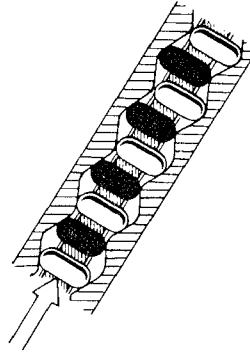


The torque from the ring gear is transmitted through the differential carrier, which is composed of two halves and the driver plate, to the sliding studs running in the curved tracks. Since the curved tracks have a different number of curves they do not have parallel surfaces. For this reason the sliding studs are prevented from advancing past the curved tracks effecting rotation of the axle shafts together with the driver plate. Under full load the differential becomes practically locked through the high axial force on the brake rings while under light loads such as when negotiating certain portions of a sharp curve the wheels are free to rotate differentially. Driving under half power through curves such as in city driving, places very high demands on the curved tracks and brake rings and is not recommended.

Section view of  
a linear develop-  
ment of the curved  
tracks, driver plate  
and sliding studs



The black studs  
transmit power  
when force is in  
direction shown

Fig. 8

#### Characteristics

1. Permits differential rotation of the wheels in curves.
2. Transmits equal rotation to both wheels under power.
3. Prevents independent wheel spin in the event of poor traction.
4. Independent wheel spin occurs only when one wheel has no traction or is off the ground for a greater time whereby the force necessary for the differential brake ceases. Short periods of poor traction such as intermittent wheel lift are spanned by the unit before the braking effect has time to dissipate since the inertia of the free wheel is sufficient to activate the brake.

#### ZF LIMITED SLIP DIFFERENTIAL

##### Removal and installation

The ZF limited slip differential is removed and installed in the same manner as described in section Rear axle item 8 RA of the 356B Shop Manual.

##### Disassembly

1. Free safety taps of through bolts.
2. Remove through bolts and open the differential carrier.
3. Clean all parts in cleaning solvent.