

ALL MODELS

DESCRIPTION

The ignition switch is mounted on the steering column and is actuated by a rod attached to the ignition key lock mechanism. On some models, the dimmer switch is located on the column near the ignition switch. This type of dimmer switch is actuated by a rod attached to the turn signal or accessory stalk. The speed control switch, on some models, is integral with the turn signal lever. Washer/wiper switches can also be found on column mounted stalk controls.

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.

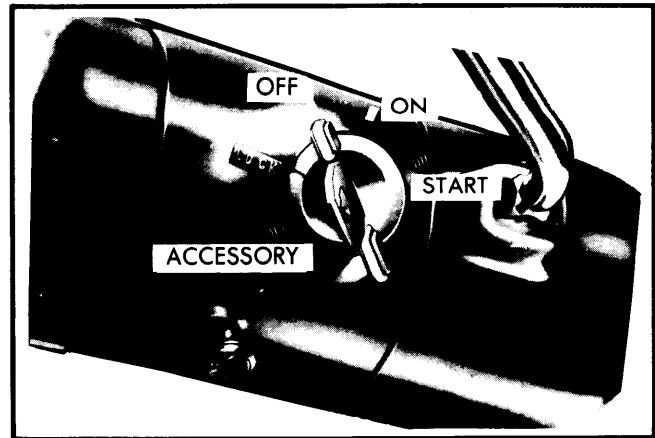


Fig. 2 Steering Column Lock Positions Common to All Models

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. Omni & Horizon) – Disconnect wiring harness from switch. Remove steering wheel and column cover. Remove wiper switch assembly. Remove wiring clip and switch retainer. Remove turn signal switch.

Installation – Reverse removal procedure and check operation.

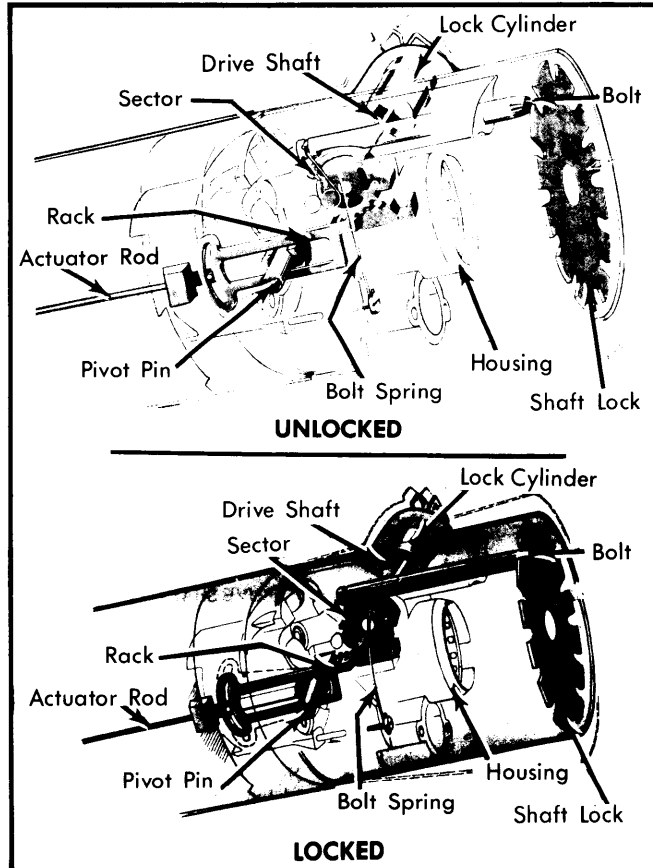


Fig. 1 General Motors Steering Column Locking Mechanism (Others Similar)

ALL MODELS (Cont.)

Removal (Chrysler Corp. Exc Omni & Horizon) – 1) Disconnect battery ground cable. Remove shift linkage connections. Disconnect wiring harness from column. Remove horn button pad and steering wheel. Pry out wiring trough retainers and remove wiring trough. Remove shift lever.

