

MULTIFUNCTION ELECTRONIC MODULES

DIAGNOSIS AND TESTING

DESCRIPTION AND OPERATION

For a detailed description of the multifunction electronic control modules, refer to the relevant description and operation sections in the workshop manual REFER to: [Module Controlled Functions](#) (419-10 Multifunction Electronic Modules, 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

1. Visually inspect for obvious signs of damage and system integrity

Visual Inspection

MECHANICAL	ELECTRICAL
<ul style="list-style-type: none">▪ Check for stuck/jammed switches and buttons▪ Visibly damaged or worn components▪ Loose or missing fasteners	<ul style="list-style-type: none">▪ Fuse(s)▪ Electrical connector(s)▪ Wiring harness

1. If an obvious cause for an observed or reported concern is found, correct the cause (if possible) before proceeding to the next step
1. If the cause is not visually evident, check for diagnostic trouble codes (DTCs) and refer to the diagnostic trouble codes index

DTC INDEX

For a list of diagnostic trouble codes that could be logged on this vehicle, please refer to Section 100-00.

REFER to: [Diagnostic Trouble Code \(DTC\) Index - DTC: Driver Door Module/Passenger Door Module \(DDM/PDM\)](#) (100-00 General Information, Description and Operation).

2015.0 F-TYPE (X152), 100-00

GENERAL INFORMATION

DESCRIPTION AND OPERATION

DRIVER/PASSENGER DOOR MODULE (DDM/PDM)

ⓘ 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

NOTES:

- If the control module or a component is suspect and the vehicle remains under manufacturer warranty, refer to the warranty policy and procedures manual, or determine if any prior approval programme is in operation, prior to the installation of a new module/component
- Generic scan tools may not read the codes listed, or may read only 5-digit codes. Match the 5 digits from the scan tool to the first 5 digits of the 7-digit code listed to identify the fault (the last 2 digits give extra information read by the manufacturer-approved diagnostic system)
- When performing voltage or resistance tests, always use a digital multimeter accurate to three decimal places and with a current 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
- Inspect connectors for signs of water ingress, and pins for damage and/or corrosion
- If diagnostic trouble codes are recorded and, after performing the pinpoint tests, a fault is not present, an intermittent concern may be the cause. Always check for loose connections and corroded terminals
- Where an 'on demand self-test' is referred to, this can be accessed via the 'diagnostic trouble code monitor' tab on the manufacturers approved diagnostic system
- Check DDW for open campaigns. Refer to the corresponding bulletins and SSMs which may be valid for the specific customer complaint and carry out the recommendations as required

The table below lists all diagnostic trouble codes (DTCs) that could be logged in the Driver/Passenger Door Module (DDM/PDM). For additional diagnosis and testing information refer to the relevant diagnosis and testing section. For additional information, refer to: [Driver Door Module \(DDM\)](#) (419-10 Multifunction Electronic Modules, Diagnosis and Testing).

DTC	DESCRIPTION	POSSIBLE CAUSES	ACTION
B1087-87	LIN Bus "A" - Missing message	<ul style="list-style-type: none"> Rear door sunblind LIN circuit(s) - Short circuit to ground, short circuit to power, open circuit, high resistance 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check the door module rear door sunblind power and LIN circuit(s) for short circuit to ground, short circuit to power, open circuit, high resistance. Repair circuit as required. Clear DTC, operate sunblind and retest If fault persists, check and install a new sunblind module as required
B109C-11	Front Courtesy Light - Circuit short to ground	<ul style="list-style-type: none"> Front courtesy light circuit - Short circuit to ground Front courtesy light - Internal failure 	<div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <p> NOTE:</p> <p>Disconnect the battery prior to performing circuit checks</p> </div> <ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check the front courtesy light circuit (pin 3) for short circuit to ground. Repair circuit as required. Clear DTC, repeatedly open and close door and retest If fault persists, check and install a new front courtesy light as required. Clear DTC, repeatedly open and close door and retest
B109C-15	Front Courtesy Light - Circuit	<ul style="list-style-type: none"> Front courtesy light - Bulb failure 	

	short to battery or open	<ul style="list-style-type: none"> Front courtesy light circuit - Short circuit to power or open circuit, high resistance 	<div style="border: 1px solid black; background-color: #e0f2f1; padding: 5px; margin-bottom: 10px;">  NOTE: </div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <p>Disconnect the battery prior to performing circuit checks</p> </div> <ul style="list-style-type: none"> Replace courtesy lamp bulb. Clear DTC, repeatedly open and close door and retest If fault persists, refer to the electrical circuit diagrams and check the front courtesy light circuit (pin 3) for short circuit to power or open circuit, high resistance. Repair circuit as required. Clear DTC and retest
B10EB-11	Driver door double locking motor - Circuit short to ground	<ul style="list-style-type: none"> Driver door double locking motor circuit - Short circuit to ground Door latch - Internal failure 	<div style="border: 1px solid black; background-color: #e0f2f1; padding: 5px; margin-bottom: 10px;">  NOTE: </div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <p>Disconnect the battery prior to performing circuit checks</p> </div> <ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check the driver door double locking motor circuit (pin 9) for short circuit to ground. Repair circuit as required. Clear DTC, repeatedly double lock /unlock the vehicle and retest If fault persists, check and install a new door latch as required. Clear DTC, repeatedly open and close door and retest
B10EB-15	Driver door double locking motor - Circuit short to battery or open	<ul style="list-style-type: none"> Driver door double locking motor circuit - Short circuit to power or open 	

		<p>circuit, high resistance</p> <ul style="list-style-type: none"> Door latch - Internal failure 	<p> NOTE:</p> <p>Disconnect the battery prior to performing circuit checks</p> <ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check the driver door double locking motor circuit (pin 9) for short circuit to power or open circuit, high resistance. Clear DTC, repeatedly double lock /unlock the vehicle and retest If fault persists, check and install a new door latch as required. Clear DTC, repeatedly double lock /unlock the vehicle and retest
B10EC-11	Passenger door double locking motor - Circuit short to ground	<ul style="list-style-type: none"> Passenger door double locking motor circuit - Short circuit to ground Door latch - Internal failure 	<p> NOTE:</p> <p>Disconnect the battery prior to performing circuit checks</p> <ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check the passenger door double locking motor circuit (pin 9) for short circuit to ground. Repair circuit as required. Clear DTC, repeatedly double lock /unlock the vehicle and retest If fault persists, check and install a new door latch as required. Clear DTC, repeatedly open and close door and retest
B10EC-15	Passenger door double locking	<ul style="list-style-type: none"> Passenger door double locking 	

