



SERVICE MANUAL

TRUCKS

L 385

Export Service Department

AKTIEBOLAGET

VOLVO

GÖTEBORG . SWEDEN

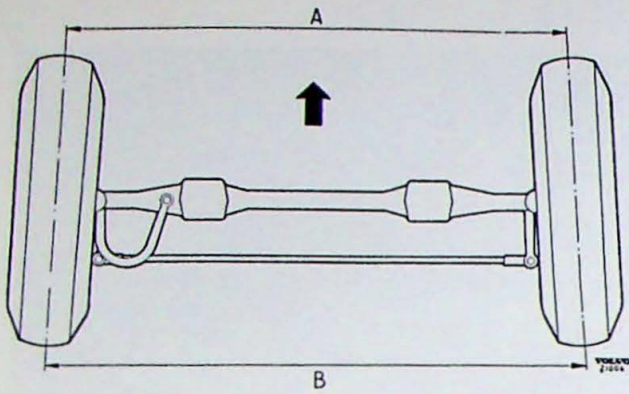


Fig. 6—28. Toe-in.

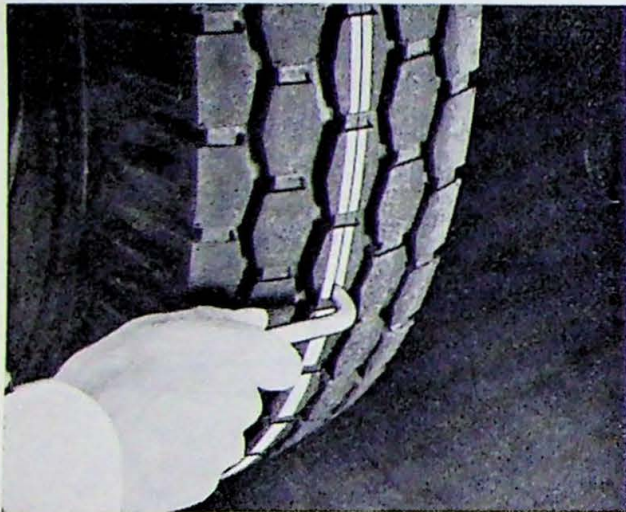


Fig. 6—29. Marking the wheels.

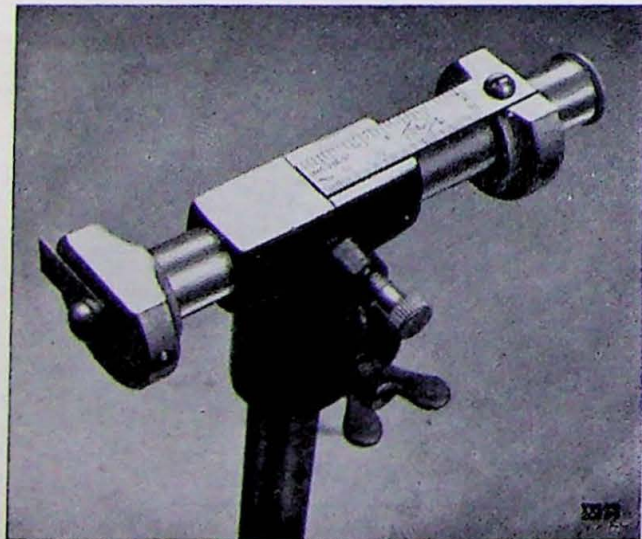


Fig. 6—30. Measuring gauge.

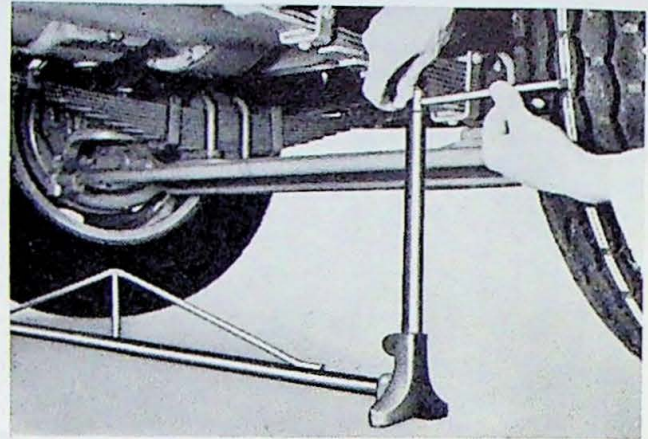


Fig. 6—31. Adjusting the measuring point.