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

2) Remove 2 screws securing turn signal lever cover to housing and remove cover. Remove wiper switch assembly. Remove 2 screws securing wiper control to switch. Rotate control clockwise and remove shaft from switch. Remove upper bearing retaining screws. Remove retainer and lift switch up and out.

Installation – To install, reverse removal procedures.

Removal (Ford Motor Co.) – Disconnect negative battery cable. Remove upper and lower column shrouds. Remove switch lever by twisting and pulling it straight out. Peel back foam switch cover from turn signal switch. Disconnect electrical connectors. Remove 2 screws attaching switch to lock cylinder housing and disengage switch from housing.

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. Rear Wheel Drive Models) – 1) Pry center cover off of 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 (Ford Motor Co. Front Wheel Drive Models) – Remove steering wheel hub cover by lifting up on outside edges. Remove and discard steering wheel attaching nut. Using a puller (T67L-3600-A), remove steering wheel. Remove 6 screws attaching back cover to steering wheel. Separate control switch connector from terminal on back cover. Remove speed control switch.

Installation – To install, reverse removal procedures, making sure control switch harness is positioned properly in lower steering wheel spoke. Use a new steering wheel attaching nut.

Removal (General Motors) – 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.

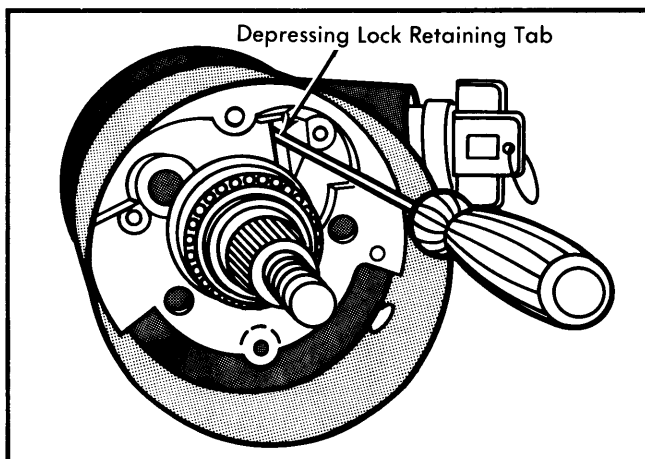


Fig. 3 Removing Lock Cylinder On AMC Vehicles. Place Cylinder in "LOCK" Position and Depress Retainer Tab.

ALL MODELS (Cont.)

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 counterclockwise until cylinder mates with sector. Push in until cylinder retainer tab snaps into place and cylinder is secured.

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 Corp. Exc. Omni & Horizon) — Place cylinder in "LOCK" position. Insert a small screwdriver, or similar tool, into slot next to switch mounting 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) — Disconnect battery ground cable. Turn ignition cylinder to "RUN" position. Remove turn signal switch as previously described. 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 — 1) Position lock cylinder in "OFF" position. Move switch slider to extreme left position and back off 2 detents to the right.

2) On standard column models, position rod into slider hole. Fasten switch to steering column, being careful not to move slider out of detent.

3) On tilt column models, position actuator rod into slider hole and install switch on steering column. Move switch down on steering column to remove actuator rod free play. Tighten attaching 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° 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 Corp. Exc. Omni & Horizon) — On standard columns, remove 2 screws from ignition switch, rotate switch 90° and slide off actuating rod. On tilt wheel models, turn ignition switch to "ACC" position. Remove mounting screws and switch.

Installation — 1) On standard columns, place ignition switch on ignition rod and rotate 90° 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.) — 1) Disconnect battery ground cable. On tilt columns, remove upper extension shroud. Remove 5 screws securing upper and lower trim shrouds. Disconnect wiring harness from column. On Escort, EXP, LN7 and Lynx, remove 2 bolts and nuts securing column to bracket.