	motor - Circuit short to battery or open	<p>motor circuit - Short circuit to power or open circuit, high resistance</p> <ul style="list-style-type: none"> ▪ Door latch - Internal failure 	<p> NOTE:</p> <p>Disconnect the battery prior to performing circuit checks</p> <ul style="list-style-type: none"> ▪ Refer to the electrical circuit diagrams and check the passenger door double locking motor circuit (pin 9) for short circuit to power or open circuit, high resistance. Clear DTC, repeatedly double lock /unlock the vehicle and retest ▪ If fault persists, check and install a new door latch as required. Clear DTC, repeatedly double lock /unlock the vehicle and retest
B1108-11	Driver door central locking motor - Circuit short to ground	<ul style="list-style-type: none"> ▪ Driver door central locking motor circuit - Short circuit to ground ▪ Door latch - Internal failure 	<p> NOTE:</p> <p>Disconnect the battery prior to performing circuit checks</p> <ul style="list-style-type: none"> ▪ Refer to the electrical circuit diagrams and check the driver door central locking motor circuit (pin 10) for short circuit to ground. Repair circuit as required. Clear DTC, repeatedly double lock /unlock the vehicle and retest ▪ If fault persists, check and install a new door latch as required. Clear DTC, repeatedly open and close door and retest
B1108-15	Driver door central locking	<ul style="list-style-type: none"> ▪ Driver door central locking 	

	motor - Circuit short to battery or open	<p>motor circuit - Short circuit to power or open circuit, high resistance</p> <ul style="list-style-type: none"> ▪ Door latch - Internal failure 	<p> NOTE:</p> <p>Disconnect the battery prior to performing circuit checks</p> <ul style="list-style-type: none"> ▪ Refer to the electrical circuit diagrams and check the driver door central locking motor circuit (pin 10) for short circuit to power or open circuit, high resistance. Clear DTC, repeatedly double lock /unlock the vehicle and retest ▪ If fault persists, check and install a new door latch as required. Clear DTC, repeatedly double lock /unlock the vehicle and retest
B1109-11	Passenger door central locking motor - Circuit short to ground	<ul style="list-style-type: none"> ▪ Passenger door central locking motor circuit - Short circuit to ground ▪ Door latch - Internal failure 	<p> NOTE:</p> <p>Disconnect the battery prior to performing circuit checks</p> <ul style="list-style-type: none"> ▪ Refer to the electrical circuit diagrams and check the passenger door central locking motor circuit (pin 10) for short circuit to ground. Repair circuit as required. Clear DTC, repeatedly double lock /unlock the vehicle and retest ▪ If fault persists, check and install a new door latch as required. Clear DTC, repeatedly open and close door and retest
B1109-15	Passenger door central locking	<ul style="list-style-type: none"> ▪ Passenger door central locking 	

	<p>motor - Circuit short to battery or open</p>	<p>motor circuit - Short circuit to power or open circuit, high resistance</p> <ul style="list-style-type: none"> ▪ Door latch - Internal failure 	<p> NOTE:</p> <p>Disconnect the battery prior to performing circuit checks</p> <ul style="list-style-type: none"> ▪ Refer to the electrical circuit diagrams and check the passenger door central locking motor circuit (pin 10) for short circuit to power or open circuit, high resistance. Clear DTC, repeatedly double lock /unlock the vehicle and retest ▪ If fault persists, check and install a new door latch as required. Clear DTC, repeatedly double lock /unlock the vehicle and retest
B1163-11	<p>Left Mirror Heater Output - Circuit short to ground</p>	<ul style="list-style-type: none"> ▪ Left side door mirror heater output circuit - Short circuit to ground ▪ Door mirror glass - Internal failure 	<p> NOTE:</p> <p>Disconnect the battery prior to performing circuit checks</p> <ul style="list-style-type: none"> ▪ Refer to the electrical circuit diagrams and check the left side door mirror heater output circuit (pin 10) for short circuit to ground. Repair circuit as required ▪ Reconnect battery, clear DTCs, repeatedly turn door mirror heating on and off and retest ▪ If fault persists, check and install a new door mirror glass as required. Clear DTC and retest
B1163-	<p>Left Mirror</p>		<p> NOTE:</p>

15	Heater Output - Circuit short to battery or open	<ul style="list-style-type: none"> ■ Left side door mirror heater output circuit - Short circuit to power or open circuit, high resistance ■ Door mirror glass - Internal failure 	<div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <p>Disconnect the battery prior to performing circuit checks</p> </div> <ul style="list-style-type: none"> ■ Refer to the electrical circuit diagrams and check the left side door mirror heater output circuit (pin 10) for short circuit to power, open circuit, high resistance. Repair circuit as required ■ Reconnect battery, clear DTCs, repeatedly turn door mirror heating on and off and retest ■ If fault persists, check and install a new door mirror glass as required. Clear DTC and retest
B1164-11	Right Mirror Heater Output - Circuit short to ground	<ul style="list-style-type: none"> ■ Right side door mirror heater output circuit - Short circuit to ground ■ Door mirror glass - Internal failure 	<div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <p> NOTE:</p> <p>Disconnect the battery prior to performing circuit checks</p> </div> <ul style="list-style-type: none"> ■ Refer to the electrical circuit diagrams and check the right side door mirror heater output circuit (pin 10) for short circuit to ground. Repair circuit as required ■ Reconnect battery, clear DTCs, repeatedly turn door mirror heating on and off and retest ■ If fault persists, check and install a new door mirror glass as required. Clear DTC and retest
B1164-15	Right Mirror Heater Output	<ul style="list-style-type: none"> ■ Right side door mirror heater 	<div style="border: 1px solid black; padding: 5px;"> <p> NOTE:</p> </div>

	- Circuit short to battery or open	<p>output circuit - Short circuit to power or open circuit, high resistance</p> <ul style="list-style-type: none"> ▪ Door mirror glass - Internal failure 	<p>Disconnect the battery prior to performing circuit checks</p> <ul style="list-style-type: none"> ▪ Refer to the electrical circuit diagrams and check the right side door mirror heater output circuit (pin 10) for short circuit to power, open circuit, high resistance. Repair circuit as required ▪ Reconnect battery, clear DTCs, repeatedly turn door mirror heating on and off and retest ▪ If fault persists, check and install a new door mirror glass as required. Clear DTC and retest
B1165-11	Left Front Puddle Lamp Output - Circuit short to ground	<ul style="list-style-type: none"> ▪ Left side front approach lamp output circuit - Short circuit to ground ▪ Approach lamp - Internal failure 	<p> NOTE:</p> <p>Disconnect the battery prior to performing circuit checks</p> <ul style="list-style-type: none"> ▪ Refer to the electrical circuit diagrams and check the left side front approach lamp output circuit (pin 12) for short circuit to ground. Repair circuit as required. Clear DTC, repeatedly open and close door and retest ▪ If fault persists, check and install a new approach lamp as required. Clear DTC and retest
B1165-15	Left Front Puddle Lamp Output - Circuit short to battery or open	<ul style="list-style-type: none"> ▪ Left side front approach lamp - Bulb failure ▪ Left side front approach lamp 	<p> NOTE:</p> <p>Disconnect the battery prior to performing circuit checks</p>

