

this purpose, grease is pressed into the lubricators by means of a grease gun until fresh grease emerges (Fig. 233).

The lubrication chart included in the Operating Instructions must be strictly observed.

- (2) The steering gear is filled with a certain amount of grease or oil. It must be replenished at regular intervals.
- (3) Screw-locking devices should be tested for tight fit after every 50 hours of operation. If necessary, screws, bolts, and nuts must be re-tightened.
- (4) Any damage to parts of the steering mechanism must immediately be removed. Parts of the steering assembly normally are annealed, thus, they must only be straightened in a cold state. Broken parts should not be welded for reasons of safety. They must be replaced by new parts. Cotter pins should not be used two times.
- (5) Any steering shows a lost motion. This is defined as the rotary motion of the steering wheel which is not transmitted to the steering assembly. During operation the lost motion is increased by wear so that it may exceed the permissible amount. For tractors which normally run slowly,

the maximum amount is 30 degrees. This is roughly equal to the width of a hand (Fig. 234).

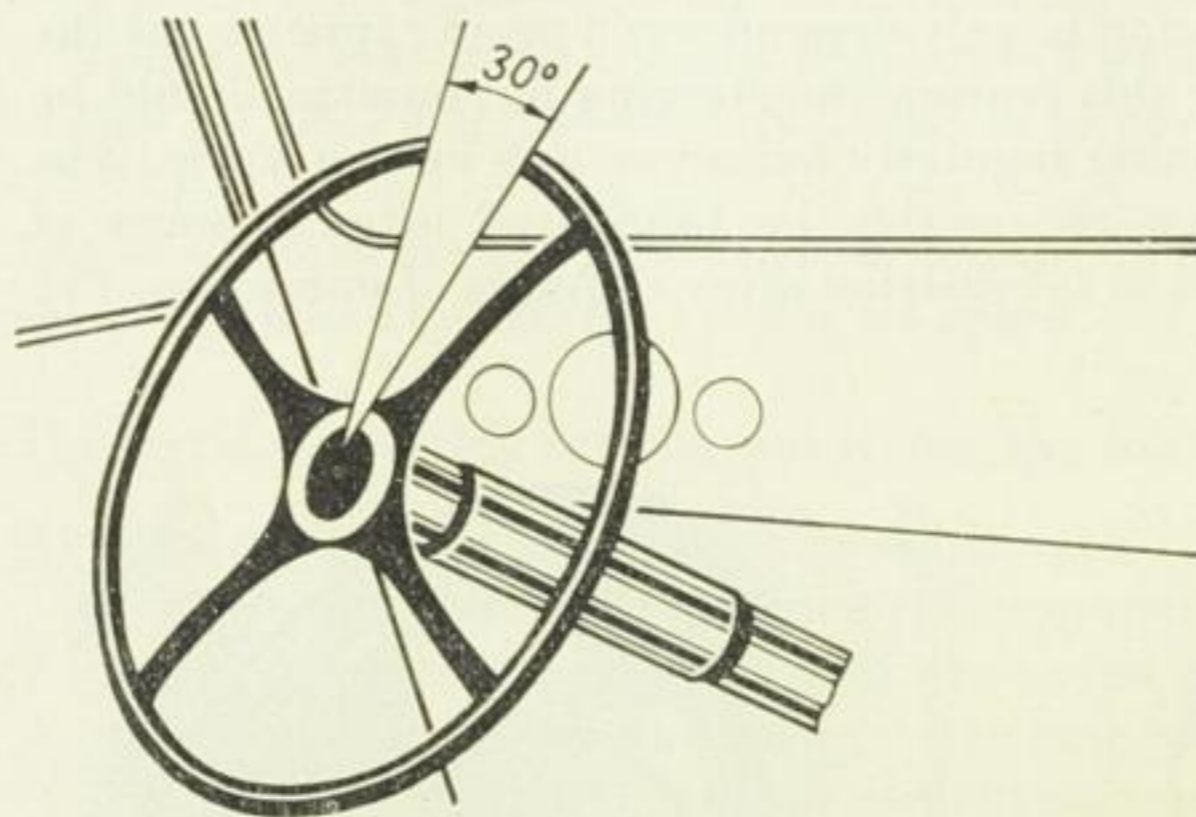


Fig. 234. Maximum permissible lost motion at the steering wheel of tractors 30°

The various types of steering gear are adjusted each in their own way. *Adjustment of the Worm-and-sector Steering Gear.* Axial backlash between steering worm and the mating member is checked by pulling the steering wheel. It is removed by re-adjusting the thrust anti-friction bearing. A special spanner is frequently required for this purpose. Care should be taken not to tighten the thrust anti-friction bearing too much, otherwise the wear rate is considerably increased. It is recommendable to check the backlash repeatedly when adjusting.

The central sector teeth will wear more rapidly than the outer teeth in the course of time. Backlash between worm and steering-worm sector is taken up by rotating the sector to unworn teeth, provided the size of the sector is large enough. Excessive backlash at the rocker arm is taken up by adjusting a stud.