

YOUR CURRENT VEHICLE

2017 Chrysler Pacifica

Description & Operation

DESCRIPTION AND OPERATION

DESCRIPTION

A power operated door lock system is standard factory-installed equipment on this vehicle. The power lock system allows all doors to be locked or unlocked electrically. Locking or unlocking the vehicle using the power lock system can be accomplished by two different methods:

- **Hands Free Entry** - When the customer executes a valid “kick” under the liftgate or one of the sliding doors, the hands free system allows the power sliding door or liftgate to be unlocked and opened.
- **Passive Entry** - The Passive Entry (PE) system allows the vehicle to be unlocked without the use of a key.
- **Power Lock System** - Operating the door lock switch located in the instrument panel center stack operates lock and unlock for all doors on this vehicle.
- **Remote Keyless Entry System** - Depressing the **Lock** or **Unlock** button of the standard equipment Remote Keyless Entry (RKE) system transmitter can also be used to lock or the front and side doors. A third button is added for rear cargo doors on cargo and glazed door vans.

Additional details of each of these subsystems and their components can be found in the subheadings and paragraphs that follow.

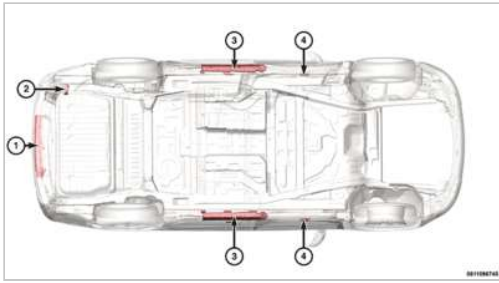
HANDS FREE ENTRY

An optional hands free system is available factory-installed equipment for this vehicle. When the customer executes a valid “kick” under the liftgate or one of the sliding doors, the hands free system allows the power sliding door or liftgate to be unlocked and opened without the use of a key or door handle, as long as an authorized FOB with Integrated Key (FOBIK) is in the possession of, or in close proximity to the individual and the aperture of the vehicle.

The PE system includes the following major components, which are described in further detail elsewhere in this service information:

- **Body Control Module** - The Body Control Module (BCM) is the gateway module and corresponds with the hands free modules over the LIN bus.
- **Hands Free Zone Sensors:**

- Under each sliding door sill are two capacitive sensors fixed to a door sill bracket. These sensors are designated as zone 1 and 2.
- The sensor bracket for the liftgate is mounted in the rear fascia



- **Dedicated Hands Free Modules:**

- One dedicated hands free module (3) for each sliding door is fixed to the door sill bracket.
- One dedicated hands free module (1) for the liftgate

- **Radio Frequency Hub** - The Radio Frequency Hub Module (RFHM) is the PE system control module and RF receiver located on the rear package shelf. ([Refer to Electrical/8E - Electronic Control Modules/MODULE, Radio Frequency \(RF Hub\)/Description and Operation](#)).

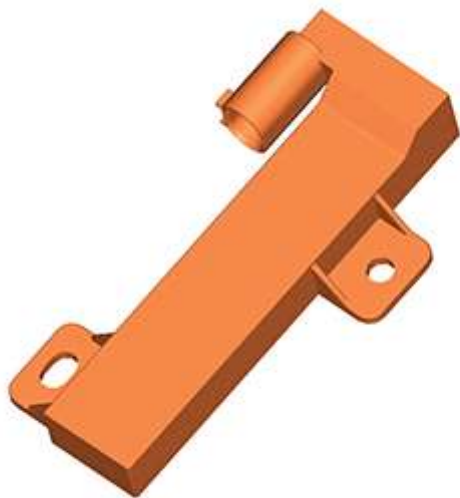
This system is not available for vehicles equipped with running boards.

PASSIVE ENTRY

An optional Passive Entry (PE) system is available factory-installed equipment for this vehicle. The PE system allows the vehicle to be unlocked without the use of a key, as long as an authorized FOB with Integrated Key (FOBIK) is in the possession of, or in close proximity to the individual and the aperture of the vehicle that is to be unlocked. All other features and Customer Programmable feature settings of the power lock system and the Remote Keyless Entry (RKE) system function the same as they would on vehicles without the PE system option.

