

# 10-12 Steering Wheel & Column Switches

## MG

MGB  
Midget

### REMOVAL & INSTALLATION

#### STEERING WHEEL

**Removal** — Disconnect battery ground cable. Remove steering wheel pad. Remove mounting nut. Mark position of steering wheel and column. Use puller (18G 1317) to remove steering wheel from shaft.

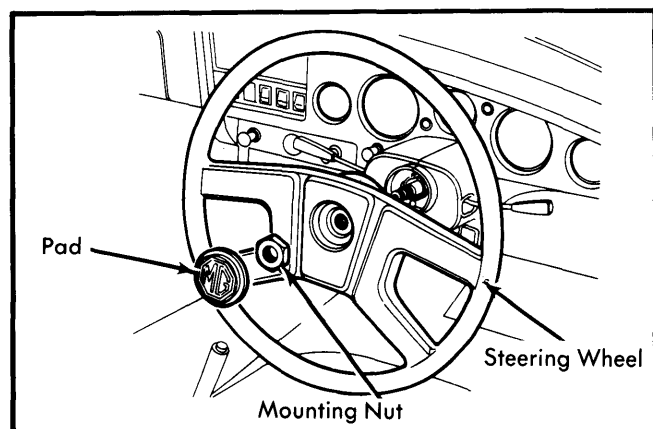


Fig. 1 Exploded View of Steering Wheel Assembly

**Installation** — Reverse removal procedure and note: Line up index marks. Make sure cancel cam has ridge facing indicator switch. Make sure steering wheel projections (tongues) slip into slots on cancel cam.

#### COMBINATION SWITCH

**Removal** — Disconnect battery ground cable. Remove steering wheel. Remove steering column shroud screws and remove shrouding. Disconnect electrical connections at base of column and remove retaining tape. Remove wiper switch retaining screws and loosen switch clamp screw. Remove combination switch from shaft.

**Installation** — To install, reverse removal procedure and note: Ensure locating tang of switch aligns with outer slot of steering column.

#### STEERING COLUMN LOCK & IGNITION SWITCH

**Removal** — Remove necessary shrouding to gain access to lock. Make sure steering lock is disengaged. Disconnect ignition switch multi-pin connector. Drill out and remove shear bolts from lock bracket. Remove steering screw holding switch in lock and remove switch.

**Installation** — Center locking mechanism on column. Hand tighten new shear bolts. Reconnect multi-pin connector. Check switch and lock operation. Tighten shear bolts until heads break.

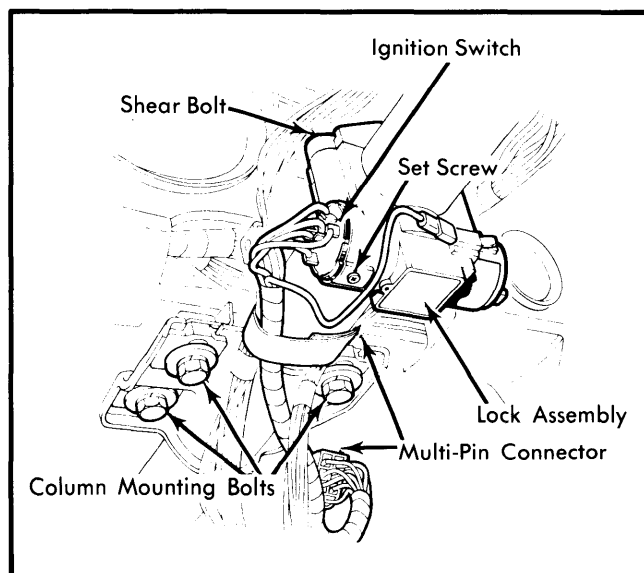


Fig. 2 Bottom View of Steering Column Showing Ignition Switch and Column Lock

## OPEL

All Models

### REMOVAL & INSTALLATION

#### HORN PAD & STEERING WHEEL

**Removal** — 1) Disconnect battery cable. Remove two screws from backside of steering wheel which hold the horn pad in place.

2) Remove horn pad from its position and disconnect the horn contact wire from the hub connection.

3) Remove steering wheel retaining nut and washer. Position suitable puller and remove the steering wheel.

**NOTE** — On sport steering wheels: Remove center pad. Remove mounting nut. Index shaft and wheel. Pull off wheel with tool J-23072 (or equivalent).

**Installation** — To install, reverse removal procedure after making sure that front wheels are in straight-ahead position and that steering wheel spokes are horizontal when steering wheel is installed. Make sure cancelling cam of turn signal switch engages properly.

