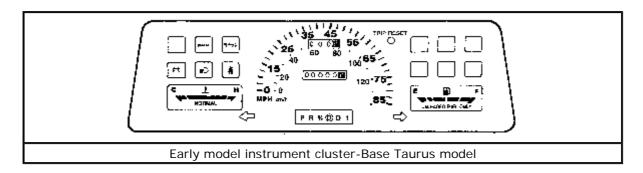
INSTRUMENTS AND SWITCHES

Instrument Cluster

REMOVAL & INSTALLATION

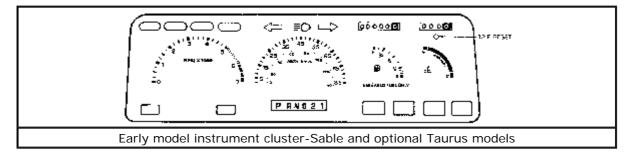
Except Electronic Cluster

- 1. Disconnect the negative battery cable.
- Remove the ignition lock cylinder to allow removal of the steering column shrouds.



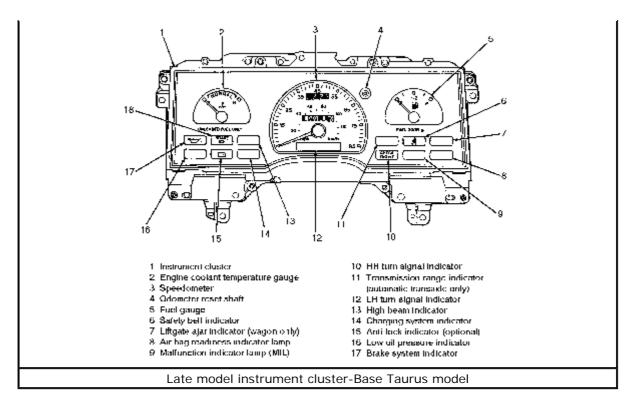
Click to enlarge

- 3. Remove the steering column trim shrouds.
- 4. Remove the screws retaining the lower left-hand side instrument panel finish panels and radio finish panels, then remove the panels by snapping them out.

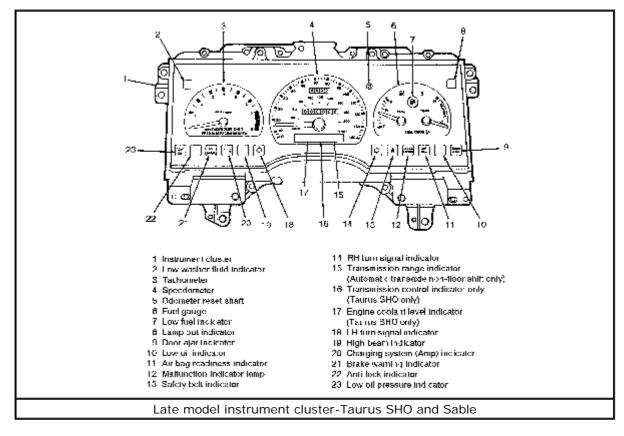


Click to enlarge

- 5. On the Taurus only, remove the clock assembly (or clock cover) to gain access to the finish panel screw behind the clock.
- Remove the seven cluster opening finish panel retaining screws, and the jam nut behind the headlight switch. Remove the finish panel by rocking the upper edge toward the driver.



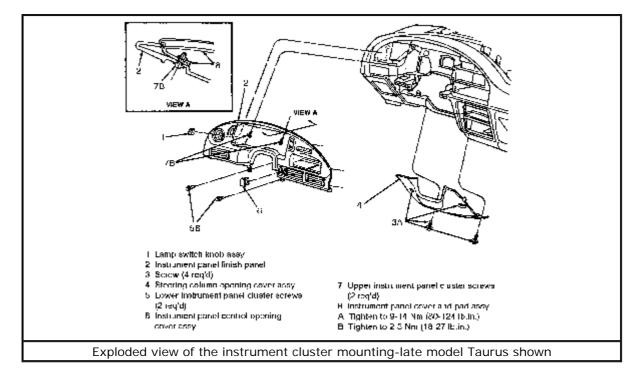
- 7. On column shift vehicles, disconnect the transaxle selector indicator from the column by removing the retaining screw and cable loop.
- 8. Disconnect the upper speedometer cable from the lower speedometer cable in the engine compartment.



