

## ALL MODELS

### DESCRIPTION

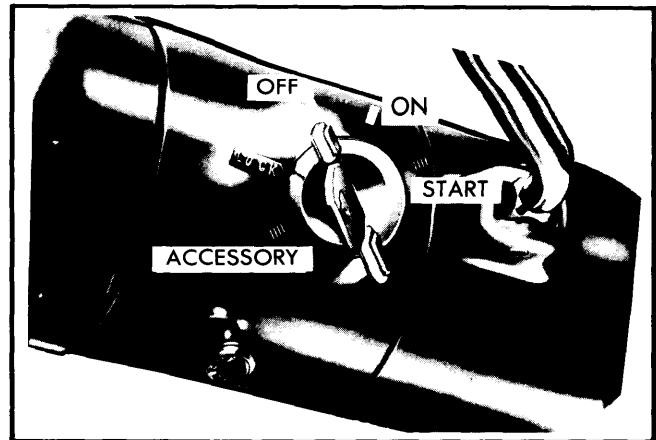
Ignition switches are mounted on steering columns and are actuated by a rod which is attached to ignition key locking mechanisms. On some models, the dimmer switch is located near the ignition switch and is actuated by a rod which is attached to the turn signal switch lever. The speed control switch is integral with the turn signal lever on some models and is integral with the shift lever on Citation, Omega, Phoenix and Skylark. Ford and Chrysler have a column mounted windshield wiper/washer switch.

### LOCK CYLINDER

**All Models** – Lock has two wing tabs and ignition key has large head for ease in grasping and improved operating leverage. Key can be removed only in "LOCK" position with ignition off and transmission engaged (automatic transmission in "PARK", manual transmission in reverse). Steering wheel will be locked or will lock immediately when wheel is turned.

### IGNITION SWITCH

**All Models** – Sliding type switch mounted on steering column and controlled by an actuating rod which is operated by the lock cylinder through a rack-and-sector mechanism. Up and down movement of actuator moves switch slider back and forth within switch housing, establishing various switch positions.



**Fig. 2 Steering Column Lock Positions Common to All Models**

### SERVICING

Steering column must be lowered or removed for access to ignition switch on some vehicles. Steering wheel, directional signal and other components must be removed to gain access to lock cylinder retaining tab for lock cylinder removal.

**CAUTION** – Steering columns are collapsible; special care must be taken to avoid bumping, jolting or hammering on steering shaft and gearshift tube.

### REMOVAL & INSTALLATION

#### TURN SIGNAL SWITCH

**Removal (American Motors)** – 1) Remove steering wheel. Remove lock plate cover by prying out of housing with 2 screwdrivers. Using suitable tool (J-23653), depress lock plate, pry snap ring from steering shaft groove and discard.

**NOTE** – If shaft has metric threads, compressor tool must use Metric Forcing Screw (J-23653-4).

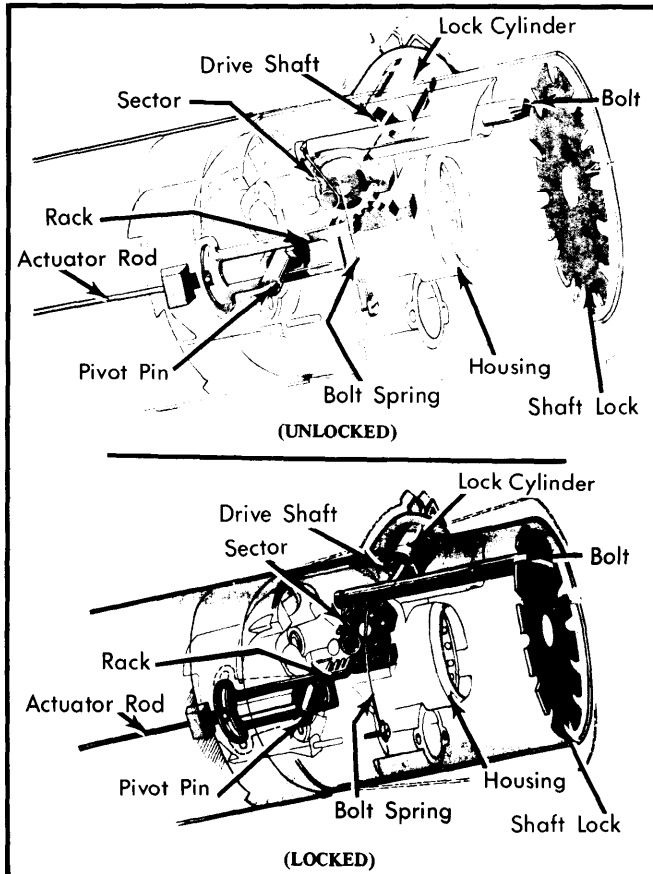
2) Remove tool, snap ring, lock plate, directional signal cancelling cam, upper bearing preload spring and thrust washer from steering shaft. Place directional signal lever in right turn position and remove lever.

