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2020.0 DEFENDER (LE), 419-01B

# ANTI-THEFT - PASSIVE (G2401030)

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## PRINCIPLES OF OPERATION

For a detailed description of the anti-theft - passive system and operation, refer to the relevant description and operation section of the workshop manual. REFER to: [Anti-Theft - Passive](#) (419-01B Anti-Theft - Passive, Description and Operation).

## INSPECTION AND VERIFICATION

**ⓘ CAUTION:**

Diagnosis by substitution from a donor vehicle is **NOT** acceptable. Substitution of control modules does not guarantee confirmation of a fault, and may also cause additional faults in the vehicle being tested and/or the donor vehicle.

1. Verify the customer concern
2. Visually inspect for obvious signs of damage and system integrity

**Visual Inspection**

| MECHANICAL                                                                                                                        | ELECTRICAL                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-----------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"><li>■ Start/stop button</li><li>■ Electric steering column lock</li><li>■ Vehicle key</li></ul> | <ul style="list-style-type: none"><li>■ Fuses</li><li>■ Electrical harnesses</li><li>■ Harness connectors</li><li>■ Vehicle key battery</li><li>■ Central junction box (controls +12Volt supply to electric steering column lock and software logic for electric steering column lock control)</li><li>■ Instrument cluster (provides electrical ground circuit to electric steering column lock)</li><li>■ Controller Area Network (CAN) circuits</li></ul> |

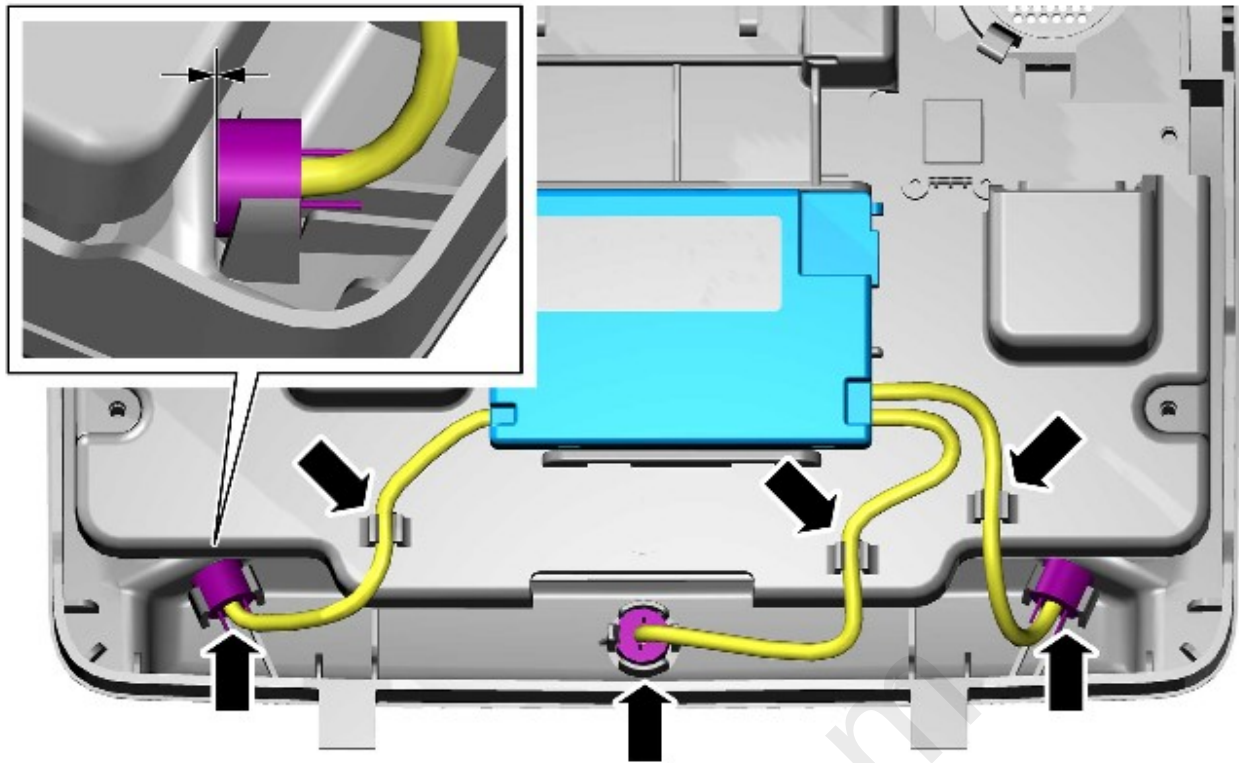
3. If an obvious cause for an observed or reported concern is found, correct the cause (if possible) before proceeding to the next step
4. If the cause is not visually evident check for Diagnostic Trouble Code(s) (DTC)s and refer to the DTC index

