GENERAL MOTORS AUTOMATIC – BUICK & CADILLAC

Buick (Electra, Rivera)
Cadillac (All Models)

NOTE – *Also refer to General Motors Motor Actuated Door Locks in this section.*

DESCRIPTION

The automatic door lock system uses the conventional power door lock system, but to accomplish the automatic feature the following additional components are used: Electronic logic module, unlock relay, lock relay (Cadillac), motor lock actuator relay, back-up lamp switch (Buick), right front door lock key cylinder switch (Buick), drive switch (Cadillac) and a seat sensor switch (Cadillac).

The module is located behind the glove box on Eldorado and Riviera, and behind the right kick panel on all other models. Lock and unlock relays are taped to the module except the Cadillac lock relay which is located behind the left kick panel. All switches and relays are replaced as an assembly. The module consists of 2 components: the wiring harness/case and the printed circuit board.

OPERATION

Cadillac – Doors lock automatically when the ignition is on, all doors are closed, courtesy lamps are off, driver is seated and transmission is shifted into "D". If a passenger unlocks the door and exits while the shifter is in "D", all doors will automatically lock when the door is closed. When the shift lever is moved to "P", all doors will unlock.

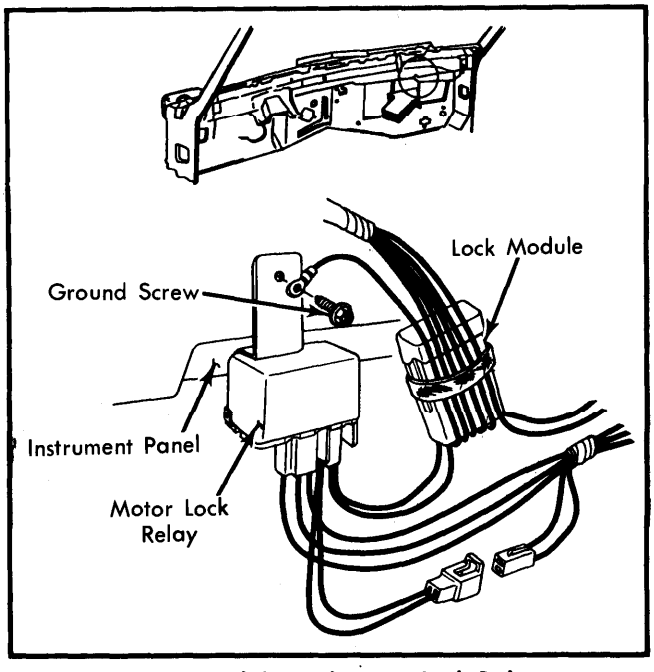

Fig. 1 Module and Motor Lock Relay Eldorado and Riviera Shown

Buick – Doors lock automatically when the ignition is on, all doors are closed, courtesy lamps are off and transmission is shifted into "D". When shift lever is shifted into "P", all doors will unlock. All doors will also unlock when the driver's door is opened from outside with a key.

TROUBLE SHOOTING

AUTOMATIC LOCKS INOPERATIVE LOCKS OPERATE FROM DOOR SWITCHES

1) Test with driver's seat occupied (Cadillac), ignition on, all doors closed, and transmission in "D". Ground one end of a self-powered test lamp and touch probe to Black wire on module. If lamp does not light, repair Black wire or ground connection.

2) Ground one end of a non-powered test lamp and check for power at the Pink/Black wire on module. If no power, repair wire.

3) If power is present on Cadillac models, replace module circuit board. On Buick models, check for power at the Lt. Blue/Black wire. If no power, repair wire. If power is present, replace circuit board module.

DOORS UNLOCK AUTOMATICALLY DO NOT LOCK AUTOMATICALLY

Eldorado and Seville – 1) Test with driver's seat occupied, ignition on, all doors closed, and transmission in "D". Ground one end of a test lamp and check Black/White wire at lock relay. If no power, check wire and drive switch on column.

2) If power is present, move test lamp to Lt. Green wire on lock relay. Move shifter from "D" to "P", then back to "D". If lamp does not light, touch test lamp to Black wire. If relay clicks, repair Black wire to ground connection. If no click from relay, replace relay.

3) If lamp came on when shifter was moved, check continuity of Lt. Green wire between relay and module. Touch test lamp to Yellow wire on module, and move shifter to "P" and back to "D".

4) If lamp does not light, replace printed circuit board in module. If lamp lights, move probe to Lt. Blue wire on motor lock relay. If no power, check seat sensor and wiring between module and motor lock relay.

