

POWER DOOR LOCKS

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GENERAL INFORMATION

INTRODUCTION

All doors can be locked or unlocked electrically by operating the switch on either front door panels. When the door lock switch is activated the Body Control Module actuates the door lock relay.

All doors can be locked or unlocked mechanically and independently with their respective locking knobs.

The right and left front door can be locked or unlocked mechanically from the outside with the key or remotely with the Remote Keyless Entry (RKE) transmitter. The front doors can also be unlocked by actuation of the inside remote door handle.

The deck lid can be unlatched by either depressing the push switch from inside the car, manually by key from outside or by depressing the remote keyless entry deck lid release button two times. This feature is customer programmable. The customer has a choice of one or two button presses for deck lid opening. The vehicle is shipped in the button pressed twice mode.

DESCRIPTION AND OPERATION

POWER DOOR LOCKS

The Body Control Module (BCM) actuates the power door lock relays when a door lock switch is activated. If the door lock switch is pressed for longer than eight consecutive seconds, the BCM will de-energize the door lock relay.

The system includes an Automatic Door Locking feature. **The vehicle is shipped with the system enabled.** When the system is disabled the door locks will work by use of the door lock switches and the Remote Keyless Entry System only. When the Automatic Door Lock System is enabled the BCM will automatically lock all the 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 scan tool (DRB) is used to enable/disable the automatic door lock system. Refer to the proper Body Diagnostic Procedures Manual for the procedure. They are also customer programmable. Refer to owners manual for customer programming procedures.

DESCRIPTION AND OPERATION (Continued)

The Body Control Module will automatically re-lock all doors if the above conditions are met and if any of the doors become ajar and then closes again.

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.

CHILD PROTECTION LOCK

The child protection locks are on the rear doors only. The lock when engaged, will disable the inside door handle from opening the door. The lock is part of the latch/lock assembly. The lock is engaged by moving a lever that is located on the rearward inside edge of the door.

DOOR LOCK INHIBIT

With the key in the ignition switch and the driver's door open, the Body Control Module (BCM) will ignore the command to lock the power door locks. Once the key is removed, or the driver's door is closed, the BCM will allow the power door locks to lock.

KEYLESS ENTRY SYSTEM

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

The receiver may receive signals from four transmitters (vehicles are shipped with two). Each transmitter has its own code and the code has been stored in memory. If the transmitter is replaced or other transmitters are added, the code for each unit must be learned.

DIAGNOSIS AND TESTING**AUTOMATIC DOOR LOCK SYSTEM**

For complete testing of the automatic door lock systems, refer to the proper Body Diagnostics Manual.

DECK LID RELEASE

For vehicles equipped with electric trunk lid release.

- (1) Confirm motor 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).

DOOR LOCK MOTOR

Make certain battery is in normal 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 maybe caused by a shorted motor, a bad switch or a bad relay. Disconnecting a defective motor will allow the others to work.

To test an individual door lock motor, disconnect the electrical connector from the motor. To lock the door, connect a 12 volt power source to the positive pin of the lock motor and a ground wire to the other pin (Fig. 1). To unlock the door reverse the wire connections at the motor pin terminals. If these results are NOT obtained, replace the motor.

