Trunk Lid Latches — Electric

CHRYSLER CORP., FORD MOTOR CO., GENERAL MOTORS

Chrysler Corp.
Ford Motor Co.
General Motors

DESCRIPTION

Chrysler Corp., Ford Motor Co., General Motors (Exc. Cadillac) — Electric trunk lid release system unlocks the trunk lid from inside the car and normally the switch is located in the glove compartment. System consists of a switch and solenoid. Trunk lid must be closed manually.

Cadillac — Trunk lid latch is electrically operated for assist in closing or releasing. Electric motor and latch are a self-contained assembly bolted to the rear end body panel inside trunk. Motor is used in conjunction with a mechanical actuator bolted to lid lock. Latch assembly consists of electric motor, switches, levers, plunger, springs and gears. The motor drives a three gear reduction system. Output gear is staked to a cam which operates a link to control up and down motion of striker as well as trigger lock release rod when lid is opened.

OPERATION

OPENING CYCLE(EXC. CADILLAC)

Trunk lid may be opened by key or by depressing the lid release switch in the glove compartment.

OPENING CYCLE — CADILLAC

Trunk lid may be opened by key or by depressing lid release button in glove box. When lid release button is depressed, the motor is energized and lid moves downward slightly and then upward. As lid moves upward, output cam trips the lock release actuator. Simultaneously, plunger contacts striker completing motor ground circuit and also closes actuator switch contacts completing motor power circuit. The motor operates raising striker to its full up position and then plunger allows actuator to break power circuit stopping motor and striker breaks contact for ground circuit. If lid is released by key lock, when lock hook clears striker, motor switch contacts will complete circuits and raise striker.

CLOSING CYCLE — CADILLAC

When lid is lowered, lock hook engages with striker about 1 to 1½" from fully closed. This energizes motor power and ground circuits, motor then pulls lid fully closed. When fully closed, motor is de-energized as plunger reaches its fullest downward travel allowing actuator switch contacts to open. Ground circuit is maintained through lock to plunger contact until opening cycle begins. **NOTE** — *Body contact surface of lock frame must be clean and paint free to insure proper ground.*

ADJUSTMENT

UNIT ALIGNMENT

CAUTION — *Do not allow fingers or clothing to come in contact with cycling mechanism as personal injury or mechanical damage may result.*

1) Lateral lock adjustment is provided by slotted holes in lid inner panel. Vertical adjustment is provided by slotted holes in latch unit. Lid must be properly aligned on body before latch system is adjusted.