3) Depress hazard warning light switch and remove button by turning counterclockwise. Disconnect directional signal harness at connector block and tape to prevent sagging. Remove switch screws and pull switch and harness from column. Loosen steering column bracket screws if necessary to clear harness.

**Installation** – Install turn signal switch and tighten retaining screws to 35 INCH lbs. To complete installation, reverse removal procedure.

**Removal (Chrysler Corp.)** – 1) On all models disconnect fusible link. Remove steering wheel and steering column cover. On Volare, Aspen, LeBaron, Diplomat, St. Regis, Newport and New Yorker with tilt steering column, remove 2 nuts mounting column to lower panel reinforcement. Remove mounting bracket from steering column by removing 4 attaching bolts.

2) Remove wiring from steering column. Position gearshift lever full clockwise. If equipped with tilt steering, position at midpoint. Disconnect light blue wiring connector, remove signal lever attaching screw and pull lever from column.



**Fig. 1 General Motors Steering Column Locking Mechanism (Others Similar)**

# Steering Column Switches

## ALL MODELS (Cont.)

**NOTE** — If equipped with speed control, DO NOT remove lever, allow it to hang loose.

**3)** Remove turn signal switch and upper retainer screws, carefully pull switch and wiring out of column.

**Installation** — Install guide wiring and switch down into column opening until switch is properly positioned. To complete installation, reverse removal procedure.

**Removal (Ford Motor Co.)** — **1)** Unscrew turn signal lever from switch. Remove shroud from under column. Lift up on tabs and remove column wiring connector plug from bracket. Remove screws securing switch assembly to column and remove switch.

**2)** On vehicles with tilt column, remove wires and terminals from column wiring connector plug with small screwdriver. A hole provided in flange casting on fixed columns makes it necessary to separate wires from plug. Remove plastic cover sleeve from wiring harness and remove switch and wire from top of column.

**Installation** — Reroute wiring through column and secure switch to column. To complete installation, reverse removal procedure.

**Removal (General Motors)** — **1)** Remove steering wheel and lock plate. Remove upper bearing preload spring and turn signal cancelling cam. Remove upper thrust washer and turn signal lever. Push hazard switch in and unscrew knob.

**2)** Remove switch mounting screws, wrap a piece of tape around upper part of wires, then remove switch by pulling straight up. On column mounted dimmer switches, switch is mounted on left side of switch bowl.

**Installation** — Install switch and secure with mounting screws. To complete installation, reverse removal procedure.

### SPEED CONTROL SWITCH

**Removal (Chrysler Corp.)** — **1)** Disconnect main fusible link in engine compartment. Remove steering column trim cover. On vehicles with tilt steering column, remove wiring trough from column.

**2)** Position gearshift lever to its full clockwise position (mid point for tilt steering columns). Disconnect speed control switch wiring harness connector. Remove turn signal attaching screw, remove lever and harness from column.

**Installation** — Use guide wire to install wire harness through steering column. Reconnect wiring harness connector. Position turn signal lever into place and secure with screw. To complete installation, reverse removal procedure.

**Removal (Ford Motor Co.)** — **1)** Pry off center cover on steering wheel. Remove 4 retaining screws and remove outer cover. Remove 2 screws from back of steering wheel.

**2)** Unplug electrical connector and remove switch assembly. Remove steering wheel, remove screw holding brush assembly. Remove brush assembly and disconnect steering column pigtail.

