

# POWER LOCKS

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### GENERAL INFORMATION

All doors can be locked or unlocked electrically by operating the switch on a front door panel or arm rest.

The rear doors can be locked or unlocked by actuation of the front door switch, or can be locked or unlocked mechanically and independently with their respective locking knobs.

The front doors can be locked or unlocked mechanically with the locking knob regardless of electrical locking and unlocking actuation with the front door knobs.

The right and left front door on all car lines can be locked or unlocked mechanically from the outside with the key or electrically as described above. The left front can also be unlocked by actuation of the inside remote door handle. The right front door on AC, AG, AJ and AY can be unlocked by actuation of the inside remote door handle.

The deck lid lock consists of a latch with internal solenoid and push button switch. The solenoid is energized only when the push button is depressed.

### DOOR LOCK INHIBIT

The power door lock inhibit system prevents the doors from being locked using the power door locks when either of two conditions occur:

- (1) The key is in the ignition switch and any of the doors are open. The ignition switch does not have to be ON.
- (2) The key is in the ignition switch and the headlamps are on.

### KEYLESS ENTRY SYSTEM

The system allows locking and unlocking of vehicle door(s) and Trunk lid by remote control using a hand held radio transmitter. The ignition switch must be OFF before the trunk lid can be unlocked with the transmitter.

The receiver may receive signals from two transmitters. Each transmitter has its own code, and the code has been stored in memory. If the transmitter is replaced or a second transmitter is added, the code on both units have to be placed in memory.

### CIRCUIT BREAKER TEST

Find correct circuit breaker on fuse block. Pull out slightly but be sure that circuit breaker terminals still contact terminals in fuse block. Connect ground wire of voltmeter to a good ground. With probe of voltmeter positive wire, check both terminals of circuit breaker for 12 volts. If only one terminal checks at 12 volts, circuit breaker is defective and must be replaced. If neither terminal shows 12 volts, check for open or shorted circuit to circuit breaker.

### WIRING VOLTAGE TEST

The following wiring test sequence determines whether or not voltage is continuous through the body harness to switch.

- (1) Remove left side switch from trim panel.
- (2) Carefully separate multiple terminal block on wiring harness from switch body.
- (3) Connect one lead of test light to a ground terminal:
  - Black Wire AA and AC Bodies
  - Gray wire AG and AJ Bodies
  - Touch other test light lead to Red Wire terminal.
  - If test light comes on, the wiring circuit between the battery and switch is functional.
  - If test light does not come on, check 30 amp circuit breaker or for a open circuit.

### SWITCH TEST

Remove the switch from its mounting location. Using an ohmmeter, refer to (Fig. 1) to determine if

continuity is correct in the Lock and Unlock switch positions. If these results are not obtained, replace the switch.

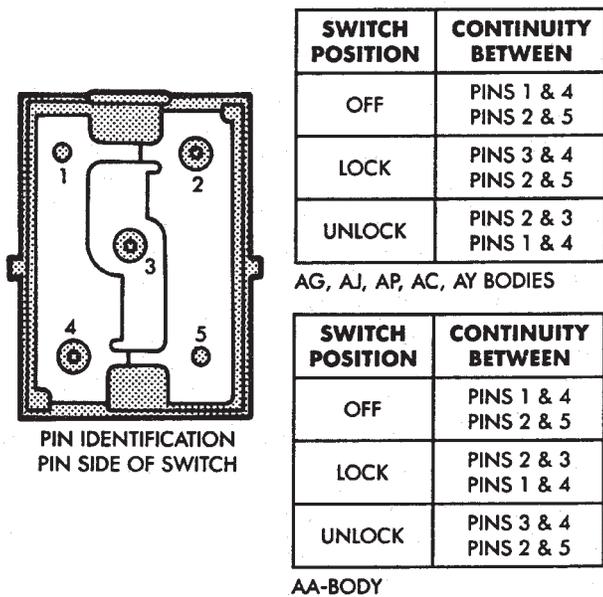


Fig. 1 Door Lock Switch Continuity

**ELECTRIC MOTOR TEST**

Make certain battery is in normal charged condition before circuits are tested.

To determine which motor is faulty, check each individual door for electrical lock and unlock or disconnect the motor connectors one at a time, while operating the door lock switch. In the event that none of the motors work, the problem may be caused by a shorted motor, or a bad switch. Disconnecting the defective motor will allow the others to work.