Click to enlarge

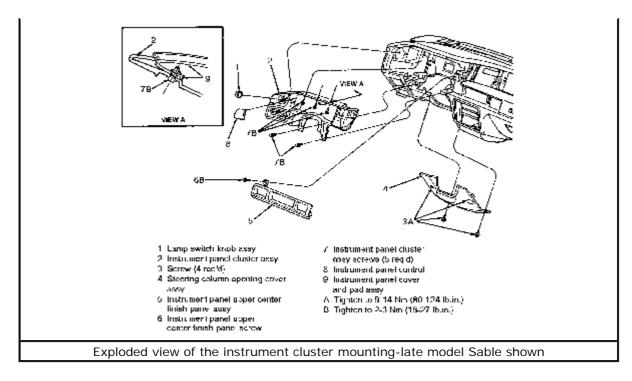
- 9. Remove the four cluster-to-instrument panel retaining screws, then pull the cluster assembly forward.
- 10. Disengage the cluster electrical connector and the speedometer cable. Press the cable latch to disengage the cable from the speedometer head while pulling the cable away from the cluster. Remove the instrument cluster.

11. Position the cluster in front of the cluster opening.



Click to enlarge

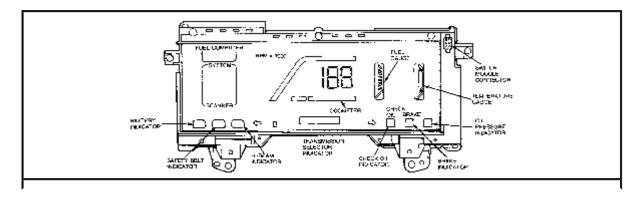
- 12. Connect the speedometer cable, then engage the electrical connectors.
- Install the cluster, then secure using the four cluster-to-instrument panel retaining screws.
- 14. Connect the upper speedometer cable to the lower speedometer cable in the engine compartment.
- 15. On column shift vehicles, connect the transaxle selector indicator.



- 16. Install the cluster opening finish panel.
- 17. On Taurus vehicles, install the clock assembly or clock cover.
- 18. Install the lower left and radio finish panels.
- 19. Install the steering column trim shrouds.
- 20. Install the ignition lock cylinder, then connect the negative battery cable.

Electronic Cluster

- 1. Disconnect the negative battery cable.
- 2. Remove the upper and lower steering column shrouds.
- 3. Remove the steering column cover, then disconnect the shift indicator cable from the cluster by removing the two retaining screws.
- Disconnect the cluster message center switch module, then remove the cluster trim/finish panel.
- 5. Remove the cluster mounting screws, then pull the bottom of the instrument cluster toward the steering wheel.
- 6. Reaching behind and underneath the instrument cluster, disengage the three electrical connectors.



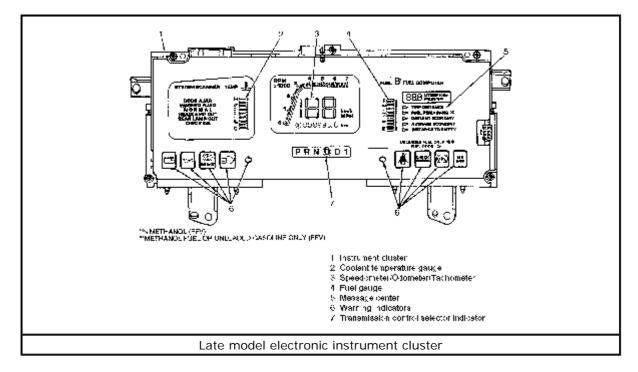
Early model electronic instrument cluster

Click to enlarge

7. Swing the bottom of the cluster out to clear the top of the cluster from the crash pad, then remove the instrument cluster.

To install:

- 8. Insert the top of the cluster under the crash pad, leaving the bottom out.
- 9. Engage the three electrical connectors.