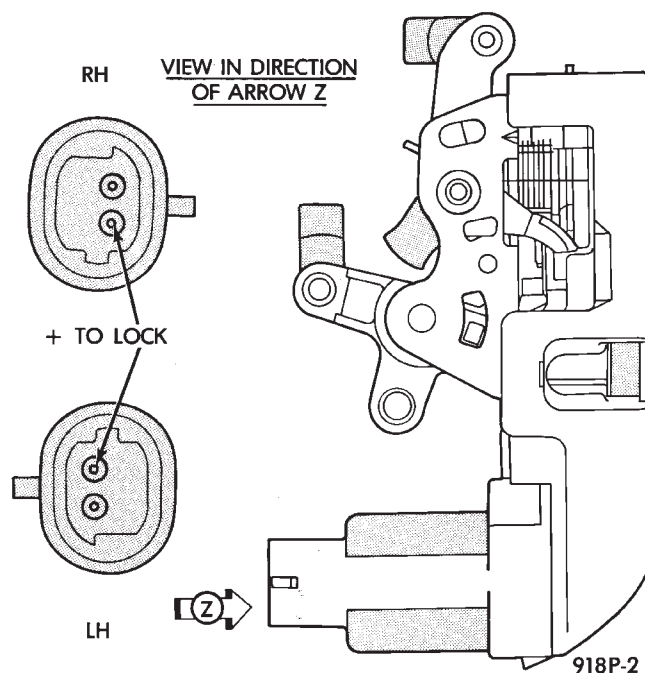


Fig. 1 Door Lock Motor/Latch

DOOR LOCK SWITCH

Remove the switch from its mounting location. Using an ohmmeter, refer to Door Lock Switch Continuity Test table to determine if continuity is correct in the Lock and Unlock switch positions. If these results are not obtained, replace the switch.

DOOR LOCK SWITCH CONTINUITY TEST

SWITCH POSITION	CONTINUITY BETWEEN	RESISTANCE VALUE
LOCK	1 AND 4	2700 Ω $\pm$ 10%
UNLOCK	1 AND 4	620 Ω $\pm$ 10%

DIAGNOSIS AND TESTING (Continued)

DOOR LOCK SYSTEM

For complete testing of the automatic door lock systems, refer to the proper Body Diagnostic Procedures Manual.

VOLTAGE

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

- (1) Remove left side switch from door 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:
 - Touch other test light lead to battery feed B+ terminal.
 - If test light comes on, the wiring circuit between the battery and switch is functional.
 - If test light does not come on, check fuse 13 in the Junction Block for a blown fuse. Refer to Group 8W, Wiring Diagrams for circuit information.

REMOVAL AND INSTALLATION

DECK LID RELEASE MOTOR

REMOVAL

- (1) Raise deck lid to the full up position.
- (2) Remove latch cover attaching screws then remove cover.

- (3) Remove two mounting motor screws and remote key cable retainers then remove motor.

INSTALLATION

For installation, reverse the above procedures.

DOOR LOCK MOTOR/LATCH

REMOVAL

- (1) Remove door trim panel, refer to Group 23, Body for removal procedures.
- (2) Disconnect motor linkage at the latch/lock motor (Fig. 1).
- (3) Disconnect motor wire connector.
- (4) Remove latch/lock assembly attaching screws and remove assembly.

INSTALLATION

For installation, reverse the above procedures.

ADJUSTMENTS

TRUNK LID

Adjust deck lid latch and striker so that the 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.

REMOTE KEYLESS ENTRY

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DESCRIPTION AND OPERATION

INTRODUCTION

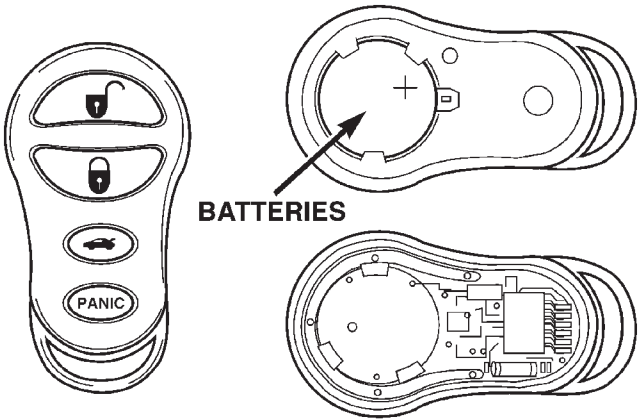
The system allows locking and unlocking of vehicle door(s), deck lid release, and panic by remote control using a hand held radio frequency transmitter. The vehicle must be in PARK before the trunk lid can be unlatched with the transmitter.

The receiver may receive signals from up to four transmitters. Each transmitter has its own code, and the code is programmed and stored into receiver memory. If a transmitter is replaced or additional transmitters are added, the codes for all units have to be reprogrammed into the receiver memory. If a receiver module is replaced, the transmitter codes must be stored in the new receiver memory.