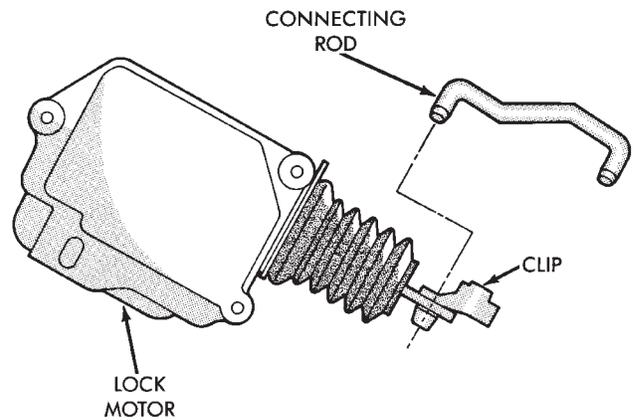
The power lock motors are also equipped with a thermal protection system which prevents the motors from burning out. The motors may chatter if they are continuously activated.

To test an individual door lock motor, disconnect the wire connector at the motor (Fig. 2 and 3). Test at the connector for 12 volts while applying the door lock switch. If no voltage repair wire. Apply 12 volts to the motor terminal, and a known good ground to the other terminal to check motor operation.

Should the motor defect be a result of a broken wire, it should have no effect on the operation of the other motors.

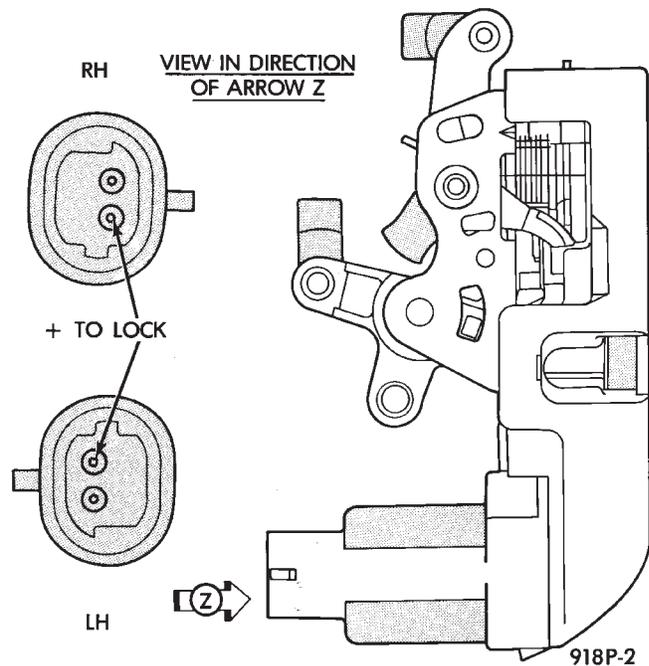
**POWER DOOR LOCKS**

When AC, AG, AJ or AY Body vehicles are equipped with power door locks, the system includes an automatic door locking feature which is actuated through the vehicle's body controller.



908P-1

Fig. 2 Door Lock Motor



918P-2

Fig. 3 Door Latch with Lock Motor – AC and AY Bodies

When this system is enabled the automatic door locks will work automatically. When the system is disabled the door locks will work by use of the door lock switches only.

The body controller controls the power locks when the door lock switch is activated. If the door lock switch is pressed for longer than eight consecutive seconds, the body controller will de-energize the door lock relay. Also, the body controller will automatically lock all doors when all of the conditions below are met:

- All doors are closed
- The vehicle speed exceeds 15 ± 1 MPH
- The throttle position sensor tip-in is greater than 10 ± 2 degrees.

The DRB II must be used to enable/disable the automatic door lock system. Refer to the Body Diagnostic Procedures Manual for the procedure.

