

## 1963-73 VOLKSWAGEN TYPE 1

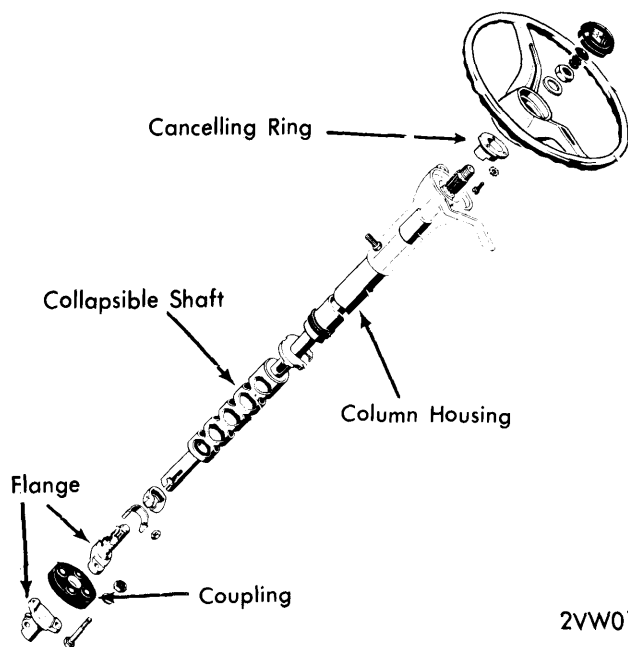
Type 1 (1963-73)  
Super Beetle (1970-73)

### DESCRIPTION

**Sedan (1963-66)** — The steering column is of the conventional type with a flexible cloth-type coupling joining the column and gear. Steering shaft is encased in a tube attached to body and instrument panel.

**Sedan, Exc. Super Beetle (1967-73)** — Vehicles are equipped with energy absorbing steering columns. Principle of design is based on tubular expanded metal section of column which collapses under impact, absorbing impact energy. Impact forces working on column axially (as in head-on collision), push expanded metal section together. Lateral impact deforms column sideways. Column housing is attached to dash panel with special mounting: Guide pieces attached with plastic rivets. Force against steering wheel causes plastic rivets to shear off and guide pieces slide from mounting. Shaft and housing are pushed through partition and deform energy absorbing element.

**Super Beetle (1970-73)** — Steering column and gear are not in line. Short shaft, with two universal joints, connects gear and column. Resulting angle prevents impact forces from being transmitted to steering wheel.



**COLLAPSIBLE STEERING COLUMN  
(EXC. SUPER BEETLE)**

## REMOVAL & INSTALLATION

### STEERING COLUMN

**Removal (1963-66)** — 1) Remove clamp from steering column (just above flexible coupling). Pull horn cable off connection on steering column coupling. On vehicles without steering/ignition lock, loosen steering wheel nut slightly and pull column out of tube, complete with steering wheel; take steering wheel off. On vehicles with steering/ignition lock, loosen turn signal switch screw and take switch off. Disconnect switch wiring and pull out of instrument panel slightly.

2) Pull column out of tube, complete with bearing. Press circlip out of column and take off brass washer, thrust spring and support ring.

**Installation (1963-66)** — 1) *NOTE* — *Steering column bearing is packed with special grease and requires no maintenance.* Install steering column in reverse of removal procedure.

2) Place ring on column, with shoulder upward. Fit thrust spring and brass washer, secure with circlip. Turn brass washer so that cutaway part points to right when wheels are in straight-ahead position.

3) Set steering gear in central position and install steering wheel with spoke horizontal (tongue of cancelling ring must engage in cut-out section of brass washer). Install spring washer and tighten steering wheel nut to 36 ft. lbs.

4) Set space between steering wheel hub and turn signal switch to approximately .08-.10" (2.5 mm) by moving steering column on coupling. Install screw on column clamp, using a new lock plate.

**Removal, Exc. Super Beetle (1967-73)** — 1) Disconnect battery ground cable from steering coupling. Unbolt coupling clamp. Remove column support ring (in partition). Remove steering wheel and circlip.

2) Turn ignition to "ON" position. Unbolt column housing from instrument panel. Remove directional switch shroud. Detach switch. Pull column and housing out upward.

**Installation, Exc. Super Beetle (1967-73)** — 1) Check housing mounting plate for proper installation and tightness (closed sides of aluminum slides must face forward). Insert housing into partition. Slide column into tube and attach to coupling.

2) Install directional switch and partially tighten shroud bolts. Install contact ring from below switch. Replace circlip. Set steering gear in center position (align ring on worm spindle with casting seam on housing).

