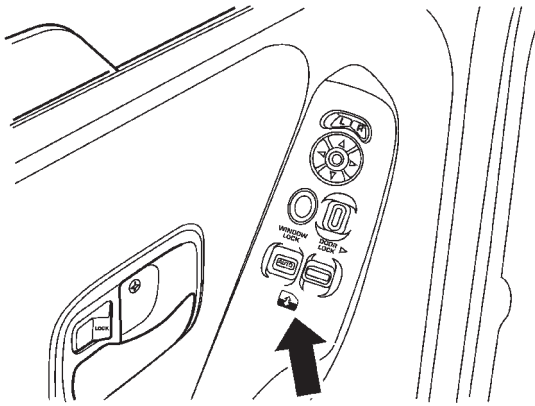


POWER LOCK SYSTEM (Continued)



809407e3

Fig. 1 Door Module**DESCRIPTION - REMOTE KEYLESS ENTRY SYSTEM**

The Remote Keyless Entry (RKE) system consists of the RKE key fob radio transmitter and an RKE module that contains a radio receiver and the program logic. The RKE module is installed in an RKE mini-dome lamp housing on the headliner of the vehicle, or in the housing of the optional overhead console, depending upon how the vehicle is equipped.

The RKE system for this vehicle also features a customer programmable horn chirp feature. This feature allows the customer the option of enabling or disabling the horn chirp request that the RKE receiver issues as an audible indication that a valid Lock signal has been received from the RKE transmitter. For more information on programming this feature, (Refer to 8 - ELECTRICAL/POWER LOCKS/REMOTE KEYLESS ENTRY MODULE - STANDARD PROCEDURE - REMOTE KEYLESS ENTRY MODULE PROGRAMMING).

The RKE system can retain the vehicle access codes of up to four transmitters. The transmitter codes are retained in memory, even if the battery is disconnected. If a transmitter is faulty or lost, new transmitter vehicle access codes can be programmed into the system using a DRBIII® scan tool. Refer to the appropriate diagnostic information.

OPERATION - POWER LOCK SYSTEM

The power lock system allows all of the doors and the liftgate to be locked or unlocked electrically by operating the switch on either front door trim panel. This system operates on battery current supplied on a non-switched fused B(+) circuit through a fuse in the Junction Block (JB) so that the system remains operational regardless of the ignition switch position.

Refer to the owner's manual in the vehicle glove box for more information on the features, use and operation of the power lock system.

OPERATION - REMOTE KEYLESS ENTRY SYSTEM

The Remote Keyless Entry (RKE) system is a radio frequency system that allows the use of a remote battery-powered radio transmitter to control the power lock system. On vehicles with the RKE option, the power locks can be operated by depressing the Lock or Unlock buttons of the RKE transmitter. The RKE system includes an illuminated entry feature, which turns on the courtesy lamps for a timed interval (about thirty seconds) when the vehicle is unlocked using the RKE transmitter.

Refer to the owner's manual in the vehicle glove box for more information on the features, use and operation of the RKE system.

DIAGNOSIS AND TESTING - POWER LOCK & REMOTE KEYLESS ENTRY SYSTEMS

On models without the Remote Keyless Entry (RKE) option, diagnosis should begin with the door modules. (Refer to 8 - ELECTRICAL/POWER LOCKS/DOOR MODULE - DIAGNOSIS AND TESTING - POWER LOCK CONTROL). As a preliminary diagnosis for models with the RKE system, note the power lock system and illuminated entry system operation while you actuate both the Lock and Unlock functions with the power lock switches and the RKE transmitter. Then proceed as the following results indicate:

- If the entire power lock system fails to function with either the power lock switches or the RKE transmitter, disconnect the wire harness connector from the RKE module and test the power lock system operation again using the power lock switches. If the power lock system now operates, diagnosis should begin with the Remote Keyless Entry Module. (Refer to 8 - ELECTRICAL/POWER LOCKS/REMOTE KEYLESS ENTRY MODULE - DIAGNOSIS AND TESTING). If the power lock system still fails to operate, diagnosis should begin with the door modules. (Refer to 8 - ELECTRICAL/POWER LOCKS/DOOR MODULE - DIAGNOSIS AND TESTING - POWER LOCK CONTROL).

- If the power lock system functions with both power lock switches, but not with the RKE transmitter, diagnosis should begin with the RKE transmitter. (Refer to 8 - ELECTRICAL/POWER LOCKS/KEYLESS ENTRY TRANSMITTER - DIAGNOSIS AND TESTING).

- If one power lock motor fails to operate with both of the power lock switches and/or the RKE transmitter, diagnosis should begin with the power

POWER LOCK SYSTEM (Continued)

lock motor. (Refer to 8 - ELECTRICAL/POWER LOCKS/DOOR LOCK MOTOR - DIAGNOSIS AND TESTING).

- If the RKE and power lock systems are functioning, but the illuminated entry system fails to operate, diagnosis should begin with the RKE module. (Refer to 8 - ELECTRICAL/POWER LOCKS/REMOTE KEYLESS ENTRY MODULE - DIAGNOSIS AND TESTING).

POWER LOCK MOTOR

DESCRIPTION

In the power lock and Remote Keyless Entry (RKE) systems, the door and liftgate locks are each actuated by a dedicated reversible electric motor mounted within each door and the liftgate. The power lock motor direction is controlled by the battery and ground feeds from the power lock and unlock relays integral to the Passenger Door Module (PDM).

The power lock motors in the doors cannot be repaired and, if faulty or damaged, the entire door latch must be replaced. The power lock motor for the liftgate is available for service separate from the liftgate latch.