The PE system includes the following major components, which are described in further detail elsewhere in this service information:

- **Door Handle Switches** - Each PE door outside smart handle is equipped with three switches and an integrated circuit. A tactile lock switch is located on the outer horizontal surface of each door handle pull, a capacitive unlock switch membrane is located on the inner vertical surface of the handle pull, while a Hall effect switch and an integrated circuit are concealed within the handle pull unit.
- **Low Frequency Antennas** - The PE system includes five Low Frequency (LF) antennas.
- **Radio Frequency Hub** - The Radio Frequency Hub Module (RFHM) is the PE system control module and RF receiver located on the rear package shelf. ([Refer to Electrical/8E - Electronic Control Modules/MODULE, Radio Frequency \(RF Hub\)/Description and Operation](#)).



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The five PEKG Antenna modules:

- Connect to the RFHM using a twisted wire pair:
 - Signal (10-12v during communication events)
 - Return
- Are only powered up during PE or KG events
- Can be checked for integrity via resistance. Resistance across the antenna circuits will be approximately 1 ohm
- Transmit a 20 kHz Low Frequency (LF) signal
- Receive a 433 MHz HFsignal
- Used to detect FOBs up to 2m (6.5ft) away

PEKG ANTENNA	LOCATION
1	left sliding door above the window motor
2	right sliding door above the window motor
3	below the storage bin in the center console
4	liftgate scuff plate

POWER LOCK SYSTEM

The power lock system includes the following major components, which are described in further detail elsewhere in this service information:

- **Body Control Module** - The Body Control Module (BCM) is located beneath the instrument panel on the driver side of the vehicle. ([Refer to Electrical/8E - Electronic Control Modules/MODULE, Body Control/Description and Operation](#)).
- **Electronic Vehicle Information Center** - The Electronic Vehicle Information Center (EVIC) includes the EVIC switches and the U-Connect Touch™ screen module in the Integrated Center Stack (ICS) located in the center stack area of the instrument panel.
- **Fuel Door Release Switch** - A switch in the map pocket on the driver side front door inside trim panel will unlatch the fuel filler door in the right outside quarter panel.
- **Power Lock Motors** - A reversible electric power lock motor is integral to the latch of each front and rear door and the liftgate.



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- **Power Lock Switches** - A power lock and unlock switch is integral to the switch module located on the forward end of the arm rest of each front door inside trim panel.

These components and their controls are combined to provide the following power lock system central locking and unlocking features:

- **Automatic Door Locking** - Automatic door locking automatically locks any unlocked door when the vehicle speed exceeds about 25.7 kilometers per hour (15 miles per hour). This is a Customer Programmable feature.
- **Automatic Door Unlocking** - Automatic door unlocking automatically unlocks the doors after they were automatically locked when the vehicle speed exceeded about 25.7 kilometers per hour (15 miles per hour), the vehicle speed has returned to zero, the transmission shift lever is in the **Neutral** or **Park** positions and the driver side front door is opened. This is a Customer Programmable feature.
- **Customer Programmable Features** - The vehicle operator interfaces with the BCM, which is the power lock system controller, using the EVIC. EVIC switches allow the vehicle operator to set or change the power lock system Customer Programmable Features through the EVIC display.

- **Door Lock Inhibit** - Prevents locking the doors using a power door lock switch or the **Lock** button of the Remote Keyless Entry (RKE) system transmitter if the key is in the ignition and the driver side front door is open.
- **Illuminated Entry** - Automatic illumination of the interior courtesy lamps when the vehicle is unlocked using the power lock system.

REMOTE KEYLESS ENTRY SYSTEM

The Remote Keyless Entry (RKE) system is standard factory-installed equipment on this vehicle. The RKE system includes the following major components, which are described in further detail elsewhere in this service information:

- **Radio Frequency Hub Module (RFHM)** - The RFHM is the RKE system control module and RF receiver located on the rear package shelf. ([Refer to Electrical/8E - Electronic Control Modules/MODULE, Radio Frequency \(RF Hub\)/Description and Operation](#)).
- **Remote Keyless Entry System Transmitter** - The FOBIK is the battery powered, wireless and portable Radio Frequency (RF) user controller for all of the features of the RKE system.

