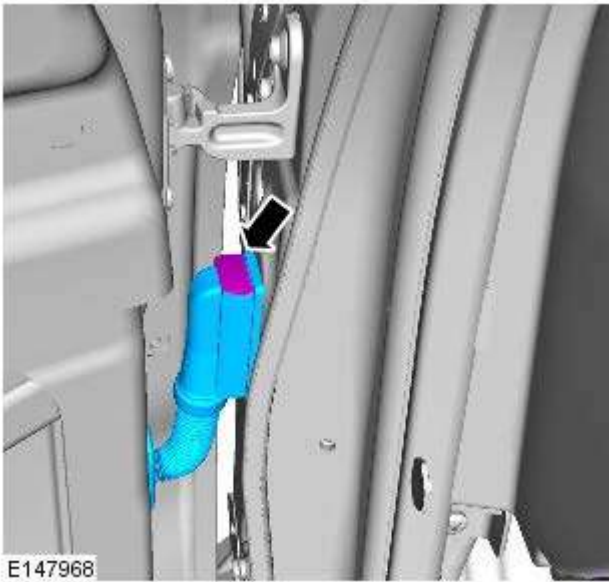
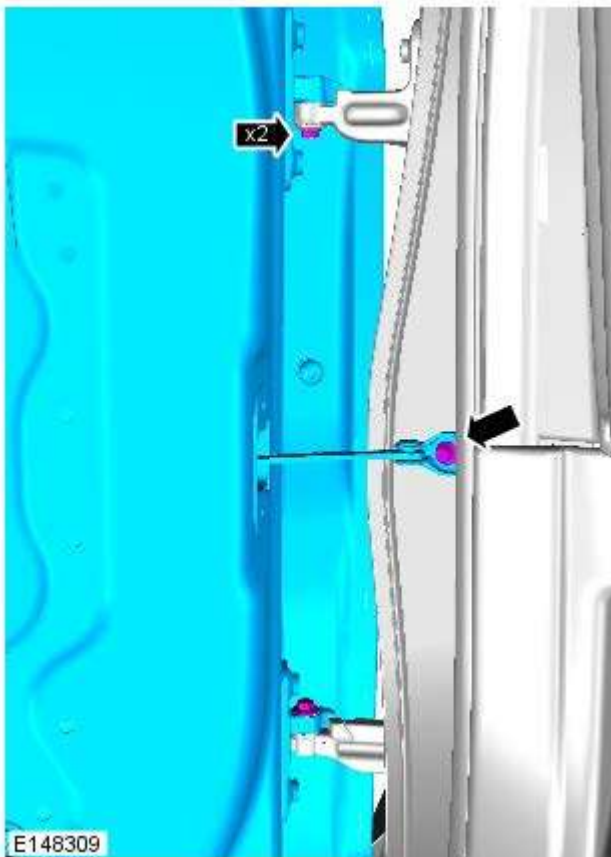




2.

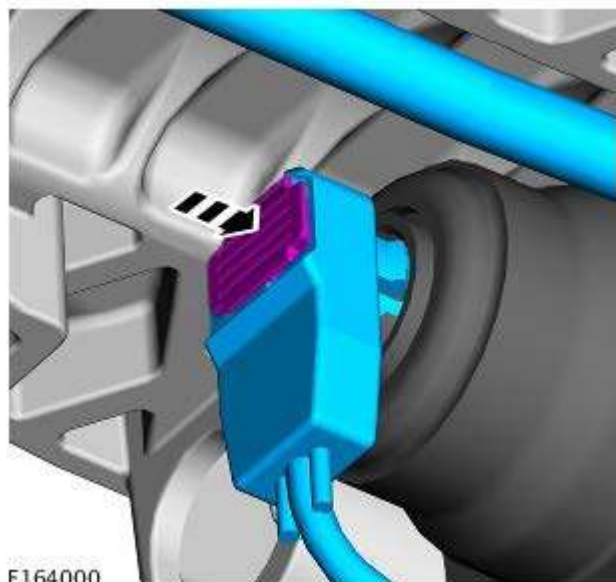
3. NOTES:

- This step requires the aid of another technician.
- Do not disassemble further if the component is removed for access only.



4. Refer to: [Exterior Mirror Glass](#) (501-09 Rear View Mirrors, Removal and Installation).
5. Refer to: [Front Door Window](#) (501-11 Glass, Frames and Mechanisms, Removal and Installation).
6. Refer to: [Front Door Latch](#) (501-14 Handles, Locks, Latches and Entry Systems, Removal and Installation).
7. Refer to: [Front Door Lower Moulding](#) (501-08 Exterior Trim and Ornamentation, Removal and Installation).
8. CAUTIONS:

- Note the fitted position of the seal.
- Make sure that the area around the component is clean and free of foreign material.



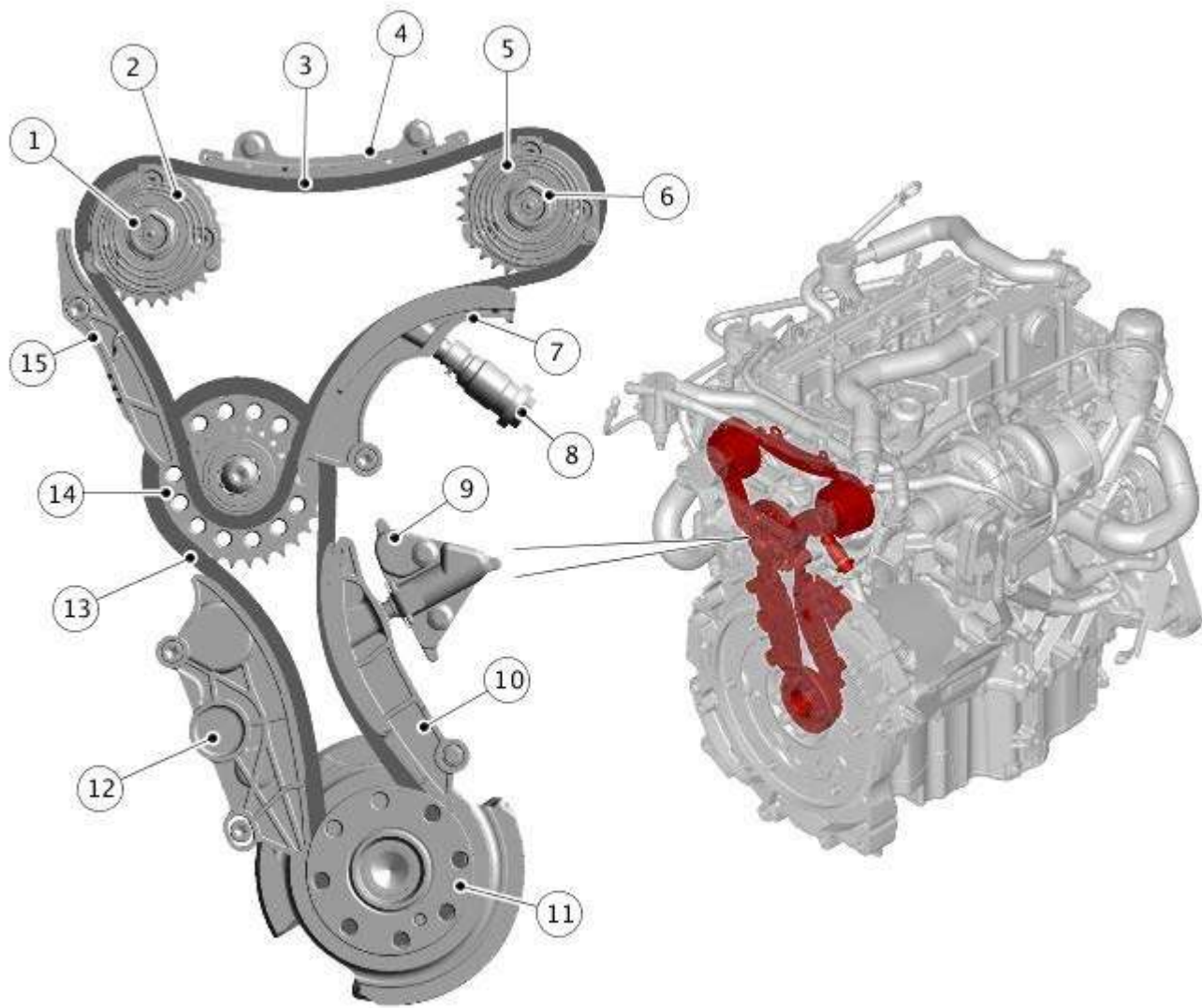
- Correct Position (Engaged)