3) Retighten coupling clamp, using new lock plate. Connect horn ground cable. Install steering wheel (ensure switch lever is in center position). Move housing until gap behind steering wheel hub is .08-.12" (2-3 mm). Torque shroud bolts.

# Steering Columns

## 1963-73 VOLKSWAGEN TYPE 1 (Cont.)

**Removal, Super Beetle (1970-73) – 1)** Remove fuel tank. Unbolt upper universal joint. Disconnect wiring to directional switch. Remove steering wheel. Unbolt column housing from instrument panel. Withdraw housing, with switch and column.

**2)** Remove circlip and spacer. Separate shroud and switch from housing and remove housing assembly from column.

**Installation, Super Beetle (1970-73) – 1)** Place column in housing, properly locating lower bearing seat. Install contact ring. Clamp shroud assembly onto column and slide on sealing collar and ring. Place spacer and circlip on column. Position column assembly and install plastic coated washer (plastic side toward universal joint).

**2)** Align groove in column with hole in joint. Bolt column to universal joint. Hand tighten column-to-panel bolts. Set steering gear in center position (by turning special adjusting bolt until point touches plug in housing).

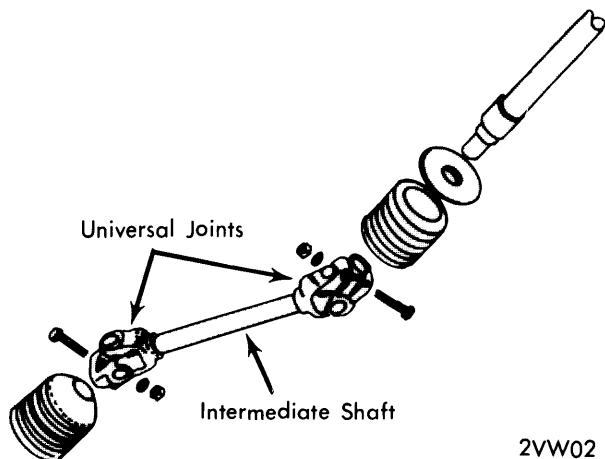
**3)** Place directional switch lever in center position and install steering wheel. *NOTE – After wheel is installed, be sure to remove gear adjusting bolt. Adjust gap behind steering wheel hub to .08-.16" (2-4 mm). Torque shroud attaching bolts.*

**3)** Turn column tube back and forth, to free from rubber grommet. Pull column tube out.

**Installation (1963-66) – 1) NOTE – Steering column bearing is packed with special grease and requires no maintenance.** Install column tube in reverse of removal procedure. *NOTE – On vehicles with steering/ignition lock, special shear-head screws must not be sheared off until the steering wheel has been fitted and the hub-to-switch clearance set correctly.*

**2)** The switch must be pushed onto the stop on column tube before the clamp screw is tightened. Place ring, spring and brass washer on the column and secure with circlip. Fit steering wheel and set hub-to-switch clearance by moving the column tube. *NOTE – Ensure that gear is centered before fitting steering wheel.*

**3)** Connect cables to flasher relay and to connector on column coupling.



**ENERGY-ABSORBING COLUMN  
(SUPER BEETLE)**

### STEERING COLUMN TUBE

**Removal (1963-66) – 1)** Disconnect horn cable from connection on column coupling. Remove steering wheel. Loosen clamp screw for turn signal switch and pull switch off column tube; it will be necessary to disconnect turn signal cable and pull wires out of instrument panel slightly.

**2)** Take circlip off column and remove brass washer, thrust spring and ring. On vehicles without steering/ignition lock, remove screws and take column tube bracket off. On vehicles, with a steering/ignition lock, drill out special shear screws and take steering lock off.

### UNIVERSAL JOINT SHAFT

**Removal, Super Beetle (1970-73) – 1)** Remove fuel tank. Unbolt upper universal joint. Remove bolts securing column to instrument panel. Pull column up until universal joint is free.

**2)** Unbolt lower joint from worm spindle. Press lower joint off with suitable levers.

**Installation, Super Beetle (1970-73) –** To install, reverse removal procedures, noting the following: Any noticeable wear in joints necessitates replacement. Use new self-locking nuts on joints. After universal joints are secured, center gear, using adjusting bolt.

### TIGHTENING SPECIFICATIONS

Application	Ft. Lbs. (mkg)
Worm Shaft-to-Coupling (Exc. Super Beetle).....	16 (2.2)
Steering Wheel Nut .....	36 (5.0)
Cancelling Ring-to-Steering Wheel .....	3.5 (.5)
Steering Column Housing-to-Instrument Panel.....	13 (1.8)
Coupling Flange-to-Disc .....	11 (1.5)
Column-to-Coupling Flange.....	11 (1.5)
Shroud & Switch-to-Housing (Super Beetle).....	5 (.7)