OPERATION

The power lock motor direction is controlled by the battery and ground feeds from the power lock and unlock relays integral to the Passenger Door Module (PDM).

DIAGNOSIS AND TESTING - POWER LOCK MOTOR

Before you proceed with this diagnosis, confirm proper power lock switch operation. (Refer to 8 - ELECTRICAL/POWER LOCKS/DOOR MODULE - DIAGNOSIS AND TESTING - POWER LOCK CONTROL). Remember, the Passenger Door Module (PDM) circuitry controls the output to each of the power lock motors. Refer to the appropriate wiring information. The wiring information includes wiring diagrams, proper wire and connector repair procedures, details of wire harness routing and retention, connector pin-out information and location views for the various wire harness connectors, splices and grounds.

- (1) Check each power lock motor for correct operation while moving the power lock switch to both the Lock and Unlock positions. If all of the power lock motors are inoperative, go to Step 2. If one power lock motor is inoperative, go to Step 3.

- (2) If all of the power lock motors are inoperative, the problem may be caused by one shorted motor.

Disconnecting a shorted power lock motor from the power lock circuit will allow the good power lock motor to operate. Disconnect each power lock motor pigtail wire connector, one at a time, and recheck both the lock and unlock functions by operating the power lock switch. If all of the power lock motors are still inoperative after the above test, check for a short or open circuit between the power lock motors and the PDM. If disconnecting one power lock motor causes the other motors to become functional, go to Step 3 to test the disconnected motor.

- (3) Once it is determined which power lock motor is inoperative, that motor can be tested as follows. Disconnect the pigtail wire connector at the inoperative power lock motor. Apply 12 volts to the power lock motor connector terminals to check its operation in one direction. Reverse the polarity to check the operation in the other direction. If OK, repair the short or open circuits between the power lock motor and the PDM as required. If not OK, replace the faulty power lock motor.

REMOVAL - FRONT DOOR POWER LOCK MOTOR

The front door power lock motor is integral to the front door latch unit. If the front door power lock motor is faulty or damaged, the entire latch unit must be replaced. (Refer to 23 - BODY/DOOR - FRONT/LATCH - REMOVAL).

REMOVAL - REAR DOOR POWER LOCK MOTOR

The rear door power lock motor is integral to the rear door latch unit. If the rear door power lock motor is faulty or damaged, the entire latch unit must be replaced. (Refer to 23 - BODY/DOORS - REAR/LATCH - REMOVAL).

REMOVAL - LIFTGATE POWER LOCK MOTOR

- (1) Disconnect and isolate the battery negative cable.

- (2) Open the liftgate.

- (3) Remove the liftgate trim panel from the liftgate. (Refer to 23 - BODY/DECKLID/HATCH/LIFTGATE/TAILGATE/TRIM PANEL - REMOVAL).

- (4) Reach through the access hole in the liftgate inner panel to disconnect the link from the clip on the liftgate power lock motor (Fig. 2).

- (5) Remove the two screws that secure the power lock motor to the liftgate inner panel.

- (6) Pull the power lock motor out through the liftgate inner panel access hole far enough to access the wire harness connector.

- (7) Disconnect the wire harness connector from the liftgate power lock motor pigtail wire connector.

- (8) Remove the power lock motor from the liftgate.

POWER LOCK MOTOR (Continued)

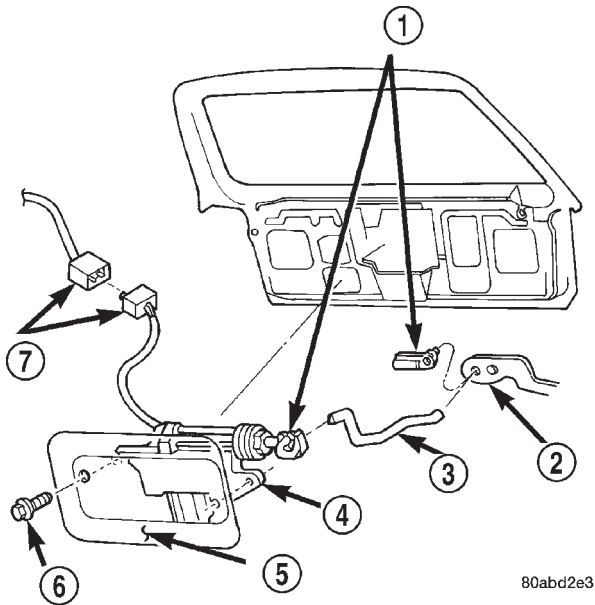


Fig. 2 Liftgate Power Lock Motor Remove/Install

- 1 - CLIPS
- 2 - LOCK LEVER
- 3 - LINK
- 4 - MOTOR
- 5 - LIFTGATE INNER PANEL
- 6 - SCREW
- 7 - CONNECTORS

INSTALLATION - FRONT DOOR POWER LOCK MOTOR

The front door power lock motor is integral to the front door latch unit. If the front door power lock motor is faulty or damaged, the entire latch unit must be replaced. (Refer to 23 - BODY/DOOR - FRONT/LATCH - INSTALLATION).

INSTALLATION - REAR DOOR POWER LOCK MOTOR

The rear door power lock motor is integral to the rear door latch unit. If the rear door power lock motor is faulty or damaged, the entire latch unit must be replaced. (Refer to 23 - BODY/DOORS - REAR/LATCH - INSTALLATION).

INSTALLATION - LIFTGATE POWER LOCK MOTOR

- (1) Position the power lock motor to the access hole in the liftgate inner panel.
- (2) Reconnect the wire harness connector to the liftgate power lock motor pigtail wire connector.
- (3) Insert the power lock motor through the access hole and position it onto the liftgate inner panel.