Click to enlarge

- 10. Properly seat the cluster, then install the retaining screws. Tighten the screws to 7-12 inch lbs. (0.8-1.4 Nm).
- 11. Connect the battery negative battery cable, then check the instrument cluster for proper operation.
- 12. Connect the shift indicator assembly to the cluster and secure with the retaining screw. Install the steering column cover.
- 13. Connect the cluster message center switch module to the cluster, then install the cluster trim/finish panel.
- 14. Install the lower and upper steering column shrouds.

Speedometer

REMOVAL & INSTALLATION

Except Electronic Cluster

1986-89 VEHICLES

1. Disconnect the negative battery cable.

- Remove the instrument cluster finish panel retaining screws, then remove the finish panel. On Sable, remove the lower trim panel attaching screws, then remove the trim panel.
- 3. Remove the mask-and-lens mounting screws, then remove the mask and lens. If equipped, remove the lower floodlight bulb and socket assemblies.
- 4. Remove the entire dial assembly from the instrument cluster by carefully pulling it away from the cluster back plate.

The speedometer, tachometer and gauges are mounted to the main dial and some effort may be required to pull the quick-connect electrical terminals from the clips.

- 5. On column shift vehicles, remove the screws attaching the transaxle selector indicator to the main dial. Remove the transaxle selector indicator from the main dial/instrument cluster. On Sable and optional Taurus, remove the odometer drive jack shaft and remove the attachment clip at the odometer, slip the jack shaft out of the odometer bracket and speedometer bridge.
- 6. Pull the reset knob from the trip odometer, if equipped. To remove the speedometer from the main dial, manually rotate the speedometer pointer to align it with the slot in the dial. Remove the mounting screws and carefully pull the speedometer away from the dial, making sure to guide the pointer through the slot.
- If necessary, remove the odometer assembly by pulling the reset knob from the lever.

To install:

- 8. Position the odometer on the mounting bosses, then install the retaining screws. Tighten the screws to 7-12 inch lbs. (0.8-1.4 Nm).
- 9. If removed, install the trip odometer reset knob.
- Carefully position the speedometer pointer parallel to the rectangular raised portion of the speedometer dial.

WARNING

The speedometer is calibrated at the factory. Overly rough handling could disturb the calibration.

- 11. Carefully guide the pointer through the slot in the main dial. Position the speedometer on the mounting bosses, then install the retaining screws. Tighten the screws to 7-12 inch lbs. (0.8-1.4 Nm).
- 12. On column shift vehicles, install the transaxle selector indicator.
- Install the main dial assembly to the cluster back plate by aligning it on the guides then pressing it carefully and firmly to seat all electrical terminals.
- 14. Position the mask and lens assembly, then secure using the retaining screws.
- 15. Install the instrument cluster finish panel.
- 16. Connect the negative battery cable.

1990-95 VEHICLES

1. Disconnect the negative battery cable.

- 2. Remove the instrument cluster. For details, please refer to the procedure located earlier in this section.
- 3. Remove the screws retaining the mask and warning lamp, then remove the mask and lens
- For vehicles through 1992, remove the two screws attaching the transaxle selector indicator or the filler bezel to the speedometer and remove the indicator or filler bezel from the cluster.
- 5. For 1993-95 vehicles, detach the speed control speedometer cable.
- 6. Lift the speedometer from the instrument cluster.

- 7. For 1993-95 vehicles, position the speedometer assembly to the back plate, then attach the speed control speedometer cable, if removed, then install.
- 8. For 1990-92 vehicles, align the speedometer with the pins, then press carefully and firmly to seat the speedometer dial on the locators. Install the transmission selector indicator or filler bezel, and secure using the retaining screws.
- 9. Position the instrument cluster mask and instrument cluster warning lamp lens assembly to the back plate, then secure it using the retaining screws.
- Install the instrument cluster. For details, please refer to the procedure located earlier in this section.
- Connect the negative battery cable, then check for proper operation of the speedometer.

Electronic Cluster

1988-89 VEHICLES

- 1. Disconnect the negative battery cable.
- 2. Remove the instrument cluster assembly. For details, please refer to the procedure located earlier in this section.
- 3. Using a clean cloth to protect the lens, place the cluster face down on a bench.
- Remove the five black hex head screws attaching the back plate to the mask assembly.
- Carefully remove the speedometer and fuel computer flex circuit from their respective locating pins.
- 6. With even pressure on both sides of the back plate, lift up on the back plate to separate it from the mask assembly.