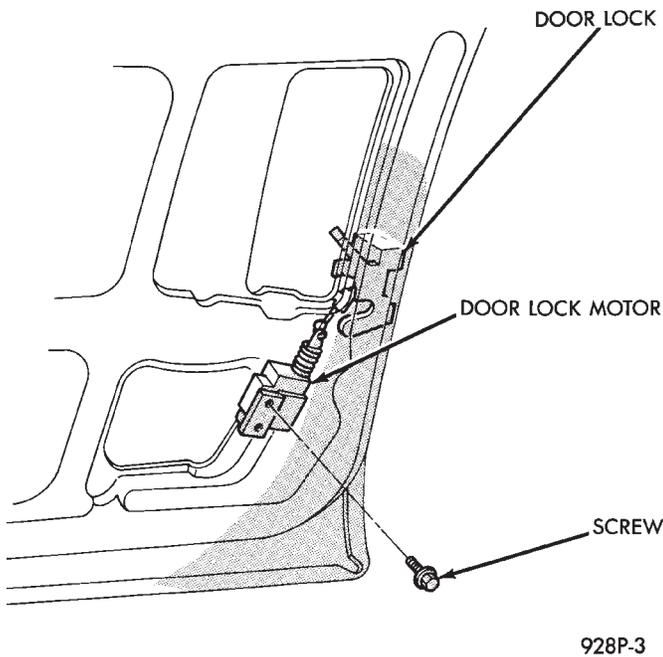
The body controller will automatically re-lock all doors if the above conditions are met and if any of the door become ajar. The body controller does not control the door unlock function. The switch is wired directly to the lock relay.

**DOOR LOCK SYSTEM TEST**

For complete testing of the AC, AG, AJ and AY body automatic door lock systems, refer to the Body Diagnostic Procedures Manual.

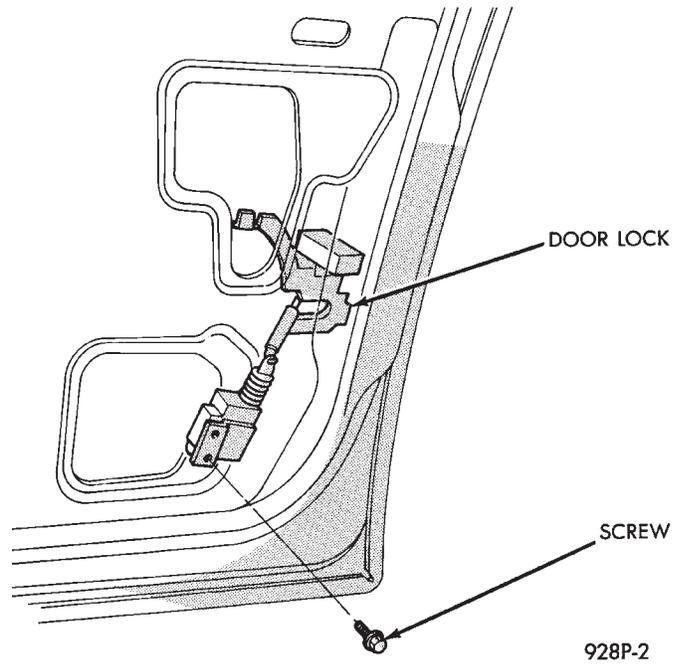
**DOOR LOCK MOTOR REPLACEMENT**

- (1) Remove inside door release handle, window regulator handle, if equipped and door trim panel.
- (2) Roll door watershield away from lower rear corner of door to reveal inside panel access opening.
- (3) Disconnect link at the motor as required (Fig. 4 through 7).

