

## VOLKSWAGEN TYPE 1

Type 1  
Sedan  
Super Beetle  
Karmann Ghia  
"The Thing"

### DESCRIPTION

#### EXC. SUPER BEETLE

The steering column has an energy-absorbing, expanded metal section at the lower end of the column which will collapse on impact. At the upper end of the steering column, the steering wheel is mounted on a collapsible hub, designed to absorb driver impact.

#### SUPER BEETLE

This model is equipped with an energy-absorbing steering column in which the gear and column are not in direct line with one another. A short intermediate shaft with two universal joint connections provides an offset angle to prevent possible forces from any direction being transmitted to the steering wheel.

### REMOVAL & INSTALLATION

#### EXC. SUPER BEETLE

**Removal** - 1) Disconnect battery ground strap. Remove fuel tank. Unscrew nut from column pinch clamp at flexible coupling. Bend up tab on support ring and remove ring (above expanded metal section, on engine side of firewall).

2) Remove steering wheel and upper column circlip. Turn ignition to "ON" position. Release air pressure from windshield washer reservoir. Disconnect all wiring and hoses from column switches. Remove the two upper column support bolts.

3) Pull column assembly up into passenger compartment. Remove bolt holding column switch to tube and remove switch. Pull tube from column shaft.

**Installation** - 1) Install switch assembly on column tube and align in original position. Torque socket head screw (located on underside of switch assembly, diagonally opposite to ignition switch). Install seal on lower end of column tube.

2) Position contact ring on steering column, then insert column into tube from below and secure it with circlip at top end. Install column assembly into vehicle, positioning column clamp without pinch bolt. Set front wheels in straight-ahead position and slide column onto flexible coupling. Install clamp bolt with a new self-locking nut.

3) Place support ring above energy-absorbing section and bend down the locking tab. Loosely install column support mounting bolts. Position steering wheel (ensure front wheels are still in straight-ahead position) with spokes horizontal. Install and tighten wheel nut. Adjust gap between steering wheel hub and column switch assembly to .08-.16" (2-4 mm) by moving column tube. Reconnect all wiring and hoses to column.

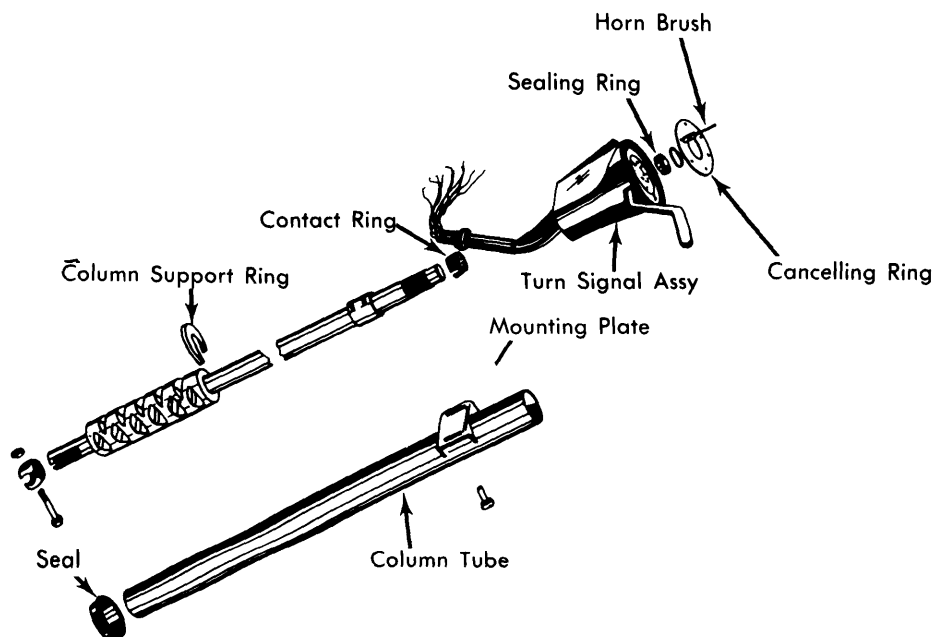


Fig. 1 Volkswagen Type 1 Steering Column and Related Components

# Steering Columns

## VOLKSWAGEN TYPE 1 (Cont.)

### SUPER BEETLE

**Removal** - 1) Remove fuel tank. Pull boot off upper universal joint and unscrew bolt holding joint. Disconnect all wiring from column switch and pull it back into passenger compartment. Remove steering wheel.