These components and their controls are combined to provide the following RKE system features:

- **Customer Programmable Features** - The vehicle operator interfaces with the RFHM, which is the RKE system controller, using the U-Connect Touch™ screen.
- **Flash Lights With Lock And Unlock** - This is a Customer Programmable feature of the RKE system. The first option has the park lamps flash as an optical verification that the RKE system has received a valid **Lock** or **Unlock** request from the FOBIK. The second option disables the optical verification feature.
- **Panic Feature** - In certain markets the FOBIK may also be equipped with a red **Panic** button. Depressing the **Panic** button of the FOBIK while within transmitter range will sound the vehicle signal horn and flash the exterior lighting of the vehicle for about three minutes or until the **Panic** button is depressed a second time, whichever occurs first. Attaining a vehicle speed of about 25.7 kilometers per hour (15 miles per hour) will also cancel the panic event.
- **Programming Additional Transmitters** - Two RKE transmitters are shipped with the vehicle from the factory, but the RKE system can retain the vehicle access codes of up to a total of eight transmitters. The transmitter codes are retained in the RKE system controller memory, even if the battery is disconnected. If a FOBIK is ineffective, lost or an additional FOBIK is desired, new transmitter vehicle access codes can be programmed into the system using a diagnostic scan tool.
- **Remote Liftgate Unlatching** - Depressing the **Liftgate Release** button of the FOBIK twice within 5 seconds while within transmitter range will unlatch the deck lid of the vehicle.
- **Remote Engine Start** - On vehicles equipped with the optional Remote Starting System, depressing the **Remote Start** button of the FOBIK twice while within transmitter range will start the engine of the vehicle.

- **Remote Locking** - Depressing the **Lock** button of the FOBIK while within transmitter range will lock all of the vehicle doors.
- **Remote Unlocking** - Depressing the **Unlock** button of the FOBIK while within transmitter range will unlock the vehicle and activate the Illuminated Entry System. The specific locks operated and the number of FOBIK button presses required varies depending upon the Customer Programmable settings chosen by the vehicle operator.
- **Remote Unlock Sequence** - This is a Customer Programmable feature of the RKE system. There are two options available. The first option allows only the driver side front door to unlock when the FOBIK **Unlock** button is depressed one time, and the remaining doors unlock when the button is depressed a second time within 5 seconds of the first press. The second option allows all doors to unlock upon a single press of the FOBIK **Unlock** button.
- **Sound Horn On Lock** - This is a Customer Programmable feature of the RKE system. There are two options available. The first option has the signal horn of the vehicle sound a short chirp as an audible verification that the RKE system received a valid **Lock** request from the FOBIK. The second option disables the audible verification feature.
- **Vehicle Theft Security System Arming** - If the vehicle is equipped with the optional Vehicle Theft Security System (VTSS), depressing the **Lock** button of the FOBIK while within transmitter range will arm the VTSS in addition to activating the remote locking feature.
- **Vehicle Theft Security System Disarming** - If the vehicle is equipped with the optional Vehicle Theft Security System (VTSS), depressing the **Unlock** button of the FOBIK while within transmitter range will disarm the VTSS in addition to activating the remote unlocking feature.

Hard wired circuitry connects many of the RKE system components to the electrical system of the vehicle. These hard wired circuits are integral to several wire harnesses, which are routed throughout the vehicle and retained by many different methods. These circuits may be connected to each other, to the vehicle electrical system and to the RKE system components through the use of a combination of soldered splices, splice block connectors, and many different types of wire harness terminal connectors and insulators. Refer to the appropriate wiring information. The wiring information includes wiring diagrams, 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.

OPERATION

HANDS FREE ENTRY

Hands Free Entry Operation:

- The customer executes a valid “kick” under liftgate/sliding doors.
- The hands free zone sensors detect the valid “kick” request.
- The hands-free module sends a message to the Body Control Module (BCM) over the LIN bus.
- The BCM sends a message to the PSD module or the PLG module. NOTE: If the Power Sliding Door (PSD) or Power Liftgate (PLG) is not locked or is not closed, the PSD or PLG opens.