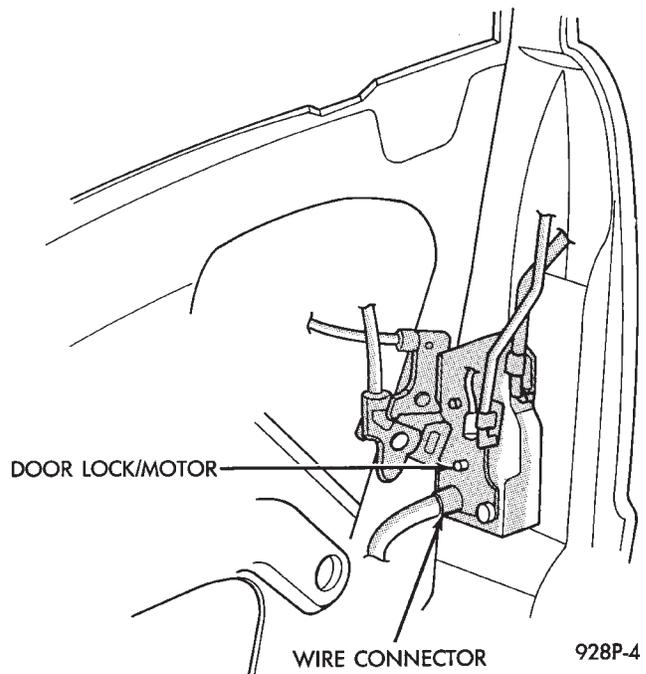


**Fig. 4 Front Power Door Lock Motors – AA, AG, AJ and AP Bodies**

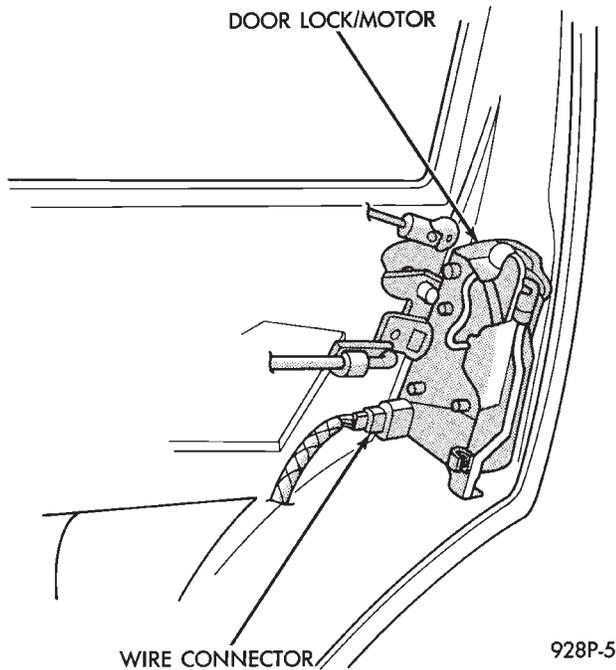
- (4) Disconnect motor lead wires.
- (5) Remove motor or latch attaching screws and remove motor assembly.
- (6) For installation reverse above procedures.



**Fig. 5 Rear Power Door Lock Motors – AA and AP Bodies**



**Fig. 6 Front Power Door Lock Motors – AC and AY Bodies**



**Fig. 7 Rear Power Door Lock Motors – AC and AY Bodies**

#### DECK LID OPERATION

For vehicles equipped with electric deck lid release.

#### TEST

- (1) Confirm solenoid lead wire is connected and 10 volts or more are available at solenoid.
- (2) Provide proper ground through latch mounting screws.
- (3) Remove latch and examine plunger. Plunger should spring back when pressed.
- (4) Insure that solenoid plunger travel is adequate approximately 16 mm (5/8 inch).

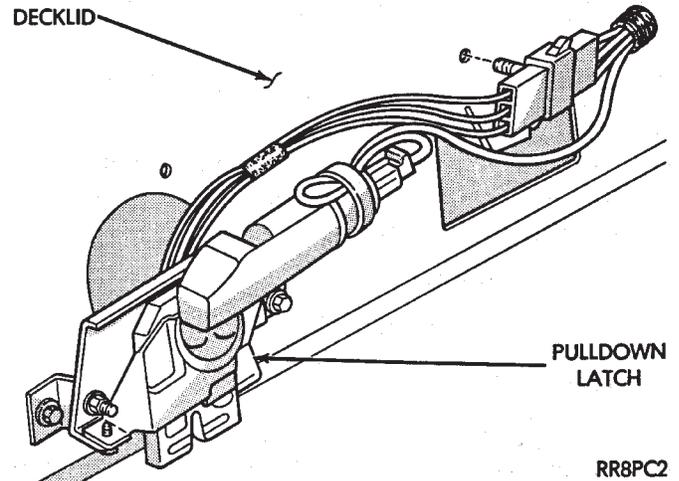
#### ADJUSTMENT

Adjust deck lid latch and striker so that deck lid latches with a moderate slam. With ignition switch in On or Accessory position, push deck lid unlock switch. Should latch fail to lock or unlock replace latch assembly.

