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, two unlock relays, a lock relay, the back-up light switch, right and left front door lock remote control handle switches, and a drivers position seat sensor (Cadillac). Buick uses a left front door lock cylinder key switch.

Location of module is under instrument panel on right front shroud. Lock and unlock relays are taped to module except the Cadillac lock relay which is attached to left shroud inner panel near junction block. All switches and relays are serviced as assemblies, and the module is serviced as two assemblies (module case and harness; or printed circuit).

OPERATION

Cadillac – With all doors closed and courtesy lights off, doors are automatically locked when driver is seated and transmission is shifted into "DRIVE".

Buick – With all doors closed and courtesy lights off, doors are automatically locked when transmission is shifted out of "PARK". Also, unlocking the drivers door using the key, will unlock all doors.

All Models – When any passenger door lock is manually unlocked or unlocked using the drivers remote control switches, all doors will unlock. All doors will automatically relock when passenger door is closed.

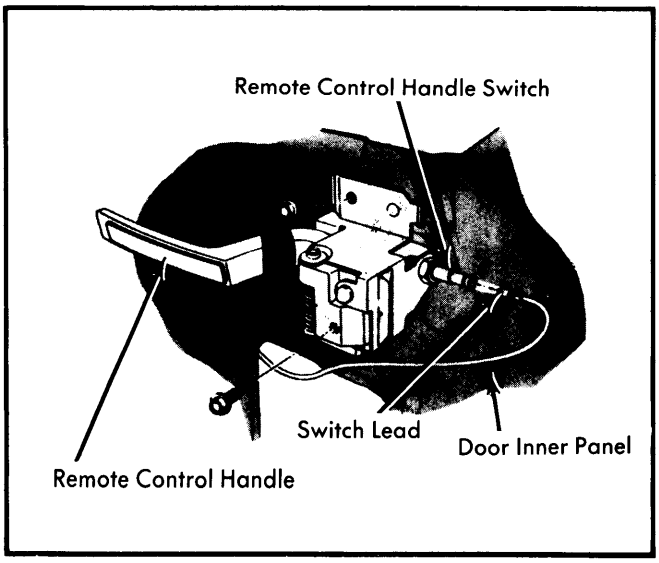

Fig. 1 Automatic Door Lock Remote Control Handle Switch

TESTING & TROUBLE SHOOTING

AUTOMATIC LOCKS INOPERATIVE BUT DOORS LOCK & UNLOCK FROM CONTROL SWITCHES IN ARMRESTS

NOTE – *For access to module, see removal and installation in this story.*

1) Occupy drivers seat, turn ignition "ON", place selector in "DRIVE", close all doors and touch probe of self-powered test light to "A" terminal of module with test light grounded. If light does not come on, check Black wire from "A" terminal for proper ground.

2) If light comes on, use test light and check for open circuit in Orange feed wire between relays and source. If open circuit in wire is found, repair circuit and recheck.

3) If light comes on, replace module printed circuit.

4) If light remains off, check for open or short in Orange feed wire between module and source. Repair circuit and recheck.

NOTE – *If circuit is shorted, body fuse will be blown and courtesy lights will not come on.*

DOORS DO NOT LOCK AUTOMATICALLY WHEN SELECTOR IS MOVED TO DRIVE, BUT LOCK AND UNLOCK FROM CONTROL SWITCHES IN ARMRESTS. ALSO, FRONT DOORS UNLOCK AUTOMATICALLY BY ACTUATING EITHER REMOTE CONTROL HANDLE

1) Occupy drivers seat, turn ignition off, ground self-powered test light and touch probe to module "B" terminal. If light comes on, proceed to step **2)** If light fails to come on, check seat sensor for proper ground (Black lead), also for failure to close, and check Yellow lead between seat sensor and module.

2) If light comes on, place selector in "DRIVE", turn ignition "ON" and connect test light between ground and module "A" terminal. If light comes on, proceed to step **3)**. If light fails to come on, check for open circuits in neutral start switch Orange wire and Black/White wire from switch to module. Also check for faulty neutral switch.

3) If light came on, place selector in "PARK", "N"' or "R", and connect test light between ground and "B" terminal. If light fails to come on, replace module printed circuit. If light comes on, check lock relay ground. If ground is good, perform Lock Relay Test.

DOORS LOCK AUTOMATICALLY, BUT LEFT DOOR DOES NOT UNLOCK WHEN ACTUATING LEFT DOOR LOCK REMOTE HANDLE.