### Seatbelt Buckle Pre Tensioner Diagnostics

This procedure should be used to aid diagnosis of the following supplementary restraints system (SRS) - buckle pre tensioner (PBP) fault codes

| SRS Light Status | DTC                                    |
|------------------|----------------------------------------|
| On               | B1211-11, B1211-12, B1211-13, B1211-2B |
| On               | B1214-11, B1214-12, B1214-13, B1214-2B |

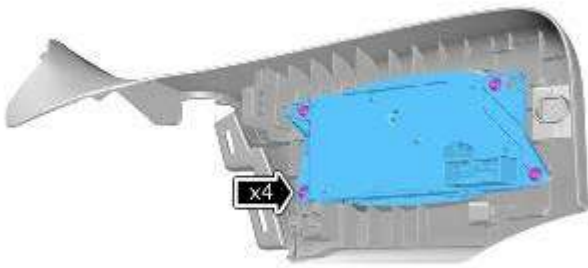
| PINPOINT TEST A : BUCKLE/RETRACTOR PRE TENSIONER DIAGNOSTIC                                                                                                                                                                                                                                         |                                                                                                                                 |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|
| A1: DIAGNOSTIC PROCEDURE                                                                                                                                                                                                                                                                            |                                                                                                                                 |
| TEST CONDITIONS                                                                                                                                                                                                                                                                                     | DETAILS/RESULTS/ACTIONS                                                                                                         |
| <b>WARNINGS:</b> <ul style="list-style-type: none"> <li>• Prior to any work on the SRS system the vehicle battery must be disconnected system the vehicle battery must be disconnected</li> <li>• Please wait for 120 seconds to allow the airbag deployment energy reserve to dissipate</li> </ul> |                                                                                                                                 |
|                                                                                                                                                                                                                                                                                                     | 1<br>Check location of harness fly-lead ensuring there is no risk snagging and sufficient strain relief during full seat travel |
|                                                                                                                                                                                                                                                                                                     | 2<br>Disconnect under-seat buckle pre tensioner connectors                                                                      |
|                                                                                                                                                                                                                                                                                                     | 3<br>Check connector for water ingress or signs of corrosion (white/green residue)                                              |
|                                                                                                                                                                                                                                                                                                     | 4<br>Check for debris in female connector and remove as required                                                                |
|                                                                                                                                                                                                                                                                                                     | 5<br>Check for debris in male harness end connector and remove                                                                  |
|                                                                                                                                                                                                                                                                                                     | 6<br>Check that male connector pins are secure and in good condition                                                            |
|                                                                                                                                                                                                                                                                                                     | 7                                                                                                                               |



E204645

| Item | Description                                      |
|------|--------------------------------------------------|
| 1    | Intake camshaft                                  |
| 2    | Variable Camshaft Timing (VCT) actuator - Intake |
| 3    | Secondary timing chain                           |
| 4    | Secondary timing chain guide                     |
| 5    | VCT actuator - Exhaust                           |
| 6    | Exhaust camshaft                                 |
| 7    | Secondary timing chain tensioner guide           |
| 8    | Secondary timing chain tensioner                 |
| 9    | Primary timing chain tensioner                   |
| 10   | Primary timing chain tensioner guide             |
| 11   | Crankshaft                                       |
| 12   | Primary timing chain guide                       |
| 13   | Primary timing chain                             |
| 14   | Idler sprocket                                   |
| 15   | Secondary timing chain guide                     |