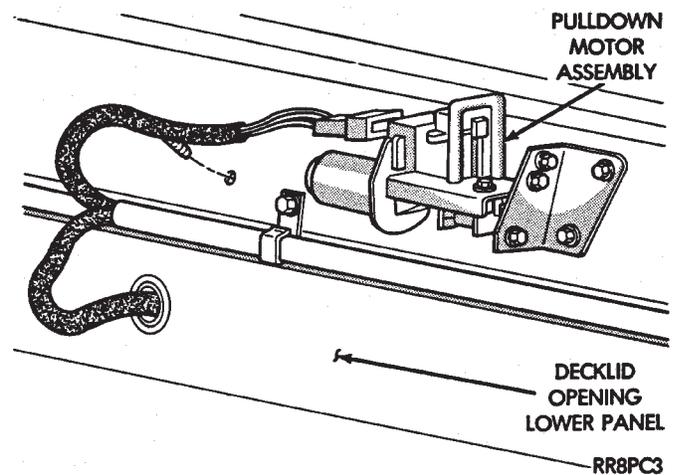
#### DECK LID PULL-DOWN SYSTEM – AC and AY BODIES

C-body vehicles have, as an option, a deck lid power pull-down mechanism which latches and pulls the deck lid down the last 25 mm (1 in.) of travel. The system incorporates a combination latch/deck lid release mechanism and a power pull-down motor assembly (Fig. 8 through 10).

When the deck lid is closed, very light pressure is required to cause the latch to grab the pull down bar. The pull down motor will automatically take the deck lid to its completely closed position.



**Fig. 8 Deck Lid Pull Down Latch – AC and AY Bodies**



**Fig. 9 Deck Lid Power Pull Down Motor – AC and AY Bodies**

#### POWER PULL DOWN

##### (1) Latch testing:

(a) With the deck lid open and the latch switch released. There should be continuity between the black with the red tracer (BK/RD\*) and the black (BK) wire (Fig. 10).

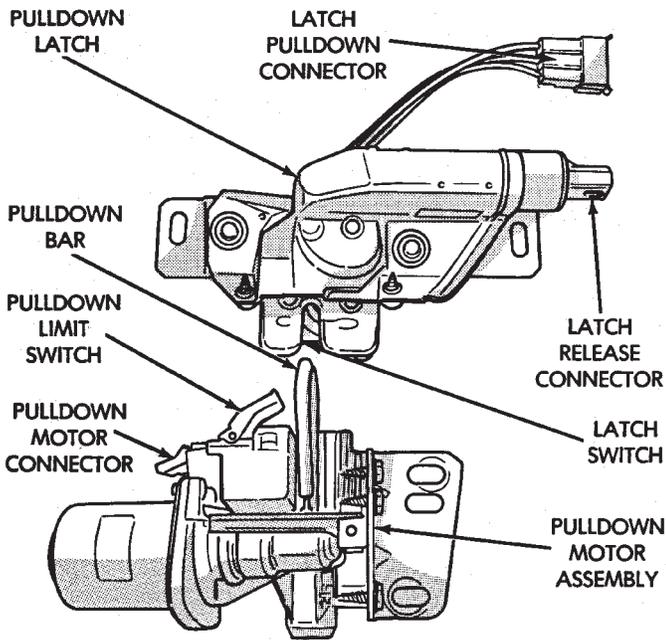
(b) With the latch switch depressed (as if the deck lid was closed), there should be continuity between the black (BK) and the black with white tracer (BK/WT\*) wire terminals.

(c) If these results are not obtained, replace the pull down latch.

##### (2) Pull down motor testing:

(a) With the pull down motor connector wiring removed, connect a 12 volt positive source to the red (RD) wire terminal of the motor and ground the tan (TN) wire terminal. This will cause the pull down bar to retract.

(b) With the positive source still connected to the red (RD) wire terminal, ground the grey (GY) wire



RR8PC4

**Fig. 10 Deck Lid Power Pull Down Assembly – AC and AY Bodies**

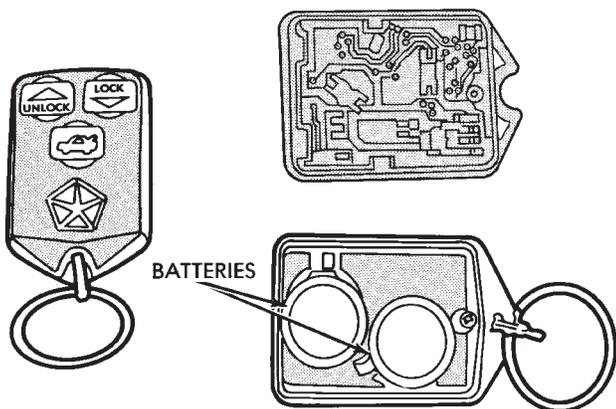
terminal. This will cause the pull down bar to raise to the deck lid open position. If the pull down limit switch is depressed at this time, the motor should stop.

