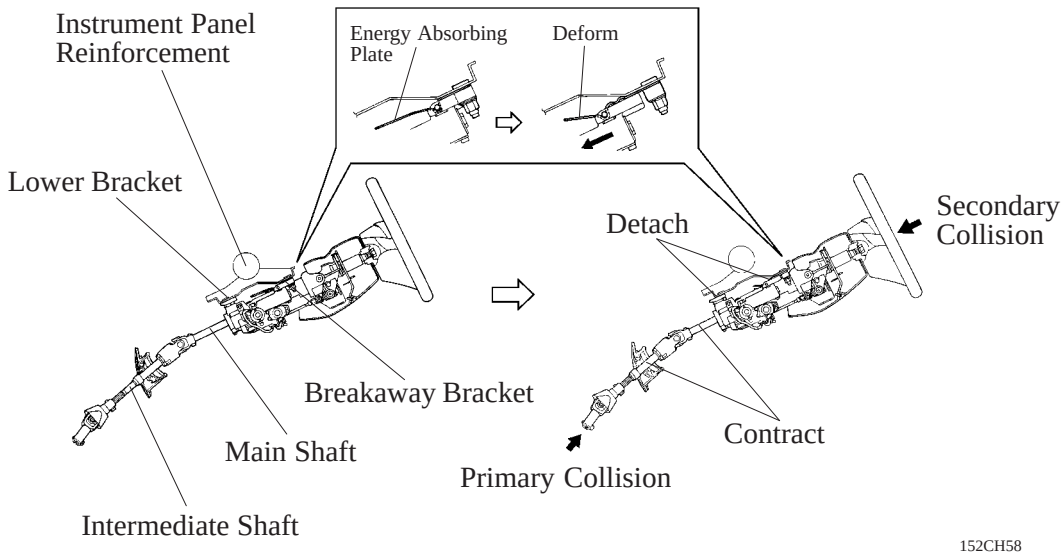
152CH44

■ STEERING GEAR

Excellent steering feeling has been realized through the adoption of the roller type rack guide, the cutting processing of the pinion gear, and the adoption of the rubber bushings to mount the steering gear box.

■ ENERGY ABSORBING MECHANISM

The energy absorbing mechanism in the steering column consists of a lower bracket, breakaway bracket, energy absorbing plate and a contractile main shaft. The steering column is mounted onto the instrument panel reinforcement via a lower bracket and breakaway bracket which is supported via a capsule and energy absorbing plate. The steering column and the steering gear box are connected with a contractile intermediate shaft. When the steering gear box moves during a collision (primary collision), the main shaft and the intermediate shaft contract, thus reduce the chance that the steering column and the steering wheel protrude into the cabin. When an impact is transmitted to the steering wheel in a collision (secondary collision), the steering wheel and the steering wheel pad help absorb the impact. In addition, the breakaway bracket and the lower bracket separate, causing the entire steering column to move forward.
At this time, the energy absorbing plate becomes deformed to help absorb the impact of the secondary collision.



152CH58

Befor Collision **After Collision**

CH