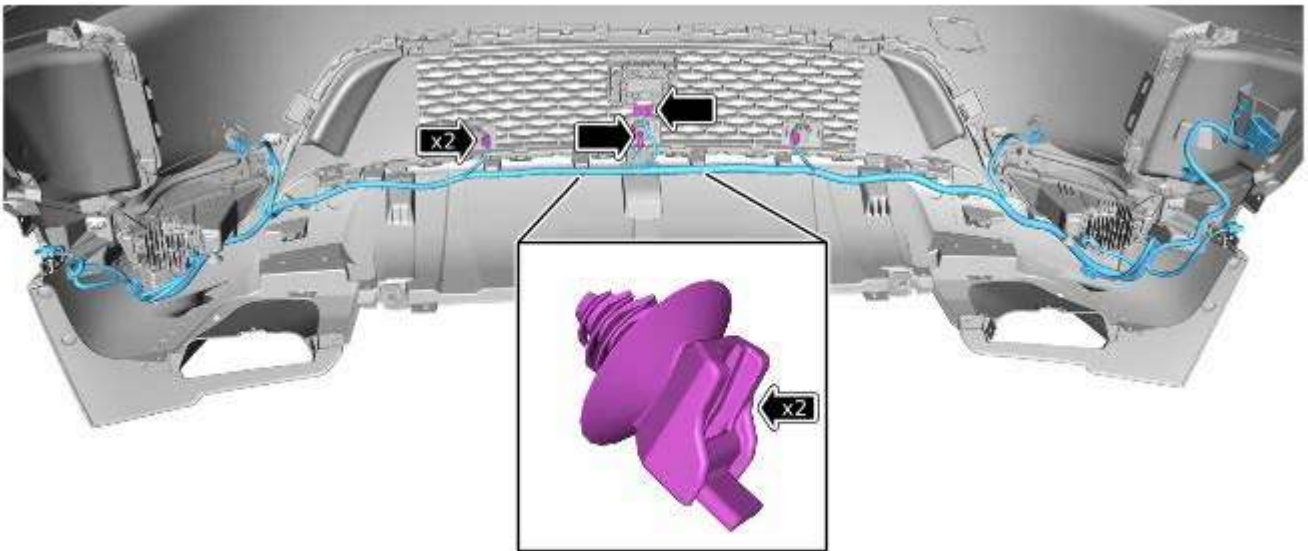
|          |                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|----------|------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|          |                                                                              | connector pin corrosion<br>Fuel injector circuit short circuit to ground, short circuit to power, open circuit, high resistance<br>Fuel injector failure                                                                                                                                                                                                                                                                                                                                                                    | injector circuit for short circuit to ground, short circuit to power, open circuit, high resistance<br>Using the Jaguar Land Rover approved diagnostic equipment, clear the Diagnostic Trouble Code(s) and retest<br>Check fuel injector resistance<br>Install new fuel injector, only when diagnosed as failed                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| P0271-1C | Cylinder 4 Injector "A" Circuit High - Circuit voltage out of range          | <ul style="list-style-type: none"> <li>• Prioritised List of Possible Causes<br/> Connector is disconnected, connector pin is backed out, connector pin corrosion<br/> Fuel injector circuit short circuit to ground, short circuit to power, open circuit, high resistance<br/> Fuel injector failure </li> </ul>                                                                                                                                                                                                          | <ul style="list-style-type: none"> <li>• Prioritised Checks to Perform<br/> Inspect connectors for signs of water ingress, and pins for damage and/or corrosion<br/> Refer to the electrical circuit diagrams and check the fuel injector circuit for short circuit to ground, short circuit to power, open circuit, high resistance<br/> Using the Jaguar Land Rover approved diagnostic equipment, clear the Diagnostic Trouble Code(s) and retest<br/> Check fuel injector resistance<br/> Install new fuel injector, only when diagnosed as failed </li> </ul>                                                                                                                                                                                                                                                                                      |
| P0299-00 | Turbocharger/Supercharger "A" Underboost Condition - No sub type information | <ul style="list-style-type: none"> <li>• Electrical Cause<br/> Yes</li> <li>• Mechanical Cause<br/> Yes</li> <li>• Monitor Description<br/> The monitor compares expected boost pressure when boost pressure control is active against target. If actual is less than expected then fault reported</li> <li>• Prioritised List of Possible Causes<br/> Air intake system, boost air system high pressure boost air leak<br/> Turbocharger seized<br/> Compressor bypass valve stuck open<br/> Air intake system,</li> </ul> | <p>NOTE:</p> <p>If any of the following Diagnostic Trouble Code(s) are set in conjunction with P0299-00, complete the checks below first followed by the checks in the relevant DTC index.<br/> P0034-11 P0035-12 P0039-13 P0234-00 P0237-16 P0238-17 P0243-13 P0244-84 P0244-85 P0245-11 P0245-14 P0246-12 P0246-15 P056E-84 P056E-85 P2261-73 P25B3-00 P25B4-00 P2AB8-16 P2AB9-17 P2B81-16 P2B81-17</p> <ul style="list-style-type: none"> <li>• Vehicle Conditions to Enable DTC Logging Strategy<br/> Drive vehicle to generate boost pressure for approximately 5 seconds</li> <li>• Check for manifold absolute pressure sensor Diagnostic Trouble Code(s) (P0106,P0107,P0108). If present, follow the actions in the relevant DTC index</li> <li>• Check air intake system, low pressure intake for blockages, restriction or leakage</li> </ul> |



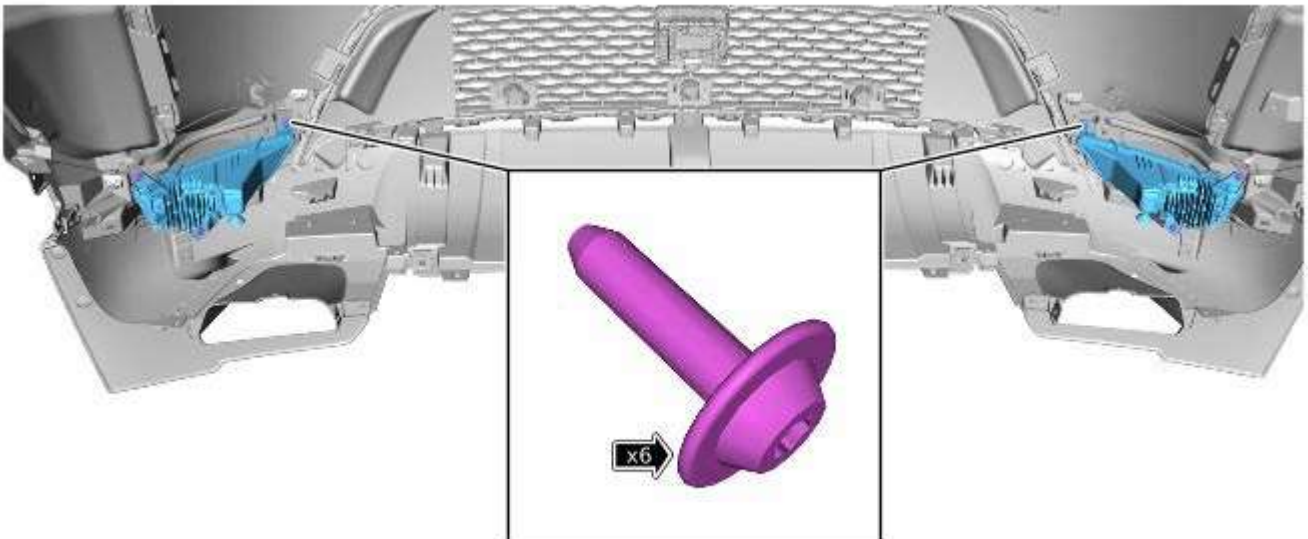
7. E233136
- Remove the 4 screws.
  - Remove the front row seat switchpack.

#### Installation

- Install the front row seat switchpack.
  - Install and tighten the 4 screws.  
*Torque: 1.4Nm*
- Connect the electrical connector.
  - Install the front row seat outer valance.
- Position the front row seatbelt pretensioner.
  - Install and tighten the bolt.  
*Renew Part: [Front row seatbelt pretensioner bolt](#) Quantity: [1](#).*
  - Connect the front row seatbelt pretensioner electrical connector.
- Connect the startup battery ground cable.  
Refer to: [12V System Disconnect](#) (414-00 Battery and Charging System - General Information, General Procedures).
- Move the front row seat to the original position.



17. E244863
- Disconnect the 4 electrical connectors.
  - Release the wiring harness at 2 clips.
  - Remove the front bumper wiring harness.