(c) If these results are not obtained, replace the pull down motor assembly.

## REMOTE KEYLESS ENTRY

### OPERATION

The transmitter has three buttons for operation (Fig. 11).



918Q-3

**Fig. 11 Transmitter**

- UNLOCK driver's door, enable illuminated entry, and disarm the Theft Security System. Pushing and

releasing the button once will unlock the driver's door. Two times within five seconds all doors will unlock.

- LOCK all doors, set Theft Security System and chirp horn. Chirp of horn is a short toot to notify that the alarm system is set and the indicator lamp on the instrument panel will flash for about 15 seconds.
- Unlock Trunk Lid
- The receiver is capable of retaining VAC even when power is removed.
- Each receiver must have at least one and no more than two transmitters.

### CONTROL RANGE

Operation range is within 7 meters (23 ft.) of the receiver.

### TRANSMITTER BATTERY

The battery can be removed without special tools and are readily available at local retail stores. The recommended battery is Duracell DL 2016 or equivalent. Battery life is about one to two years.

### PROGRAM REMOTE KEYLESS ENTRY

(1) Remove trim cover or floor console as needed that may be covering the Air Bag System Diagnostic Module (ASDM).

(2) Pull floor carpeting back between the accelerator pedal and ASDM.

(3) Locate program line a dark green wire with an insulator on the end. Located between the accelerator and (ASDM).

(4) Turn ignition switch to the ON position.

(5) Connect the program line from the Remote Keyless Entry Module to ground. The door locks will lock and unlock to indicate the receiver is ready to receive transmitter code. Trunk solenoid will not cycle.

(6) Press any button on the transmitter to set code. If there is a second transmitter it has to be set at this time. The locks will cycle to confirm programming.

(7) Disconnect the program line from ground. This returns the system to its normal operation mode.

(8) Replace trim cover or floor console as necessary.

### HORN CHIRP CANCELLATION

During the programming operation the horn chirp can be disabled using the following procedures:

(1) Remove trim cover or floor console as needed that may be covering the Air Bag System Diagnostic Module (ASDM).

(2) Pull floor carpeting back between the accelerator pedal and ASDM.

(3) Locate program line a dark green wire with a insulator on the end. Located between the accelerator and (ASDM).

(4) Turn ignition switch ON.

(5) Connect the program line from the Remote Keyless Entry Module to ground. The door locks will lock and unlock to indicate the receiver is ready to receive transmitter code. Trunk solenoid will not cycle.

(6) Press any button on the transmitter to set code. If there is a second transmitter it has to be set at this time. The locks will cycle to confirm programming.

(7) Press LOCK then UNLOCK transmitter buttons repeat three times.

(8) Door locks and rear release will cycle three times as feedback of Horn Chirp lockout.

(9) Remove ground from program line to restore normal system operation.

(10) To reinstate the Horn Chirp feature refer to Program Remote Keyless Entry.

#### TESTING

CONDITION: When trying to program the receiver module in the vehicle with a new transmitter and there is no response from the module, Example: the door locks do not cycle through a lock/unlock routine. Refer to Fig. 12 for a block wiring diagram or to Group 8W, Wiring Diagrams.