(4) Install and tighten the screws that secure the power lock motor to the liftgate inner panel. Tighten the screws to 3 N-m (28 in. lbs.).

(5) Reach through the liftgate inner panel access hole and reconnect the link to the clip on the power lock motor (Fig. 2).

(6) Reinstall the liftgate trim panel onto the liftgate. (Refer to 23 - BODY/DECKLID/HATCH/LIFTGATE/TAILGATE/TRIM PANEL - INSTALLATION).

(7) Close the liftgate.

(8) Reconnect the battery negative cable.

DOOR MODULE

DESCRIPTION

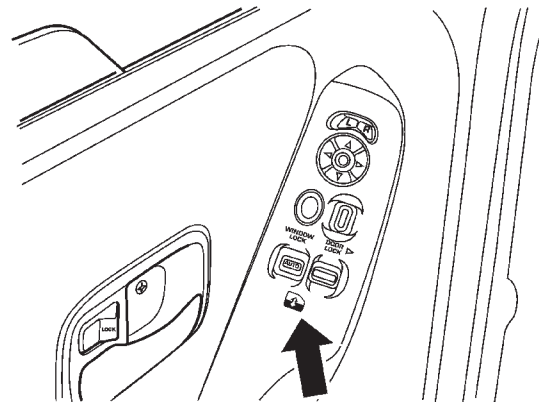


Fig. 3 Door Module

A Driver Door Module (DDM) and a Passenger Door Module (PDM) are used on all models equipped with power locks and power windows (Fig. 3). Each door module houses both the front door power lock and power window switches. In addition to the switches for its own door, the DDM houses individual switches for each passenger door power window, a power window lockout switch, the power mirror switch, and circuitry to support the one-touch down feature of the driver side front door power window. The PDM also houses the control circuitry and the power lock and unlock relays for the power lock system.

The DDM and the PDM are mounted to their respective front door trim panels. The DDM and PDM are serviced individually and cannot be repaired. If the DDM or PDM, or any of the switches and circuitry that they contain are faulty or damaged, the entire DDM or PDM unit must be replaced.

OPERATION

The role of the Passenger Door Module (PDM) in the power lock system is to receive inputs from the

DOOR MODULE (Continued)

battery, the ignition switch, the Driver Door Module (DDM), the driver door ajar switch, the key-in ignition switch, and the headlamp switch. It also receives a hard wired input from the Remote Keyless Entry (RKE) module, if the vehicle is so equipped. In response to these inputs, the PDM sends the proper outputs to control the power lock motors through its integral power lock and unlock relays.

**DIAGNOSIS AND TESTING - DOOR MODULE
POWER LOCK CONTROL**

If the power lock system is inoperative using either front door power lock switch, begin by testing the Passenger Door Module (PDM). If the power lock system is inoperative with only the driver side front door power lock switch, begin by testing the Driver Door Module (DDM). Refer to the appropriate wiring information. The wiring information includes wiring diagrams, proper wire and connector repair procedures, further details on wire harness routing and retention, as well as pin-out and location views for the various wire harness connectors, splices and grounds.

DRIVER DOOR MODULE

The only function of the Driver Door Module (DDM) in the power lock system is to provide a Lock or Unlock signal to the power lock system control circuitry contained within the Passenger Door Module (PDM). The DDM signals the PDM by providing a hard wired ground path through the DDM ground circuit and the driver side power lock switch contacts to the Lock request or Unlock request terminals of the PDM. The DDM power lock switch function can be tested as follows:

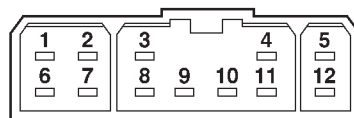
(1) Disconnect and isolate the battery negative cable. Remove the driver side front door trim panel and disconnect the 12-way (C-2) door wire harness connector for the DDM from the DDM connector receptacle. Check for continuity between the ground circuit cavity of the 12-way (C-2) door wire harness connector for the DDM and a good ground. There should be continuity. If OK, go to Step 2. If not OK, repair the open ground circuit to ground as required.

(2) If the problem being diagnosed is inoperative power lock switch illumination, proceed as follows. If the problem is not power lock switch illumination, go to Step 4. Connect the battery negative cable. Turn the ignition switch to the Accessory or On positions. Check for battery voltage at both sides of the power window circuit breaker in the Junction Block (JB). If OK, go to Step 3. If not OK, replace the faulty circuit breaker.

(3) With the ignition switch still in the On or Accessory position, check for battery voltage at the fused ignition switch output (run-acc) circuit cavity of

the 12-way (C-2) door wire harness connector for the DDM. If OK, replace the faulty DDM. If not OK, repair the open fused ignition switch output (run-acc) circuit between the DDM and the JB as required.

(4) Test the power lock switch continuity at the DDM 12-way connector receptacle. See the DDM Power Lock Switch Continuity chart (Fig. 4) to determine if the continuity is correct in both the Lock and Unlock switch positions. If OK, repair the lock request circuit and/or the unlock request circuit between the DDM and the PDM as required. If not OK, replace the faulty DDM.