		<p>output circuit - Short circuit to power or open circuit, high resistance</p> <ul style="list-style-type: none"> Approach lamp - Internal failure 	<ul style="list-style-type: none"> Replace approach lamp bulb. Clear DTC, repeatedly lock and unlock car using the key fob and retest If fault persists, refer to the electrical circuit diagrams and check the left side front approach lamp output circuit (pin 12) for short circuit to power or open circuit, high resistance. Repair circuit as required. Clear DTC and retest If fault persists, check and install a new approach lamp as required. Clear DTC and retest
B1166-11	Right Front Puddle Lamp Output - Circuit short to ground	<ul style="list-style-type: none"> Right side front approach lamp output circuit - Short circuit to ground Approach lamp - Internal failure 	<div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;">  NOTE: Disconnect the battery prior to performing circuit checks </div> <ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check the right side front approach lamp output circuit (pin 12) for short circuit to ground. Repair circuit as required. Clear DTC, repeatedly open and close door and retest If fault persists, check and install a new approach lamp as required. Clear DTC and retest
B1166-15	Right Front Puddle Lamp Output open load or short to	<ul style="list-style-type: none"> Right side front approach lamp - Bulb failure Right side front approach lamp output circuit - 	<div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;">  NOTE: Disconnect the battery prior to performing circuit checks </div>

	battery - Circuit short to battery or open	Short circuit to power or open circuit, high resistance <ul style="list-style-type: none"> Approach lamp - Internal failure 	<ul style="list-style-type: none"> Replace approach lamp bulb. Clear DTC, repeatedly lock and unlock car using the key fob and retest If fault persists, refer to the electrical circuit diagrams and check the right side front approach lamp output circuit (pin 12) for short circuit to power or open circuit, high resistance. Repair circuit as required. Clear DTC and retest If fault persists, check and install a new approach lamp as required. Clear DTC and retest
B117E-07	Front Power Window Up - Mechanical Failures	<ul style="list-style-type: none"> Set when window is reversed during window up due to mechanical problems, window channel restriction preventing window closure Window mechanism fault 	<ul style="list-style-type: none"> Check for mechanical problems with the window operation. Check door window seals are fully seated in door, window channel seals are correctly fitted and window movement is not obstructed Manually fully open and close windows 5 times ensuring window is driven fully into fully closed position before the window up switch is released Clear DTCs and run "Learn Window Close Position" and "Window Test" diagnostic routines using the manufacturer approved diagnostic tool. Clear DTCs and retest If fault persists, check and install new window seals as required
B117E-72	Front Power Window Up -	<ul style="list-style-type: none"> Door module window up 	<div style="background-color: #e0f2f1; padding: 5px; border: 1px solid #ccc;">  NOTE: </div>

	<p>Actuator stuck open</p>	<p>/window down motor control circuits - Short circuit to ground, short circuit to power, open circuit, high resistance</p> <ul style="list-style-type: none"> ■ Door module - Internal relay sticking open 	<div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <p>Disconnect the battery prior to performing circuit checks</p> </div> <ul style="list-style-type: none"> ■ Refer to the electrical circuit diagrams and check the door module window up/window down motor control circuits (pins 12 & 1) for short circuit to ground, short circuit to power, open circuit, high resistance. Repair circuit as required. Clear DTC and retest ■ Reconnect battery, clear DTCs and fully open and close windows 5 times ensuring window is driven fully into fully closed position before the window up switch is released, then retest ■ If fault persists, check and install a new door module as required
<p>B117E-73</p>	<p>Front Power Window Up - Actuator stuck closed</p>	<ul style="list-style-type: none"> ■ Door module window up /window down motor control circuits - Short circuit to ground, short circuit to power, open circuit, high resistance ■ Door module - Internal relay sticking closed 	<div style="background-color: #e0f2f1; padding: 5px; margin-bottom: 10px;"> <p> NOTE:</p> </div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <p>Disconnect the battery prior to performing circuit checks</p> </div> <ul style="list-style-type: none"> ■ Refer to the electrical circuit diagrams and check the door module window up/window down motor control circuits (pins 12 & 1) for short circuit to ground, short circuit to power, open circuit, high resistance. Repair circuit as required. Clear DTC and retest ■ Reconnect battery, clear DTCs and fully open and close windows 5 times

			<p>ensuring window is driven fully into fully closed position before the window up switch is released, then retest</p> <ul style="list-style-type: none"> ▪ If fault persists, check and install a new door module as required
B117E-92	Front Power Window Up - Performance or incorrect operation	<ul style="list-style-type: none"> ▪ Set when auto window up was interrupted (e.g. by pressing local switch) 	<ul style="list-style-type: none"> ▪ Check for mechanical problems with the window operation. Check door window seals are fully seated in door, window channel seals are correctly fitted and window movement is not obstructed ▪ Manually fully open and close windows 5 times ensuring window is driven fully into fully closed position before the window up switch is released ▪ Clear DTCs and run "Learn Window Close Position" and "Window Test" diagnostic routines using the manufacturer approved diagnostic tool. Clear DTCs and retest ▪ If fault persists, check and install new window seals as required
B117F-72	Front Power Window Down - Actuator stuck open	<ul style="list-style-type: none"> ▪ Front window motor circuit open circuit, high resistance ▪ Front door module internal failure 	<div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <p> NOTE:</p> <p>Disconnect the battery prior to performing circuit checks</p> </div> <ul style="list-style-type: none"> ▪ Refer to the electrical circuit diagrams and check the rear window motor circuit (pins 12 & 1) for open circuit, high resistance. Reconnect battery, clear DTCs and

