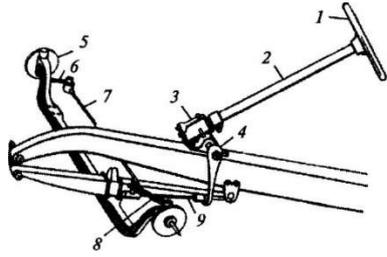


Прочитайте и письменно переведите текст на английском языке

Steering System



To guide the car, it is necessary to have some means of turning the front wheels so that the car can be pointed in the direction the driver wants to go. The steering wheel in front of the driver is linked by gears and levers to the front wheels for this purpose. The front wheels are on pivots so they can be swung to the left or right. They are attached by steering knuckle arms to the rods. The tie-rods are, in turn, attached to the pitman arm.

When the steering wheel is turned, gearing in the steering gear assembly causes the pitman arm to turn to the left or right. This movement is carried by the tie-rods to the steering knuckle arms, and wheels, causing them to turn to the left or right.

The steering system incorporates: the steering wheel and column, steering gear, pitman arm, steering knuckle arm, front axle, steering knuckle pivot, tie-rods.

Attached to each side of the rack are inner and outer tie rods. These rods connect to the spindles. As the rack pulls and pushes the rods, they move the spindles. And it is the spindles that hold the wheels. By turning the spindle, the rods turn the wheel.

Most modern cars also have power steering. In these systems, the rack has a cylinder with a piston in the middle. The power steering pump supplies high pressure fluid to move the piston. This reduces the amount of force needed to turn the pinion gear and rack.

Troubles of Steering Gear Components

Steering gear and linkage may have the following basic troubles: excessive steering-wheel free play, bending of steering rod, oil leakage from the steering-gear case, disadjustment of steering gear.

What to do

1. Check the steering-wheel free play and steering gear performance while the car is running.
2. Check the steering-gear case for oil leakage by visual inspection.
3. Adjust the steering gear. Steering gear of the worm and roller type is adjusted by end playing in the steering worm shaft bearings.