The area near the gauge clips will cause the most resistance.

- Turn the cluster assembly over and disconnect the switch connector from the mask assembly by squeezing in on the retaining clips and pushing the connector through the hole in the mask.
- 8. Remove the four screws attaching the speedometer to the mask assembly, then remove the speedometer assembly.

To install:

9. Install the speedometer module with the flex circuit and switch connector toward

the gauge side of the cluster.

- 10. Install the four speedometer retaining screws.
- 11. Push the switch connector through the hole in the mask.

Make sure that the wires are routed to the top of the mask, out of the way of the gauges.

- 12. Position the back plate onto the mask assembly making sure that the speedometer and fuel computer flex circuits are fed through their respective holes.
- 13. With the back plate properly aligned to the mask assembly, push down firmly on the gauge clips to seat the gauges properly into the clips.
- 14. Carefully position the speedometer and fuel computing flex circuits over their respective locating pins.
- 15. Install the five back plate-to-mask assembly screws.
- Install the instrument cluster. For details regarding, please refer to the procedure located earlier in this section.
- 17. Connect the negative battery cable.

1990-95 VEHICLES

The speedometer is part of a single electronic instrument cluster module and cannot be removed separately.

Tachometer

REMOVAL & INSTALLATION

Except Electronic Cluster

- 1. Disconnect the negative battery cable.
- 2. Remove the instrument cluster.
- Remove the cluster main lens and mask retaining screws, then remove the mask and lens.
- 4. Remove the tachometer from the gauge clips by pulling the tachometer from the instrument cluster back plate.

To install:

The tachometer is calibrated at the factory. Excessive rough handling could disturb the calibration.

- 5. Carefully position the tachometer over the gauge clips.
- 6. Being careful not the get fingerprints on the applique, press the tachometer into the gauge clips in the cluster back plate.
- Install the cluster mask and lens using the retaining screws, then install the instrument cluster.
- 8. Connect the negative battery cable.

Electronic Cluster

The tachometer is part of a single electronic instrument cluster module and cannot be removed separately.

Speedometer Core

REMOVAL & INSTALLATION

- 1. Disconnect the negative battery cable.
- 2. Disconnect the speedometer cable from the speedometer head. Pull the speedometer core out of the upper end of the casing.
- 3. Install a new core in the casing.

Fuel Gauge

REMOVAL & INSTALLATION

- 1. Disconnect the negative battery cable.
- Remove the instrument cluster finish panel retaining screws, then remove the finish panel.
- 3. On vehicles equipped with a tachometer, remove the lower trim panel retaining screws, then remove the lower trim panel.
- 4. Remove the mask and lens mounting screws, then remove the cluster mask and warning lamp lens.

The lower flood lamp bulb filters are not secured and may fall out.

5. On vehicles equipped with a tachometer, remove the two lower flood lamp bulb and socket assemblies.

The gauges are mounted to the main dial, and some effort may be required to pull the quick connect electrical terminals from the clips.

- 6. Lift the main dial assembly from the instrument cluster assembly back plate.
- On column shift vehicles only, remove the two screws retaining the transmission range indicator to the main dial, them remove the transmission range indicator from the cluster.
- 8. Manually rotate the fuel gauge pointer to align it with the slot in the dial. Remove the mounting screws and carefully pull the fuel gauge away from the dial, guiding the pointer through the slot.

To install:

- 9. Carefully position the pointer parallel to the rectangular raised portion of the dial.
- Guide the pointer carefully through the slot in the main dial. Then position the fuel gauge on mounting bosses, then install the mounting screws. Tighten the screw to 8-12 inch lbs. (0.8-1.4 Nm).
- 11. On column shift vehicles, install the transmission control selector indicator.
- 12. Install the main dial assembly to instrument cluster back plate by aligning it on the guides. Press carefully and firmly to seat all electrical terminals.
- 13. On vehicles equipped with a tachometer, install the two lower flood lamp bulb and

socket assemblies.