			<p>retest by moving window up and down</p> <ul style="list-style-type: none"> ▪ If the fault persists, check and install a new front door module as required
B117F-73	Front Power Window Down - Actuator stuck closed	<ul style="list-style-type: none"> ▪ Door module window up /window down motor control circuits - Short circuit to ground, short circuit to power, open circuit, high resistance ▪ Door module - Internal relay sticking closed 	<p> NOTE:</p> <p>Disconnect the battery prior to performing circuit checks</p> <ul style="list-style-type: none"> ▪ Refer to the electrical circuit diagrams and check the door module window up/window down motor control circuits (pins 12 & 1) for short circuit to ground, short circuit to power, open circuit, high resistance. Repair circuit as required. Clear DTC and retest ▪ Reconnect battery, clear DTCs and fully open and close windows 5 times ensuring window is driven fully into fully closed position before the window up switch is released, then retest ▪ If fault persists, check and install a new door module as required
B1189-29	Front Window Position Sensor - Signal signal invalid	<ul style="list-style-type: none"> ▪ Missing signal from hall sensor 1 or 2 ▪ Sensor circuit fault ▪ Hall sensor - Internal Failure 	<p> NOTE:</p> <p>Disconnect the battery prior to performing circuit checks</p> <ul style="list-style-type: none"> ▪ Refer to the electrical circuit diagrams and check the hall sensor circuits pin 5 (hall 2) and pin 6 (hall 1) between the door

			<p>module and window motor for short circuit to ground, short circuit to power, open circuit, high resistance. Repair as necessary</p> <ul style="list-style-type: none"> Clear DTCs and run "Learn Window Close Position" and "Window Test" diagnostic routines using the manufacturer approved diagnostic tool. Clear DTCs and retest If fault persists, check and install a new window motor as required
B11D1-83	LIN Bus "C" - Value of signal protection calculation incorrect	<ul style="list-style-type: none"> LIN bus checksum error; driver switchpack internal fault 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check the LIN bus circuit between the driver door window switch and the door module. Check the connectors for integrity and security. Clear the DTC and retest If the fault persists, check and install a new driver door switchpack as required
B11D1-86	LIN Bus "C" - Signal invalid	<ul style="list-style-type: none"> LIN bus header error; driver switchpack internal fault 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check the LIN bus circuit between the driver door window switch and the door module. Check the connectors for integrity and security. Clear the DTC and retest If the fault persists, check and install a new driver door switchpack as required
B11D1-87	LIN Bus "C" - Missing message	 <p>NOTE:</p>	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check the LIN circuit for short circuit to ground, short

		<p>Circuit reference LIN</p> <ul style="list-style-type: none"> ■ LIN circuit short circuit to ground, short circuit to power, open circuit, high resistance ■ Driver door switchpack power or ground circuit open circuit, high resistance ■ Driver door switchpack internal failure 	<p>circuit to power, open circuit, high resistance</p> <ul style="list-style-type: none"> ■ Refer to the electrical circuit diagrams and test the driver door switchpack power and ground circuits for open circuit, high resistance ■ Using the manufacturer approved diagnostic system, clear the DTCs and retest. If the fault persists, check and install a new driver door switchpack as required
B11F6-11	Driver Folding Mirror Motor - Circuit short to ground	<ul style="list-style-type: none"> ■ Driver door folding mirror motor circuit - Short circuit to ground ■ Mirror motor failure 	<div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <p> NOTE:</p> <p>Disconnect the battery prior to performing circuit checks</p> </div> <ul style="list-style-type: none"> ■ Clear DTCs, fold/unfold the mirrors repeatedly from the driver switchpack and check if the mirror fold function operates normally. If a DTC not set and the mirror fold function operates normally, but there is no autofold when the car is locked, check mirror autofold configuration on vehicle and reconfigure as required ■ If fault persists, refer to the electrical circuit diagrams and check the mirror fold circuit (pin 17) between the driver door module and the driver door mirror assembly for

			<p>short circuit to ground. Repair circuit as required. Clear DTC and retest</p> <ul style="list-style-type: none"> ▪ If the fault persists, check and install a new door mirror as required
B11F6-15	Driver Folding Mirror Motor - Circuit short to battery or open	<ul style="list-style-type: none"> ▪ Driver door folding mirror motor circuit - Short circuit to power, open circuit, high resistance ▪ Mirror motor failure 	<div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;">  NOTE: Disconnect the battery prior to performing circuit checks </div> <ul style="list-style-type: none"> ▪ Clear DTCs, fold/unfold the mirrors repeatedly from the driver switchpack and check if the mirror fold function operates normally. If a DTC not set and the mirror fold function operates normally, but there is no autofold when the car is locked, check mirror autofold configuration on vehicle and reconfigure as required ▪ If fault persists, refer to the electrical circuit diagrams and check the mirror fold circuit (pin 17) between the driver door module and the driver door mirror assembly for short circuit to power, open circuit, high resistance. Repair circuit as required. Clear DTC and retest ▪ If the fault persists, check and install a new door mirror as required
B11F7-11	Passenger Folding Mirror Motor - Circuit short to ground	<ul style="list-style-type: none"> ▪ Passenger door folding mirror motor circuit - Short circuit to ground 	<div style="border: 1px solid black; padding: 5px;">  NOTE: </div>

		<ul style="list-style-type: none"> ■ Mirror motor failure 	<div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <p>Disconnect the battery prior to performing circuit checks</p> </div> <ul style="list-style-type: none"> ■ Clear DTCs, fold/unfold the mirrors repeatedly from the driver switchpack and check if the mirror fold function operates normally. If a DTC not set and the mirror fold function operates normally, but there is no autofold when the car is locked, check mirror autofold configuration on vehicle and reconfigure as required ■ If fault persists, refer to the electrical circuit diagrams and check the mirror fold circuit (pin 17) between the passenger door module and the passenger door mirror assembly for short circuit to ground. Repair circuit as required. Clear DTC and retest ■ If the fault persists, check and install a new door mirror as required
<p>B11F7-15</p>	<p>Passenger Folding Mirror Motor - Circuit short to battery or open</p>	<ul style="list-style-type: none"> ■ Passenger door folding mirror motor circuit - Short circuit to power, open circuit, high resistance ■ Mirror motor failure 	<div style="background-color: #e0f2f7; padding: 5px; margin-bottom: 10px;"> <p> NOTE:</p> </div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <p>Disconnect the battery prior to performing circuit checks</p> </div> <ul style="list-style-type: none"> ■ Clear DTCs, fold/unfold the mirrors repeatedly from the driver switchpack and check if the mirror fold function operates normally. If a DTC not set and the mirror fold function operates normally, but there is no

			<p>autofold when the car is locked, check mirror autofold configuration on vehicle and reconfigure as required</p> <ul style="list-style-type: none"> ▪ If fault persists, refer to the electrical circuit diagrams and check the mirror fold circuit (pin 17) between the passenger door module and the passenger door mirror assembly for short circuit to power, open circuit, high resistance. Repair circuit as required. Clear DTC and retest ▪ If the fault persists, check and install a new door mirror as required
B12BA-11	Lock Status LED - Front - Circuit short to ground	<ul style="list-style-type: none"> ▪ Front door lock /unlock switch status LED circuit - Short circuit to ground ▪ Lock/unlock switch - Internal failure 	<p> NOTE:</p> <p>Disconnect the battery prior to performing circuit checks</p> <ul style="list-style-type: none"> ▪ Refer to the electrical circuit diagrams and check the front door lock/unlock switch status LED circuit (pin 2) for short circuit to ground. Repair circuit as required. Clear DTC, repeatedly lock and unlock car using the key fob, wait for 60 seconds and retest ▪ If fault persists, check and install a new lock/unlock switch as required
B12BA-15	Lock Status LED - Front - Circuit short to battery or open	<ul style="list-style-type: none"> ▪ Front door lock /unlock switch status LED circuit - Short circuit to power, open circuit, high resistance 	<p> NOTE:</p> <p>Disconnect the battery prior to performing circuit checks</p>

