

## AUDI

### INSTRUMENT CLUSTER

**Audi Fox** — Disconnect battery ground cable and remove lower instrument panel trim. Disconnect speedometer shaft at speedometer and multiple plug at back of cluster. Disconnect left and right mounting springs using suitable long nose pliers. Remove cluster by pulling it forward.

**Audi 100** — After removing battery ground cable, proceed as follows:

1) Remove instrument panel padding. Remove two hex nuts from cluster cover and remove cover, washers and foam rubber strips.

2) Pull instrument cluster assembly straight out. Disconnect multiple plug and (if equipped) tachometer cable. Disconnect speedometer cable and remove cluster.

### SPEEDOMETER, CLOCK & GAUGES

Speedometer, clock and all gauges may be removed after first removing instrument cluster from panel.

### HAZARD WARNING & TURN SIGNAL FLASHER

Single, plug-in type unit mounted on fuse block. Plug-in connectors can be installed in only one position. Be sure that flasher connector blades are properly positioned and indexed with receptacle sockets.

### IGNITION SWITCH

**Audi Fox** — Disconnect battery ground cable and remove steering wheel, switch holder cap and upper and lower instrument panel trim. Proceed as follows:

1) A punch mark is on the steering lock housing in the area of the lock cylinder guide. Drill carefully through the housing at this location with a number 31 (3 mm) drill. Guide a punch into this hole and press in lock cylinder spring. Pry out lock cylinder with a screwdriver. *NOTE* — *Steering wheel lock pin must not be engaged in jaws of steering column when removing cylinder.*

2) If the ignition key is not available and lock pin is engaged, drill off the shear screw heads. When installing lock cylinder, make sure that projection on lock cylinder is slid into groove of ignition lock housing far enough to engage spring.

**Audi 100** — Disconnect battery ground cable and proceed as follows:

1) Remove steering wheel and steering wheel trim. Unscrew combination switch.

2) Center punch shear screws that hold ignition switch clamp together and drill through screws with a number 31 (3 mm) drill.

3) Insert proper size screw extractor into drilled holes and remove shear screws and lower portion of switch clamp. Remove switch and lock from steering column. To install, reverse removal procedure, using new shear screws.

### STOP LIGHT SWITCH

Switch is hydraulically operated by brake fluid pressure and is attached to end of brake master cylinder.

## AUSTIN MARINA

### INSTRUMENT CLUSTER

Remove instrument panel and the four screws and washers retaining cluster to instrument panel. Remove four sleeve screws from back of cluster and clips securing glass to front of cluster.

### SPEEDOMETER, CLOCK & GAUGES

Speedometer, clock and all gauges may be removed after first removing instrument cluster from panel.

### HAZARD WARNING & TURN SIGNAL FLASHER

Flasher unit is located just above and to the right of the steering column. To remove, disconnect battery ground cable. Disconnect wiring from flasher and pull unit from holder.

### IGNITION SWITCH

Disconnect battery and remove four screws securing switch covers. Remove covers and disconnect electrical leads at harness connectors. Remove screw retaining switch in lock housing and remove switch assembly. To install, reverse removal procedure ensuring that locating peg on switch registers in groove in lock housing.

### STOP LIGHT SWITCH

Disconnect wiring from switch and remove screws retaining switch mounting bracket. Remove bracket and switch assembly. Withdraw split pin locking switch in bracket and unscrew switch. To install, reverse removal procedure ensuring that one complete thread of switch housing is visible on pedal side of bracket.

## BMW

### INSTRUMENT CLUSTER

**4 Cyl. Models** — Disconnect battery cable. Remove two screws from trim plate. Remove six screws and remove casing outer tube. Remove knurled nuts and speedometer cable. Push out instrument panel and remove wiring harness connectors.

**Bavaria** — Remove two lower retaining screws. Tilt housing outwards and remove electrical connectors. Disconnect speedometer cable. Remove housing.

**3.0 CS** — Remove steering wheel. Remove heater control panel. *NOTE* — *Do not separate cover panel and switch plate.* Remove five retaining screws and disconnect speedometer cable. Press instrument panel upwards and remove by pulling outwards.