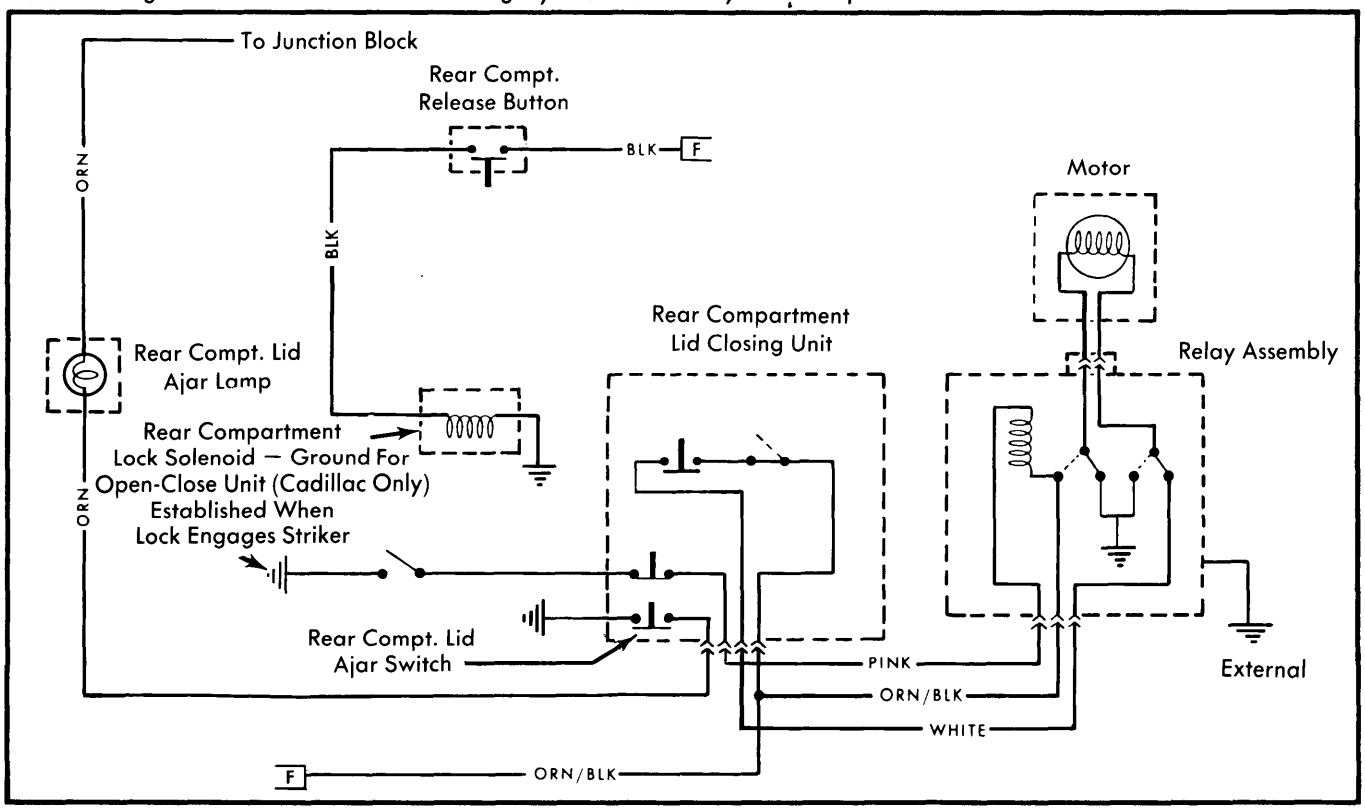

Fig. 1 Wiring Diagram of Trunk Lid Lock System and Cadillac Open-Close System Circuit

CHRYSLER CORP., FORD MOTOR CO., GENERAL MOTORS (Cont.)

2) Disconnect motor power wire connector. Use a screwdriver to turn secondary gear output shaft and manually cycle unit counterclockwise in direction of arrow on unit to full down position. Set output cam against lock release lever (anti-reversing stop).

3) Loosen bolts on unit cover, then adjust striker for proper weatherstrip compression and lid fit to adjacent panels. Connect motor power wire.

NOTE — *When power wire is connected, and plunger is in contact with striker, unit will cycle to full up position.*

TESTING

UNIT ALIGNMENT

NOTE — *It is important to determine if motor is shut off (not in stall condition) and output cam is against anti-reversing stop.*

1) With engine off, connect ammeter in motor power circuit at motor connector.

2) Hold meter outside trunk with leads draped over weatherstrip. Close lid and allow unit to completely close and note current reading. Reading during closing cycle should be about 2-3 Amps.

3) After closing cycle is complete, approximately 3-4 seconds, ammeter should drop to zero. If meter does not read zero with lid closed, unit is adjusted too low and motor is in stall condition. To correct, align unit upward.

REMOVAL & INSTALLATION

SOLENOID LOCK UNIT

Removal — Open trunk lid and disconnect feed wire at connector, remove solenoid attaching bolts, solenoid and lock.

Installation — To install, reverse removal procedure.

COMPLETE UNIT (CADILLAC)

Removal — 1) Open lid, remove unit trim cover and disconnect motor power wire and actuator switch connector.

2) Scribe locating marks around unit for reinstallation and remove securing bolts and unit assembly.

Installation — To install, reverse removal procedure.

CAUTION — *If striker is in any position other than fully up when motor power wire is reconnected, unit may cycle to full up when reconnected.*

DRIVE MOTOR (CADILLAC)

Removal — 1) Open lid, remove latch unit trim cover, disconnect power wire connector and motor ground terminal from plunger plate tab.

NOTE — *Depress terminal locking barb with a pointed instrument to remove.*

2) Remove motor retaining strap screw and rotate strap upward to remove motor.

Installation — To install, reverse removal procedure.

ACTUATOR SWITCH (CADILLAC)

Removal — Remove complete unit as previously outlined. Remove actuator switch retaining screw from back side of unit.

Installation — To install, reverse removal procedure.

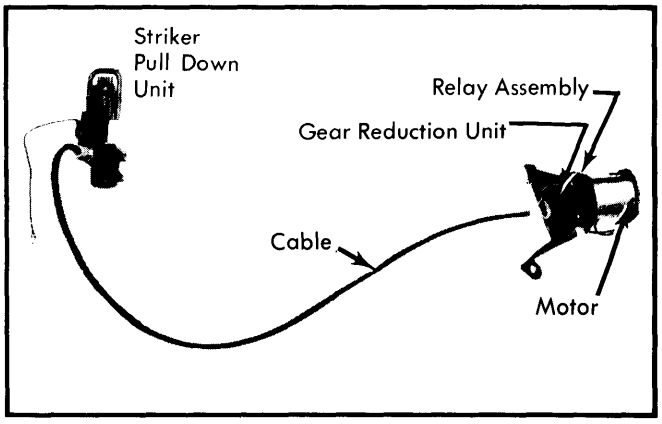

Fig. 2 Cadillac Electric Locking Unit