		<ul style="list-style-type: none"> Lock/unlock switch - Internal failure 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check the front door lock/unlock switch status LED circuit (pin 2) for short circuit to power or open circuit, high resistance. Repair circuit as required. Clear DTC, repeatedly lock and unlock car using the key fob, wait for 60 seconds and retest If fault persists, check and install a new lock/unlock switch as required
B1326-11	External Door Handle LED - Circuit short to ground	<ul style="list-style-type: none"> Exterior door handle ambience lighting LED circuit - Short circuit to ground Exterior door handle - Internal failure 	<div style="border: 1px solid black; background-color: #e0f2f1; padding: 5px; margin-bottom: 10px;">  NOTE: </div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <p>Disconnect the battery prior to performing circuit checks</p> </div> <ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check the exterior door handle circuit (pin 16) for short circuit to ground. Reconnect battery and repeatedly lock and unlock door while ignition is in the off position and see if DTC sets If fault persists, check and install a new deployable door handle module as required
B1326-15	External Door Handle LED - Circuit short to battery or open	<ul style="list-style-type: none"> Exterior door handle ambience lighting LED circuit short circuit to power, open circuit, high resistance Exterior door handle internal failure 	<div style="border: 1px solid black; background-color: #e0f2f1; padding: 5px; margin-bottom: 10px;">  NOTE: </div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <p>Disconnect the battery prior to performing circuit checks</p> </div> <ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check the exterior door handle circuit (pin 16) for short

			<p>circuit to power, open circuit, high resistance. Reconnect battery, clear DTCs and repeatedly lock and unlock door while ignition is in the off position and see if DTC sets</p> <ul style="list-style-type: none"> ▪ If fault persists check and install a new deployable door handle module as required
B1A98-83	LIN Bus Circuit #1 - Value of signal protection calculation incorrect	<ul style="list-style-type: none"> ▪ Rear door module LIN circuit - Value of signal protection calculation incorrect 	<ul style="list-style-type: none"> ▪ Refer to the electrical circuit diagrams and check the LIN bus circuit between the rear door module and the driver/passenger door module. Check the connectors for integrity and security ▪ Clear the DTC, operate the rear door switchpack and retest. If the fault persists, check and install a new rear door module as required. Clear the DTC, operate the rear door switchpack and retest
B1A98-86	LIN Bus Circuit #1 - Signal invalid	<ul style="list-style-type: none"> ▪ Rear door module LIN circuit - Signal invalid 	<ul style="list-style-type: none"> ▪ Refer to the electrical circuit diagrams and check the LIN bus circuit between the rear door module and the driver/passenger door module. Check the connectors for integrity and security ▪ Clear the DTC, operate the rear door switchpack and retest. If the fault persists, check and install a new rear door module as required. Clear the DTC, operate the rear door switchpack and retest
B1A98-87	LIN Bus Circuit #1 - Missing	<ul style="list-style-type: none"> ▪ Rear door module LIN 	<ul style="list-style-type: none"> ▪ Ensure the battery is fully charged. Refer to the

	message	circuit - Missing message	<p>electrical circuit diagrams and check the LIN bus and power circuits to the rear door module. Repair circuit (s) as required</p> <ul style="list-style-type: none"> ▪ Disconnect the harness from the rear door module, wait 30 seconds and reconnect. Clear DTCs, start engine and leave running for at least 30 seconds, then retest. If fault persists, repeat the above procedure and retest ▪ If the fault continues to persist, check and install a new rear door module as required. Clear the DTC, operate the rear door switchpack and retest
B1C09-11	Driver Left /Right Mirror Motor Circuit - Circuit short to ground	<ul style="list-style-type: none"> ▪ Driver mirror adjustment motor circuit - Short circuit to ground ▪ Mirror motor failure 	<div style="border: 1px solid black; background-color: #e0f2f1; padding: 5px; margin-bottom: 10px;">  NOTE: </div> <p>Disconnect the battery prior to performing circuit checks</p> <ul style="list-style-type: none"> ▪ Refer to the electrical circuit diagrams and check the mirror adjustment motor circuit (pin 8) between the drivers door module and the door mirror assembly for short circuit to ground. Repair circuit as required. Reconnect battery, clear DTCs and attempt to move the door mirror left and right, then retest ▪ If the fault persists, check and install a new door mirror as required
B1C09-15	Driver Left /Right Mirror	<div style="border: 1px solid black; background-color: #e0f2f1; padding: 5px; margin-bottom: 10px;">  NOTE: </div>	<div style="border: 1px solid black; background-color: #e0f2f1; padding: 5px; margin-bottom: 10px;">  NOTE: </div>

	Motor Circuit - Circuit short to battery or open	<p>Circuit reference MIRROR_X / MIRROR_XY</p> <ul style="list-style-type: none"> Driver door mirror left/right adjust circuit short circuit to power, open circuit, high resistance Driver door mirror motor internal failure 	<p>Disconnect the battery prior to performing circuit checks</p> <ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check the driver door mirror left /right adjust circuit (pin 8) for short circuit to power, open circuit, high resistance. Reconnect battery, clear DTCs and attempt to move the mirror left and right If DTC sets again check and install a new driver door mirror as required
B1C10-11	Driver Up /Down Mirror Motor Circuit - Circuit short to ground	<ul style="list-style-type: none"> Driver mirror adjustment motor circuit - Short circuit to ground Mirror motor failure 	<p> NOTE:</p> <p>Disconnect the battery prior to performing circuit checks</p> <ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check the mirror adjustment motor circuit (pin 24) between the drivers door module and the door mirror assembly for short circuit to ground. Repair circuit as required. Reconnect battery, clear DTCs and attempt to move the door mirror up and down, then retest If the fault persists, check and install a new door mirror as required
B1C10-15	Driver Up /Down Mirror Motor Circuit - Circuit short to battery or open	<ul style="list-style-type: none"> Driver mirror adjustment motor circuit - Short circuit to 	<p> NOTE:</p> <p>Disconnect the battery prior to performing circuit checks</p>

