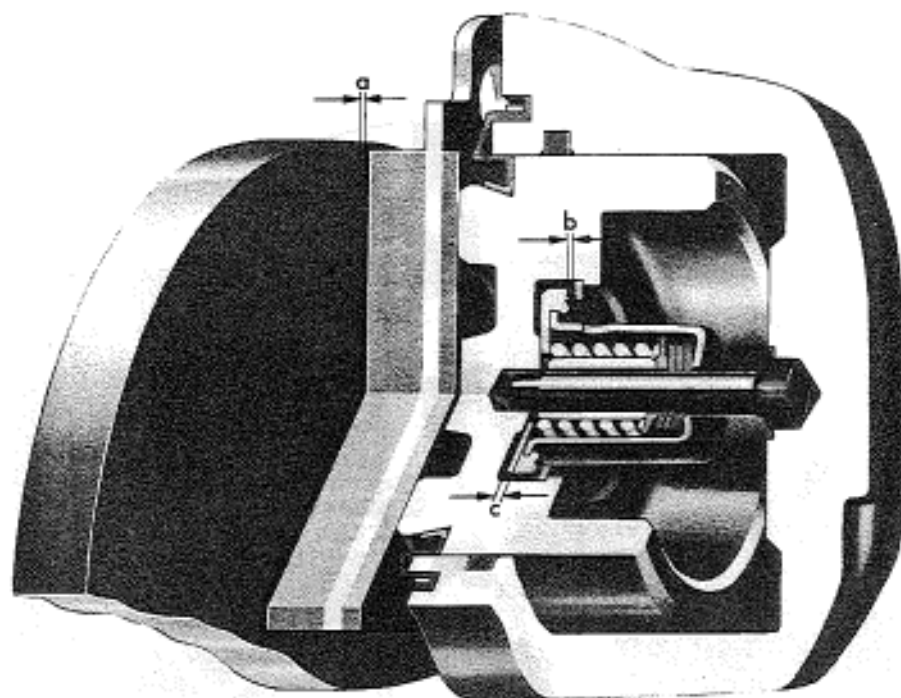


When releasing the brake pedal, the springs force the tandem master cylinder pistons back to their original positions and the complete system is relieved of pressure due to the pressure relief port in the tandem master cylinder. Simultaneously, the pistons in the brake caliper are retracted by the rubber seals resuming their normal condition. The friction pads, which are pressed against the pistons by the spreader springs, move away from the brake disc, thus allowing the disc to rotate freely again. The amount of clearance between the friction pads and the brake disc when the brakes are off depends upon the elasticity of the rubber seal. The clearance is approximately, .002-.008 in. (0.05-0.2 mm). This clearance does not increase as the friction pads wear, as the pistons, when they have to cover a distance toward the brake disc larger than the lateral deflection of the rubber seals, slip through the rubber seals. The friction pads adjust themselves automatically according to the amount of wear, and the adjuster and brake disc deflection compensator comes into operation with every movement of the piston.

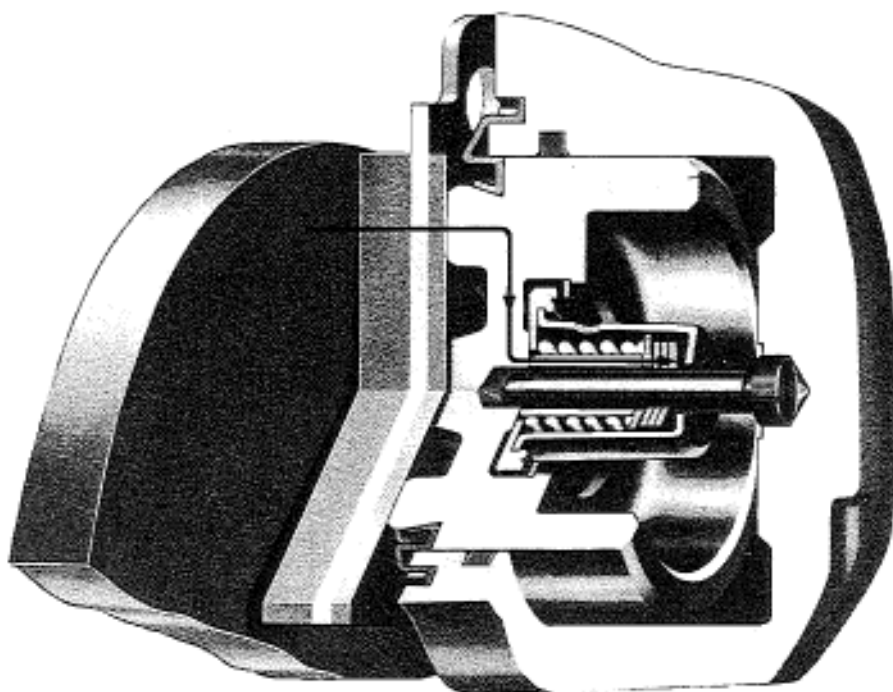


Clearance a is the clearance between friction pads and brake disc.

Clearance b between retaining disc and stop ring is required for the automatic adjustment of the pistons.

Clearance c between underside of piston crown and end of spacer sleeve is required for the brake disc deflection compensator.

BRAKE DISC DEFLECTION COMPENSATION



The forces acting on the front axle when operating the vehicle can lead to a lateral deflection of the brake disc. If this deflection is greater than clearance a , the piston is pushed back into the cylinder. As the underside of the piston crown rests against the stop ring when the brakes are at rest, the spring which also rests against the stop ring is compressed. Clearance c is reduced. If, however, the brake disc deflection is so great that clearance c is completely eliminated and the piston crown bears against the spacer sleeve, the friction washers are forced along the cylindrical pin by the spacer sleeve pushing against the distance piece (arrow = direction of force).

BRAKE FRICTION PADS

The friction pads consist of friction material and a metal plate. A layer of sound deadening plastic is cemented to the back of the metal plate to keep noises down to a minimum.

The friction material is provided with a groove, .08 in. (2 mm) wide and .3 in. (8 mm) deep running in a radial direction which immediately breaks up any water or oil film that has formed on the brake disc. By this good braking in bad weather is maintained.