

Rear Axle

Job-No.
35 — 0

The rear axle is designed as a single-jointed swing axle, i. e. the two axle halves swing about a common, low-positioned fulcrum (Fig. 35 — 0/1).

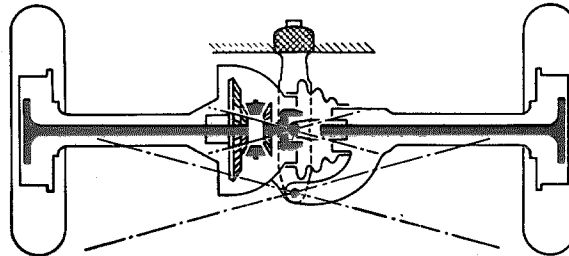


Fig. 35 — 0/1

The connecting pin (6) is the fulcrum of the two axle halves. It serves to connect the rear axle housing (10), with the left axle tube (11) fixed to it, the right axle tube (1) and the support (5) for the rear axle suspension (Fig. 35 — 0/2).

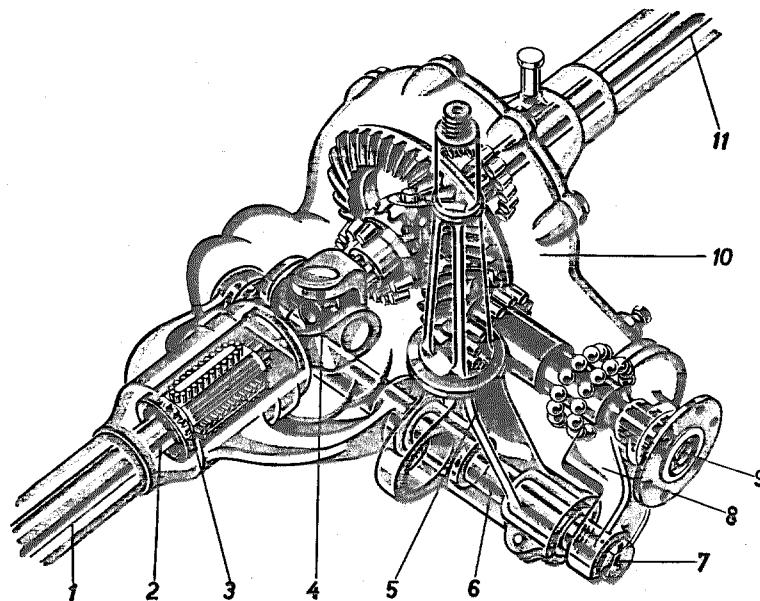


Fig. 35 — 0/2

- | | | |
|---|-------------------------------------|----------------------|
| 1 Axle tube right | 5 Support for rear axle suspension | 9 Drive pinion |
| 2 Rear axle shaft right | 6 Connecting pin | 10 Rear axle housing |
| 3 Sliding sleeve | 7 Hexagon screw for connecting pin | 11 Axle tube left |
| 4 Slip coupling and universal joint cross | 8 Cover with eye for connecting pin | |

This design, which has been successfully developed in our racing and sports cars, gives the car excellent road-holding and cornering qualities, because when the springs are fully depressed, alteration of track and camber is slight, and when cornering, the shifting of wheel load from the inside to the outside wheel is far less than was previously the case with the twin-jointed swing axle.

As in the case of the twin-jointed swing axle, the single-jointed swing axle has hypoid gearing, in which the axis of the pinion gear is offset a definite distance.

The out-of-center is 1 inch = 25.4 mm (Fig. 35 — 0/3), whilst with normal Gleason spiral gearing the axes intersect at the center (Fig. 35 — 0/4).

The principal advantages of hypoid gearing are a longer meshing period and quieter operation of the gears.

Gleason hypoid gearing

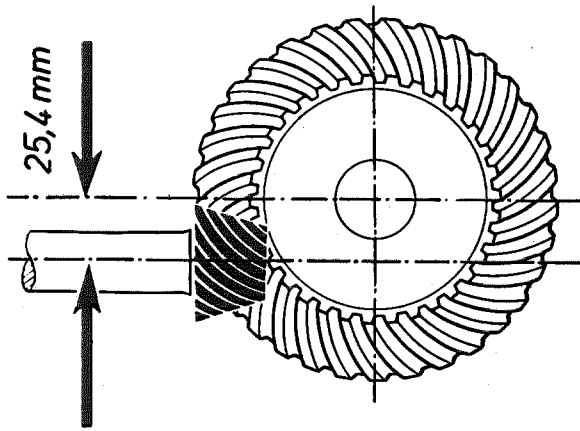


Fig. 35 — 0/3

Gleason spiral gearing

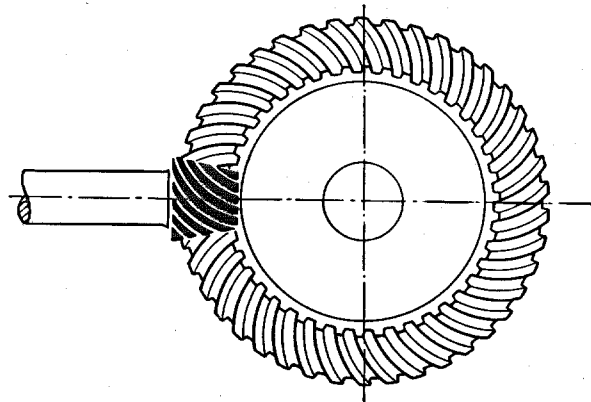


Fig. 35 — 0/4