OPERATION

The transmitter has four buttons for operation (Fig. 1). They are LOCK, UNLOCK, DECK LID RELEASE, and PANIC.

- The UNLOCK button will unlock the driver's door and enable illuminated entry. Pushing and releasing the button once will unlock the driver's door. Pushing and releasing the button two times, within a five second interval, will unlock all doors.
- Upon pressing the LOCK button, the horn will sound a short CHIRP (if enabled) and flash the park lamps to notify that the all door lock signal was received and set. Illuminated entry is cancelled and the interior lamps are faded to off.
- Pushing and releasing the DECK LID RELEASE button (one or two times depending on customer preference) within a two second interval, will slightly ajar the deck lid.
- Pushing the PANIC button will cause the panic alarm to sound for three minutes, until the panic



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Fig. 1 Remote Keyless Entry Transmitter

button is pressed a second time or, the vehicle reaches a speed of 15 mph.

The receiver is capable of retaining a Vehicle Access Code (VAC) even when power is removed.

Each Remote Keyless Entry (RKE) module must have at least one and no more than four transmitters.

HORN CHIRP TOGGLE

Once the transmitters have been programmed, the horn chirp can be enabled/disabled by sending the horn chirp toggle operation code to the Body Control Module (BCM). This can be done using a DRB scan tool or by the customer. The horn chirp will enter the opposite state of its current programmed state by receiving this operation code. The BCM is responsible for keeping track of the horn chirp status.

DIAGNOSIS AND TESTING

RKE SYSTEM

When trouble shooting problems with the Remote Keyless Entry System, always verify that the power door lock/unlock switches are functional. If the doors do not lock/unlock with the power switches, the following modules should be analyzed:

- Lock/Unlock Switches
- Body Control Module
- Lock and unlock relays
- Door lock/unlock motors

If the following modules do not work:

- Remote keyless entry system
- Radio/clock
- Body Control Module
- Door lock switches

A blown fuse is the probable cause. The remote keyless entry fuse 13 is located in the Junction Block. To check for a blown fuse, pull the fuse out slightly, but maintain contact between the fuse terminals and the terminals in Junction Block. Using the voltmeter probe, check both terminals for 12 volts. If only one terminal measures battery voltage, the fuse is defective and must be replaced. If neither terminal measures battery voltage, check for an open or shorted circuit to the Junction Block, repair as needed. If battery voltage is still not available, check the high current fuse G in the Power Distribution Center, located in the engine compartment.

REMOTE KEYLESS ENTRY DIAGNOSIS

To diagnose the Remote Keyless Entry (RKE) System, use a DRB scan tool and refer to the proper Body Diagnostic Procedures Manual.

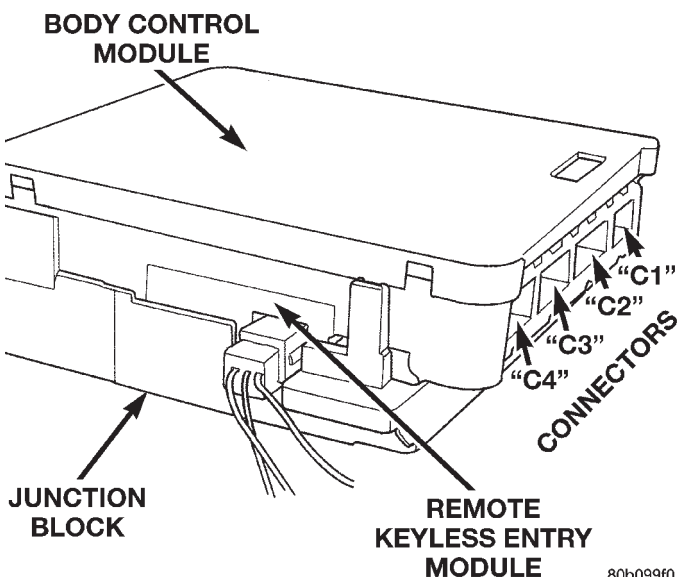
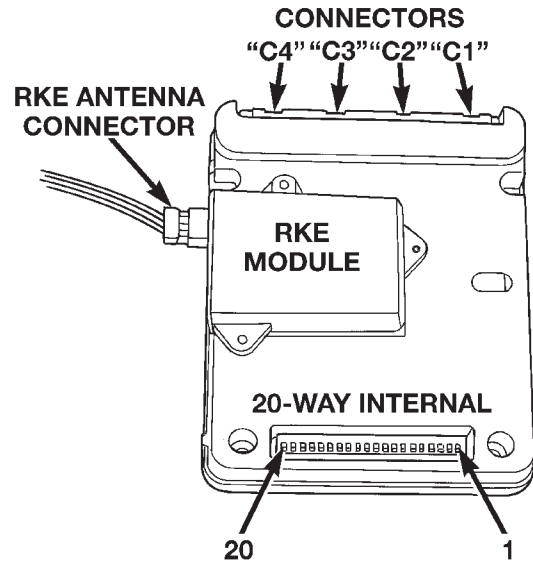