		<p>power, open circuit, high resistance</p> <ul style="list-style-type: none"> ▪ Mirror motor failure 	<ul style="list-style-type: none"> ▪ Refer to the electrical circuit diagrams and check the mirror adjustment motor circuit (pin 24) between the drivers door module and the door mirror assembly for short circuit to power, open circuit, high resistance. Repair circuit as required. Reconnect battery, clear DTCs and attempt to move the door mirror up and down, then retest ▪ If the fault persists, check and install a new door mirror as required
B1C11-11	Passenger Left /Right Mirror Motor Circuit - Circuit short to ground	<ul style="list-style-type: none"> ▪ Passenger mirror adjustment motor circuit - Short circuit to ground ▪ Mirror motor failure 	<div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;">  NOTE: Disconnect the battery prior to performing circuit checks </div> <ul style="list-style-type: none"> ▪ Refer to the electrical circuit diagrams and check the mirror adjustment motor circuit (pin 8) between the passenger door module and the door mirror assembly for short circuit to ground. Repair circuit as required. Reconnect battery, clear DTCs and attempt to move the door mirror left and right, then retest ▪ If the fault persists, check and install a new door mirror as required
B1C11-15	Passenger Left /Right Mirror Motor Circuit - Circuit short to battery or open	<ul style="list-style-type: none"> ▪ Passenger mirror adjustment motor circuit - Short circuit to power, open circuit, high resistance 	<div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;">  NOTE: Disconnect the battery prior to performing circuit checks </div>

		<ul style="list-style-type: none"> ▪ Mirror motor failure 	<ul style="list-style-type: none"> ▪ Refer to the electrical circuit diagrams and check the mirror adjustment motor circuit (pin 8) between the passenger door module and the door mirror assembly for short circuit to power, open circuit, high resistance. Repair circuit as required. Reconnect battery, clear DTCs and attempt to move the door mirror left and right, then retest ▪ If the fault persists, check and install a new door mirror as required
B1C12-11	Passenger Up /Down Mirror Motor Circuit - Circuit short to ground	<ul style="list-style-type: none"> ▪ Passenger mirror adjustment motor circuit - Short circuit to ground ▪ Mirror motor failure 	<div style="border: 1px solid black; background-color: #e0f2f1; padding: 5px; margin-bottom: 10px;">  NOTE: </div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <p>Disconnect the battery prior to performing circuit checks</p> </div> <ul style="list-style-type: none"> ▪ Refer to the electrical circuit diagrams and check the mirror adjustment motor circuit (pin 24) between the passenger door module and the door mirror assembly for short circuit to ground. Repair circuit as required. Reconnect battery, clear DTCs and attempt to move the door mirror up and down, then retest ▪ If the fault persists, check and install a new door mirror as required
B1C12-15	Passenger Up /Down Mirror Motor Circuit - Circuit short to battery or open	<ul style="list-style-type: none"> ▪ Passenger mirror adjustment motor circuit - Short circuit to power, open circuit, high resistance 	<div style="border: 1px solid black; background-color: #e0f2f1; padding: 5px; margin-bottom: 10px;">  NOTE: </div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <p>Disconnect the battery prior to performing circuit checks</p> </div>

		<ul style="list-style-type: none"> ▪ Mirror motor failure 	<ul style="list-style-type: none"> ▪ Refer to the electrical circuit diagrams and check the mirror adjustment motor circuit (pin 24) between the passenger door module and the door mirror assembly for short circuit to power, open circuit, high resistance. Repair circuit as required. Reconnect battery, clear DTCs and attempt to move the door mirror up and down, then retest ▪ If the fault persists, check and install a new door mirror as required
B1C13-11	Driver Up /Down Mirror Motor Feedback Circuit - Circuit short to ground	<ul style="list-style-type: none"> ▪ Driver mirror adjustment motor sensor Y circuit - Short circuit to ground ▪ Mirror motor sensor failure 	<div style="border: 1px solid #0070C0; background-color: #D9E1F2; padding: 5px; margin-bottom: 10px;">  NOTE: </div> <p style="margin-left: 20px;">Disconnect the battery prior to performing circuit checks</p> <ul style="list-style-type: none"> ▪ Refer to the electrical circuit diagrams and check the mirror adjustment motor sensor Y circuit (pin 18) between the driver door module and the door mirror assembly for short circuit to ground. Repair circuit as required. Reconnect battery, clear DTCs and attempt to move the door mirror up and down, then retest ▪ If the fault persists, check and install a new door mirror as required
B1C13-15	Driver Up /Down Mirror Motor Feedback Circuit - Circuit short to battery or open	<ul style="list-style-type: none"> ▪ Driver mirror adjustment motor sensor Y circuit - Short circuit to power, open circuit, high resistance 	<div style="border: 1px solid #0070C0; background-color: #D9E1F2; padding: 5px; margin-bottom: 10px;">  NOTE: </div> <p style="margin-left: 20px;">Disconnect the battery prior to performing circuit checks</p>

		<ul style="list-style-type: none"> ▪ Mirror motor sensor failure 	<ul style="list-style-type: none"> ▪ Refer to the electrical circuit diagrams and check the mirror adjustment motor sensor Y circuit (pin 18) between the driver door module and the door mirror assembly for short circuit to power, open circuit, high resistance. Repair circuit as required. Reconnect battery, clear DTCs and attempt to move the door mirror up and down, then retest ▪ If the fault persists, check and install a new door mirror as required
B1C14-11	Driver Left /Right Mirror Motor Feedback Circuit - Circuit short to ground	<ul style="list-style-type: none"> ▪ Driver mirror adjustment motor sensor X circuit - Short circuit to ground ▪ Mirror motor sensor failure 	<div style="border: 1px solid #0070C0; background-color: #D9E1F2; padding: 5px; margin-bottom: 10px;">  NOTE: </div> <p>Disconnect the battery prior to performing circuit checks</p> <ul style="list-style-type: none"> ▪ Refer to the electrical circuit diagrams and check the mirror adjustment motor sensor X circuit (pin 19) between the driver door module and the door mirror assembly for short circuit to ground. Repair circuit as required. Reconnect battery, clear DTCs and attempt to move the door mirror left and right, then retest ▪ If the fault persists, check and install a new door mirror as required
B1C14-15	Driver Left /Right Mirror Motor Feedback Circuit - Circuit short to battery or open	<ul style="list-style-type: none"> ▪ Driver mirror adjustment motor sensor X circuit - Short circuit to power, open circuit, high resistance 	<div style="border: 1px solid #0070C0; background-color: #D9E1F2; padding: 5px; margin-bottom: 10px;">  NOTE: </div> <p>Disconnect the battery prior to performing circuit checks</p>