DeVille and Fleetwood – 1) Test with ignition on, all doors closed, driver's seat occupied, and transmission in "D". Touch test lamp to Black/White wire on module. If doors lock, repair wire or drive switch.

2) If doors do not lock, test at Yellow wire on module. Move shift lever to "P" and back to "D". If lamp does not come on, replace module circuit board.

3) If lamp lit at Yellow wire, move probe to Lt. Blue wire on motor lock relay. If lamp is on, system is okay. If lamp does not light, check seat sensor and wiring between module and motor lock relay.

Buick – 1) With ignition on and transmission in "P", connect test lamp between ground and Lt. Blue/Black wire at module. If lamp is on, replace back-up light switch.

2) If lamp is off, check for open in Black/Yellow wire between module and motor relay. Repair wire if necessary. If wire is good, replace module printed circuit board.

GENERAL MOTORS AUTOMATIC – BUICK & CADILLAC (Cont.)

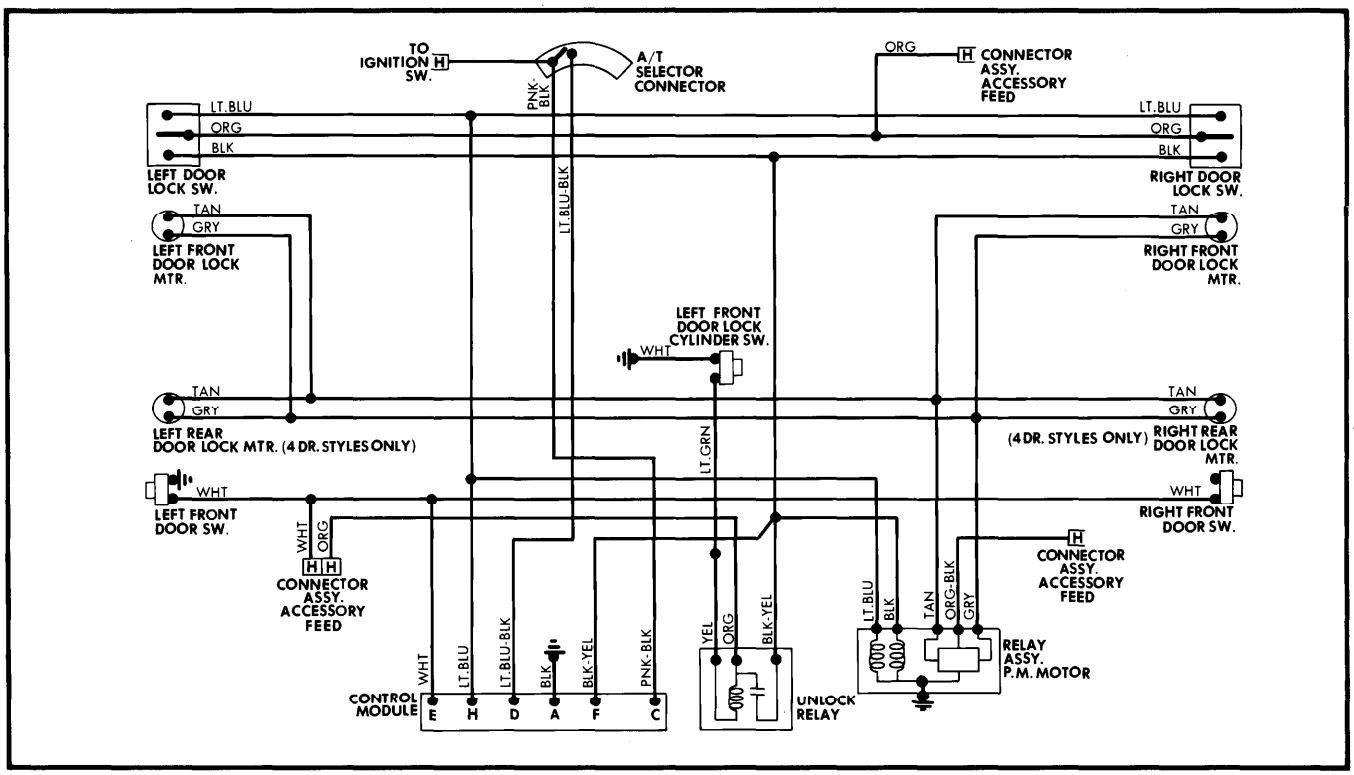

Fig. 2 Buick Automatic Door Lock Wiring Diagram

DOORS LOCK AUTOMATICALLY DO NOT UNLOCK AUTOMATICALLY

Cadillac – 1) With selector in "P" and all doors locked, touch test lamp to Lt. Blue/Black wire at module. If doors unlock, repair Lt. Blue/Black wire between drive switch and module.

