

FACTORY SERVICE BULLETINS

Play in the Rack and Pinion Steering System

Models 203, 209, 210, 211, 215, 220, 230



Figure 1

When inspecting the steering system, note that radial movement of the steering coupling at the input of the control shaft (Figure 1, item 1) is not relevant for evaluating play in the steering box. This does not have any influence on the operation of the rack-and-pinion steering system, or the play in the steering system, or the driving dynamics of the vehicle. The same applies to radial movement at the rack/tie rod (see Figure 1, especially when the wheels are turned all the way to one side. In this position, the rack is extended to one side and acts as a larger lever, which causes supposed play to be felt even more (checking play at the outer and inner joints remains the same). Radial movement when applying pressure when the rack is fully extended to one side or the other is normal and is due to the construction of the steering system.

When quickly turning the steering wheel left/right, especially when the engine is off (no power assist), a loud clunking noise can be heard. This is also due to the steering system's construction and is in no way evidence of play in the system. In order to properly check for play, please note the following requirements:

Prerequisite: The steering column and the outer and inner joints of the tie rods must not have any play.

The actual check for play in the rack-and-pinion steering system may only be made:

- with vehicle at standstill
- with engine running (power assist of the steering must be ensured)
- with the wheels pointed straight ahead

The steering wheel must be turned slowly while watching the rims. The rims must start to move before the steering wheel is turned at most approximately ± 1 degree. During this movement, a steady increase in pressure can be felt in the steering wheel. This delay in reaction is a result of the elasticity of the steering system (steering connections, etc.) and is not a fault. In order to properly evaluate play in the rack-and-pinion steering system, only the axial movement of the rack in relation to the steering box is relevant (which is being measured by the above procedure, see Figure 2.



Figure 2

Repair Kit for Glow Plug Threads in Cylinder Head Diesel engines

Save that expensive cylinder head! A repair kit is now available for damaged glow plug threads and/or broken off glow plugs. It makes it possible to accurately drill out the glow plug bore and install a threaded insert.

The repair kit can be ordered as a Special Tool (611 589 00 99 00), and costs \$650. Also, the wear and tear components of the kit can be individually ordered as needed, along with additional replacement threaded inserts.