

## Description of the Brake System

The service brake is hydraulically operated consisting of:

- a) master cylinder which transmits pedal pressure to the hydraulic system,
- b) wheel cylinders located in the brake calipers which press the linings against the discs,
- c) the discs which are attached to the wheels retard the wheel rotation,
- d) the hydraulic lines feed equal pressure to all points in the system giving equal braking to the front and rear wheels respectively.

The hydraulic system makes use of the principle of fluid mechanics which states that pressure in a fluid is equally distributed in all directions.

The master cylinder converts mechanical pedal pressure to hydraulic pressure in the lines which forces the wheel cylinders in the calipers against the brake jaws.

Through this direct transmission of force, the braking effort increases linear to the increase of pedal pressure.

When the pedal is released a return spring in the wheel cylinders pulls back the pistons a fixed predetermined distance. This spring is part of the automatic adjustment device.

## Master Cylinder

The master cylinder is equipped with a special large bore check valve which prevents residual pressure in the lines. The valve has a 0.7 mm dia. bore which allows rapid return of brake fluid upon release of the pedal.

This valve is the only item in which the master cylinder for disc brakes differs from the master cylinder for drum brakes.