CONNECTOR 2 (C-2)

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Fig. 4 DDM - Power Lock Switch Continuity

SWITCH POSITION	CONTINUITY BETWEEN
LOCK	C2 PIN 7 & C2 PIN 8
UNLOCK	C2 PIN 11 & C2 PIN 8

PASSENGER DOOR MODULE

The Passenger Door Module (PDM) provides the power lock system control circuitry with a ground path through the PDM ground circuit and the driver side power lock switch contacts to indicate a Lock request or Unlock request. The PDM power lock system functions can be tested as outlined below. If the power lock system operates, but the Remote Keyless Entry (RKE) system Lock and/or Unlock functions are inoperative, begin by testing the RKE module. (Refer to 8 - ELECTRICAL/POWER LOCKS/REMOTE KEYLESS ENTRY MODULE - DIAGNOSIS AND TESTING).

(1) Check the fused B(+) fuse (Fuse 15 - 25 ampere) in the Junction Block (JB). If OK, go to Step 2. If not OK, repair the shorted circuit or component as required and replace the faulty fuse.

(2) Disconnect and isolate the battery negative cable. Remove the passenger side front door trim panel and disconnect the 8-way (C-1) door wire harness connector for the PDM from the PDM connector receptacle. Check for continuity between the ground circuit cavity of the 8-way (C-1) door wire harness connector for the PDM and a good ground. There should be continuity. If OK, go to Step 3. If not OK, repair the open ground circuit to ground as required.

DOOR MODULE (Continued)

(3) If the problem being diagnosed is inoperative power lock switch illumination, proceed as follows. If the problem is not power lock switch illumination, go to Step 5. Reconnect the battery negative cable. Turn the ignition switch to the Accessory or On positions. Check for battery voltage at both sides of the power window circuit breaker in the JB. If OK, go to Step 4. If not OK, replace the faulty circuit breaker.

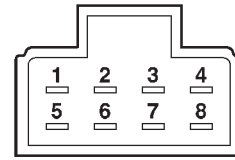
(4) With the ignition switch still in the Accessory or On positions, check for battery voltage at the fused ignition switch output (run-acc) circuit cavity of the 8-way (C-1) door wire harness connector for the PDM. If OK, replace the faulty PDM. If not OK, repair the open fused ignition switch output (run-acc) circuit between the PDM and the JB as required.

(5) If the problem being diagnosed is an inoperative door lock inhibit feature or a power lock system that responds to an Unlock command, but not to a Lock command, proceed as follows. Otherwise, go to Step 7. With the driver side front door closed, check for continuity between the door ajar/key-in ignition circuit cavity of the 8-way (C-1) door wire harness connector for the PDM and a good ground. There should be no continuity. If OK, go to Step 6. If not OK, repair the shorted door ajar and/or key-in ignition circuits as required.

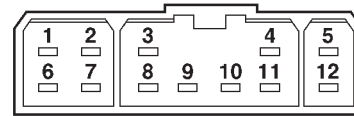
(6) Open the driver side front door with the key in the ignition switch, or with the headlamp switch in the On position. Check for continuity between the door ajar/key-in ignition circuit cavity of the 8-way (C-1) door wire harness connector for the PDM and a good ground. There should be continuity. If OK, go to Step 8. If not OK, repair the open door ajar and/or key-in ignition circuits between the PDM and the driver door ajar switch as required.

(7) Connect the battery negative cable. Check for battery voltage at the fused B(+) circuit cavity of the 8-way (C-1) door wire harness connector for the PDM. If OK, go to Step 8. If not OK, repair the open fused B(+) circuit between the PDM and the JB as required.

(8) Test the PDM power lock switch continuity through the two PDM connector receptacles. See the PDM Power Lock Switch Continuity chart (Fig. 5) to determine if the continuity is correct in both the Lock and Unlock switch positions. If OK, (Refer to 8 - ELECTRICAL/POWER LOCKS/POWER LOCK MOTOR - DIAGNOSIS AND TESTING). If not OK, replace the faulty PDM.



CONNECTOR 1 (C-1)



CONNECTOR 2 (C-2)

8097e2cd

Fig. 5 PDM - POWER LOCK SWITCH CONTINUITY

SWITCH POSITION	CONTINUITY BETWEEN
RIGHT-HAND DRIVE (RHD)	
LOCK	C1 PIN 7 & C1 PIN 6
	C1 PIN 7 & C2 PIN 1
	C1 PIN 7 & C2 PIN 5
UNLOCK	C1 PIN 6 & C1 PIN 3
	C1 PIN 3 & C2 PIN 1
	C1 PIN 3 & C2 PIN 5
LEFT-HAND DRIVE (LHD)	
LOCK	C1 PIN 3 & C1 PIN 6
	C1 PIN 3 & C2 PIN 1
	C1 PIN 3 & C2 PIN 5
UNLOCK	C1 PIN 6 & C1 PIN 7
	C1 PIN 7 & C2 PIN 1
	C1 PIN 7 & C2 PIN 5

DIAGNOSIS AND TESTING - DOOR MODULE
POWER WINDOW CONTROL

The Driver Door Module (DDM) contains the master switches and the lockout switch in the power window system. The DDM also contains an integrated circuit to support the one-touch down feature of the driver side front door power window. Remember that the passenger side front door power window switch and, on four-door models, the rear door power window switches get their battery current through the power window lockout switch in the Driver Door Module (DDM). In addition, each individual power window switch gets its ground through the master switch in the DDM.

The one-touch down feature circuitry within the DDM will not operate the power window motor if the door glass, window regulator, or gearbox mechanism are stuck, obstructed, or binding. If the driver side

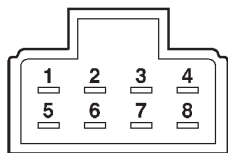
DOOR MODULE (Continued)

front door power window operates as designed, but the one-touch down feature is inoperative, replace the faulty DDM. If the problem being diagnosed is an inoperative power window switch illumination lamp, but the power window switch operates as designed, replace the faulty door module.

