

STEERING GEAR

Description of the ZF single-peg steering mechanism

General

The movements of the steering wheel are transmitted through the steering column and the flexible joint to the steering worm, which is mounted in adjustable taper ball bearings in the steering box. The steering peg, which is mounted in roller bearings on the drop arm shaft (rocker shaft), rolls along the flanks of the worm. It transmits the movement of the worm to the drop arm, and hence through the two tie rods to the steering arms on the stub axles and in this way to the front wheels.

Lubrication

High-grade SAE 90 gear oil should be used for the lubrication of the steering gear. The steering box has a capacity of about $\frac{1}{4}$ US/quarts (0.25 liters). The oil level should be checked at regular intervals as specified in the Lubrication Chart.

Maintenance

Only in its central position, with the wheels in straight-ahead position, there is no play in the steering gear. If the steering gear is correctly adjusted and the vehicle is jacked up, this position will be indicated by a slight resistance at the steering wheel – known as the “pressure point”. When adjustments are made to the steering peg, it is essential that the steering gear should be at this pressure point, as described in the following sections. A certain amount of play in the steering when the vehicle is stationary and the front wheels are turned from the straight-ahead position is quite normal. When the vehicle is on the road and is rounding a curve, this play is compensated for by caster action of the front wheels, acting through the tie rods and the drop arm, which forces the steering peg against one flank of the steering worm.

The toe-in must be checked with great care at regular intervals. It is prerequisite that the instructions given in the section “adjusting toe-in” are complied with when this is done.

Axial play of the steering worm can be reduced by removing some of the shims located between the steering box and the end plate.

Please note:

New steering boxes, and also those that have been overhauled by the manufacturers, are sealed to prevent tampering by a third party. Since the manufacturers will not accept any claims under the guarantee in respect of steering boxes with a damaged seal, we recommend that a few factory-reconditioned steering boxes should be kept in stock for exchange purposes, and that repairs be as far as possible entrusted to the manufacturers.

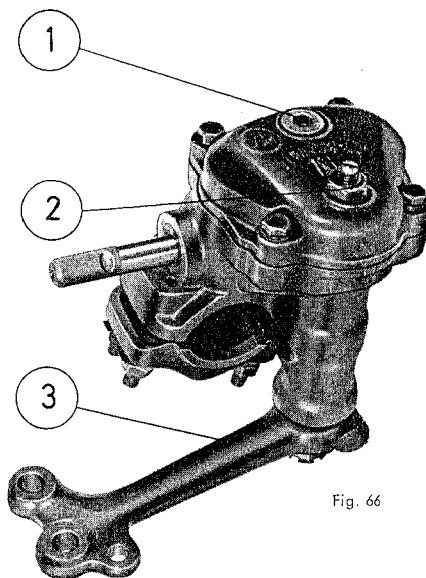


Fig. 66

Steering Gear

- ① Oil filler plug
- ② Adjusting screw and lock nut
- ③ Steering drop arm