- If the PSD or PLG is closed and locked, the PSD or PLG module sends a message to the BCM which gates the message to the Radio Frequency Hub Module (RFHM) requesting a FOB search.
- The RFHM searches for a FOB in the designated area and if a valid FOB is found, the RFHM sends a message to the BCM which gates the message to the PSD or PLG module.
- If a FOB was found in the designated area, the PSD or PLG module then powers open the associated door/liftgate.

PASSIVE ENTRY SYSTEM

Operation:

- Touching either front door handle will cause the Radio Frequency Hub Module (RFHM) to authenticate the validity and location(s) of a FOB via Passive Entry Keyless Go (PEKG) antenna(s).
- The FOBIK responds by sending a Ultra High Frequency (UHF) message back to the receiver within the RFHM.
- If an authentic FOB (up to eight can be programmed) is found in the same exterior zone (left, right) as the asserted door handle, the RFHM sends out an "Unlock Door" request via CAN-C if the following conditions are met:
 - vehicle not moving
 - vehicle in park

While the PEKG system allows the doors to be unlocked passively; they must still be locked actively after exiting the vehicle using the tactile **Lock** button on either front door handle.

The PEKG system circuits and FOBIK inputs are continually monitored by the microcontroller and software contained within the RFHM. When the RFHM monitors a problem in any of the PEKG system circuits or FOBIK inputs, it stores a Diagnostic Trouble Code (DTC) in its memory circuit.

POWER LOCK SYSTEM

The power lock system uses non-switched battery current received through a fused B(+) fuse in the Body Control Module (BCM) so that the system remains operational regardless of the ignition switch position. The BCM is the primary power lock system controller. The power lock switches are hard wired to their respective Driver Door Module (DDM), Passenger Door Module (PDM) or Power Sliding Door Module (PSDM). The BCM, the DDM and the PDM all communicate with each other and with other electronic modules in the vehicle over the Controller Area Network (CAN) data bus.

OPERATION

- When a door module receives an input from a power lock switch, it sends the appropriate electronic **Lock Request** or **Unlock Request** message to the BCM over the CAN data bus.
- The BCM responds to these request messages by providing the appropriate outputs to each of the power lock motors to lock or unlock each of the door latches.
- The BCM also monitors a hard wired input from the liftgate release switch and the power sliding door switch and electronic message inputs indicating automatic transmission gear selector position and

vehicle speed. The BCM uses all of these inputs and internal programming to determine whether or not to provide the output necessary to operate the liftgate or sliding door latch release motor.

The BCM also stores the power lock system Customer Programmable feature settings received over the CAN data bus from the Electronic Vehicle Information Center (EVIC). The BCM uses these settings and internal programming along with hard wired and electronic message inputs to determine the proper outputs needed to produce each of the appropriate power lock system features.

The power lock system circuits are continually monitored and controlled by the microcontroller and software contained within the BCM, the DDM and the PDM. When one of these modules monitors a problem in any of the power lock system circuits or components, it stores a fault code or Diagnostic Trouble Code (DTC) in its memory circuit.

REMOTE KEYLESS ENTRY SYSTEM

The Remote Keyless Entry (RKE) system uses non-switched battery current received through a fused B(+) fuse in the Body Control Module (BCM) so that the system remains operational regardless of the ignition switch position. The Radio Frequency Hub Module (RFHM) is the primary RKE system controller as well as the Radio Frequency (RF) RKE receiver. The RFHM validates the vehicle access code of each RKE transmitter from which it receives RF signal inputs. It ignores requests from any transmitter for which it has no stored vehicle access code.

The RFHM communicates and shares resources with the BCM and many other electronic modules in the vehicle over the vehicle's CAN data busses. The RFHM also stores the RKE system Customer Programmable feature settings received over the CAN data bus from the Electronic Vehicle Information Center (EVIC). When the RFHM receives an input from a valid transmitter source, it uses these settings and internal programming to send the appropriate electronic request messages to the BCM (CAN-C) and other electronic modules over the CAN data bus to invoke the proper RKE system features and responses.

The RKE system circuits and transmitter inputs are continually monitored by the microcontroller and software contained within the RFHM. When the RFHM monitors a problem in any of the RKE system circuits or transmitters, it stores a Diagnostic Trouble Code (DTC) in its memory circuit.