- 14. Position the mask and lens assembly, then install the cluster mask and warning lamp lenses retaining screws.
- 15. Install the instrument finish panel.
- 16. Connect the negative battery cable.

Engine Coolant Temperature Gauge

REMOVAL & INSTALLATION

The engine coolant temperature gauge is integral to the fuel gauge. Refer to *Fuel Gauge*, *Removal & Installation* for more information.

Printed Circuit Board

REMOVAL & INSTALLATION

- Disconnect the negative battery cable. Remove the instrument cluster from the vehicle.
- 2. If equipped, remove the low fuel warning switch assembly by depressing the clip retaining assembly to the lower left of the (rear view) instrument cluster back plate, then remove the low fuel level warning switch.
- 3. Remove all miniature bulb and instrument lamp panel socket assemblies by twisting counterclockwise.
- 4. Remove the speedometer and gauges.

Do not overbend the retaining clips as they may break.

- Remove the retaining clips using long-nose pliers. Squeeze both ends of the clip equally so that the locking ears will slide through the clip opening in the instrument cluster back plate, then push the clips through the opening.
- 6. After the clips are removed remove the printer circuit from its mounting.

To install:

7. Position the instrument cluster printed circuit on the back plate and install the clips by bending the taps on the clips with fingers. Push the clips into the clip opening until the locking ears are locked into the back plate.

An audible "click" will be heard when the clips are locked into position.

- 8. Install the speedometer and gauges.
- 9. Install all miniature bulb and instrument panel lamp socket assemblies into the instrument cluster back plate by twisting clockwise.
- If removed, position the low fuel level warning switch in the pocket slides, then
 push inward to fully snap the low fuel level warning switch in the instrument
 cluster.
- 11. Install the instrument cluster. For details, please refer to the procedure located earlier in this section. heard.
- 12. Connect the negative battery cable.

Windshield Wiper Switch

REMOVAL & INSTALLATION

The front windshield wiper switch is located deep inside the steering column assembly and is actuated by the multi-function lever on the left of the steering column. For details concerning removal and installation, please refer to the steering column procedures located in **Section 8** of this manual.

Rear Window Wiper Switch

REMOVAL & INSTALLATION

1986-89 Vehicles

- 1. Disconnect the negative battery cable.
- 2. Remove the four cluster opening finish panel retaining screws, then remove the finish panel by rocking the upper edge toward the driver.
- 3. Disengage the electrical wiring connector from the rear wiper switch.
- 4. Remove the wiper switch from the instrument panel. On Sable, the switch is retained with two screws.

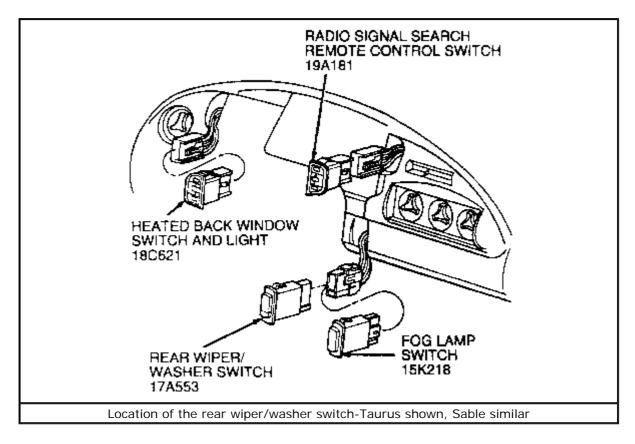
To install:

- 5. Push the rear washer switch into the cluster finish panel until it snaps into place. On Sable, install the two retaining screws.
- 6. Engage the electrical wiring connector.
- Install the cluster opening finish panel, then secure using the four retaining screws.
- 8. Connect the negative battery cable.

1990-95 Vehicles

- 1. Disconnect the negative battery cable.
- 2. Remove the cluster opening finish panel as follows:
 - 1. Disconnect the positive battery cable.
 - 2. Engage the parking brake.
 - 3. Remove the ignition lock cylinder.
 - 4. If equipped with a tilt column, tilt the column to the full down position and remove the tilt lever.
 - 5. Remove the four bolts and the opening cover from under the steering column.
 - Remove the steering column trim shrouds.
 Disconnect all electrical connections from the multifunction switch.
 - 7. Remove the two screws retaining the multi-function switch, then remove the switch.
 - 8. Pull the gear shift lever to the full down position.