2) If doors do not unlock, move test lamp to Black wire on module and move shifter to "D". If lamp comes on, test unlock relay. If not, replace module circuit board.

DOORS LOCK AUTOMATICALLY WITH DOOR(S) OPEN & SELECTOR LEVER IN "DRIVE"

Check for the following conditions: Open in door jamb switch circuit (White wire); defective door jamb switch, open circuit in White wire between module and courtesy light circuit. If none of these conditions exist, replace module printed circuit board.

LOCKS DO NOT OPERATE AUTOMATICALLY OR FROM ARMREST SWITCHES

Check for open or shorts in Orange/Black wire in following circuits: Automatic door locks, power seats, seat back lock and deck lid release. Check for shorts or open in Orange wire (Cadillac) or Lt. Blue/Black or Pink/Black (Buick) in automatic door lock circuit. Check lock relay ground.

DOORS LOCK AUTOMATICALLY BUT DO NOT UNLOCK WITH KEY

Buick – 1) Lock doors with armrest switch and connect test lamp to ground and Yellow wire at unlock relay. If doors unlock, check for open in Yellow or Lt. Grn. wire between unlock relay and door lock cylinder switch.

2) If doors do not unlock, move test lamp to Orange wire at unlock relay. If lamp does not light, check for open in Orange wire. If lamp lights, move test lamp to Black/Yellow wire at unlock relay, and place door cylinder lock in unlock position.

3) If lamp lights, check for open in Black/Yellow wire. If lamp does not light, replace unlock relay.

DOORS DO NOT LOCK AUTOMATICALLY WHEN SELECTOR LEVER IN "PARK"

Cadillac – Replace in-line diode (Black wire).

DOORS LOCK AUTOMATICALLY WITH SELECTOR IN "DRIVE", BUT SEAT NOT OCCUPIED

Cadillac – Place selector lever in "N" or "R". Connect test lamp to ground and Lt. Blue wire at driver's seat sensor switch. With driver's seat not occupied, move selector lever to "D". If lamp lights, defective seat sensor switch is cause.

TESTING

MOTOR LOCK RELAY TEST

All Models – 1) Be sure relay case is grounded during test. Check for power at Orange/Black wire. If no power, repair wire between fuse block and relay. Place test lamp probe on Lt. Blue wire at relay and press door switch to "LOCK". If lamp does not light, check switch, Orange wire and Lt. Blue wire.

2) If lamp was okay at Lt. Blue wire, test Black wire with switch in "UNLOCK" position. If lamp is off, check Black wire and switch. If lamp is on, test Tan wire with switch in "UNLOCK" position, then Gray wire with switch in "LOCK" position. If lamp does not light in either position, replace relay. If lamp is

GENERAL MOTORS AUTOMATIC – BUICK & CADILLAC (Cont.)

on in both cases, relay is good. Check for open in Gray or Tan wires between relay and lock actuators.

UNLOCK RELAY

Cadillac – 1) Connect test lamp between ground and Black wire at relay. Move shifter to "P". If lamp does not light, check continuity of Black wire between relay and module. If lamp lights, move test lamp to Tan wire.

2) Move shifter from "D" to "P". If lamp is on, relay is good. If lamp does not light, test at Orange/Black wire. If lamp is on, replace relay. If not, check circuit breaker and Orange/Black wire.

Buick – 1) Lock all doors from arm rest switch. Connect test lamp between ground and Yellow wire at relay. If doors unlock, check door cylinder switch, switch ground, and wire to relay from switch.

2) If doors do not unlock, check for power at Orange wire on relay. If no power, repair Orange wire. Connect test lamp to Black/Yellow wire and actuate lock cylinder switch. If test lamp lights, repair Black/Yellow wire to motor lock relay. If lamp does not light, replace relay.

REMOVAL & INSTALLATION

MODULE & RELAYS

Removal – Remove kick panel. Remove module bracket and module. On Eldorado and Riviera, remove glove compartment and remove module.

Installation – To install, reverse removal procedure.

PRINTED CIRCUIT BOARD

Removal – Lower module and remove relays. Remove fuse from fuse block, then open module case. Pry out circuit board with small screwdriver.