**Installation** — Install brush assembly and steering wheel. Insert 2 screws from back of steering wheel into switch assembly. Insert electrical connector. To complete installation, reverse removal procedure.

**Removal (General Motors — Buick, Camaro & Firebird)** — **1)** Disconnect battery. Remove steering column trim cover and disconnect cruise control harness connection. Remove steering wheel and lock plate cover.

**2)** Remove screw securing turn signal lever and attach a 24" piece of follower wire to connector. Pull lever and harness from column.

**Installation** — Connect switch harness to follower wire and pull harness into column. Position turn signal lever on switch and install screw. To complete installation, reverse removal procedure.

**Removal (General Motors — Citation, Omega, Phoenix & Skylark)** — **1)** Disconnect negative battery terminal. Remove lower trim panel, disconnect switch connector and fasten a 24" follower wire to connector.

**2)** Remove shift lever pivot pin. Remove shift lever and wire harness from column.

**Installation** — Connect new wiring harness to follower wire. Pull harness into column and reconnect shift lever. To complete installation, reverse removal procedure.

**Removal (General Motors - All Others)** — **1)** Disconnect battery ground cable. Remove lower trim panel and disconnect switch harness connector. Connect 24" follower wire to end of switch harness connector.

**2)** Pull turn signal lever (speed control lever) straight out of column. Remove lever and harness by pulling from column.

**NOTE** — Leave follower wire in column to guide new wire harness back into column.

**Installation** — Connect new harness to follower wire. Pull harness into column. Align key on turn signal lever with slot in turn signal switch. Push lever in until seated in snap lock. To complete installation, reverse removal procedure.

### LOCK CYLINDER

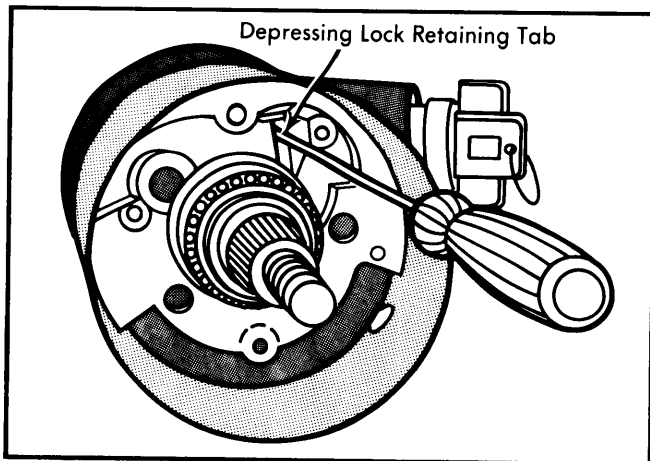
**NOTE** — If lock cylinder retaining tab is not visible through hole (slot) clean flashing away to gain access to lock retaining tab.

**Removal (American Motors)** — Place key in "LOCK" position. Insert a thin tool (screwdriver or knife blade) into slot next to upper right switch mounting screw boss. Depress lock cylinder retaining tab and at same time pull lock cylinder from housing.

**Installation** — **1)** Hold lock cylinder sleeve and rotate cylinder clockwise against stop. Insert cylinder into housing with key on cylinder sleeve aligned with keyway in housing.

**2)** Lightly push cylinder against sector, rotate cylinder counter-clockwise until cylinder mates with sector. Push in until cylinder retainer tab snaps into place and cylinder is secured.

## ALL MODELS (Cont.)



**Fig. 3** Depressing Lock Cylinder Retaining Tab on American Motors Vehicles

**Removal (Chrysler Corp. Omni & Horizon)** — Remove steering wheel, both column covers and turn signal switch. Use a hack saw blade and cut the upper  $\frac{1}{4}$ " from the key cylinder retainer pin boss. Using a drift punch, drive roll pin from housing and remove key cylinder.

**Installation** — Insert cylinder into housing making sure that it engages lug on ignition switch driver. Install the roll pin.

**Removal (Chrysler — All Others)** — Place cylinder in "LOCK" position. Insert a small screwdriver or similar tool into slot next to switch mounting screw boss (right hand slot). Depress spring latch at bottom of slot and pull lock cylinder out of housing bore.