2) Drill out break-off head bolts connecting switch to lock cylinder with a $\frac{1}{8}$ " drill bit. Remove bolts and disengage switch from actuator rod.

Installation — 1) Set switch to "ON" position. Set lock cylinder to "ON" position (about 90° from "LOCK" position). Install switch onto actuator rod. Align switch and column mounting holes.

2) Install new break-off head bolts and tighten until bolt heads break off. Connect wiring harness to switch. Check operation of switch and lock cylinder. Replace shrouds and battery ground cable.

Removal (General Motors) — 1) Steering column must be lowered or removed on some models to gain access to switch. Steering wheel removal is not required. Position lock cylinder in "OFF" position.

2) If lock cylinder has already been removed, pull actuating rod up until it stops, then push down 2 detents. Remove switch

ALL MODELS (Cont.)

retaining screws and lift switch off of column and retaining rod.

Installation – 1) Place lock cylinder in "OFF" position. Place switch in "OFF" position by moving selector to top of switch and then backing off 2 detents.

2) On standard column models, fit actuator rod into slider hole. Install switch onto steering column and tighten attaching bolts.

3) On tilt or telescope columns, install switch and lightly push switch down on column to take up free play in actuator rod. Tighten attaching screws, connect wiring harness and check operation of switch.

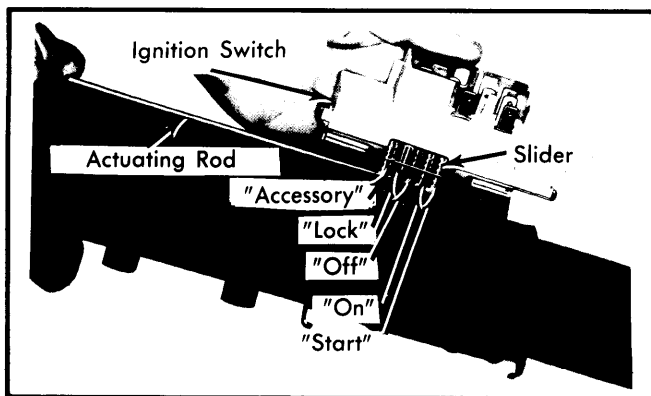


Fig. 4 Rod Actuated Ignition Switch
Common to All Models

DIMMER SWITCH

Removal (American Motors) – 1) Disconnect battery ground cable. Remove lower finish panel, tube cover and package tray. Tape actuator rod to column.

2) Remove wiring harness connector from switch. Remove attaching screws. Separate switch from actuator rod.

Installation – 1) Install switch onto actuator rod. Install switch onto steering column. Remove tape from actuator rod.

2) Adjust switch by depressing lightly and inserting a $\frac{3}{32}$ " drill bit through hole in switch bracket. Move switch upward on steering column to remove lash from actuator rod. Tighten switch attaching screws and remove drill bit. Reconnect wiring harness to switch.

3) Check operation of switch (full up, center and full down wheel position, if equipped with tilt wheel). Install tube cover, lower finish panel and package tray. Reconnect battery ground cable.

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 drill shank can be inserted through alignment hole.

2) Reposition upper end of wash/wipe switch. With a light

rearward pressure on switch, install attaching screws and remove drill bit.

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 battery ground cable. Remove upper and lower shrouds. Disconnect steering column wiring harness. On front wheel drive models, peel back foam switch cover, remove 2 screws holding switch and remove switch. On rear wheel drive models, remove 2 mounting screws, disconnect harness from switch and remove switch.

Installation – To install, reverse removal procedure.

Removal (General Motors – Front Wheel Drive Exc. Eldorado, Riviera, Seville and Toronado) – 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 an unscrew knob.

2) Remove turn signal switch mounting screws, wrap a piece of tape around upper part of wires and remove switch by pulling straight out. Remove ignition switch and lock cylinder. Remove dimmer switch.

3) Remove screws securing retainer. Remove pivot pins and bearing and remove switch from column housing.

Installation – To install, reverse removal procedure.