## SYMPTOM CHART

| SYMPTOM                                                                         | POSSIBLE CAUSES                                                                                                                                                                                                                                                                    | ACTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|---------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| False alarm triggers - Volumetric sensor identified as last known alarm trigger | <ul style="list-style-type: none"> <li>■ Genuine movement detected, no further action required</li> <li>■ Water ingress into the volumetric sensor /connectors</li> <li>■ Poor installation of the volumetric sensor (false trigger)</li> <li>■ Sensor internal failure</li> </ul> | <div>  <b>NOTES:</b> <ul style="list-style-type: none"> <li>■ Confirm if the vehicle has been checked previously for the same concern or whether this is the first visit to a retailer</li> <li>■ Make sure to take a recording of the alarm trigger history and add this to the warranty claim</li> </ul> </div> <ul style="list-style-type: none"> <li>■ Check with the customer to establish whether the vehicle is parked near air force bases or other locations where the vehicle could be subject to loud noises (jets flying overhead, tractors driving very close by)</li> <li>■ Inspect the area of the volumetric sensor for any evidence of water leaks and rectify as necessary</li> <li>■ Check the installation of the volumetric sensor, remove and reinstall the sensor making sure all connections are secure and the sensor is correctly installed</li> <li>■ If there have been repeat visits for false alarm triggers install a new volumetric sensor</li> </ul> |

## CORRECT INSTALLATION OF THE VOLUMETRIC SENSOR

The volumetric sensor is located in a central position in the overhead console. The volumetric sensor allows the interior of the vehicle to be monitored when the vehicle is double locked. In cases where customers have reported "false-alarm" triggers of the vehicle anti-theft alarm and where the volumetric sensor has been identified as the last known alarm trigger (see diagnostic instructions below), this may indicate an issue with the installation of the volumetric sensor rather than an internal failure of the sensor itself.



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In light of this, when first faced with this issue, the existing volumetric sensor should be carefully removed and refitted. Care should be taken to make sure that the sensor and associated connectors are installed correctly and securely. See illustration and video for correct installation, when installed conduct 'push-pull-push' on connections to make sure of correct engagement. Make sure the sensors are pushed fully home and abut against the console, there should be equal placement all around the sensor and it should not be angled when compared to the surface of the console, no large visible gap should be seen and any small gap should be equal all around the sensor when viewed from the front and the rear of the console, use a flashlight to aid with gap visibility, REFER to: [Overhead Console](#) (501-12 Instrument Panel and Console, Removal and Installation).

If the issue reoccurs after refitting of the volumetric sensor, then the sensor should be replaced.

#### READING ALARM TRIGGER HISTORY THROUGH PATHFINDER DIAGNOSTICS

##### NOTE:

Make sure to take a recording of the alarm trigger history and add this to the warranty claim

To determine the details of recent anti-theft alarm triggers on Pathfinder vehicles, the following steps should be followed:

1. Using the Jaguar Land Rover approved diagnostic equipment, connect to the vehicle through the Vehicle Communication Interface (VCI) unit

2. Load in the Vehicle Identification Number (VIN)
3. SELECT 'ECU Diagnostics'
4. SELECT 'Body Control Module (BCM)'
5. SELECT 'ECU Functions From List'
6. SELECT 'Alarm Trigger History' and follow on-screen instructions to view recent alarm trigger history

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## DTC INDEX

For a list of DTCs that could be set on this vehicle, please refer to Section 100-00. REFER to:(100-00 General Information)

[Diagnostic Trouble Code Index - DTC: Body Control Module \(BCM\)](#) (Description and Operation),  
[Diagnostic Trouble Code Index - DTC: Remote Function Actuator \(RFA\)](#) (Description and Operation).

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