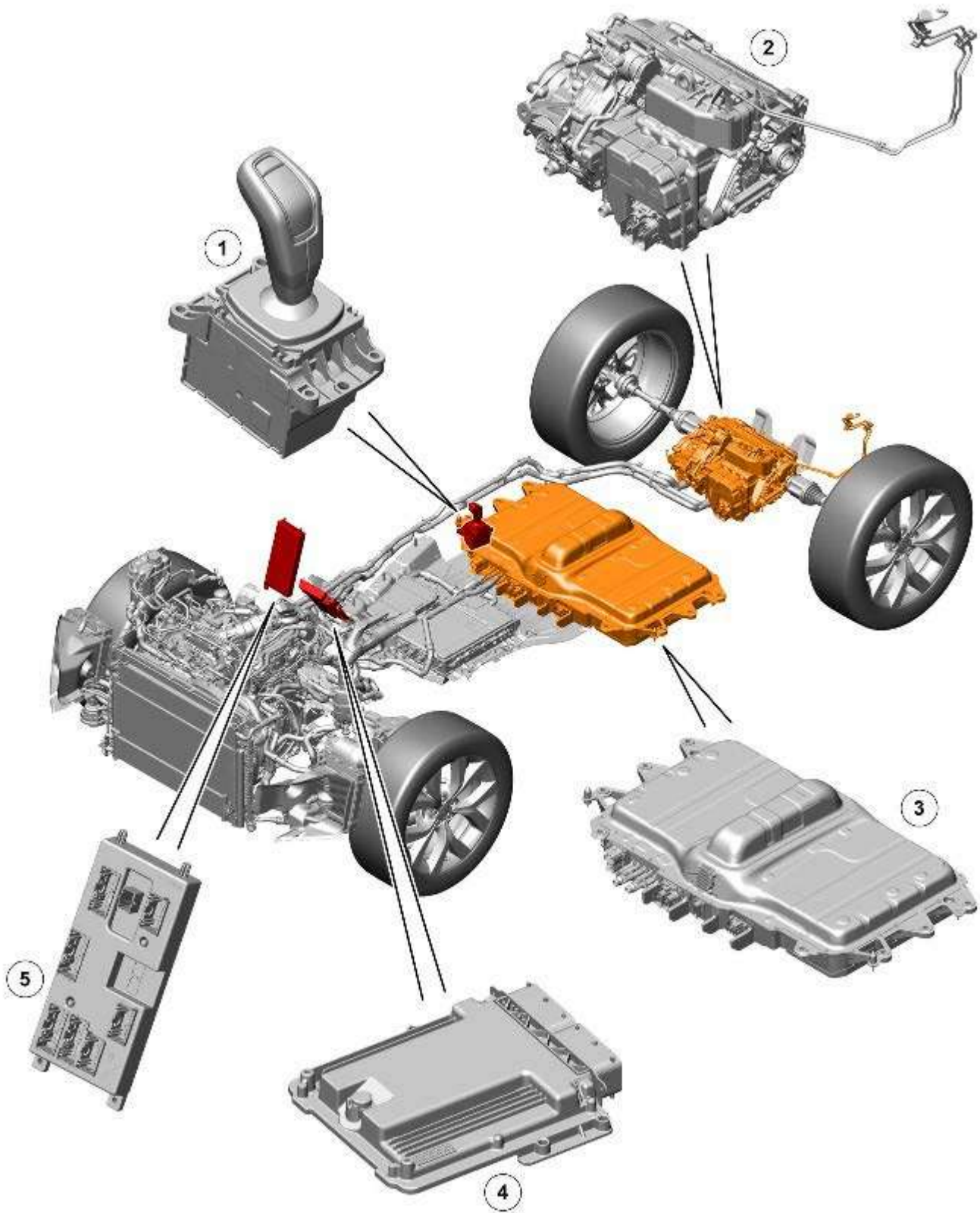


18. E244864
- Remove the 6 screws.
  - Remove the 2 front fog lamps.

19. CAUTIONS:
- Take extra care not to damage the component.
  - Use a suitable plastic trim tool to release the component.

|          |                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|----------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|          |                                                                                       | <p>below a threshold during cat heating</p> <ul style="list-style-type: none"> <li>• Prioritised List of Possible Causes <ul style="list-style-type: none"> <li>External fuel leak from high pressure fuel system</li> <li>Internal fuel leak into low pressure fuel system</li> </ul> </li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | <p>minute</p> <ul style="list-style-type: none"> <li>• Prioritised Checks to Perform <ul style="list-style-type: none"> <li>Check for external fuel leaks from the high pressure fuel pump and fuel rail</li> <li>Check for internal fuel leaks from high pressure fuel pump into the low pressure fuel system</li> </ul> </li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| P053F-24 | Cold Start Fuel Pressure Performance Bank 1 - Signal stuck high                       | <ul style="list-style-type: none"> <li>• Monitor Description <ul style="list-style-type: none"> <li>The high pressure pump signal is above a threshold during cat heating</li> </ul> </li> <li>• Prioritised List of Possible Causes <ul style="list-style-type: none"> <li>External fuel leak from high pressure fuel system</li> <li>Internal fuel leak into low pressure fuel system</li> </ul> </li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | <ul style="list-style-type: none"> <li>• Vehicle Conditions to Enable DTC Logging Strategy <ul style="list-style-type: none"> <li>Engine running greater than 1 minute</li> </ul> </li> <li>• Prioritised Checks to Perform <ul style="list-style-type: none"> <li>Check for external fuel leaks from the high pressure fuel pump and fuel rail</li> <li>Check for internal fuel leaks from high pressure fuel pump into the low pressure fuel system</li> </ul> </li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| P054A-00 | Cold Start "B" Camshaft Position Timing Over-Advanced Bank 1 - No subtype information | <ul style="list-style-type: none"> <li>• Electrical Cause <ul style="list-style-type: none"> <li>No</li> </ul> </li> <li>• Mechanical Cause <ul style="list-style-type: none"> <li>Yes</li> </ul> </li> <li>• Monitor Description <ul style="list-style-type: none"> <li>Exhaust camshaft target versus actual deviation exceeds allowable limit during catalyst heating phase</li> </ul> </li> <li>• Prioritised List of Possible Causes <ul style="list-style-type: none"> <li>Oil level is low</li> <li>Variable camshaft timing solenoid circuit intake and exhaust connectors swapped</li> <li>Variable camshaft timing solenoid circuit short circuit to ground, short circuit to power, open circuit, high resistance</li> <li>Oil pressure is low</li> <li>Variable camshaft timing actuator mechanical failure</li> <li>VCT solenoid (Exhaust)</li> <li>Excessive camshaft friction, restricted</li> </ul> </li> </ul> | <ul style="list-style-type: none"> <li>• Vehicle Conditions to Enable DTC Logging Strategy <ul style="list-style-type: none"> <li>Engine must be cold or soaked for an extended period (greater than 6 hours) in order to enable catalyst heating, Start and idle vehicle for at least 15 seconds</li> </ul> </li> <li>• Prioritised Checks to Perform <ul style="list-style-type: none"> <li>Check the oil level is correct</li> <li>Check variable camshaft timing solenoid circuit intake and exhaust connectors are not swapped</li> <li>Refer to the electrical circuit diagrams and check variable camshaft timing solenoid circuit for short circuit to ground, short circuit to power, open circuit, high resistance</li> <li>Refer to the relevant sections of the workshop manual and check the oil pressure is within specification. Check oil supply to camshaft is correct and that oil gallery is free from debris</li> <li>Using the Jaguar Land Rover approved diagnostic equipment, clear the Diagnostic Trouble Code(s) and retest</li> <li>Using the Jaguar Land Rover approved diagnostic equipment complete "VCT Actuator Exhaust Test"</li> </ul> </li> </ul> |