**Installation** — Turn key to "LOCK" position and remove key. Insert cylinder into housing far enough to contact switch actuator. Press inward and move switch actuator rod up and down to align parts. When parts align, the cylinder will move inward and a spring loaded retainer will snap into place locking the cylinder into the housing.

**NOTE** — Before attempting removal of lock cylinder, place shift lever in "PARK" position on automatic transmission models, or any gear position on manual transmission models, and place ignition switch in "ON" position.

**Removal (Ford Motor Co.)** — Disconnect battery ground cable. Remove trim shroud, remove electrical connector from key warning switch. Turn lock cylinder to "ON" position. Insert  $\frac{1}{8}$ " diameter pin into hole located at 4 o'clock position and  $1\frac{1}{4}$ " from outer edge of lock cylinder housing. Depress retaining pin, pull out lock cylinder.

**Installation** — With lock cylinder in "ON" position, insert lock cylinder into housing bore in column and turn key to "OFF" position. The action will extend lock cylinder retaining pin into flange. Insert key in lock and cycle cylinder to insure correct operation in all positions.

**Removal (General Motors)** — Turn ignition switch to "RUN" position, remove key warning buzzer switch and screw securing lock cylinder, remove lock cylinder.

**Installation** — Align cylinder key with keyway in housing. Push lock all the way in. Install screw and buzzer switch. To complete installation, reverse removal procedure.

### IGNITION SWITCH

**Removal (American Motors)** — Place key lock in "OFF LOCK" position and remove switch mounting screws. Disconnect switch from remote rod, remove harness connector and remove switch.

**Installation (Standard Column)** — With actuator rod disconnected, position switch lever actuator rod and steering column. Move slider toward steering wheel placing switch in "ACCESSORY" position. Position actuator rod in slider hole and fasten switch to column being careful not to move slider out of detent.

**Installation (Tilt Column)** — With actuator rod disconnected, position switch over rod and steering column. Move switch slider downward from steering wheel placing switch in "ACCESSORY" position. Position actuator rod in slider hole, place switch on column and lightly push switch down column to remove lash in rod, do not move slider out of detent; then tighten switch screws.

**CAUTION** — When tightening screws, do not move switch from detent position.

**Removal (Chrysler Corp. Omni & Horizon)** — Remove connector from ignition switch and place cylinder in "LOCK" position, and remove key. Remove mounting screws from switch; switch and push rod will drop below jacket. Rotate switch  $90^\circ$  to permit removal of switch from push rod.

**Installation** — Position switch in "LOCK" (second detent from top). Place switch at right angles to column and insert push rod. Align switch on bracket and tighten screws. Reinstall connector and connect battery cable. Check switch for proper operation.

**Removal (Chrysler — All Others)** — On standard columns, remove 2 screws from ignition switch, rotate switch  $90^\circ$  and slide off actuating rod. On tilt steering wheels turn ignition switch to "ACC" position and remove mounting screws and switch.

**Installation** — 1) On standard columns, place ignition switch on ignition rod and rotate  $90^\circ$  to lock rod into place. Install 2 screws and tighten to specifications.

2) On tilt steering columns, place ignition in "ACC" position by holding switch in left hand and actuator rod in right hand. Move slider to extreme left ("ACC" position).

3) Fit actuator rod into slider and mount switch to column using 2 retaining screws. Push down lightly to remove lash in actuator rod, then tighten mounting screws to specifications.

**Removal (Ford Motor Co.)** — Disconnect negative battery cable and steering column trim shroud. Disconnect ignition switch electrical connector and drill out the break-off head bolts connecting the switch to the lock cylinder housing using a  $\frac{1}{8}$ " drill. Remove ignition switch from the actuator pin.

## ALL MODELS (Cont.)

**Installation** – 1) When installing switch, both locking mechanisms at top of column and switch itself must be in "LOCK" position. To hold mechanical parts of column in "LOCK" position, place shift lever in "PARK" (Automatic transmission) or reverse (Manual transmission), turn key to "LOCK" position and remove key.

2) Pull switch plunger out as far as it will go then move it in one detent ("LOCK" position). Insert a  $\frac{7}{16}$ " drill bit into locking hole on top of switch. Switch is now pinned in "LOCK" position.