- Remove the cluster opening finish panel retaining screws. There are four retaining screws on the Taurus and five on the Sable.
- Remove the finish panel by pulling it toward the driver to unsnap the snap-in retainers and disconnect the wiring from the switches, clock and warning lights.
- 3. Disengage the electrical wiring connector from the rear wiper/washer switch.
- 4. Remove the washer switch from the cluster finish panel.



- 5. Push the rear washer switch into the cluster finish panel until it snaps into place.
- 6. Engage the wiring connector to the rear wiper/washer switch.
- 7. Install the cluster finish panel as follows:
 - 1. Engage the electrical wiring to the switches, clock and warning lights, then install the finish panel by snapping it into place.
 - Install the cluster opening finish panel retaining screws.
 - 3. Place the gear shift lever to its original position.
 - Install the multi-function switch by engaging the electrical connectors, then secure using the retaining screws.
 - 5. Install the steering column shrouds.
 - Install the opening cover from under the steering column and secure using the retaining bolts.

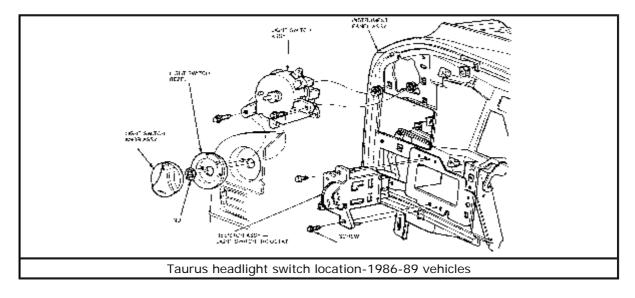
- 7. If removed, install the tilt lever, then return the column to its original position.
- 8. Install the ignition lock cylinder.
- Disengage the parking brake, then connect the positive battery cable.
- 8. Connect the negative battery cable.

Headlight Switch

REMOVAL & INSTALLATION

1986-89 Taurus

- 1. Disconnect the negative battery cable.
- 2. Pull off the headlight switch knob.
- 3. Remove the bezel retaining nut, then remove the bezel.
- 4. Remove the instrument cluster finish panel.
- 5. Remove the two screws retaining the headlight switch, then pull the switch out of the instrument panel, disengage the electrical connector, then remove the switch.



Click to enlarge

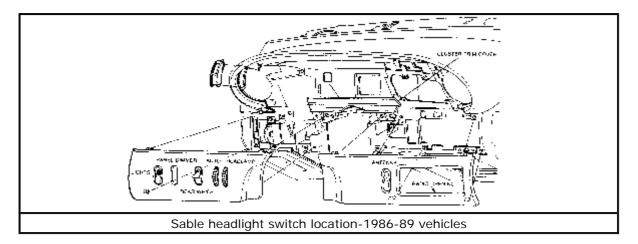
To install:

- 6. Position the switch, engage the electrical connector, then install the switch securing with the two retaining screws.
- 7. Install the instrument cluster finish panel.
- 8. Install the bezel, then secure using the retaining nut.
- 9. Fasten the headlight switch knob.
- 10. Connect the negative battery cable.

1986-89 Sable

1. Disconnect the negative battery cable.

- 2. Remove the lower left-hand finish panel.
- 3. Remove the two screws retaining the headlight switch to the finish panel, then disengage the electrical connector and remove the switch.



To install:

- 4. Position the switch, engage the electrical connector, then install the switch using the two retaining screws.
- 5. Install the lower left-hand finish panel.
- 6. Connect the negative battery cable.