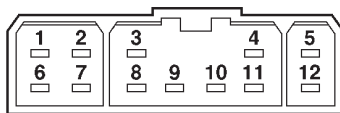
Refer to the appropriate wiring information. The wiring information includes wiring diagrams, proper wire and connector repair procedures, further details on wire harness routing and retention, as well as pin-out and location views for the various wire harness connectors, splices and grounds.

(1) Disconnect and isolate the battery negative cable. Remove the front door trim panel and disconnect the door wire harness connectors from the door module connector receptacles.

(2) Check the door module power window switch and/or power window lockout switch continuity in each position, as shown in the proper figure and corresponding chart (Fig. 6) or (Fig. 7). If OK, go to the Power Window Motor diagnosis. (Refer to 8 - ELECTRICAL/POWER WINDOWS/POWER WINDOW MOTOR - DIAGNOSIS AND TESTING). If not OK, replace the faulty door module.



CONNECTOR 1 (C-1)



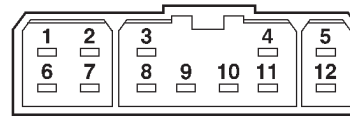
CONNECTOR 2 (C-2)

8097e2cd

Fig. 6 DDM Power Window Switch Continuity

SWITCH POSITION	CONTINUITY BETWEEN
POWER WINDOWS - CONNECTOR 2 (C-2)	
OFF (NORMAL)	1 & 8, 2 & 8, 3 & 8, 4 & 8, 5 & 8, 6 & 8, 10 & 8, 12 & 8
RIGHT REAR DOWN	1 & 9, 2 & 8
RIGHT REAR UP	2 & 9, 1 & 8
RIGHT FRONT UP	3 & 9, 6 & 8
LEFT REAR UP	4 & 9, 10 & 8
LEFT FRONT UP	5 & 9, 12 & 8
RIGHT FRONT DOWN	6 & 9, 3 & 8

SWITCH POSITION	CONTINUITY BETWEEN
LEFT REAR DOWN	10 & 9, 4 & 8
LEFT FRONT DOWN	12 & 9, 5 & 8
WINDOW LOCK OUT - CONNECTOR 1 (C-1) & CONNECTOR 2 (C-2)	
LOCK OUT OFF (UP)	C1 PIN 8 & C2 PIN 9
LOCK OUT ON (DOWN)	NO CONTINUITY BETWEEN C1 PIN 8 & C2 PIN 9



CONNECTOR 2 (C-2)

8097ie8b

Fig. 7 PDM Power Window Switch Continuity

SWITCH POSITION	CONTINUITY BETWEEN CONNECTOR 2 (C-2) PINS
OFF (NORMAL)	2 & 3, 4 & 9
UP	2 & 3, 9 & 10
DOWN	2 & 10, 4 & 9

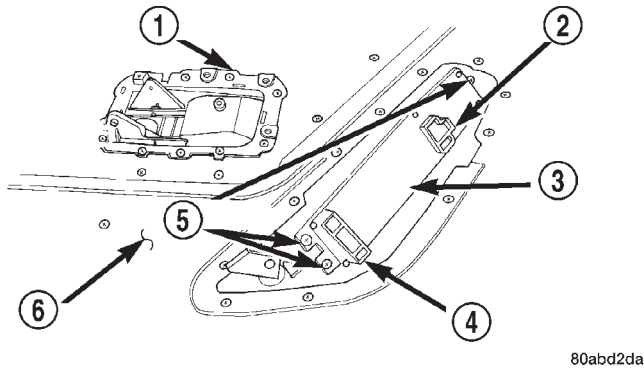
REMOVAL

- (1) Disconnect and isolate the battery negative cable.
- (2) Remove the trim panel from the inside of the front door. (Refer to 23 - BODY/DOOR - FRONT/TRIM PANEL - REMOVAL).
- (3) Disconnect the door wire harness connectors from the door module connector receptacles.
- (4) Remove the three screws that secure the door module to the front door trim panel (Fig. 8).
- (5) Remove the door module from the front door trim panel.

INSTALLATION

- (1) Position the door module onto the front door trim panel.
- (2) Install and tighten the three screws that secure the door module to the front door trim panel. Tighten the screws to 2.2 N·m (20 in. lbs.).
- (3) Reconnect the door wire harness connectors to the door module connector receptacles.

DOOR MODULE (Continued)



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Fig. 8 Door Module Remove/Install

- 1 - INSIDE DOOR LATCH AND LOCK REMOTE CONTROLS
- 2 - CONNECTOR 1 RECEPTACLE
- 3 - DOOR MODULE
- 4 - CONNECTOR 2 RECEPTACLE
- 5 - SCREWS
- 6 - DOOR TRIM PANEL

(4) Reinstall the trim panel onto the front door inner panel. (Refer to 23 - BODY/DOOR - FRONT/TRIM PANEL - INSTALLATION).

(5) Reconnect the battery negative cable.

REMOTE KEYLESS ENTRY TRANSMITTER

DESCRIPTION

The Remote Keyless Entry (RKE) system transmitter is equipped with three buttons, labeled Lock, Unlock, and Panic. It is also equipped with a key ring and is designed to serve as a key fob. The operating range of the transmitter radio signal is up to 7 meters (23 feet) from the RKE receiver.

Each transmitter has a different vehicle access code, which must be programmed into the memory of the RKE module in the vehicle in order to operate the RKE system. See the procedures for RKE transmitter programming. (Refer to 8 - ELECTRICAL/POWER LOCKS/REMOTE KEYLESS ENTRY TRANSMITTER - STANDARD PROCEDURE - TRANSMITTER PROGRAMMING).