Fig. 2 Remote Keyless Entry Module Location



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Fig. 3 Remote Keyless Entry Module/BCM

SERVICE PROCEDURES

DECK LID RELEASE TOGGLE

Deck lid release toggle is programmed to "one press" or "two presses" by continually pressing the unlock button for a minimum of 4 seconds to a maximum of 10 seconds. Within the 4-10 second range, the deck lid release button is depressed. Both buttons are then released.

HORN CHIRP TOGGLE

The horn chirp toggle is programmed by continually pressing the lock button for a minimum of 4 seconds to a maximum of 10 seconds. Within the 4-10 second range, the unlock button is depressed. Both buttons are then released.

REMOVAL AND INSTALLATION

REMOTE KEYLESS ENTRY MODULE

The Remote Keyless Entry (RKE) Module is located between the junction block and body control module (Fig. 2). Refer to Group 8E, Instrument Panel and Systems for Junction Block/BCM Removal and Installation procedures.

REMOVAL

(1) With the junction block/BCM removed, separate the two. Refer to Group 8E, Instrument Panel and Systems for BCM Removal and Installation procedures.

(2) Remove the three retaining screws to RKE Module and separate from BCM.

REMOVAL AND INSTALLATION (Continued)

INSTALLATION

For installation, reverse the above procedures.

NOTE: The RKE transmitters must be reprogrammed to the new RKE module.

ADJUSTMENTS**PROGRAM REMOTE KEYLESS ENTRY TRANSMITTER(S)**

The Remote Keyless Entry Transmitter can be programmed with the use of the DRB, or by the customer.

PROGRAMMING TRANSMITTER WITH DRB

For procedures on programming the transmitter(s) with the DRB, refer to the proper Body Diagnostics Procedures Manual.

PROGRAMMING BY CUSTOMER

For a customer to be able to program RKE transmitters themselves, at least one RKE transmitter must be programmed already. This procedure is to add additional transmitters. If all transmitters are lost, the DRB must be used to program the new transmitters.

Transmitter programming by the customer is done by continually pressing the unlock button, on a pro-

grammed fob, for a minimum of 4 seconds to a maximum of 10 seconds with the ignition switch ON. Within the 4-10 second range, the panic button is depressed. Both buttons are then released.

The BCM will chime. Then press any button on each fob to be programmed. The BCM will chime as each fob is learned. To exit program mode, turn off ignition or wait 32 seconds. The BCM will chime again.

SPECIFICATIONS**TRANSMITTER BATTERY**

The transmitter has two 3 volt batteries, which can be removed and replaced without special tools. Insert a dime in the side slot of the transmitter and twist. The halves should separate and the batteries are stacked on top of each other. The batteries are available at local retail stores. Recommended batteries are Panasonic CR 2016 or equivalent. Battery life is about two years (Fig. 1).

TRANSMITTER RANGE

Operation range is within 12 meters (40 ft.) of the module/receiver.