### SPEEDOMETER & GAUGES

Speedometer and all gauges may be removed after first removing instrument cluster.

**BMW (Cont.)****IGNITION SWITCH**

Disconnect battery ground cable. Remove lower steering column trim panel and lower center section of instrument panel trim. Turn ignition switch to "Halt" position and remove screws from steering lock holder. Note wiring position and disconnect wiring. To install, reverse removal procedure.

**INSTRUMENT CLUSTER**

- 1) Disconnect battery ground cable and remove lower steering column shroud. Release clip securing upper steering column shroud. Remove ashtray.
- 2) Remove hazard flasher switch and disconnect wiring. Remove turn signal switch and allow it to hang on wiring. Remove screws securing lower dash trim panel and pull trim panel forward and down. Disconnect wiring to clock and cigarette lighter and remove trim panel.
- 3) Pull off instrument panel light control knob. Remove lower screws securing instrument cluster, pull cluster downward and disconnect seat belt warning light wiring and oil pressure line union. Remove screws securing cluster to panel and disconnect speedometer cable and wiring. Remove cluster.

**SPEEDOMETER & GAUGES**

Speedometer and all gauges may be removed after first removing instrument cluster.

**INSTRUMENT CLUSTER**

To remove instrument cluster, remove attaching screws at bottom, unclip top and pull cluster outward. Disconnect electrical connections, speedometer cable and remove cluster assembly.

**SPEEDOMETER & GAUGES**

Speedometer and all gauges may be removed after first removing instrument cluster.

**HAZARD WARNING & TURN SIGNAL FLASHER**

Located at lower center of instrument panel. A separate flasher is used for hazard warning and turn signals.

**STOP LIGHT SWITCH**

Mechanical type mounted on brake pedal bracket. Adjust switch so that specified amount of contact button is visible.

**Application****Plunger Length**

4 Cyl. Models .....	.197-.24" (5-6 mm)
6 Cyl. Models .....	.24-.28" (6-7 mm)

**CAPRI****HAZARD WARNING & TURN SIGNAL FLASHER**

Disconnect battery ground cable and pull instrument cluster from panel to gain access to flasher. Remove flasher and wiring.

**IGNITION SWITCH**

Remove instrument cluster and disconnect wiring from ignition switch. Ensure that switch is in "0" position and remove screws securing switch to lock and remove switch. Remove two halves of lock by tapping bolt heads lightly with center punch. If this fails, drill out shear bolts. To install, reverse removal procedure using new shear bolts.

**STOP LIGHT SWITCH**

Mechanical type mounted on bracket at brake pedal lever.

**COLT****IGNITION SWITCH**

To replace ignition switch, remove column cover and pull out switch assembly.

**STOP LIGHT SWITCH**

Mechanical type, mounted on brace above brake pedal. Switch also serves as a brake pedal free travel adjustment screw. Adjust switch so that distance between toeboard and top face of brake pedal is 6.5-6.7".

**NEUTRAL SAFETY SWITCH**

Located in console under gear indicator cover. Switch has a mark for aligning with "N" position. Use a .060" feeler gauge to set gap between switch contact and lever.

**COURIER****INSTRUMENT CLUSTER**

Disconnect battery ground cable. Remove four screws securing cluster to instrument panel. Pull cluster out sufficiently to gain access and disconnect speedometer cable and wiring. Remove cluster from vehicle.

**SPEEDOMETER & GAUGES**

Speedometer and all gauges may be removed after first removing instrument cluster.

**HAZARD WARNING FLASHER**

Flasher is located to the left of the steering column beneath instrument panel.

**TURN SIGNAL FLASHER**

Flasher is located to the right of the steering column beneath instrument panel.

**IGNITION SWITCH**

Disconnect battery ground cable. Reach behind instrument panel and disconnect wiring from switch. While holding switch from back, remove black retaining nut and remove switch.

**STOP LIGHT SWITCH**

Mechanical type mounted on bracket at top of brake pedal.