

419-01A Perimeter Anti-Theft Alarm
Description and Operation

2019 Ranger
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Perimeter Anti-Theft Alarm - System Operation and Component Description

System Operation

System Diagram



Network Message Chart

IPC Network Input Messages

Broadcast Message	Originating Module	Message Purpose
Perimeter alarm chime	<u>BCM</u>	Used by the <u>IPC</u> to sound the perimeter alarm chime during

request		the 12-second delay.
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BCM Network Input Messages

Broadcast Message	Originating Module	Message Purpose
RKE data	<u>RTM</u>	Used by the <u>BCM</u> to arm/disarm the perimeter alarm or to activate/deactivate the panic alarm.

Perimeter Alarm

The BCM controls the operation of the perimeter alarm. It monitors inputs from the RKE system, the passive entry system (if equipped) , the power door lock system, the door ajar status and the PATS to determine when to arm the perimeter alarm.

The BCM monitors all of the door ajar inputs and the hood ajar input to determine when to activate the perimeter alarm. When the BCM detects an input indicating an unauthorized entry into the vehicle, the BCM activates the perimeter alarm by sounding the anti theft alarm horn and flashing all the turn signals and interior courtesy lamps at regular intervals.

The BCM monitors the RKE system, the passive entry system (if equipped), and the PATS to determine when to disarm the perimeter alarm.

A switch inhibit feature temporarily disables the door lock control switches for 20 seconds after the vehicle is electronically locked. For detailed information of the switch inhibit feature, Refer to: [Handles, Locks, Latches and Entry Systems - System Operation and Component Description](#) (501-14 Handles, Locks, Latches and Entry Systems, Description and Operation).

Visual and audible feedback is also provided when locking or unlocking the vehicle. For detailed information of the vehicle locking and unlocking feedback, Refer to: [Handles, Locks, Latches and Entry Systems - System Operation and Component Description](#) (501-14 Handles, Locks, Latches and Entry Systems, Description and Operation).

Arming The Perimeter Alarm

The perimeter alarm is ready to arm any time the ignition is off. The perimeter alarm pre-arms when any of the following actions are carried out:

- Pressing the lock button on a RKE transmitter
- Pressing the door lock control switch to the lock position with a front door open, and then closing the door
- Locking the vehicle with the passive entry feature (if equipped)

Once the system is pre-armed, there is a 20-second countdown before the perimeter alarm is armed. Each entry point to the vehicle (hood and door) is armed separately and must be closed before that entry point begins the 20-second countdown to become armed. If all entry points are closed, the turn signals flash upon locking to indicate all entry points are entering the 20-second countdown.

Perimeter Alarm Activation

The perimeter alarm has a 12-second delay when the driver front door is opened without using a valid programmed RKE transmitter or a passive key to unlock the vehicle. During the delay, a chime sounds. If the perimeter alarm is not disarmed within the 12-second delay, the alarm activates.

The perimeter alarm activates when any of the following actions are carried out:

- The driver front door is opened without first receiving an unlock command from the passive entry feature or a valid programmed RKE transmitter, and the 12-second delay has expired.
- Any other door or the hood is opened without first receiving an electronic unlock command from the passive entry feature or a valid programmed RKE transmitter.

The perimeter alarm only activates 10 times per arming cycle. After that, the alarm does not activate. To enable the perimeter alarm again, disarm the perimeter alarm and then arm it again.

Disarming The Perimeter Alarm

The perimeter alarm disarms when any of the following actions are carried out:

- Pressing the unlock button on a door lock control switch within the 20-second pre-arm
- The smart unlock feature activates within the initial 20-second pre-arm
- Pressing the unlock button on a valid programmed RKE transmitter
- Using a valid programmed key to change the ignition to RUN
- Unlocking a front door using the passive entry feature

Component Description

Door Latch

The door ajar switch, the lock/unlock solenoid and the door lock cylinder lock/unlock switches are part of the door latch and not serviceable separately.

The door ajar switch is monitored by the BCM and the primary function is for the courtesy lamps system. Refer to: [Interior Lighting - System Operation and Component Description](#) (417-02 Interior Lighting, Description and Operation).

The lock/unlock solenoid is controlled by the BCM for locking and unlocking the door. Refer to: [Handles, Locks, Latches and Entry Systems - System Operation and Component Description](#) (501-14 Handles, Locks, Latches and Entry Systems, Description and Operation).

Hood Latch

The hood ajar switch is part of the hood latch and not serviceable separately.

BCM

The BCM controls the perimeter alarm.

The BCM requires PMI when replaced. Additionally, at least 2 keys must be programmed and the parameter reset procedure carried out.

