

# 10-16 Steering Wheel & Column Switches

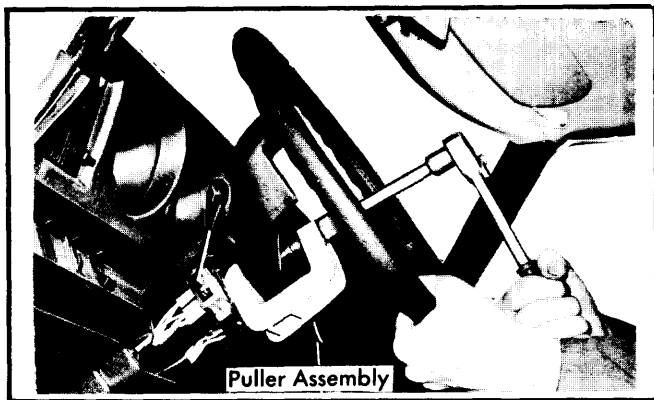
## SAAB

99

### REMOVAL & INSTALLATION

#### HORN CONTROL & STEERING WHEEL

**Removal** — Unbolt the mounting hardware and remove the bottom cover from steering column. Remove four screws, under steering wheel spokes, holding safety pad, then remove pad. Remove steering wheel nut and washer, then fit puller and remove wheel. With wheel removed, extract directional indicator assembly.



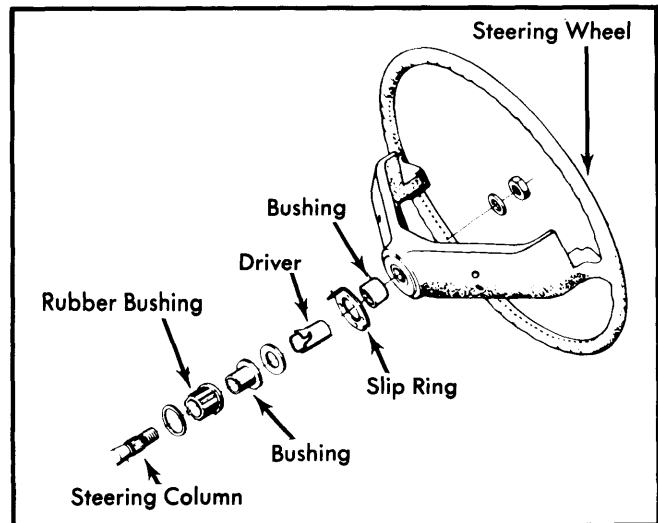
**Fig. 1** Using a Universal Puller Tool to Remove Steering Assembly

**Installation** — Refit directional signal assembly ensuring index line coincides with centerline of assembly housing. Install plastic sleeve over driver. Put steering wheel on with front

wheels straight ahead and spokes horizontal. To complete reassembly, reverse removal procedure.

**Removal (99 EMS Models Only)** — Disconnect battery ground. Remove center pad, then reach under and disconnect horn leads from center pad while hand supporting pad. Remove steering wheel nut. Use a universal steering wheel puller to remove steering wheel.

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



**Fig. 2** Exploded View of Saab Steering Wheel Except EMS Models

## SUBARU

1600  
BRAT

### REMOVAL & INSTALLATION

#### HORN PAD & STEERING WHEEL

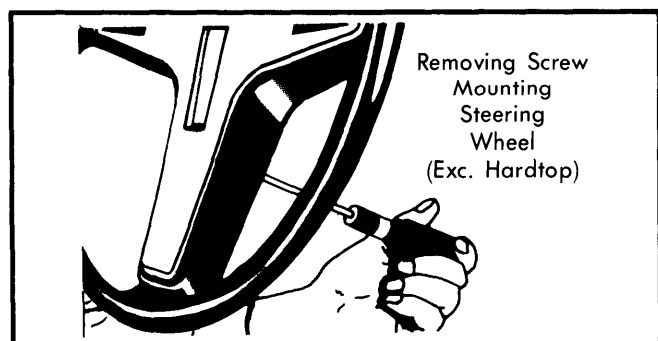
**Removal** — Disconnect battery. Remove bolt (from back side of steering wheel) that holds wheel in place (except Hardtop). Take off horn pad by lightly pressing down and rotating to left. Remove steering wheel mounting nut, spring washer and washer. Pull steering wheel from steering column shaft while disconnecting horn wires, if necessary.

**Installation** — To install, reverse removal procedure and note the following: After steering wheel is installed, check clearance between wheel and column cover; it should be .04-.12" (1-3 mm). If beyond this range, loosen column cover screws and adjust.

#### COMBINATION SWITCH

**Removal** — Remove steering wheel as previously described. Unscrew hazard warning knob from steering column. Remove two switch retaining screws and lift assembly from steering column.

