ZF (AXIAL SELF SERVO) LIMITED SLIP DIFFERENTIAL

Description

The ZF limited slip differential is a self activating curved track geared unit which retards differential rotation by friction brakes. In place of pinions and side gears a driver plate runs between two curved track elements. The sliding studs of the driver plate exert high axial force on the curved tracks when transmitting power. The hemispherical ends of the sliding studs effect a high pressure angle on the curved tracks thereby pressing them against the differential carrier. This pressure supplies the braking force which prevents differential movement of the two curved tracks. The difference in the number of curves on the two tracks allows the two elements to rotate in opposite directions as a customary differential gear. One track has eight and the other nine curves.

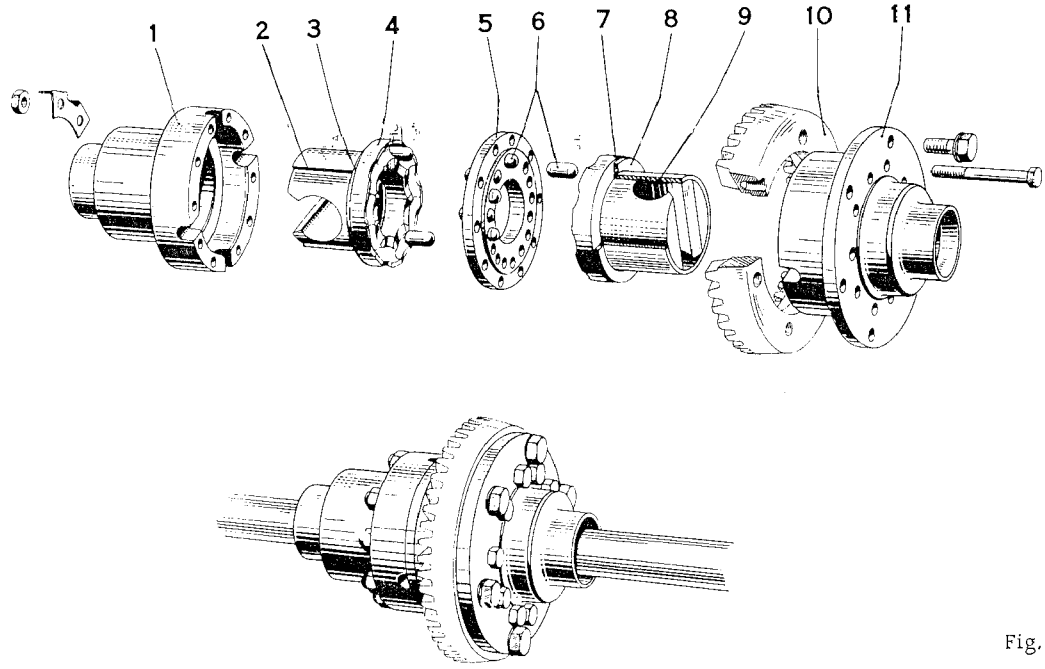

Fig. 7

1. Carrier half without flange
2. Axle joint body
3. Brake ring
4. Curved track element
5. Driver plate
6. Slidingstud
7. Curved track element
8. Brake ring
9. Axle joint body
10. Ring gear
11. Carrier half with flange