2) Unscrew bolts attaching column tube to instrument panel. Pull column assembly from vehicle. Remove top circlip and spacer. Loosen clamp bolt holding column switch assembly to tube. Pull tube off column shaft.

**Installation** - 1) Check needle bearing for wear and replace, if necessary. Insert column shaft into tube. Install contact ring on top end of column. Push column switch assembly onto tube as far as possible. Tighten switch housing screw.

2) Slide bulbous sealing collar onto midpoint of column, then place column ring on lower end of tube. Place assembly in vehicle. Install plastic-coated washer on column lower end with plastic side toward universal joint. Align groove in splines with bolt hole in universal joint. Insert and tighten pinch bolt. Reposition boot over joint.

3) Hand tighten column-to-instrument panel bolts. Set steering gear in center position; this is done as follows: Special centering bolt (113 415 375) is screwed in until the point just touches conical depression in aluminum plug of gear housing (see illustration).

4) Install steering wheel with spokes horizontal, ensuring switch lever is in center position. Install lock washer and steering wheel nut. Set gap between steering wheel hub and column housing to .08-.16" (2-4 mm). Tighten column mounting bolts. Remove gear centering bolt.

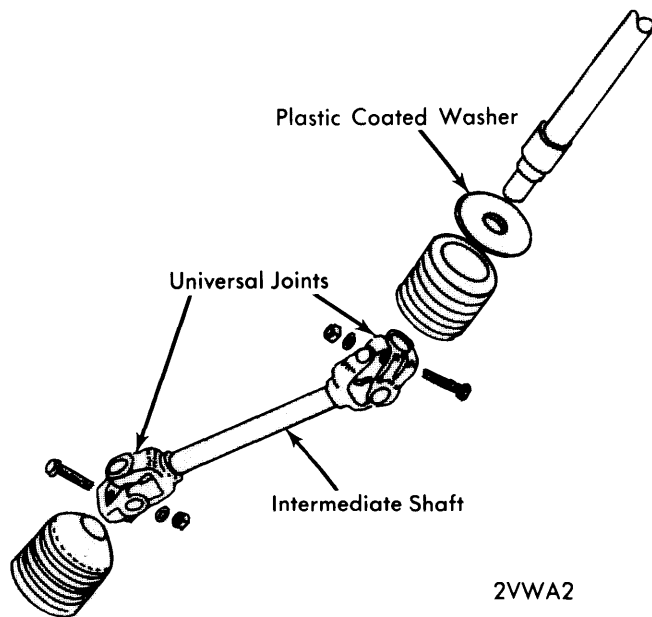


Fig. 2 Super Beetle Intermediate Shaft Connections and Related Components

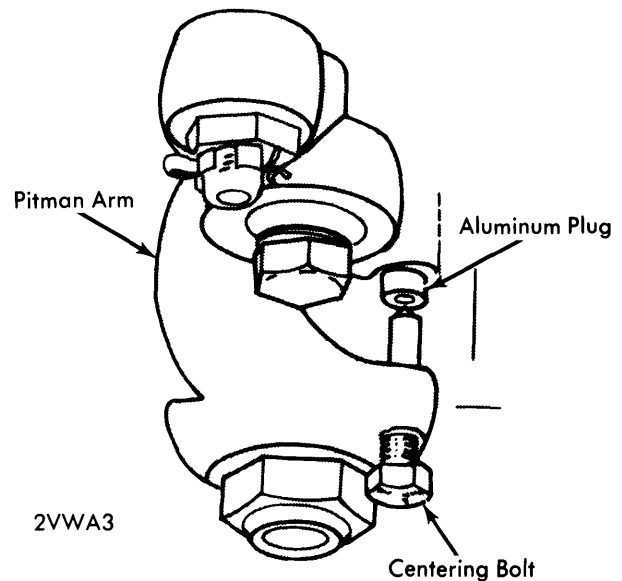


Fig. 3 Centering Steering Gear on Super Beetle Models

### TIGHTENING SPECIFICATIONS

Application	Ft. Lbs. (mkg)
Steering Wheel Nut .....	36 (4.98)
Flexible Coupling Clamp Bolt .....	18 (2.49)
Socket Head Screw (Switch Assembly) .....	4-7 (.55-.97)
Column Support Bolts .....	11 (1.52)