|          |                                                    |                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|----------|----------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|          |                                                    | <ul style="list-style-type: none"> <li>Hood release switch stuck pressed</li> </ul>                                                                                                     | <ul style="list-style-type: none"> <li>Check the operation of the hood latch release switch. Free the stuck switch or install a new hood latch release switch as necessary</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| C111A-11 | Right Stop Lamp - Circuit short to ground          | <ul style="list-style-type: none"> <li>Right stop lamp bulb failure (where installed)</li> <li>Right stop lamp circuit short circuit to ground</li> </ul>                               | <p>NOTES:</p> <ul style="list-style-type: none"> <li>After ensuring any faults have been repaired, inspect if DTC U1000-00 is stored in the BCM. If yes, using the Jaguar Land Rover approved diagnostic equipment, run the application 'Ignition cycle counter reset' from ECU Diagnostics - Body Control Module (BCM) - ECU Functions. The application re-enables the output and allows successful validation of the repair using the recommended method</li> <li>To validate the repair run the engine for 10 seconds, stop the engine, run the engine for another 10 seconds and check the stop lamp function. Then use the Jaguar Land Rover approved diagnostic equipment to check this DTC is no longer set in the body control module. Alternatively use the Jaguar Land Rover approved diagnostic equipment to perform the routine - On Demand Self Test. If the repair is successful this DTC will no longer be set within the body control module</li> <li>Replace the right stop lamp bulb (where installed)</li> <li>Refer to the electrical circuit diagrams and check the right stop lamp circuit for short circuit to ground. Repair the wiring harness or install a new right tail lamp assembly as necessary</li> </ul> |
| C111A-15 | Right Stop Lamp - Circuit short to battery or open | <ul style="list-style-type: none"> <li>Right stop lamp bulb failure (where installed)</li> <li>Right stop lamp circuit short circuit to power, open circuit, high resistance</li> </ul> | <p>NOTE:</p> <p>To validate the repair run the engine for 10 seconds, stop the engine, run the engine for another 10 seconds and check the stop lamp function. Then use the Jaguar Land Rover approved diagnostic equipment to check this DTC is no longer set in the body control module. Alternatively use the Jaguar Land Rover approved diagnostic equipment to perform the routine - On Demand Self Test. If the repair is successful this DTC will no longer be set within the body control module</p> <ul style="list-style-type: none"> <li>Replace the right stop lamp bulb (where installed)</li> <li>Refer to the electrical circuit diagrams and check the right stop lamp circuit for short circuit to power, open circuit, high resistance. Repair the wiring harness or install a new right tail lamp assembly as necessary</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                     |
| C111B-11 | Left Stop Lamp - Circuit short to ground           | <ul style="list-style-type: none"> <li>Left stop lamp</li> </ul>                                                                                                                        | <p>NOTES:</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |



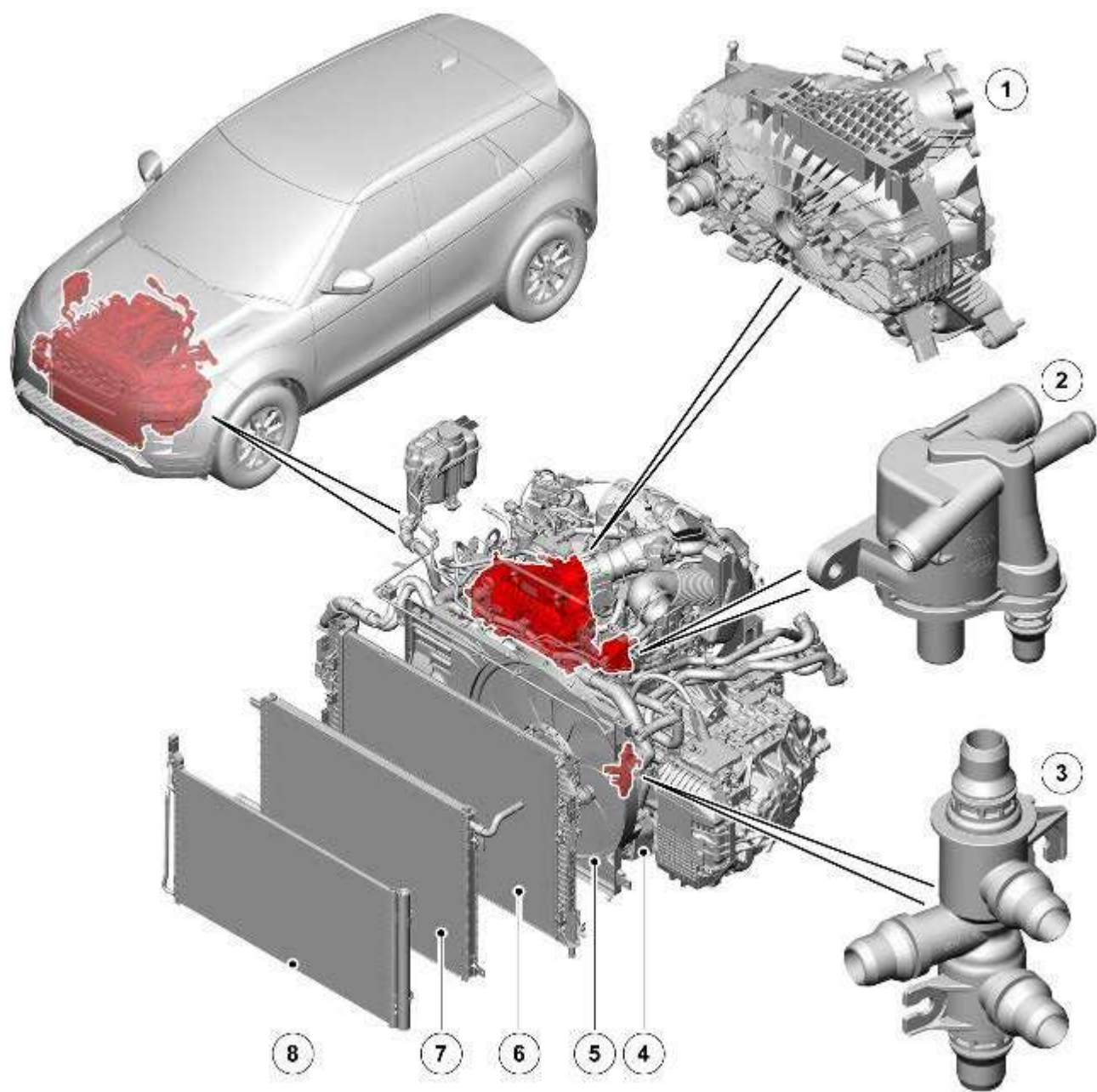
E254849

| Item | Description                                      |
|------|--------------------------------------------------|
| 1    | Transmission Control Switch (TCS)                |
| 2    | Electric Rear Axle Drive (eRAD)                  |
| 3    | Plug-in Hybrid Electric Vehicle (PHEV) battery   |
| 4    | Powertrain Control Module (PCM)                  |
| 5    | Body Control Module (BCM)/Gateway Module A (GWM) |

## High Voltage Harness - 2 of 2

- 7 Charge air coolant pump
- 8 Coolant expansion tank

## Component Location - 3 of 3



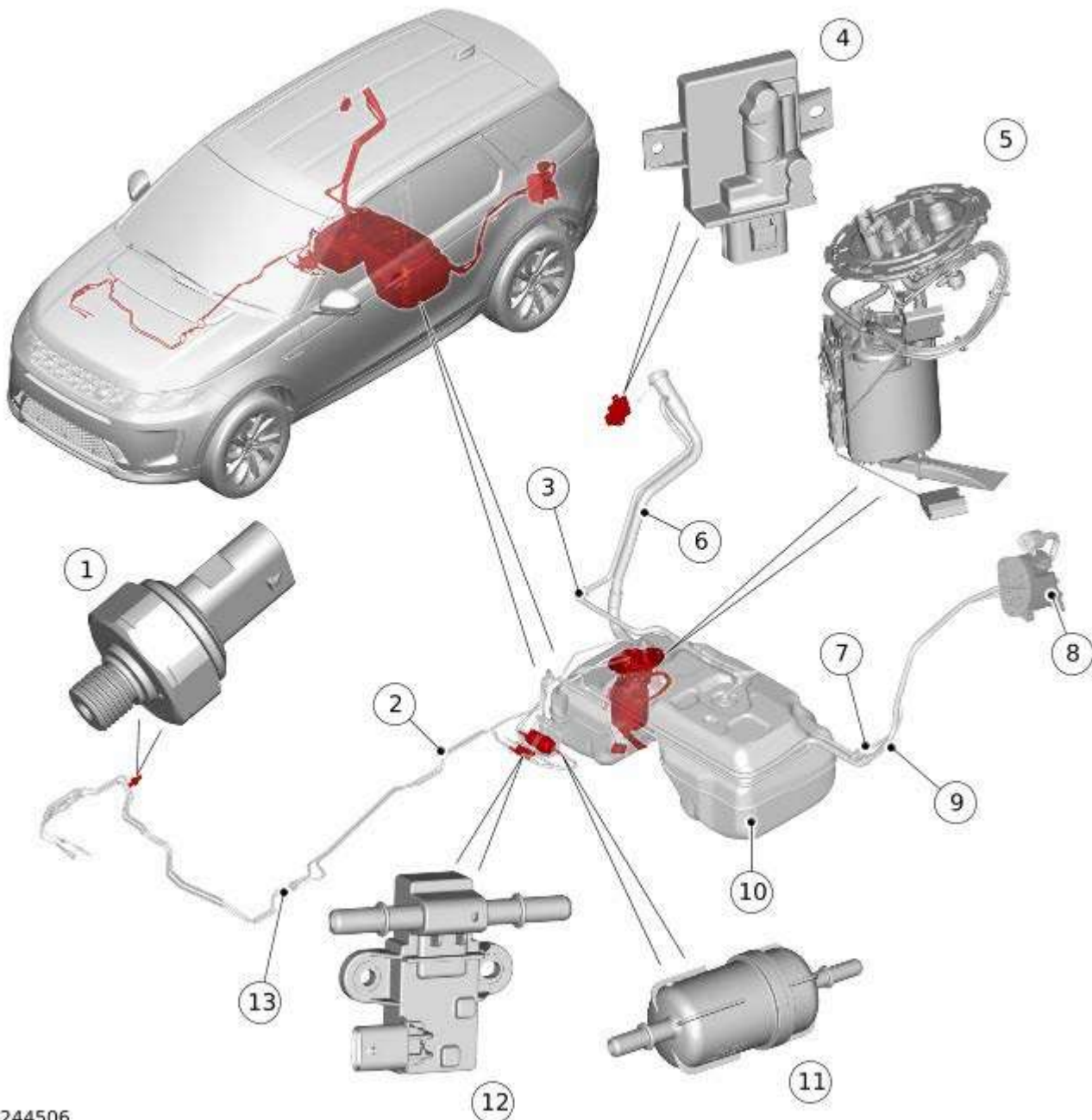
E244681

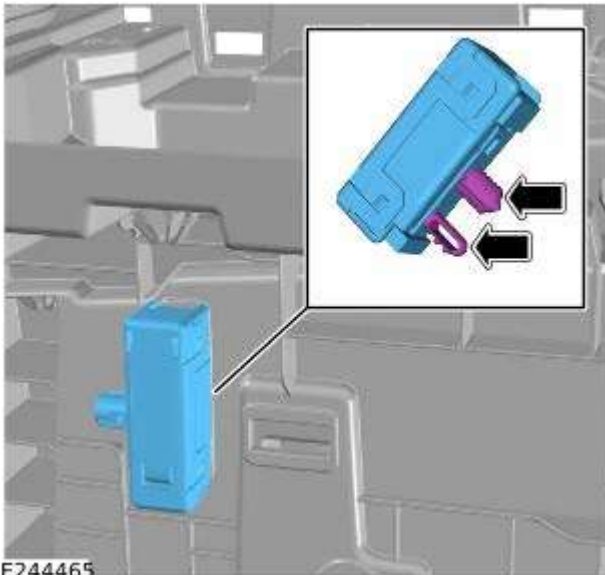
| Item | Description                                      |
|------|--------------------------------------------------|
| 1    | Charge air cooler                                |
| 2    | Engine coolant degas separator                   |
| 3    | Automatic Transmission Fluid (ATF) warming valve |
| 4    | ATF cooler                                       |
| 5    | Electric cooling fan                             |
| 6    | Radiator                                         |
| 7    | Charge air radiator                              |
| 8    | Air Conditioning (A/C) condenser                 |