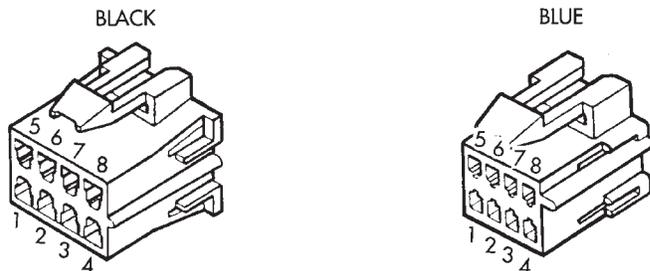
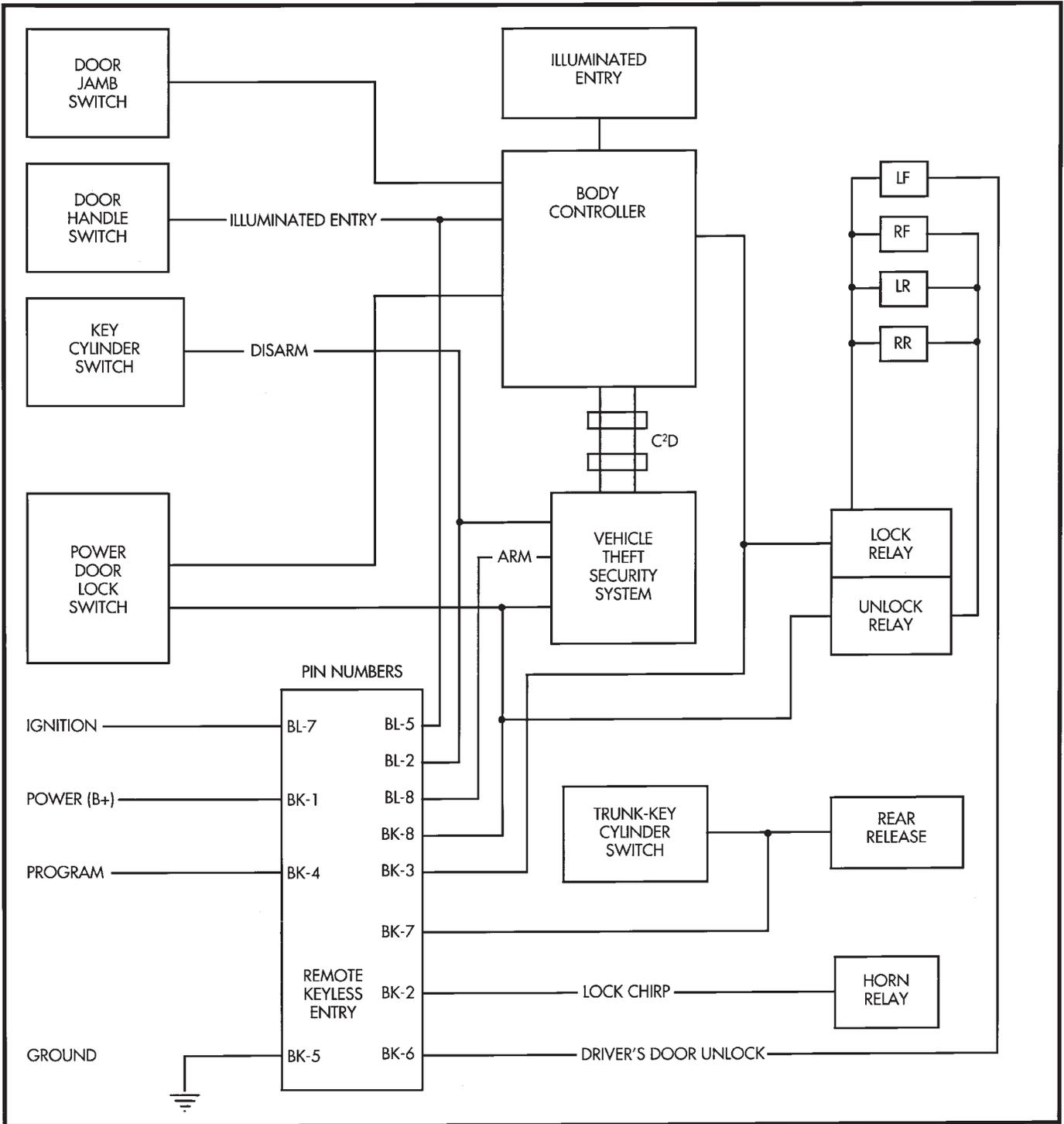


Fig. 12 Block Wiring Diagram

(1) Be sure that the module has a battery feed from the 20 Amp breaker in cavity 1 of the black connector. Also affected would be the optical horn and the stop lamps.

(2) Be sure that the module has an ignition feed from 5 Amp fuse in cavity 8 of the black connector. Also affected would be the body computer, instrument cluster and message center.

(3) Be sure that the module has a ground from the right side cowl behind the body computer to the cavity 5 of the black connector.

(4) Be sure that you are supplying a good ground to the programming wire.

(5) If the above circuits are good, replace the Receiver Module.

**CONDITION:** Doors can be locked or unlocked with the Keyless Entry transmitter. But the doors will not lock. The Vehicle Theft Alarm system will not arm, when using only the power door LOCK switch in the driver's door.

(1) Be sure you have not left key in the ignition column lock cylinder.

(2) If step 1 is OK, check the Key in Lock switch circuit in the steering column for a short to ground.

(3) In this problem the body computer controls the LOCK function. Be sure that it is providing a battery voltage output to the door lock relay. The door lock relay controls the door lock motors.