#### COMBINATION SWITCH & IGNITION LOCK

**Removal** — 1) Remove screws holding upper and lower steering column covers in place. Remove the hazard warning button.

# Steering Wheel & Column Switches 10-13

## OPEL (Cont.)

2) Detach the combination turn signal/lighting switch by removing the four retaining screws. Remove two retaining screws to take off the washer/wiper switch.

3) Remove the lock cylinder by removing the snap ring and three attaching bolts on the column flange. Lift off the cylinder

housing, lower washer and shaft. Use a screwdriver to pry out the lower column rubber bushing.

**Installation** — To install, reverse removal procedure, noting that lock cylinder engages shaft properly and that cancelling cam of turn signal switch engages steering wheel properly.

## PORSCHE

911SC  
924  
928  
Turbo

### REMOVAL & INSTALLATION

#### HORN PAD & STEERING WHEEL

**NOTE** — On models equipped with a collapsible "can" behind the steering wheel, care must be taken in all service procedures. Do not apply excessive or striking forces to the steering wheel or steering column.

**Removal (911 & Turbo)** — 1) Align front wheels in straight-ahead position. Disconnect battery ground cable.

2) Grasp horn pad and rotate counterclockwise while pushing in. When horn pad is free, lift from steering wheel and disconnect horn contact finger.

3) Loosen steering wheel retaining nut. Mark position of steering wheel to steering shaft. Attach a suitable puller and remove the steering wheel.

**Installation** — To install steering wheel, reverse removal procedure and note the following: Lightly lubricate horn contact finger with electrical contact grease before reinstalling.

**Removal & Installation (924)** — Disconnect battery. Carefully pry off horn pad. Unscrew wheel retaining nut. Pull wheel upward and off shaft. To refit wheel, reverse removal procedure.

**Removal (928)** — Disconnect battery ground. Place wheels in straight-ahead position. Take off horn pad. Disconnect horn wires. Index mark steering wheel and column shaft. Unscrew mounting nut. Remove steering wheel.

**Installation** — Align index marks and replace steering wheel so spokes are horizontal. Install mounting nut. Fit horn wires into place in pad. Press horn pad onto retaining pins.

#### STEERING WHEEL COMBINATION SWITCH

**Removal (924)** — 1) Disconnect battery ground. Using hand pressure, lift up steering pad. Remove steering wheel mounting nut. Pull steering wheel off shaft.

2) Remove shroud from around switch housing. Pull up on switch plate and disconnect electrical wires. Remove entire switch assembly then, separate wiper/washer switch from turn signal switch by taking out screw that mounts them together.

**Installation** — Refit switches together with screw. Slide switch assemblies back into place refitting spacer at same time. Make sure spacer is driven in until there is a distance of 1.6" (41 mm) from face (top edge) of spacer to top edge of shaft. This distance will ensure there is .08-.15" (2-4 mm) between steering wheel and steering column switches. Reverse removal procedure to install remaining components.

**Removal (928)** — Disconnect battery ground. Remove steering wheel. Remove cover from under steering column switch. Remove steering column switch mounting screw. Remove instrument cover mounting screws. Maneuver instrument cover until electrical wires can be disconnected. Remove column switch.

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

#### STEERING COLUMN LOCK, KEY CYLINDER & IGNITION SWITCH

**Removal** — 1) Remove combination switch as previously outlined.

2) Drill out shear bolts.

3) Disconnect ignition switch wiring.

4) Disengage snap ring and slide out switch housing with bearing.

5) Use a pointed tool (scribe) and push cylinder lock retainer in to release cylinder. With key inserted and retainer depressed, pull cylinder from housing.

6) Take out ignition switch set screw and pull ignition switch back out of housing.

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

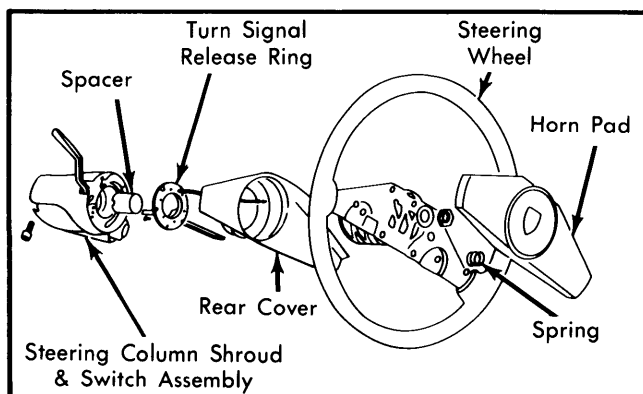


Fig. 1 Exploded View of Porsche 924 Steering Wheel and Related Components