

## PORSCHE

911 & Turbo Carrera  
912/E  
914

### DESCRIPTION

The steering column assemblies on all Porsche models are essentially the same, consisting of a three-piece, energy-absorbing unit, with the three pieces connected by two universal joints. The offset design of the steering shaft and the collapsible element in the steering column provide the energy-absorbing protection for the driver.

### REMOVAL & INSTALLATION

#### UPPER COLUMN ASSEMBLY & STEERING SHAFTS

**Removal, 911 & 912/E** - 1) Disconnect battery. Remove front compartment carpeting and open access door. Detach auxiliary heater duct from steering post. Remove intermediate shaft cover. Unscrew heater pump retaining bolts and move pump aside.

2) Loosen lower retaining nuts on both universal joints. Remove lower steering shaft bushing cap. Pull universal joint off lower shaft. Drive intermediate shaft out of upper universal joint, then remove intermediate shaft and lower universal joint.

3) Remove steering wheel. Remove steering lock cover by drilling shear-head bolts. Do not disconnect electrical connections. Using suitable tool (P 281), remove headlight switch (allow to hang by wires).

4) Loosen Allen bolt in upper column assembly retaining clamp (just forward of instrument panel), turn clamp joint downward, and pull out locking pin with pliers (see Dismantling Upper Column Assembly illustration). Disconnect wiring leading to upper column housing assembly (mark for reassembly). Withdraw upper housing (switch assembly) with upper steering shaft and universal joint. Remove steering post attaching bolts. Twist and remove post from grommet.

**Installation** - 1) To install, reverse removal procedure, noting the following: Prior to replacing switch assembly in column, place retaining clamp onto steering post with threaded part on right side (to permit installation of Allen bolt from bottom).

2) After switch assembly and locking pin are in place, torque clamp (Allen bolt) to specification. Clearance between post and instrument panel should be .08" (2 mm). If necessary, move steering post, then torque post retaining bolts to specification. Tighten and shear heads from new steering lock bolts.

3) Install new universal joint bolts and lock washers. Place lock washers under Allen bolts which retain bushing cap on lower steering shaft. Torque to specification.

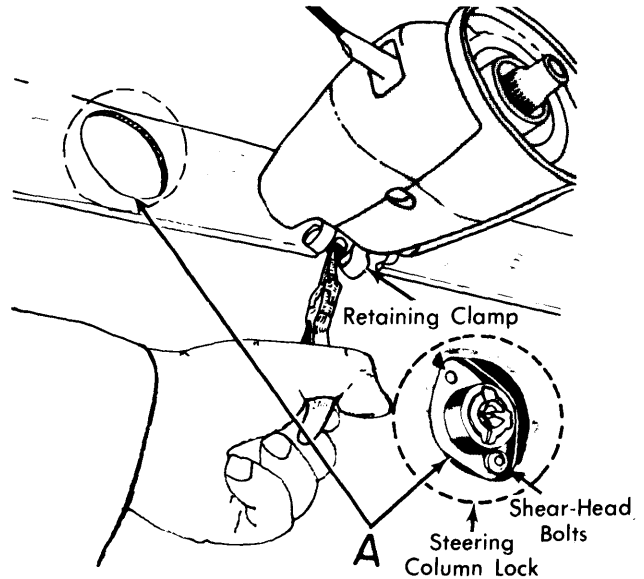


Fig. 1 Dismantling Upper Column Assembly 911 and 912/E Models

#### UPPER COLUMN ASSEMBLY

**Removal, 914** - Detach knee guard from below instrument panel. Disconnect electrical connectors from steering column switch assembly. Detach hose connections from windshield washer valve. Remove retaining screws from shaft cover tube (four screws). Detach intermediate steering shaft at upper universal joint and withdraw entire upper steering column assembly.

**Installation** - To install, reverse removal procedure.

### OVERHAUL

#### UPPER SHAFT & POST EXTENSION

**Disassembly, 911 & 912/E** - Remove universal joint. Detach ring seal retainer, ring seal washer and second seal retainer. Remove Allen bolts securing steering post extension. Drive post extension out of switch assembly. Remove bearing lock ring from upper shaft and drive out of bearing. Pry bearing retainer out of post extension. Drive ball bearing out of extension. Mount extension in padded vise and drive spindle bearing out.

**Reassembly** - To assemble, reverse disassembly procedure, noting the following: When post extension is installed, align rectangular steering lock opening on line with directional switch handle.

#### TIGHTENING SPECIFICATIONS

Application	Ft. Lbs. (mkg)
Universal Joint Bolts.....	25 (3.5)
Splined Universal Joint Bolts .....	18 (2.5)
Steering Shaft Bearing Cap Bolts.....	18 (2.5)
Steering Wheel Nut .....	58 (8.0)
Upper Column Assembly Clamp Strap.....	18 (2.5)