1) Place selector in "PARK" and lock all doors. Connect test light between ground and module "H" terminal. If left door does not unlock, proceed to step **2)**. If left door unlocks, check remote handle switch ground, remote handle switch for defects, or for open circuit in wire between remote handle switch and module.

2) If door did not unlock, turn ignition to "ON". Connect test light between ground and module "F" terminal. If door unlocks, replace module printed circuit. If door does not unlock, perform Left Door Unlocking Relay Test.

GENERAL MOTORS AUTOMATIC – BUICK & CADILLAC (Cont.)

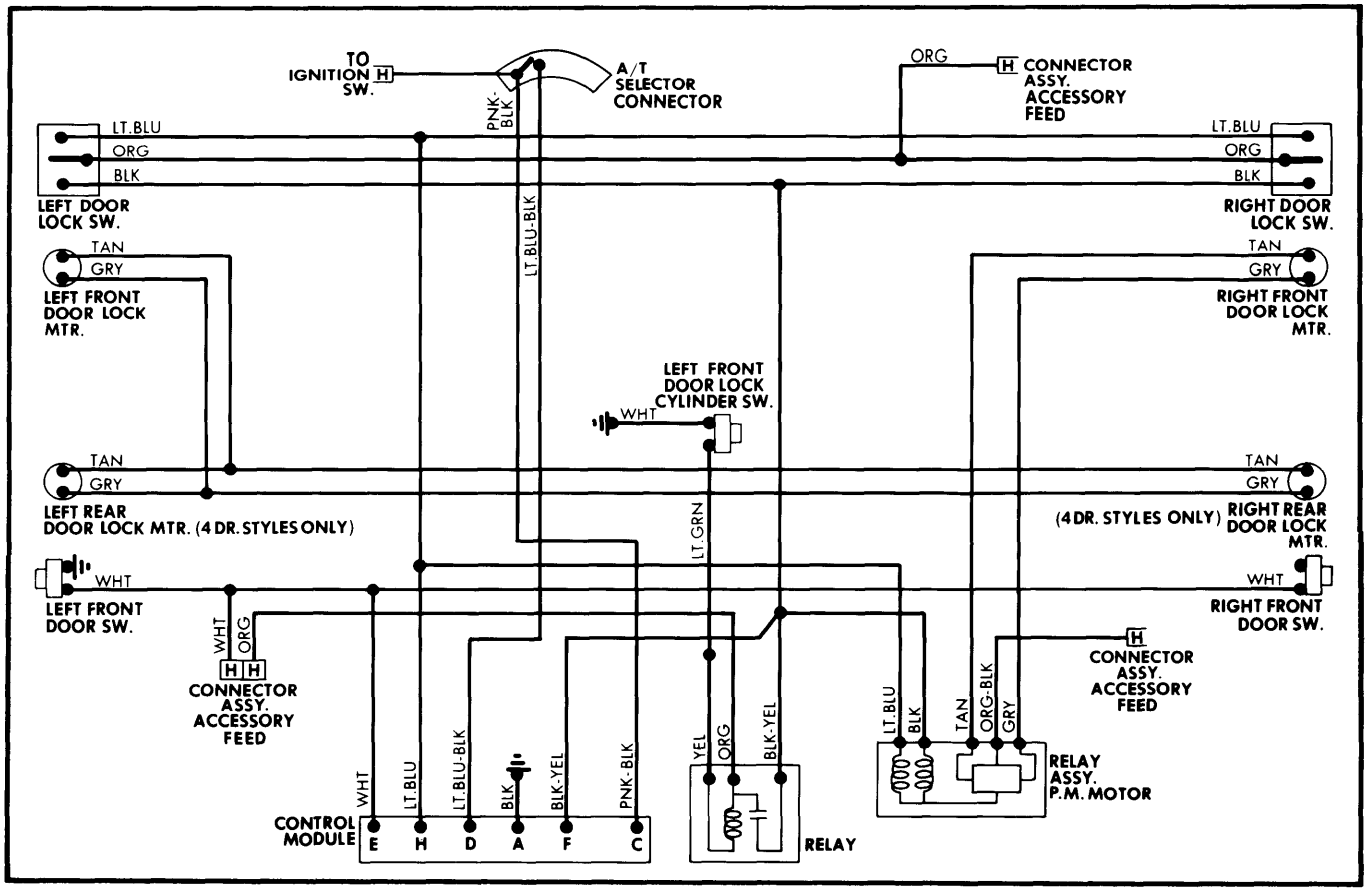

Fig. 2 Buick Automatic Door Lock Wiring Diagram

DOORS LOCK AUTOMATICALLY, BUT RIGHT DOOR DOES NOT UNLOCK WHEN ACTUATING RIGHT DOOR LOCK REMOTE HANDLE

Follow left door lock remote handle test above, testing first the module "J" terminal, and then the "E" terminal. If right door does not unlock, perform Right Door Unlocking Relay Test.