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



**Fig. 1** Removing Horn Pad from Steering Wheel

# Steering Wheel & Column Switches 10-17

## TOYOTA

Celica  
Corolla  
Corona  
Cressida  
Pickup  
Land Cruiser

### REMOVAL & INSTALLATION

#### STEERING WHEEL

**NOTE** — Steering wheel removal procedure is a general one. It should be noted that all steps may not apply to every model.

**CAUTION** — Some models are equipped with collapsible type steering, DO NOT apply excessive pressure or impact to mainshaft.

**Removal** — 1) Disconnect battery ground. From lower portion of steering column, disconnect any electrical wiring for indicator lights, horn or dimmer switch.

2) Remove screws holding steering wheel protective pad or plastic cover. On some models, pad will pry off.

3) Remove steering wheel mounting nut and washer (if equipped), then using suitable puller, extract steering wheel from shaft (Fig. 1).

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

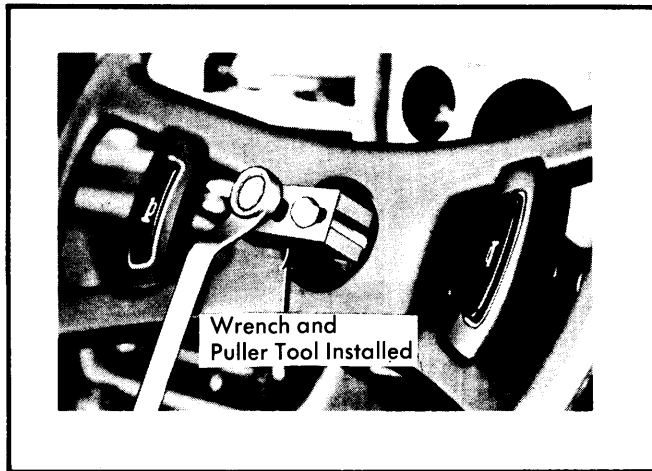


Fig. 1 Using Puller to Remove Steering Wheel

#### COMBINATION SWITCH

**Removal** — After removing steering wheel as previously outlined, combination switch may be removed by detaching steering column covers, removing retaining screws from face of switch assembly and unplugging necessary electrical connectors.

**Installation** — To install, reverse removal procedure and make sure all electrical connections are properly made. Check cancelling operation of turn signal switch.

#### COLUMN LOCK & IGNITION SWITCH

**Removal** — 1) Disconnect battery ground. Remove steering wheel as previously outlined.

**NOTE** — Steering wheel removal is optional if only the ignition switch portion is being removed. Removal of wheel makes access to this operation easier.

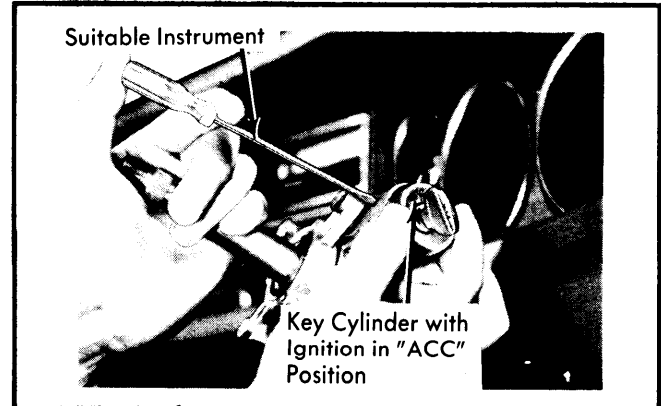


Fig. 2 Disengaging Key Cylinder from Position on Mainshaft

2) Remove screws mounting upper and lower column covers and disconnect any electrical couplings not detached during steering wheel removal.

**NOTE** — On some models, access to ignition switch for its removal is gained by removing lower cover only. It is easier to perform this operation, however, by removing both cover halves.

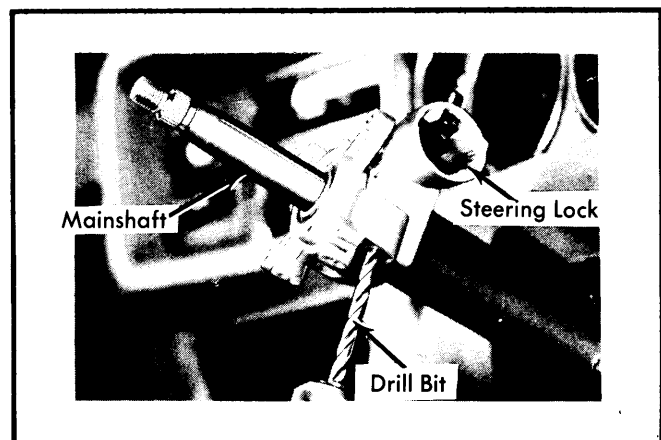


Fig. 3 Drilling Out Shear Head Bolt to Remove Steering Lock from Shaft

3) Remove turn signal switch assembly as previously described. (required only if column lock assembly is being removed).

4) Remove mainshaft bearing retainer and snap ring (if required).