3) Connect switch plunger to actuator rod. Position switch on column and loosely install retaining nuts. Move switch up and down to locate mid-position of rod lash then tighten retaining nuts.

**Removal (General Motors)** – 1) Steering column must be lowered or removed (tilt or telescope columns) or turn signal switch removed (standard column).

**NOTE** – On tilt or telescope columns, steering wheel removal is not required.

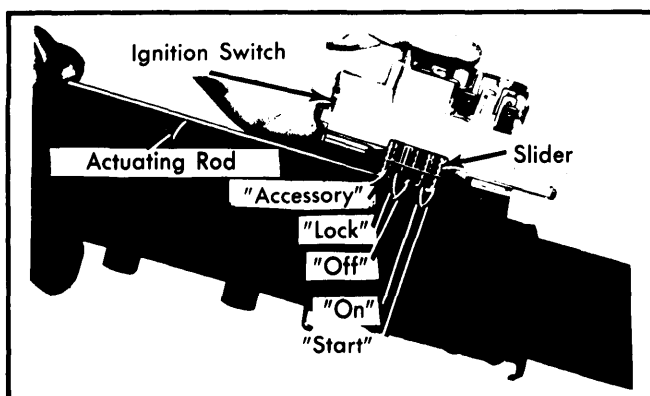
2) Position switch in "ACC" on tilt or telescope columns, or "OFF" on standard columns. If lock cylinder has already been removed, the actuating rod should be pulled up until it stops.

3) On standard columns, push actuating rod down one detent ("OFF" position). Remove switch screws and lift switch from actuating rod and column.

**Installation** – 1) With lock cylinder in "OFF-UNLOCK" position (tilt or telescope columns) or "OFF" position (standard column), insert a small screwdriver into hole in switch and move slide portion of switch to top position.

2) On Standard column models, move slider part of switch back one detent ("OFF" position). Fit actuator rod into slider hole and loosely assemble switch on steering column. On Standard column, tighten retaining screws to 35 INCH lbs.

3) On other columns, lightly push switch down column to remove slack in rod, then tighten screws to 35 INCH lbs. torque. Connect wiring and check operation of switch.



**Fig. 4 Rod Actuated Ignition Switch Common to All Models**

## DIMMER SWITCH

**Removal (Chrysler Corp.)** – 1) Disconnect negative battery terminal. Remove lower steering column cover. Disconnect electrical connection from switch.

2) Remove 2 mounting screws from switch and disengage switch from push rod. Remove switch.

**Installation** – 1) Firmly push rod into switch. Compress switch until two .093" drill shanks can be inserted into alignment holes.

2) Reposition upper end of wash/wipe switch, this can be done by feel. With a light rearward pressure on switch, install 2 screws and remove 2 drill bits.

**Removal (Ford Motor Co.)** – 1) Disconnect battery ground from battery. Remove steering column trim shroud. Remove dimmer switch lever by grasping lever and use a pulling and twisting motion while pulling lever straight out from switch.

2) Peel back foam sight shield and disconnect electrical connection. Remove 2 screws from switch and remove switch.

**Installation** – 1) Align switch mounting holes with holes on column and install screws. Install dimmer switch lever by aligning key-way in switch with key-way in lever.

2) Push lever into switch to full engagement. Install electrical connections and trim shroud.

**Removal (General Motors)** – 1) Disconnect negative battery terminal. Remove lower steering column shield. Remove 2 nuts securing steering column to upper mounting bracket.

2) Lower column and remove 2 screws securing dimmer switch. Disconnect electrical connections and remove switch.

**Installation** – 1) Position switch on steering column and loosely install bolts. Install electrical connections. Insert  $\frac{3}{32}$ " drill through locating hole securing dimmer switch to connector body.

2) Slide dimmer switch so that it firmly contacts actuator arm and tighten bolts.

## WINDSHIELD WASHER/WIPER SWITCH

**Removal (Chrysler Corp.)** – Disconnect negative battery terminal. Remove steering wheel and lower column cover. Remove screw securing washer/wiper switch, disconnect terminal connector and remove switch.

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

**Removal (Ford Motor Co.)** – Disconnect negative battery terminal. Remove lower column shroud. Push electrical connector off switch with screwdriver. Remove 2 screws from wiper switch and remove switch.

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