The RKE transmitter cannot be repaired and, if faulty or damaged, it must be replaced. The batteries for the RKE transmitter are available for service replacement.

OPERATION

The Remote Keyless Entry (RKE) transmitter is a radio frequency transmitter that operates on two Panasonic CR2016 (or equivalent) batteries. Typical battery life is from one to two years.

DIAGNOSIS AND TESTING - REMOTE KEYLESS ENTRY TRANSMITTER

(1) Replace the Remote Keyless Entry (RKE) transmitter batteries (Refer to 8 - ELECTRICAL/POWER LOCKS/REMOTE KEYLESS ENTRY TRANSMITTER - STANDARD PROCEDURE - TRANSMITTER BATTERY REPLACEMENT). Test each of the RKE transmitter functions again. If OK, discard the faulty batteries. If not OK, go to Step 2.

(2) Perform the RKE Transmitter Programming procedure with the suspect transmitter and another known good transmitter. (Refer to 8 - ELECTRICAL/POWER LOCKS/REMOTE KEYLESS ENTRY TRANSMITTER - STANDARD PROCEDURE - TRANSMITTER PROGRAMMING).

(3) Test the RKE system operation with both transmitters. If both RKE transmitters fail to operate the power locks, see the diagnosis for the Remote Keyless Entry Module (Refer to 8 - ELECTRICAL/POWER LOCKS/REMOTE KEYLESS ENTRY MODULE - DIAGNOSIS AND TESTING). If the known good RKE transmitter operates the power locks and the suspect transmitter does not, replace the faulty RKE transmitter.

NOTE: Be certain to perform the Remote Keyless Entry Transmitter Programming procedure again following this test. This procedure will erase the access code of the test transmitter from the RKE module.

STANDARD PROCEDURES - TRANSMITTER PROGRAMMING

To program the Remote Keyless Entry (RKE) transmitter access codes into the RKE module requires the use of a DRBIII® scan tool. Refer to the appropriate diagnostic information.

STANDARD PROCEDURES - TRANSMITTER BATTERY REPLACEMENT

The Remote Keyless Entry (RKE) transmitter case snaps open and shut for battery access. To replace the RKE transmitter batteries:

(1) Using a trim stick or another suitable wide flat-bladed tool, gently pry at the center seam of the transmitter case halves near the key ring until the two halves unsnap.

(2) Lift the back half of the RKE transmitter case off of the front half.

(3) Remove the two batteries from their receptacle in the RKE transmitter case.

(4) Replace the two batteries with new Panasonic CR2016, or their equivalent. Be certain that the batteries are installed with their polarity correctly oriented.

REMOTE KEYLESS ENTRY TRANSMITTER (Continued)

(5) Align the two RKE transmitter case halves with each other, and squeeze them both firmly until they snap back together.

POWER LOCK SWITCH

DESCRIPTION

The power lock system is controlled by a two-way switch that is integral to the Driver Door Module (DDM) and the Passenger Door Module (PDM), mounted in the trim panel of its respective front door. Each switch is illuminated by a light-emitting diode when the ignition switch is turned to the On position.

The power lock switches and their lamps cannot be repaired. If the switches are damaged or faulty, the entire PDM or DDM unit must be replaced.

OPERATION

The power lock switches provide a hard wired Lock and/or Unlock signal to the power lock system control circuitry, which is located within the Passenger Door Module (PDM).

REMOTE KEYLESS ENTRY MODULE

DESCRIPTION

On models with the optional Remote Keyless Entry (RKE) system, an RKE module is mounted in the mini-dome lamp housing, or in the overhead console housing on the vehicle headliner. The RKE module contains a radio frequency receiver and the RKE system program logic. The RKE module also serves as a smart relay to control the illuminated entry feature included with the RKE system.

The RKE module has a memory function to retain the vehicle access codes of at least one, but no more than four RKE transmitters. The module is designed to retain these transmitter codes in its memory, even if the battery is disconnected.

The RKE system for this vehicle also features a customer programmable horn chirp feature. This feature allows the customer the option of enabling or disabling the horn chirp request that the RKE module issues as an audible indication that a valid Lock signal has been received from the RKE transmitter. (Refer to 8 - ELECTRICAL/POWER LOCKS/REMOTE KEYLESS ENTRY MODULE - STANDARD PROCEDURE - MODULE PROGRAMMING).

OPERATION

The Remote Keyless Entry (RKE) module receives inputs from the battery, the driver door ajar switch, and the Chrysler Collision Detection (CCD) data bus. It also receives the radio frequency inputs from the RKE transmitter. In response to those inputs, it is programmed to control outputs to the power lock motors, the courtesy lamp circuits, and the horn relay.

The RKE module cannot be repaired and, if faulty or damaged, it must be replaced.

DIAGNOSIS AND TESTING - REMOTE KEYLESS ENTRY MODULE

If the problem being diagnosed is an inoperative Remote Keyless Entry (RKE) horn chirp feature, be certain that the horn chirp feature has not been disabled. (Refer to 8 - ELECTRICAL/POWER LOCKS/REMOTE KEYLESS ENTRY MODULE - STANDARD PROCEDURE - MODULE PROGRAMMING). Also be certain that the horn system is operational. (Refer to 8 - ELECTRICAL/HORN SYSTEM - DIAGNOSIS AND TESTING). If the problem being diagnosed is an inoperative RKE illuminated entry system, be certain that the interior courtesy lamp system is operational. (Refer to 8 - ELECTRICAL/LAMPS/LIGHTING - INTERIOR/READING LAMP - DESCRIPTION AND OPERATION). Before you proceed with diagnosis of the RKE module, see the diagnosis for the RKE transmitter. (Refer to 8 - ELECTRICAL/POWER LOCKS/REMOTE KEYLESS ENTRY TRANSMITTER - DIAGNOSIS AND TESTING).