DOORS LOCK AUTOMATICALLY WITH DRIVERS SEAT UNOCCUPIED AND SELECTOR LEVER IN "DRIVE"

Connect test light between ground and module "B" terminal. If light remains off, replace module printed circuit. If light comes on, check module to seat sensor Yellow wire for grounded condition. Also check seat sensor for a failure to close condition.

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 opens or shorts in Orange/Black wire in the following circuits: Automatic Door Lock; Power Seat; Seat Back Lock.

DOORS LOCK AND UNLOCK AUTOMATICALLY BUT RIGHT OR LEFT FRONT DOOR FAILS TO UNLOCK FROM CONTROL SWITCH IN ARMREST

Perform appropriate (right or left) Unlock Relay Functional Test.

LOCK RELAY FUNCTIONAL TEST

1) With drivers seat occupied, doors unlocked, courtesy lights off, and transmission selector lever in "PARK", connect test light between ground and Orange/Black wire at relay. Move selector to "DRIVE".

NOTE – *Relay must be grounded externally and all doors closed. If light remains off, check for open circuit in Orange/Black wire between relay and module.*

2) If light came on momentarily in step **1)**, probe Orange/Black wire at relay. If light comes on, proceed to step **3)**. If light remains off, check for open in Orange/Black wire between relay source.

3) Move selector to "PARK" and probe Lt. Blue wire relay terminal and move selector to "DRIVE". If light remains off, replace lock relay. If light comes on momentarily, then goes out and doors lock, relay is good. If all doors do not lock, check for open in Lt. Blue wire between relay and door lock actuator.

GENERAL MOTORS AUTOMATIC – BUICK & CADILLAC (Cont.)