		<ul style="list-style-type: none"> ▪ Mirror motor sensor failure 	<ul style="list-style-type: none"> ▪ Refer to the electrical circuit diagrams and check the mirror adjustment motor sensor X circuit (pin 19) between the driver door module and the door mirror assembly for short circuit to power, open circuit, high resistance. Repair circuit as required. Reconnect battery, clear DTCs and attempt to move the door mirror left and right, then retest ▪ If the fault persists, check and install a new door mirror as required
B1C15-11	Passenger Up /Down Mirror Motor Feedback Circuit - Circuit short to ground	<ul style="list-style-type: none"> ▪ Passenger mirror adjustment motor sensor Y circuit - Short circuit to ground ▪ Mirror motor sensor failure 	<div style="border: 1px solid #0070C0; background-color: #D9E1F2; padding: 5px; margin-bottom: 10px;">  NOTE: </div> <p style="margin-left: 20px;">Disconnect the battery prior to performing circuit checks</p> <ul style="list-style-type: none"> ▪ Refer to the electrical circuit diagrams and check the mirror adjustment motor sensor Y circuit (pin 18) between the passenger door module and the door mirror assembly for short circuit to ground. Repair circuit as required. Reconnect battery, clear DTCs and attempt to move the door mirror up and down, then retest ▪ If the fault persists, check and install a new door mirror as required
B1C15-15	Passenger Up /Down Mirror Motor Feedback	<ul style="list-style-type: none"> ▪ Passenger mirror adjustment motor sensor Y circuit - Short 	<div style="border: 1px solid #0070C0; background-color: #D9E1F2; padding: 5px; margin-bottom: 10px;">  NOTE: </div> <p style="margin-left: 20px;">Disconnect the battery prior to performing circuit checks</p>

	Circuit - Circuit short to battery or open	<p>circuit to power, open circuit, high resistance</p> <ul style="list-style-type: none"> ■ Mirror motor sensor failure 	<ul style="list-style-type: none"> ■ Refer to the electrical circuit diagrams and check the mirror adjustment motor sensor Y circuit (pin 18) between the passenger door module and the door mirror assembly for short circuit to power, open circuit, high resistance. Repair circuit as required. Reconnect battery, clear DTCs and attempt to move the door mirror up and down, then retest ■ If the fault persists, check and install a new door mirror as required
B1C16-11	Passenger Left /Right Mirror Motor Feedback Circuit - Circuit short to ground	<ul style="list-style-type: none"> ■ Passenger mirror adjustment motor sensor X circuit - Short circuit to ground ■ Mirror motor sensor failure 	<div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <p> NOTE:</p> <p>Disconnect the battery prior to performing circuit checks</p> </div> <ul style="list-style-type: none"> ■ Refer to the electrical circuit diagrams and check the mirror adjustment motor sensor X circuit (pin 19) between the passenger door module and the door mirror assembly for short circuit to ground. Repair circuit as required. Reconnect battery, clear DTCs and attempt to move the door mirror left and right, then retest ■ If the fault persists, check and install a new door mirror as required
B1C16-15	Passenger Left /Right Mirror Motor Feedback	<ul style="list-style-type: none"> ■ Passenger mirror adjustment motor sensor X circuit - Short 	<div style="border: 1px solid black; padding: 5px;"> <p> NOTE:</p> </div>

	Circuit - Circuit short to battery or open	<p>circuit to power, open circuit, high resistance</p> <ul style="list-style-type: none"> ■ Mirror motor sensor failure 	<p>Disconnect the battery prior to performing circuit checks</p> <ul style="list-style-type: none"> ■ Refer to the electrical circuit diagrams and check the mirror adjustment motor sensor X circuit (pin 19) between the passenger door module and the door mirror assembly for short circuit to power, open circuit, high resistance. Repair circuit as required. Reconnect battery, clear DTCs and attempt to move the door mirror left and right, then retest ■ If the fault persists, check and install a new door mirror as required
B1D06-11	Left Turn Indicator - Circuit short to ground	<ul style="list-style-type: none"> ■ Left turn side repeater circuit - Short circuit to ground ■ Bulb/LED failure ■ Side repeater lamp assembly - Internal failure 	<p> NOTE:</p> <p>Disconnect the battery prior to performing circuit checks</p> <ul style="list-style-type: none"> ■ Refer to the electrical circuit diagrams and check the left turn side repeater circuit (pin 11) for short circuit to ground. Repair circuit as required. Clear DTC and retest ■ If the fault persists, check and install a new side repeater bulb/LED as required. Clear DTC and retest ■ If the fault persists, check and install a new side repeater assembly as required. Clear DTC and retest

<p>B1D06-15</p>	<p>Left Turn Indicator - Circuit short to battery or open</p>	<ul style="list-style-type: none"> ▪ Bulb/LED failure ▪ Left turn side repeater circuit - Short circuit to power, open circuit, high resistance ▪ Side repeater lamp assembly - Internal failure 	<div style="border: 1px solid black; background-color: #e0f2f1; padding: 5px; margin-bottom: 10px;">  NOTE: Disconnect the battery prior to performing circuit checks </div> <ul style="list-style-type: none"> ▪ Check and install a new side repeater bulb/LED as required. Clear DTC and retest ▪ If the fault persists, refer to the electrical circuit diagrams and check the left turn side repeater circuit (pin 11) for short circuit to power, open circuit, high resistance. Repair circuit as required. Clear DTC and retest ▪ If the fault persists, check and install a new side repeater assembly as required. Clear DTC and retest
<p>B1D07-11</p>	<p>Right Turn Indicator - Circuit short to ground</p>	<ul style="list-style-type: none"> ▪ Right turn side repeater circuit - Short circuit to ground ▪ Bulb/LED failure ▪ Side repeater lamp assembly - Internal failure 	<div style="border: 1px solid black; background-color: #e0f2f1; padding: 5px; margin-bottom: 10px;">  NOTE: Disconnect the battery prior to performing circuit checks </div> <ul style="list-style-type: none"> ▪ Refer to the electrical circuit diagrams and check the right turn side repeater circuit (pin 11) for short circuit to ground. Repair circuit as required. Clear DTC and retest ▪ If the fault persists, check and install a new side repeater bulb/LED as required. Clear DTC and retest ▪ If the fault persists, check and install a new side