Refer to the appropriate wiring information. The wiring information includes wiring diagrams, proper wire and connector repair procedures, further details on wire harness routing and retention, as well as pin-out and location views for the various wire harness connectors, splices and grounds.

(1) Check the fused B(+) fuse (Fuse 16 - 15 ampere) in the Power Distribution Center (PDC). If OK, go to Step 2. If not OK, repair the shorted circuit or component as required and replace the faulty fuse.

(2) Disconnect and isolate the battery negative cable. Remove the Remote Keyless Entry (RKE) module from the headliner. Disconnect the wire harness connector for the RKE module from the module connector receptacle.

(3) Check the wire harness connector and the receptacle in the RKE module for loose, corroded, or damaged terminals and pins. If OK, go to Step 4. If not OK, repair as required.

(4) Check for continuity between each of the two ground circuit cavities of the wire harness connector for the RKE module and a good ground. In each case,

REMOTE KEYLESS ENTRY MODULE (Continued)

there should be continuity. If OK, go to Step 5. If not OK, repair the ground circuit to ground as required.

(5) Reconnect the battery negative cable. Check for battery voltage at the fused B(+) circuit cavity of the wire harness connector for the RKE module. If OK, go to Step 6. If not OK, repair the open fused B(+) circuit between the RKE module and the PDC as required.

(6) If the problem being diagnosed involves only the RKE horn chirp feature, go to Step 10. If the problem being diagnosed involves only the RKE illuminated entry feature, go to Step 9. If the problem being diagnosed involves only the RKE Lock/Unlock features, go to Step 7.

(7) Disconnect and isolate the battery negative cable. Disconnect the 8-way (C-2) door wire harness connector for the Passenger Door Module (PDM) from the PDM connector receptacle. Check for continuity between the lock request circuit cavity of the wire harness connector for the RKE module and a good ground. Repeat the test between the unlock request circuit cavity of the wire harness connector for the RKE module and a good ground. In each case, there should be no continuity. If OK, go to Step 8. If not OK, repair the shorted lock or unlock request circuit between the RKE module and the PDM as required.

(8) Check for continuity between the lock request circuit cavities of the wire harness connector for the RKE module and the 8-way (C-2) door wire harness connector for the PDM. Repeat the test between the unlock request circuit cavities of the wire harness connector for the RKE module and the 8-way (C-2) door wire harness connector for the PDM. In each case, there should be continuity. If OK, replace the faulty RKE module. If not OK, repair the open lock or unlock request circuit between the RKE module and the PDM as required.

(9) Check for continuity between the courtesy lamps driver circuit cavity of the wire harness connector for the RKE module and a good ground with the driver side front door closed. There should be no continuity until the driver side front door is opened. If OK, replace the faulty RKE module. If not OK, repair the courtesy lamps driver circuit between the RKE module and the driver door ajar switch as required.

(10) Remove the horn relay from the Junction Block (JB). Check for continuity between the horn relay control circuit cavity of the wire harness connector for the RKE module and a good ground. There should be no continuity. If OK, go to Step 11. If not OK, repair the shorted horn relay control circuit between the RKE module and the JB as required.

(11) Check for continuity between the horn relay control circuit cavity of the wire harness connector for the RKE module and the JB cavity for the horn

relay coil ground terminal (85). There should be continuity. If OK, replace the faulty RKE module. If not OK, repair the open horn relay control circuit between the RKE module and the JB as required.

STANDARD PROCEDURES - MODULE PROGRAMING

The optional Remote Keyless Entry (RKE) system for this vehicle has a customer programmable horn chirp feature. The horn chirp is requested by the RKE module through a hard wired circuit to the horn relay, whenever a valid Lock message is received from a programmed RKE transmitter. The purpose of the horn chirp is to provide the vehicle operator with an audible verification that the Lock request has been received by the RKE module. However, for any number of reasons, some customers may prefer that this feature be disabled. This RKE system allows them that option.

To program the Remote Keyless Entry (RKE) module so that the horn chirp feature is enabled/disabled, proceed as follows:

(1) While within the reception range of the RKE module, depress and hold the Lock button of a programmed RKE transmitter for five to ten seconds.

(2) While continuing to hold the RKE transmitter Lock button depressed, press and release the RKE transmitter Unlock button.

(3) The RKE horn chirp feature is now enabled/disabled.

Repeating the preceding steps will revert the RKE horn chirp feature to its previous state.

REMOVAL - MINI-DOME MOUNTED

CAUTION: A discharge of static electricity may damage this unit. At no time should any source of static electricity be permitted near this unit. Technicians handling or servicing the unit should wear cotton clothing, not synthetic fabric clothing; and, should ground themselves before and during all handling and service procedures. Electrically conductive wrist or heel straps are recommended, or static dissipating shoes are also acceptable. Work and storage areas should be free of static generative materials such as: dry air, glass, nylon, wool, fur, silk, rayon, acrylic, polystyrene foam, polyester, saran, polyethylene, polypropylene, PVC, and teflon.

(1) Disconnect and isolate the battery negative cable.

(2) Remove the two screws that secure the Remote Keyless Entry (RKE) mini-dome housing to the roof panel reinforcement (Fig. 9).

