

## 1963-72 VOLKSWAGEN TYPE 2

### Volkswagen Type 2 (1963-72)

#### DESCRIPTION

##### STEERING GEAR

Worm and sector gear and column shaft are two separate components, joined by coupling disc. Steering gear housing is bolted to sidemember. Steering wheel movements are transmitted via shaft and coupling to worm spindle. Steering peg is mounted on taper roller and contacts flanks of sector shaft arm. From the pitman arm, steering forces pass through the draglink, swing lever, and tie rods to front wheels.

##### STEERING LINKAGE

Pitman arm transmits steering movements via adjustable draglink to swing lever and two maintenance-free tie rods to the wheels. One tie rod is adjustable and other is fixed. Hydraulic steering damper is attached to front axle beam and swing lever.

#### ADJUSTMENT – OFF VEHICLE

**All Models** – Turn adjusting screw in or out to set play between peg and worm. Adjustment is correct when 134 INCH lbs. of torque is measured while turning worm through pressure point (center position).

#### ADJUSTMENT – ON VEHICLE

**All Models** – Raise vehicle. While turning wheel through center position, pressure point should be clearly felt without "sticking". To correct, have assistant turn adjusting screw in until steering is stiff. Then while turning wheel through center, back screw out until correct feel is obtained. Torque may be measured with pitman arm separated from drag link and horn button and cable removed. Place torque wrench on wheel nut and turn through center position. Suitable torque is 45-56 INCH lbs.

#### REMOVAL & INSTALLATION

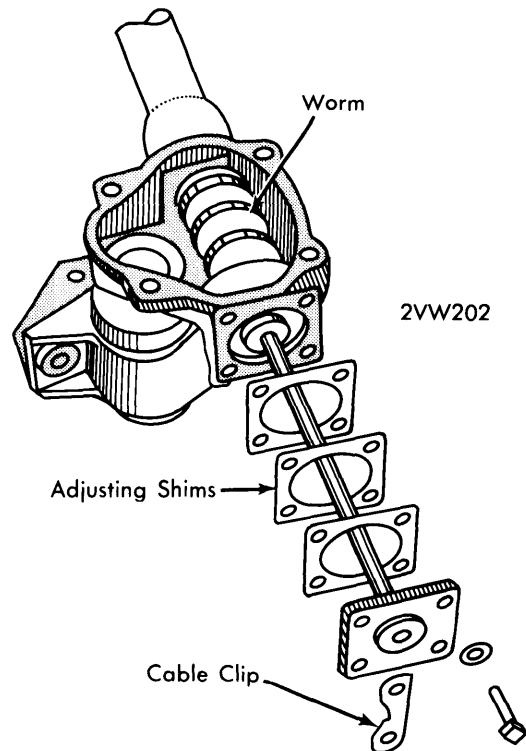
##### STEERING GEAR

**Removal (1963-69)** – 1) Disconnect battery ground cable. Remove steering wheel and ignition switch (with retaining plate). Detach horn ground cable from gear plate. Remove cover plate under pedals. Pull pitman arm from gear shaft and unbolt gear bracket. Pull gear down and forward and slide bushing off column.

**Installation (1963-69)** – Mount gear, position floor plate, and replace retaining plate, switch, and steering wheel. Column must be installed free of tension at retaining plate. Install pitman arm. Replace horn cable. *NOTE* – On 1963-66 models, check oil level in gear box.

**Removal (1970-72)** – Remove directional switch and cover plate under pedals. Press off pitman arm. Remove screw from steering coupling flange. Unbolt gear from sidemember, push column and coupling upward and remove gear assembly.

**Installation (1970-72)** – Bolt gear to sidemember. Install pitman arm (align notches). Set wheels in straight-ahead position, then bolt coupling flange to worm spindle. Place cancelling ring tongue to left. Install directional switch, adjust gap behind steering wheel to .08" (2 mm) and replace floor plate.



PLACEMENT OF ADJUSTING SHIMS

#### OVERHAUL

**Disassembly (1963-72)** – Turn peg in sector shaft clockwise and remove taper rollers (do not hammer out). Press worm out of housing. Disassemble worm as necessary.

**Reassembly (1963-72)** – Install retaining ring for ball race and replace worm in housing. Assemble taper rollers in sector shaft (do not replace in housing). Vary shims on worm cover plate until 11-28 INCH lbs. torque is required to turn worm, with oil seal installed. Hold sector shaft peg in vise and torque hex nut to specification. Torque required to turn peg should be 11-17 INCH lbs. After adjusting, bend lock plate tabs to secure hex nuts. Install sector shaft at right angle to worm.