OVERVIEW

| Item | Description                                            |
|------|--------------------------------------------------------|
| 1    | Fuel Fired Booster Heater (FFBH)                       |
| 2    | FFBH fuel pump supply line connection - To engine      |
| 3    | FFBH fuel pump                                         |
| 4    | FFBH fuel pump supply line connection - From fuel tank |
| 5    | Fuel supply line - To FFBH fuel pump                   |
| 6    | FFBH fuel supply line - From FFBH fuel pump            |
| 7    | Fuel feed hose connection - FFBH                       |
| 8    | Wiring harness connectors - FFBH                       |
| 9    | Air intake hose - FFBH                                 |
| 10   | Coolant hose inlet - FFBH                              |
| 11   | Coolant hose outlet - FFBH                             |

## Component Location - 4 of 4 - Flex Fuel System - Brazil and France Only

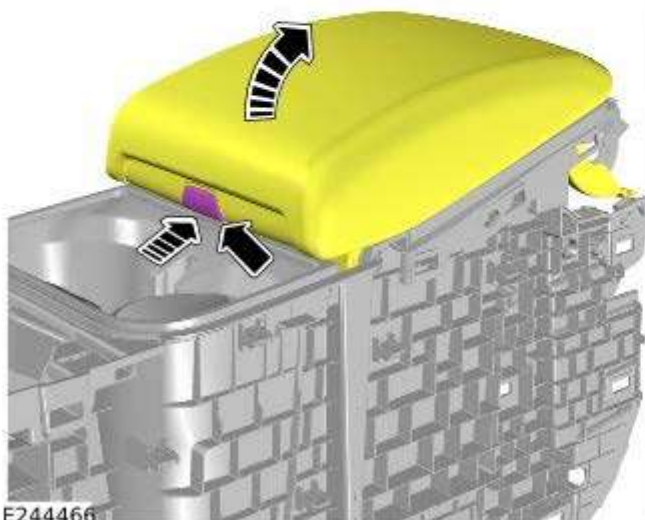




E244465

16.

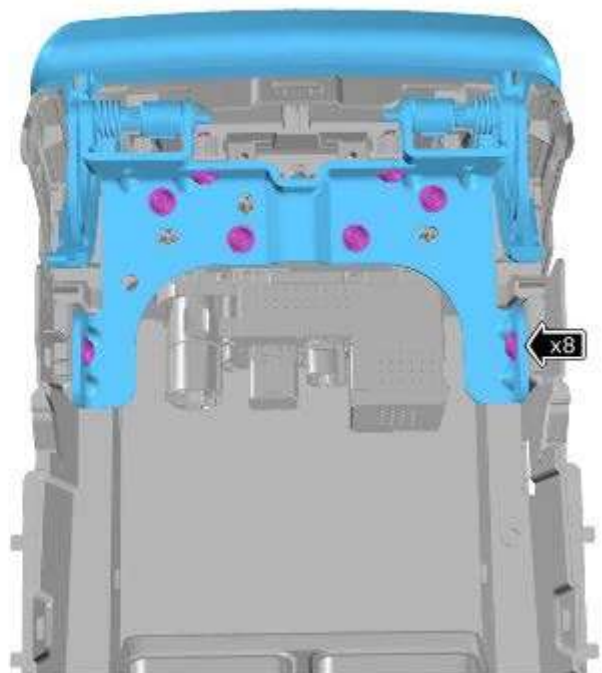
- Release the 2 plastic retainers.
- Remove the Bluetooth® antenna.



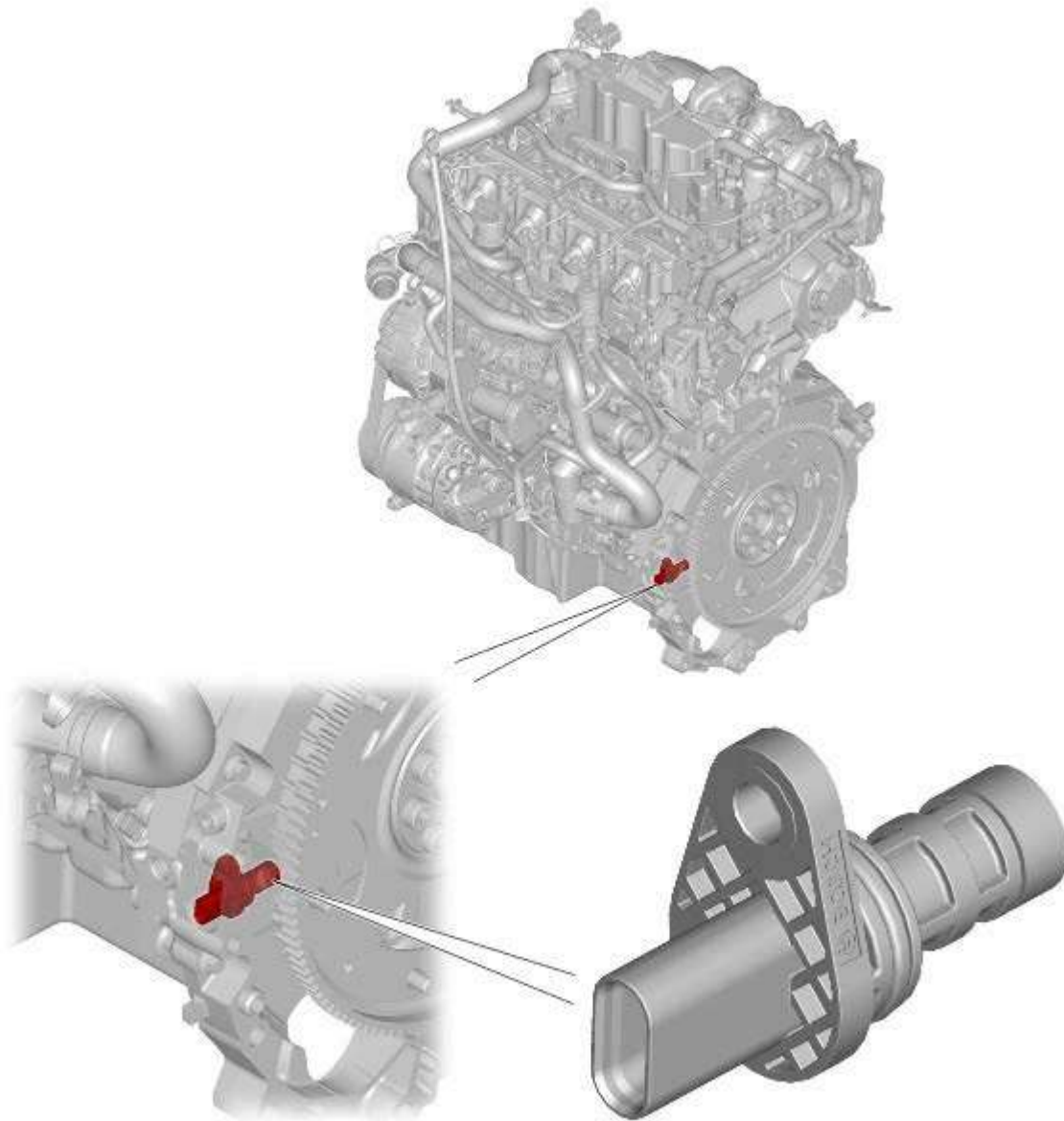
E244466

17.

