

PORSCHE - DISC BRAKES

General

The Porsche 356 B/2000 GS is equipped with Porsche-ATE disc brakes. Only the first units of this model were equipped with standard drum brakes.

The disc brake differs from the customary drum brake in the following ways: Flat brake lining segments of equal area are pressed against the surfaces of a disc by hydraulic pistons situated in a caliper which encloses the disc. Since equal pressure is exerted on both sides of the disc, no deformation of the disc occurs.

The disc, due to its ability to dissipate heat rapidly, is less temperature sensitive and therefore does not fade like the drum brake. The heat generated during braking is dissipated quickly because the disc rotates exposed to the air on all sides. Cooling is even better since the friction surface is directly exposed to the air while the heat in a drum must first be transmitted through the drum wall. In addition, the expansion resulting from increased temperature is primarily radial and therefore has no effect on the braking surface.

In contrast to the drum brake, the disc brake is not self-servo acting and therefore is not as greatly affected by changes in the coefficient of friction.

In the event that water or dirt comes in contact with the drum, the centrifugal force of rotation or the application of the brake linings quickly cleans the disc.