**CONDITION:** Doors will lock but Vehicle Theft System will not arm when using the transmitter.

(1) The Keyless Entry Receiver Module controls the door lock signal to the door lock relay. The door lock relay controls the door lock motors. Check for battery voltage at cavity 10 of the Theft Alarm module from the Receiver module.

(2) If voltage is OK, replace Receiver module.

**CONDITION:** All doors except driver's door will lock with the transmitter.

(1) Test the driver's door output of the Receiver Module for a ground.

(2) If there is no ground at the pin, replace the Receiver module.

(3) If there is a ground at the output, replace the door lock motor.

**CONDITION:** Only driver's door will lock with the transmitter.

- Repair ground circuit to unlock relay
- Replace unlock relay

**CONDITION:** Doors do not lock with the transmitter, but still get horn CHIRP that indicates that they did lock. Replace Receiver module.

**CONDITION:** Doors will lock with the transmitter but there is no horn CHIRP.

(1) Press horn button, listen horn sound.

(2) If the horn sounded, change horn relay.

(3) Still no CHIRP, check continuity between the horn relay and the receiver output pin BK-2. Repair as necessary.

(4) Still no horn CHIRP, replace the receiver module.

(5) If using a DRB II, refer to Body Diagnostic Procedures.

### REMOTE KEYLESS MODULE REPLACEMENT

(1) Remove lower right instrument panel silencer.

(2) Remove glove box assembly.

(3) Remove three screws attaching the mounting bracket to instrument panel.

(4) Lower bracket and module assembly, to disconnect wire connector.

(5) Remove two screws attaching the Remote Keyless entry Module to bracket.

(6) Remove two screws attaching the security module to bracket.

(7) To installation reverse above procedures.

### LAMP OUTAGE MODULE REPLACEMENT

(1) Remove lower right instrument panel silencer.

(2) Remove glove box and ash receiver module.

(3) Remove three screws attaching the mounting bracket to instrument panel.

(4) Lower bracket and module assembly, to disconnect wire connectors.

(5) Remove two screws attaching the Lamp Outage Module to bracket.

(6) Remove two screws attaching the security module to bracket.

(7) To install reverse above procedures.

### DOOR LOCK INHIBIT

The power door lock inhibit system prevents the doors from being locked using the power door locks when either of two conditions occur:

(1) The key is in the ignition switch and any of the doors are open. The ignition switch does not have to be ON.

(2) The key is in the ignition switch and the headlamp are on.

### AC, AG, AJ AND AY BODIES

With the ignition switch in the ON or OFF position and the driver's door open the Body Controller will ignore the command to lock the power door locks. Once the key is removed, or the driver's door is closed, the Body Controller will allow the power door locks to lock. Refer to Body Diagnostic Procedure Manual for further testing procedures.

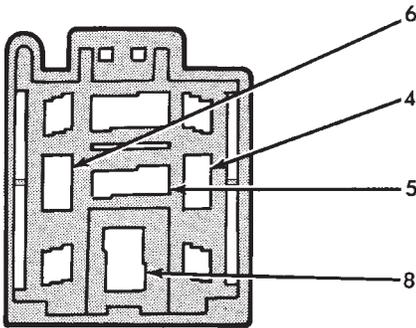
### AA BODY

Uses a power door lock inhibit relay. The relay is located above the glove box compartment.

**INHIBIT RELAY**

- (1) Using a voltmeter, test for battery voltage at pin 4. If no voltage check fuse 15 (Fig. 13).

WIRE END VIEW



928P-7

**Fig. 13 Inhibit Relay Connector**

- (2) Using a ohmmeter, check for continuity to ground at pin 8. If no continuity to ground, check instrument panel ground.

- (3) To check pin 5:

(a) The key is in the ignition switch and a door is open.

(b) The key is in the ignition switch and the headlamps are ON.

(c) Test for continuity to ground.

(d) If not, the relay contact is open or the relay is being energized when it should not be. Pin 5 feeds the ground from the relay to door lock switch.

- (4) To check pin 6:

(a) The key is in the ignition switch and a door is open.

(b) The key is in the ignition switch and the headlamps are ON.

(c) Test for continuity to ground.

(d) If not, check key in switch, headlamps on switch and/or door jamb switches. Pin 6, feeds ground from key in switch to the relay.