REMOTE KEYLESS ENTRY MODULE (Continued)

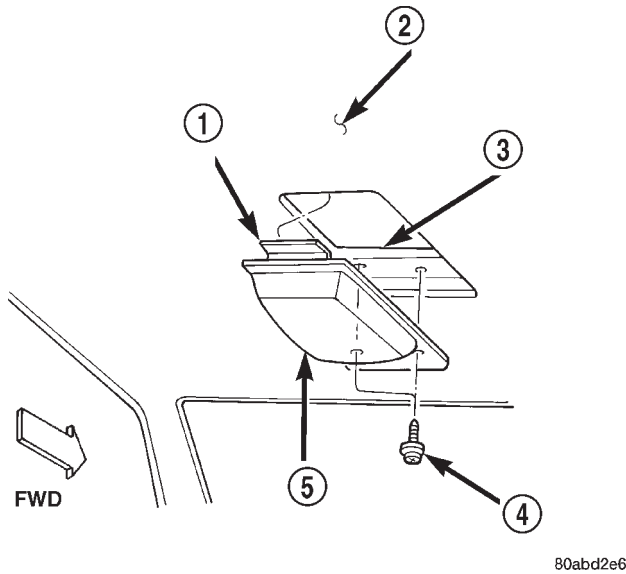


Fig. 9 Mini-Dome Housing Remove/Install

- 1 - MOUNTING TAB
- 2 - HEADLINER
- 3 - REINFORCEMENT
- 4 - SCREW
- 5 - MINI-DOME HOUSING

(3) Lower the front of the mini-dome housing and slide the unit forward to disengage the rear mounting tab from the headliner.

(4) Lower the mini-dome housing far enough to access the wire harness connector for the RKE module.

(5) Disconnect the wire harness connector for the RKE module from the module connector receptacle.

(6) Remove the RKE mini-dome and module from the headliner as a unit.

REMOVAL - OVERHEAD CONSOLE MOUNTED

CAUTION: A discharge of static electricity may damage this unit. At no time should any source of static electricity be permitted near this unit. Technicians handling or servicing the unit should wear cotton clothing, not synthetic fabric clothing; and, should ground themselves before and during all handling and service procedures. Electrically conductive wrist or heel straps are recommended, or static dissipating shoes are also acceptable. Work and storage areas should be free of static generative materials such as: dry air, glass, nylon, wool, fur, silk, rayon, acrylic, polystyrene foam, polyester, saran, polyethylene, polypropylene, PVC, and teflon.

(1) Disconnect and isolate the battery negative cable.

(2) Remove the overhead console from the headliner. (Refer to 8 - ELECTRICAL/OVERHEAD CONSOLE - REMOVAL).

(3) Remove the six screws that secure the rear overhead console housing to the overhead console bezel (Fig. 10).

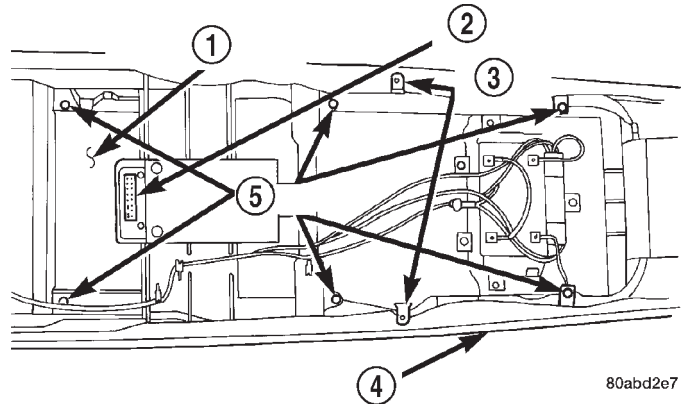


Fig. 10 RKE Receiver Remove/Install

- 1 - REAR OVERHEAD CONSOLE HOUSING
- 2 - RKE RECEIVER
- 3 - TABS
- 4 - OVERHEAD CONSOLE BEZEL
- 5 - SCREWS

(4) Gently flex the sides of the overhead console bezel outward far enough to clear the tabs on the rear console housing and remove the housing from the bezel.

(5) Remove the two screws that secure the RKE module circuit board to the rear overhead console housing.

(6) Remove the RKE module circuit board from the rear overhead console housing.

INSTALLATION - MINI-DOME MOUNTED

(1) Position the RKE mini-dome housing and module to the headliner as a unit.

(2) Reconnect the wire harness connector for the RKE module to the module connector receptacle.

(3) Position the RKE mini-dome unit into the headliner opening and slide it rearward to engage the rear mounting tab to the headliner.

(4) Install and tighten the two screws that secure the RKE mini-dome housing to the roof panel reinforcement (Fig. 9). Tighten the screws to 2.8 N·m (24 in. lbs.).

(5) Reconnect the battery negative cable.

REMOTE KEYLESS ENTRY MODULE (Continued)

INSTALLATION - OVERHEAD CONSOLE MOUNTED

(1) Position the RKE module circuit board to the rear overhead console housing.

(2) Install and tighten the two screws that secure the RKE module circuit board to the rear overhead console housing. Tighten the screws to 2.2 N·m (20 in. lbs.).

(3) Gently flex the sides of the overhead console bezel outward far enough to clear the tabs on the rear console housing and install the housing onto the bezel.

(4) Install and tighten the six screws that secure the rear overhead console housing to the overhead console bezel (Fig. 10). Tighten the screws to 2.2 N·m (20 in. lbs.).

(5) Reinstall the overhead console onto the headliner. (Refer to 8 - ELECTRICAL/OVERHEAD CONSOLE - INSTALLATION).

(6) Reconnect the battery negative cable.