- Open the stowage compartment lid.
- Remove the 8 screws.
- Remove the floor console stowage compartment lid.



|          |                                                                    |                                                                                                                                      |                                                                                                                                                                                                                                                         |
|----------|--------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|          |                                                                    |                                                                                                                                      | 43 and 44) for short circuit between power and return                                                                                                                                                                                                   |
| B0091-12 | Left Side Restraints Sensor 1 - Circuit short to battery           | <ul style="list-style-type: none"> <li>Left C pillar impact sensor circuit short circuit to power</li> </ul>                         | <ul style="list-style-type: none"> <li>Refer to the electrical circuit diagrams and inspect the left C pillar impact sensor circuit for short circuit to power</li> </ul>                                                                               |
| B0091-13 | Left Side Restraints Sensor 1 - Circuit open                       | <ul style="list-style-type: none"> <li>Left C pillar impact sensor circuit - open circuit</li> </ul>                                 | <ul style="list-style-type: none"> <li>Refer to electrical circuit diagrams and check left C pillar impact sensor circuit for open circuit</li> </ul>                                                                                                   |
| B0091-2B | Left Side Restraints Sensor 1 - Signal cross coupled               | <ul style="list-style-type: none"> <li>Left C pillar impact sensor circuit short circuit to another impact sensor circuit</li> </ul> | <ul style="list-style-type: none"> <li>Refer to the electrical circuit diagrams and inspect the left C pillar impact sensor circuit for short circuit to another impact sensor circuit</li> </ul>                                                       |
| B0091-31 | Left Side Restraints Sensor 1 - No signal                          | <ul style="list-style-type: none"> <li>Left C pillar impact sensor circuit open circuit, high resistance</li> </ul>                  | <ul style="list-style-type: none"> <li>Refer to the electrical circuit diagrams and inspect the left C pillar impact sensor circuit for open circuit, high resistance</li> </ul>                                                                        |
| B0091-4A | Left Side Restraints Sensor 1 - Incorrect component installed      | <ul style="list-style-type: none"> <li>Incorrect component installed</li> </ul>                                                      | <ul style="list-style-type: none"> <li>Check that the correct component is installed. Using the Jaguar Land Rover approved diagnostic equipment, clear the DTCs and retest. If the fault persists, install a new left C pillar impact sensor</li> </ul> |
| B0091-56 | Left Side Restraints Sensor 1 - Invalid / incomplete configuration | <ul style="list-style-type: none"> <li>Restraints control module is not configured correctly</li> </ul>                              | <ul style="list-style-type: none"> <li>Using the Jaguar Land Rover approved diagnostic equipment, reconfigure the restraints control module with the latest level software</li> </ul>                                                                   |
| B0091-96 | Left Side Restraints Sensor 1 - Component internal failure         | <ul style="list-style-type: none"> <li>Left C pillar impact sensor internal failure</li> </ul>                                       | <ul style="list-style-type: none"> <li>Using the Jaguar Land Rover approved diagnostic equipment, clear the DTCs and retest. If the fault persists, install a new left C pillar impact sensor</li> </ul>                                                |
| B0095-11 | Right Frontal Restraints Sensor - Circuit short to ground          | <ul style="list-style-type: none"> <li>Front right impact sensor circuit short circuit to ground</li> </ul>                          | <ul style="list-style-type: none"> <li>Refer to the electrical circuit diagrams and inspect the front right impact sensor circuit for short circuit to ground</li> </ul>                                                                                |
| B0095-12 | Right Frontal Restraints Sensor - Circuit short to                 | <ul style="list-style-type: none"> <li>Front right impact sensor circuit short circuit to</li> </ul>                                 | <ul style="list-style-type: none"> <li>Refer to the electrical circuit diagrams and inspect the front right impact sensor circuit for short circuit to power</li> </ul>                                                                                 |



E204488

The CKP is located at the side of the engine towards the front and adjacent to the reluctor ring. The reluctor ring is an integral part of the drive plate. The CKP is located in a hole and is secured with a screw.

The reluctor ring has 58 teeth and a space, the size of 2 missing teeth, as a reference point. The CKP is a hall effect sensor which uses the missing teeth on the reluctor ring to determine the crankshaft position and rotational speed.

The CKP produces a square wave signal, the frequency of which is proportional to engine speed. The CKP measures the magnetic field variation induced by the reluctor ring.

The CKP sensor has a 3-pin electrical connector. The 3-pin electrical connector has these connections:

- A 5V reference voltage from the CKP.
- A CKP signal to the PCM.
- A ground connection.

When a fault occurs with the CKP, a DTC is registered in the PCM. The engine will continue to operate using data from the CMP until the fault has been corrected.

The PCM uses the signal from the CKP for the following functions:

Published: 18-Aug-2020

2021.0 Discovery Sport (LC), 311-01

## Automatic Transmission

# Diagnostics (G2732348)

### DIAGNOSIS AND TESTING Principles of Operation

For a detailed description of the Automatic Transmission, refer to the relevant Description and Operation section in the workshop manual REFER to:[External Controls](#) (311-01 Automatic Transmission, Description and Operation).

### Inspection and Verification CAUTIONS:

- 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.
- The vehicle should not be driven if the fluid level is low as internal failure can result.
- When the wheels are free of the ground (for example, when the vehicle is on a lift), do not drive the vehicle in any gear higher than 4th gear. Failure to comply with this instruction may cause Diagnostic Trouble Code(s) (DTC)s to set or damage to the automatic transmission.

- NOTES:
- If a control module or a component is at fault or may be at fault and the vehicle remains under manufacturer warranty, refer to the Warranty Policy and Procedures manual, or determine if any prior approval program is in operation, prior to the installation of a new module/component.
  - When performing voltage or resistance tests, always use a digital multimeter accurate to three decimal places, and with an up-to-date calibration certificate. When testing resistance always take the resistance of the digital multimeter leads into account.
  - Check and rectify basic faults before beginning diagnostic routines involving pinpoint tests.
  - A road test should be performed by a suitably qualified and experienced technician in accordance with: Jaguar Land Rover - Service Experience Framework (SEF) - 4.4 Road Test Check Sheet. The customer should be present and ideally should drive the vehicle.

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

### Visual Inspection

| Mechanical                                                                                                                   | Electrical                                                                                        |
|------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"><li>• Automatic transmission casing</li><li>• Automatic transmission fluid leaks</li></ul> | <ul style="list-style-type: none"><li>• Fuses</li><li>• Wiring harnesses and connectors</li></ul> |