BRAKES

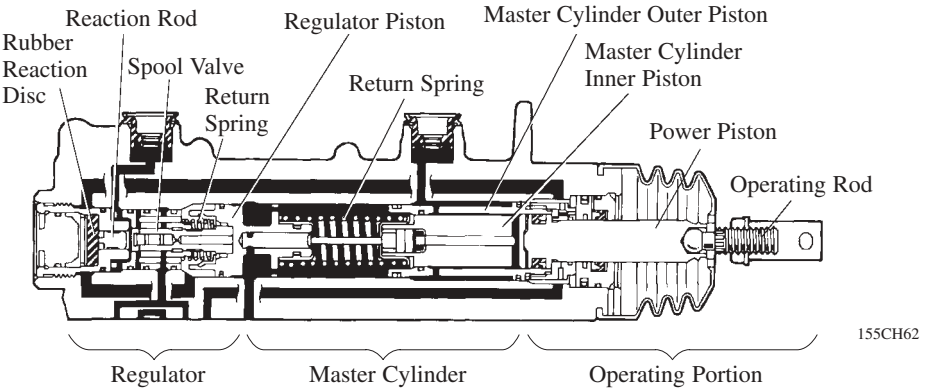
■ DESCRIPTION

- The same front and rear brakes of the previous GS300 are used. However, on the new GS430, the shape of the dust covers of the front brakes has been changed in conjunction with the output characteristics of the engine in order to improve the cooling performance.
- The diameter of the master cylinder has been changed from 22.22 mm (0.87 in.) to 26.99 mm (1.06 in.) to realize the excellent brake feel and control performance.
- As in the previous model, a hydraulic brake booster, in which the brake actuator and master cylinder are integrated, is used.
  However, the master cylinder pistons have adopted a dual construction consisting of outer and inner pistons. Ordinary, the outer and inner pistons operate in unison. If the accumulator pressure is not applied to outer piston, only the inner piston operates to ensure braking force.

■ MASTER CYLINDER AND BRAKE BOOSTER

1. General

As in the previous model, a hydraulic brake booster, in which the brake actuator and master cylinder are integrated, is used.
However, the master cylinder pistons have adopted a dual construction consisting of outer and inner pistons. Ordinary, the outer and inner pistons operate in unison. If the accumulator pressure is not applied, only the inner piston operates to ensure braking force.



2. Operation

During Power Supply Malfunction

If the accumulator pressure is affected due to some type of malfunction, no pressure will be supplied by the regulator. Then, a power assist cannot be provided to the force that is applied via the brake pedal and the pressure to the rear brakes cannot be increased.
Because the power assist is not applied to the master cylinder outer piston, the master cylinder outer piston does not operate and remains in its initial position.
The pressure to the front brakes will be increased by the master cylinder inner piston in accordance with the pedal effort applied to the brake pedal.