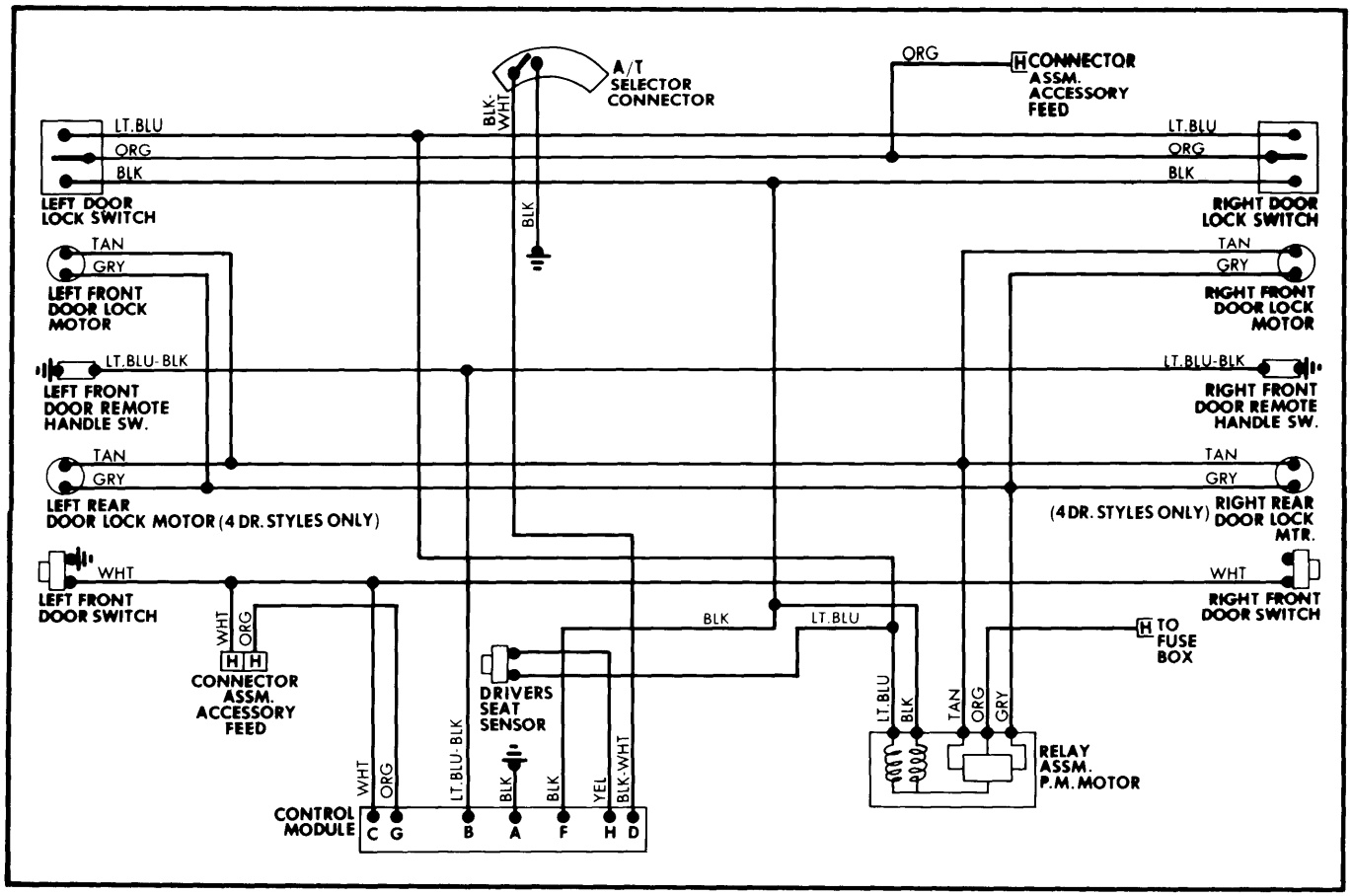

Fig. 3 Cadillac Automatic Door Lock Wiring Diagram

UNLOCK RELAY FUNCTIONAL TESTS

NOTE – *Tests for right and left unlock relays are the same except for wire color codes.*

1) Place selector in "PARK" and lock all doors from switch in armrest. Connect test light between ground and Lt. Blue wire terminal (right), Tan wire terminal (left) at relay. If door does not unlock, proceed to step **2**). If door unlocks, check for open circuit in wire between relay terminal just tested and module.

2) Probe Orange wire terminal at relay. If light comes on, proceed to step **3**). If light failed to come on, check for an open circuit in Orange wire between relay and source.

3) Probe Black wire at relay and if the light comes on, proceed to step **4**). If light remains off, check Black wire between relay and source for open circuit condition.

4) Actuate door remote handle while probing Lt. Blue wire and Black wire at relay. If light comes on momentarily, proceed to step **5**). If light fails to come on, replace door lock relay.

5) Lock all doors. Unlock doors using armrest switch while probing Black wire terminal. If light comes on momentarily, proceed to step **6**). If light fails to come on, check for open circuit in Black wire between relay and lock switches in armrest.

6) Lock all doors. Unlock doors using arm rest switch while probing Dk. Blue wire (right), Black wire (left) terminal. If light remains off, replace door unlock relay. If light comes on and door unlocks, unlock relay is good. If test light comes on but door does not unlock, check for an open circuit in Dk. Blue wire (right), Black wire (left), between relay and front door lock solenoid.

REMOVAL & INSTALLATION

MODULE & RELAYS

Removal (Cadillac) – Remove shroud and deadener. Remove module bracket retaining screw and pull module downward. Remove unlock relays from module and lock relay retaining screw to detach lock relay.

NOTE – *Establish external ground for lock relay before testing.*

Installation – To install module of relays, reverse removal procedures.

Removal (Buick) – Remove module from behind glove box and remove relays from module as required.

Installation – To install, reverse removal procedure.

GENERAL MOTORS AUTOMATIC – BUICK & CADILLAC (Cont.)

PRINTED CIRCUIT BOARD

Removal – Lower module and remove relays as required. Disengage locking tab on module housing and separate module halves. Insert small screwdriver into hole at edge of printed circuit board and pry out circuit board.

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 in AUTOMATIC TRANSMISSION Section.*

REMOTE CONTROL HANDLE SWITCHES

Removal – Remove upper and lower door trim panels as required. Remove switch from base of front door inside handle.

Installation – To install, reverse removal procedure.

SEAT SENSOR (CADILLAC)

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