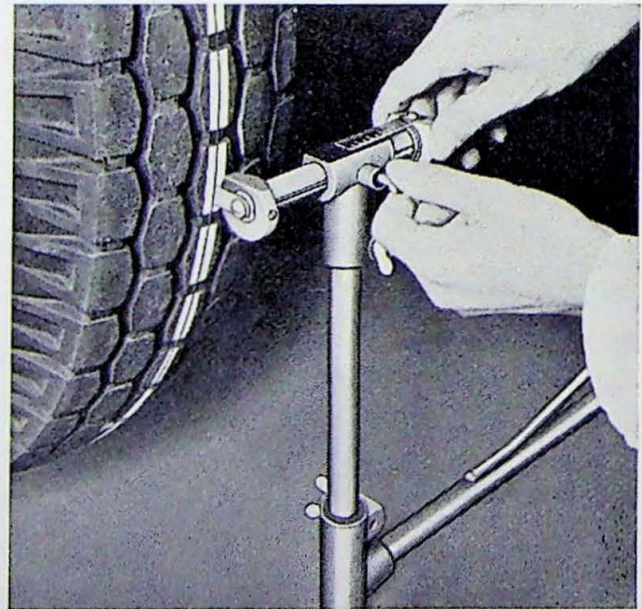


Fig. 6—32. Reading off the toe-in.

FRONT WHEEL ALIGNMENT

PROCEDURE TO BE CARRIED OUT BEFORE ADJUSTING FRONT WHEEL ALIGNMENT

Before any control or adjustment of the front wheel alignment is carried out, the following procedure must be followed and any fault remedied:

1. Check the air pressure on all tires.
2. Check that both the front wheel tires are equally worn. If this is not the case replace them with the rear wheel tires or fit the spare wheel.
3. Check that the wheel run-out does not exceed 3.5 mm (9/64") and that the out-of-roundness does not exceed 3.5 mm (9/64").
4. Check the front wheel bearings and the king pins with bushings.
5. Check that the springs are in good condition and are not "tired".
6. Check the looseness and settings of the steering gear mechanism. When the steering gear mechanism is in its center position, the road wheels should point straight forward.
7. Check the drag link, the tie rod and the steering knuckle arms.

MEASURING AND ADJUSTING FRONT WHEEL ALIGNMENT

To measure front wheel alignment, two turntables are fitted under the front wheels (Fig. 6-25). The rear wheels are blocked up to the same height as the front wheels. Measure the wheel alignment angles with special instruments. Follow the instructions supplied by the manufacturer.

Caster

Caster means the inclination backwards or forwards of the king pins. See Fig. 6-26. On L 385 trucks there should be a positive caster of 2.25° , that is to say the king pin should be inclined 2.25° backwards - upwards. If caster is faulty, adjust by means of keys between the axle and the springs.

Camber

Camber is positive if the wheel inclines outwards-upwards (Fig. 6-27). On L 385 trucks there should be a positive camber of 1.5° . If the camber is faulty this can depend on a deformed axle or deformed steering knuckle. In order to determine whether it is the axle or the steering knuckle that is deformed, king pin inclination is also measured. If the king pin inclination is correct then it is the steering knuckle that is deformed.

An axle that is slightly twisted can be straightened again, see "Straightening the Beam Axle", but a deformed steering knuckle must absolutely be replaced.

King Pin Inclination

King pin inclination means the inclination of the king pin inwards-upwards (Fig. 6-27). On L 385 trucks this should be 7.5° .

Toe-in

Toe-in means the inwards-forwards inclination of the wheels. See Fig. 6-28. The difference between measurements A and B should be 3 mm ($1/8"$). Toe-in is measured and adjusted in the following way:

1. Carry out a check in accordance with "Procedure to be carried out before adjusting front wheel alignment".
2. Have the truck standing on a level floor. Jack it up until the front wheels are free from the floor.
3. Chalk and mark the wheels all round with the help of a gauge as shown in Fig. 6-29.
4. Lower the truck. Move the road wheels so that they are pointing straight forwards and then roll the truck forward about half a wheel revolution.
5. Zero the gauge (Fig. 6-30) and place it behind the wheels. Make sure that the pointers are at the same level as the hubs. Place the measuring end pointer on the mark on the right-hand wheel and then adjust the moveable measuring pointer to the mark on the left wheel (Fig. 6-31).
6. Move the gauge carefully to the front of the wheels and adjust the moveable pointer to the mark on the right wheel. Adjust the measuring end pointer against the mark on the left wheel and read off the toe-in (Fig. 6-32).
7. If the toe-in is faulty, loosen the bolts on the tie rod and twist the tie rod in the desired direction. Then roll the truck forward another half wheel revolution and carry out measurements again. Note. The truck must be rolled forward half a wheel revolution before each measurement is carried out. When the correct toe-in has been obtained, the bolts on the tie rod should be tightened and secured.