

1963-73 MERCEDES-BENZ

All Models (1963-73)

NOTE — Some models have power steering as standard or optional equipment. See Mercedes-Benz under **POWER STEERING** in this section.

► CHANGES, CAUTIONS, CORRECTIONS

► **STEERING COUPLING PRODUCTION CHANGE** — From mid-June, 1973, a riveted steering coupling (115 460 05 10) has been installed instead of removable version. Do not expose the plastic bushings of this unit to steam spray or cleaning solvent, as this would remove the lubricant and noise would result in steering.

► **NOISY IDLER ARM** — If groaning or creaking noises are evident when steering is at full lock position, the fault is with rubber bushing of the idler arm. Lubricating these bushings is not recommended since this would be only a temporary solution. Bushing replacement with new reduced-axial, pretension bushings (114 586 00 46) is recommended. Also replace self-locking nut and torque to 87 ft. lbs.

DESCRIPTION

The standard steering used with these models is the recirculating ball type, with worm gear and pitman shaft. Pitman arm is connected to tie rod and center link by tapered ball pins.

ADJUSTMENT

WORM GEAR END PLAY

Worm gear should require 5-6 in. lbs. to turn. If not, tighten threaded ring to 130-145 ft. lbs. and check again. If still not correct, loosen or tighten threaded ring until correct worm gear turning torque is obtained. Then install lock ring.

LUBRICATION

Capacity — 0.75 pts. (350 cc) of S.A.E. 90w gear oil.

REMOVAL & INSTALLATION

STEERING GEAR

Removal — 1) Remove socket screw on upper flange of steering coupling. Disconnect pitman arm from pitman shaft with suitable puller (100 589 04 33 00). Make sure pitman arm and pitman shaft are marked for proper alignment when installing.

2) Loosen steering damper on holder of frame. Remove lock bolts securing steering gear to frame and pull steering gear out of vehicle in a downward direction.

Installation — To install steering gear, reverse removal procedure. Tighten to specifications.

STEERING LINKAGE

Removal — Using suitable tools (111 589 08 33 00, 136 589 12 33 00, 100 589 04 33 00) disconnect pitman arm, idler arm, center link and tie rods from vehicle.

Installation — Check all joints and rubber grease cups, replace as necessary. Installation of linkage is reverse of removal procedure. Tighten all nuts and bolts to specifications.

OVERHAUL

STEERING GEAR

Disassembly — 1) Attach steering gear to suitable assembly plate (116 589 01 59 00), and remove nut from adjusting screw. Remove bolts securing cover to steering box. Screw adjusting screw into cover and remove cover with gasket.

2) Remove pitman shaft from steering box. Remove lock ring from steering box, unscrew threaded ring and adjusting ring and remove from steering box. Remove worm gear with steering nut and ball cages.

3) Remove outer bearing race and adjusting ring from steering box. Remove sealing ring, adjusting ring from cover and bearing inner race from worm gear. Remove locking ring and adjusting screw from pitman shaft.

Inspection — 1) On steering nut and worm gear, check ball paths for score marks, wear or any other damage. Check for bent worm gear and damaged ball guides. If any component is damaged or worn, replace as a unit (steering nut, worm gear, balls and ball guide). Check pitman shaft for wear on bearing surfaces.

2) Check steering box for wear, steering box cover for flatness and replace as necessary. Check and replace all bearings if worn or damaged.

Reassembly — Replace all sealing rings with new rings. Reassemble in reverse of disassembly procedure. Adjust worm gear to specification. Tighten to specifications.

Installation — To install steering gear, reverse removal procedure and tighten to specifications.

TIGHTENING SPECIFICATIONS

Application	Ft. Lbs. (mkg)
Pitman Shaft-to-Pitman Arm Nut.....	115 (16)
Tie Rod-to-Pitman Arm.....	25 (3.5)
Center Link-to-Pitman Arm.....	25 (3.5)
Center Link-to-Idler Arm.....	25 (3.5)
Steering Box-to-Frame.....	44 (6.0)
Steering Coupling Bolts.....	18 (2.5)
Steering Box Cover Bolts.....	18 (2.5)
Threaded Ring.....	138 (19)
Adjusting Screw Lock Nut.....	25 (3.5)
Idler Arm-to-Frame.....	87 (12)
Tie Rod Clamp Bolts.....	15 (2.0)