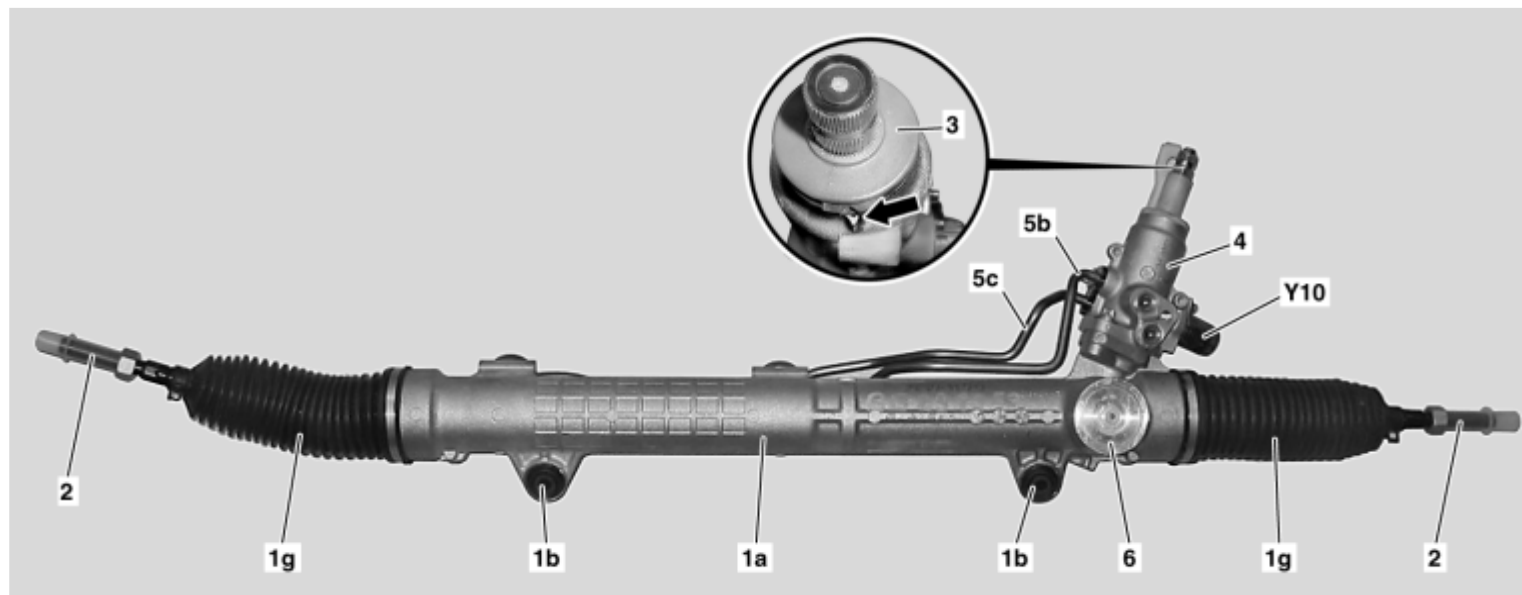


GF46.20-P-5137GZ

Steering gear of rack-and-pinion steering, component description

23.2.06

MODEL 164



P46.50-2033-08

1a Steering gear housing
 1b Rubber bushing
 1g Bellows with clips
 2 Track rods

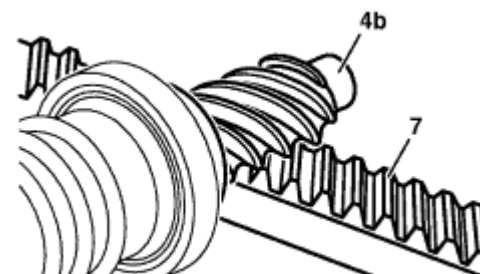
3 Cap with marking line for steering gear
 center position (arrows)
 4 Rotary valve and control bush housing

5b Pressure line of right pressure
 chamber
 5c Pressure of left pressure chamber
 6 Play compensator
 Y10 SPS [PML] solenoid valve

4b Drive pinion
 7 Rack

The rack-and-pinion steering is located in front of the center of the front axle in the direction of travel. It transmits the steering movements from the steering wheel to the wheels, assists manual rotational force and thus facilitates steering the vehicle.

The drive pinion (4b) transmits the movement of the steering wheel to the gear rack (7) and then via the tie rods to the wheels.



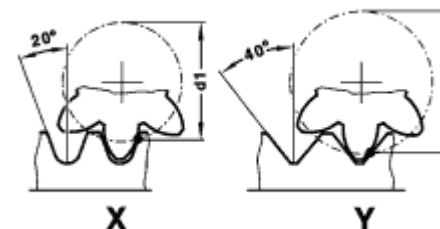
The drive pinion has spiral splines. As more and more teeth are in mesh simultaneously, the rack-and-pinion steering is very wear-resistant and has a very low noise level.

P46.20-0243-01

d1 Effective diameter 1
d2 Effective diameter 2
X Center area
Y Outside areas

The variable steering gear ratio is achieved by the effective diameter 1 and 2 which result from the shape and angles of the teeth.

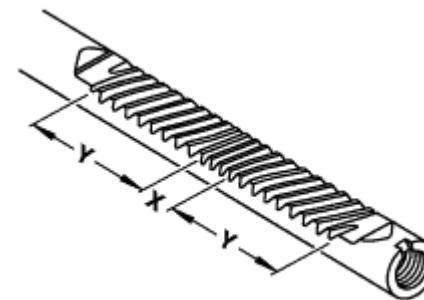
The toothed rack is designed indirect in the center area (X). The rack-and-pinion steering is increasingly more direct in the outer areas (Y).



P46.20-0241-01

X Center area
Y Outer area

The difference between the gear ratio in the center area (X) and the gear ratio in the outer area (Y) is approx. 30%.



P46.20-0242-01