1990-95 Vehicles

- 1. Disconnect the negative battery cable.
- 2. Pull off the headlight switch knob, then remove the retaining nut.
- 3. Remove the instrument cluster finish panel as follows:
 - 1. Disconnect the negative battery cable.
 - 2. Apply the parking brake.
 - 3. Remove the ignition lock cylinder.
 - 4. If equipped with a tilt column, tilt the column to the most downward position, then remove the tilt lever.
 - Remove the four bolts and opening cover from under the steering column.
 - Remove the steering column trim shrouds.
 Disengage all electrical connections from the steering column multi-function switch.
 - 7. Remove the two screws retaining the multi-function switch, then remove the switch.
 - 8. Pull the gear shift lever to the full down position.
 - Remove the four cluster opening finish panel retaining screws. Remove the finish panel by pulling it toward the driver to unsnap the snap-in retainers and disconnect the wiring from the switches, clock and warning lights.

4. Remove the two screws retaining the headlight switch to the instrument panel, pull the switch out of the instrument panel, disengage the electrical connector, then remove the switch.

To install:

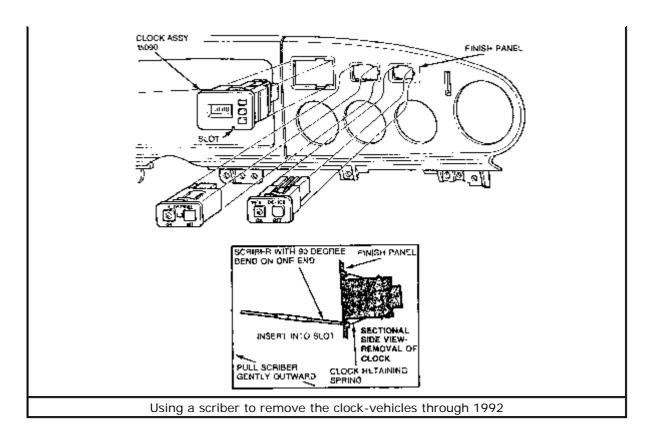
- 5. Position the headlight switch, then engage the electrical connector. Install the switch in the instrument panel, then secure using the two retaining screws.
- 6. Install the cluster finish panel as follows:
 - Engage the electrical wiring to the switches, clock and warning lights, then install the finish panel by snapping it into place.
 - Install the cluster opening finish panel retaining screws.
 - 3. Place the gear shift lever to its original position.
 - Install the multi-function switch by engaging the electrical connectors, then secure using the retaining screws.
 - 5. Install the steering column shrouds.
 - Install the opening cover from under the steering column and secure using the retaining bolts.
 - If removed, install the tilt lever, then return the column to its original position.
 - 8. Install the ignition lock cylinder.
 - Disengage the parking brake, then connect the positive battery cable.
- 7. Install the retaining nut, then connect the headlight switch knob.
- 8. Connect the negative battery cable.

Clock

REMOVAL & INSTALLATION

1986-92 Vehicles

- 1. Disconnect the negative battery cable.
- 2. Using a 90° bent scriber, dental pick or similar hardened tool, insert the bent end of the tool into the slot at the bottom center of the clock.



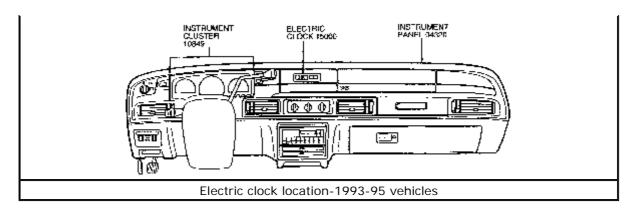
- Gently pull the scriber tool outward until the bottom clock retaining spring releases.
- 4. Grasp the clock and pull it outward to remove.
- 5. Disengage the clock electrical connector.

To install:

- 6. Engage the clock electrical connector, then snap the clock back into position.
- 7. Connect the negative battery cable.

1993-95 Vehicles

- 1. Disconnect the negative battery cable.
- 2. Remove the instrument panel upper finish panel.
- 3. Disengage the clock electrical connector.
- 4. Remove the two retaining screws holding the clock in the instrument panel upper finish panel. There is one screw on each clock mounting tab.
- 5. Remove the clock from the instrument panel upper finish panel.



Click to enlarge

- 6. Install the clock to the instrument panel upper finish panel and secure using the two retaining screws (one on each side).
- 7. Engage the clock electrical connector.
- 8. Install the instrument panel upper finish panel.
- 9. Connect the negative battery cable.

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