Installation – To install, reverse removal procedure insuring circuit board terminals are fully seated.

BACK-UP LIGHT/NEUTRAL START SWITCH

Removal – Remove switch retaining screws from lower end of steering column.

Installation – To install, reverse removal procedure.

NOTE – *Adjust switch as outlined in Automatic Transmission Servicing article in TRANSMISSION Section.*

SEAT SENSOR (CADILLAC)

A waffle type seat sensor switch is installed under the front seat trim cover

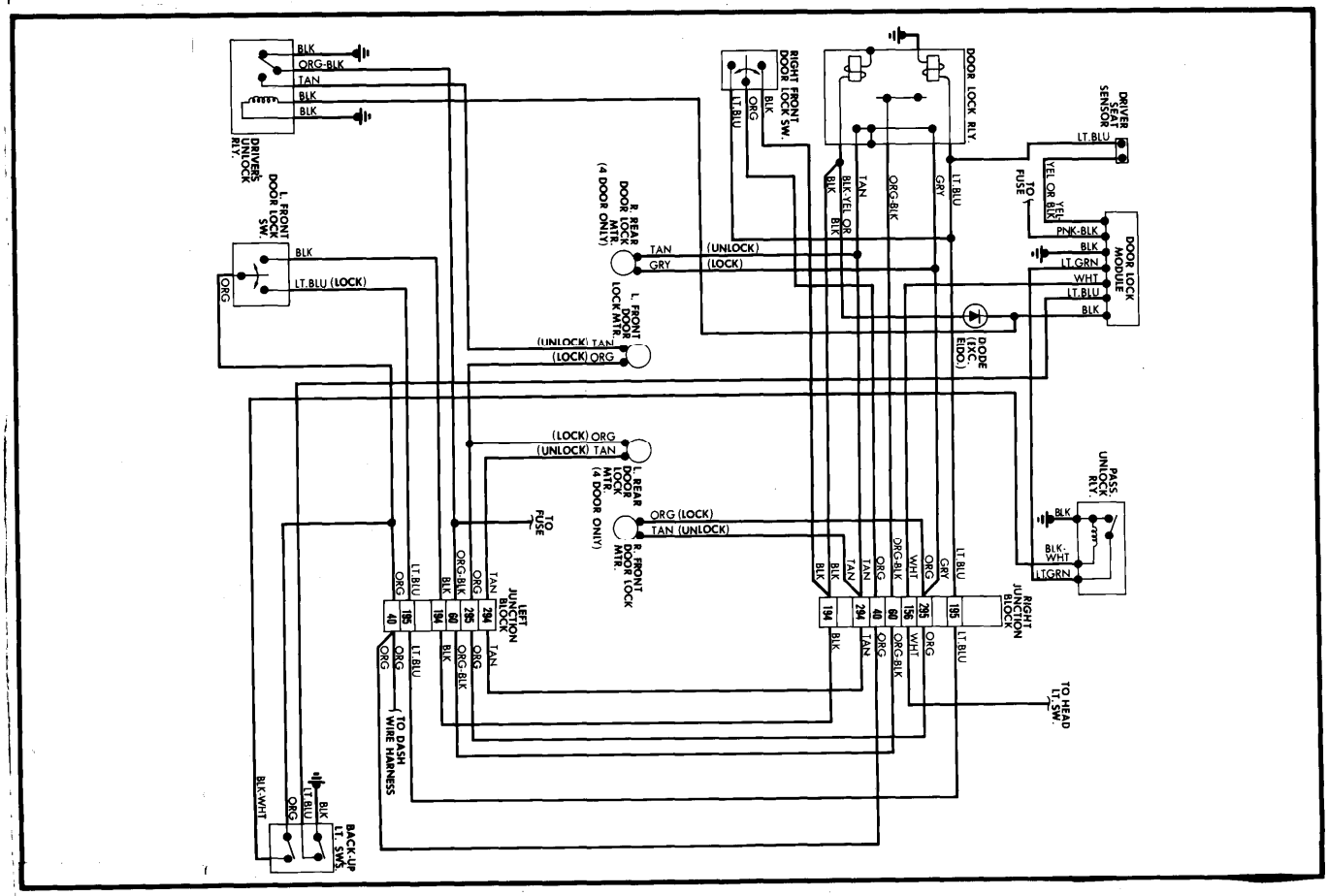

Fig. 3 Cadillac Automatic Door Lock Wiring Diagram