

VOLKSWAGEN TYPE 2 WORM & ROLLER

Type 2
Transporter

DESCRIPTION

Beginning with 1973 models, Type 2 vehicles incorporated a worm and roller steering unit. This replaced the previously used worm and peg assembly. Steering linkage remains the same as on earlier models, consisting of an adjustable drag link, two maintenance-free tie rods (one adjustable), and a hydraulic steering damper.

ADJUSTMENT

- 1) Check for excessive free play in steering by raising front of vehicle, placing wheels in straight-ahead position, and lightly turning steering wheel back and forth while holding one of the wheel spokes at outer end. Free play should not exceed $\frac{5}{8}$ " steering wheel spokes at outer end. Free play should not exceed $\frac{5}{8}$ " (15 mm) before resistance is felt in the steering wheel.
- 2) If free play is excessive, check for loose or worn steering linkage components, check for tight mounting of gear box, and check for proper tightness of gear box cover. If these are found to be in good condition and properly tightened, continue to next step.
- 3) Disconnect drag link from pitman arm. Turn steering wheel 180-200° from center, in either direction. *NOTE* — Center position is determined when pointer on worm spindle dust cap is in line with square boss on worm cover plate. Loosen adjusting screw lock nut and turn adjusting screw out one full turn.
- 4) Working under vehicle, move pitman arm back and forth while gradually tightening adjusting screw. Repeat until no play is felt at pitman arm (without stiffness). Hold adjusting screw in this position and tighten lock nut.
- 5) Take off horn button and disconnect horn wire. Attach a torque gauge to steering wheel nut. Turn steering wheel

through centerpoint. Steering is correctly adjusted if torque gauge reads 7-11 INCH lbs. (8-12 cmkg). If necessary, repeat and recheck adjustment.

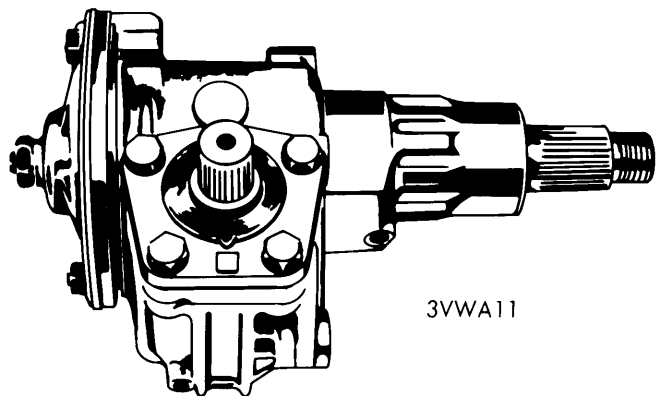
REMOVAL & INSTALLATION

Removal — Remove screws holding turn signal switch to column tube and move switch aside. From underneath vehicle, remove cover plate below pedal cluster. Detach drag link and pitman arm. Bend lock plate back and remove M8 clamp bolt holding coupling flange on worm spindle. Unbolt gear box from frame. Push column slightly upward and remove gear assembly from vehicle.

Installation — To install, reverse removal procedure, noting the following: Ensure a gap of .08-.12" (2-3 mm) exists between steering wheel hub and turn signal switch.

OVERHAUL

NOTE — Manufacturer does not recommend overhaul procedures for the worm and roller steering gear. If defects are found in the gear, replace it as an assembly.



DETERMINING GEAR CENTERPOINT