			repeater assembly as required. Clear DTC and retest
B1D07-15	Right Turn Indicator - Circuit short to battery or open	<ul style="list-style-type: none"> ▪ Bulb/LED failure ▪ Right turn side repeater circuit - Short circuit to power, open circuit, high resistance ▪ Side repeater lamp assembly - Internal failure 	<p> NOTE:</p> <p>Disconnect the battery prior to performing circuit checks</p> <ul style="list-style-type: none"> ▪ Check and install a new side repeater bulb/LED as required. Clear DTC and retest ▪ If the fault persists, refer to the electrical circuit diagrams and check the right turn side repeater circuit (pin 11) for short circuit to power, open circuit, high resistance. Repair circuit as required. Clear DTC and retest ▪ If the fault persists, check and install a new side repeater assembly as required. Clear DTC and retest
C1B14-11	Sensor Supply Voltage A - Circuit short to ground	<ul style="list-style-type: none"> ▪ Front door window hall sensor supply circuit - Short circuit to ground ▪ Front door window motor - Internal failure 	<p> NOTE:</p> <p>Disconnect the battery prior to performing circuit checks</p> <ul style="list-style-type: none"> ▪ Refer to the electrical circuit diagrams and check the window hall sensor supply circuit (pin 17) for short circuit to ground. Repair circuit as required. Reconnect battery, clear DTCs and operate window, then retest ▪ If the fault persists, check and install a new front

			door window motor as required. Clear DTC and retest
C1B14-15	Sensor Supply Voltage A - Circuit short to battery or open	<ul style="list-style-type: none"> ■ Front door window hall sensor supply circuit - Short circuit to power, open circuit, high resistance ■ Front door window motor - Internal failure 	<div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;">  NOTE: Disconnect the battery prior to performing circuit checks </div> <ul style="list-style-type: none"> ■ Refer to the electrical circuit diagrams and check the window hall sensor supply circuit (pin 17) for short circuit to power, open circuit, high resistance. Repair circuit as required. Reconnect battery, clear DTCs and operate window, then retest ■ If the fault persists, check and install a new front door window motor as required. Clear DTC and retest
U0010-00	Medium Speed CAN Communication Bus - No sub type information	<ul style="list-style-type: none"> ■ Medium speed CAN communication bus fault ■ Door module - Internal failure 	<ul style="list-style-type: none"> ■ Refer to the electrical circuit diagrams and check the power and ground connections to the module. Repair circuit as required ■ Using the manufacturer approved diagnostic system, complete a CAN network integrity test. Refer to the electrical circuit diagrams and check the CAN network. Repair circuit as required. Clear DTC and retest ■ If the fault persists, check and install a new door module as required
U0208-	Lost		

00	Communication With "Seat Control Module A" - No sub type information	<ul style="list-style-type: none"> ▪ Loss of CAN communication with driver seat module 	<ul style="list-style-type: none"> ▪ Refer to the electrical circuit diagrams and check the power and ground connections to the module ▪ Using the manufacturer approved diagnostic system, complete a CAN network integrity test. Refer to the electrical circuit diagrams and check the CAN network between the driver seat module and the driver door module ▪ Check the driver seat module for related DTCs and refer to the relevant DTC index
U0300-00	Internal Control Module Software Incompatibility - No sub type information	<ul style="list-style-type: none"> ▪ Invalid configuration message is received ▪ Door module(s) ID does not match stored car configuration details 	<ul style="list-style-type: none"> ▪ Check door module part numbers are correct for vehicle type ▪ If correct modules are installed, reflash the car configuration file using the manufacturer approved diagnostic system. Clear DTC and retest ▪ If incorrect modules are installed, check and install a new door module as required
U2010-11	Switch Illumination - Circuit short to ground	<ul style="list-style-type: none"> ▪ Switch illumination circuit - Short circuit to ground 	<div style="border: 1px solid #0070C0; background-color: #D9E1F2; padding: 5px; margin-bottom: 10px;">  NOTE: Disconnect the battery prior to performing circuit checks </div> <ul style="list-style-type: none"> ▪ Refer to electrical circuit diagrams and check the switch illumination circuit for short circuit to ground. Repair circuit as required. Clear DTC and retest
U2011-11	Motor - Circuit short to ground	<ul style="list-style-type: none"> ▪ Exterior door handle motor 	<div style="border: 1px solid #0070C0; background-color: #D9E1F2; padding: 5px;">  NOTE: </div>

		<p>circuit short circuit to ground</p> <ul style="list-style-type: none"> Exterior door handle module internal failure 	<p>Disconnect the battery prior to performing circuit checks</p> <ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check the deployable door handle circuit (pins 8 & 19) for short circuit to ground. Reconnect battery, clear the DTCs and repeatedly lock and unlock the vehicle If the fault persists, check and install a new door handle module as required
U2011-12	Motor - Circuit short to battery	<ul style="list-style-type: none"> Exterior door handle motor circuit short circuit to power Exterior door handle module internal failure 	<p> NOTE:</p> <p>Disconnect the battery prior to performing circuit checks</p> <ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check the deployable door handle circuit (pins 8 & 19) for short circuit to power. Reconnect battery, clear DTCs, repeatedly lock and unlock vehicle If the fault persists, check and install a new door handle module as required
U2011-13	Motor - Circuit open	<ul style="list-style-type: none"> Exterior door handle motor circuit open circuit, high resistance Exterior door handle module and harness internal failure 	<p> NOTE:</p> <p>Disconnect the battery prior to performing circuit checks</p> <ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check the deployable door handle circuit (pins 8 &

			<p>19) for open circuit, high resistance. Reconnect battery, clear DTCs, and repeatedly lock and unlock the vehicle</p> <ul style="list-style-type: none"> ▪ If the fault persists, check and install a new harness and door handle module as required
U2014-44	Control module hardware - Data memory failure	<ul style="list-style-type: none"> ▪ Control module - Data memory failure 	<ul style="list-style-type: none"> ▪ Clear DTC and retest. If fault persists, reconfigure the door module using the manufacturer approved diagnostic system. Clear DTC and retest ▪ If fault persists, check and install a new driver door /passenger door module as required
U2100-00	Initial configuration not complete - No sub type information	<ul style="list-style-type: none"> ▪ Control module incorrectly configured 	<ul style="list-style-type: none"> ▪ Check that all parameters associated with the door module are set correctly in the car configuration ▪ Reconfigure the driver door /passenger door modules using the manufacturer approved diagnostic system. Clear DTC and retest

2015.0 F-TYPE (X152), 419-10

MULTIFUNCTION ELECTRONIC MODULES

MODULE CONTROLLED FUNCTIONS - SYSTEM OPERATION AND COMPONENT DESCRIPTION

(G1565915)

DESCRIPTION AND OPERATION

SYSTEM OPERATION

MODULE CONTROLLED FUNCTIONS

Refer to the relevant section for details of system operation.

COMPONENT DESCRIPTION

MODULES, SYSTEMS AND FUNCTION

The Central Junction Box (CJB) is the 'gateway' for the network systems which allows information to be exchanged between networks.

The entertainment system components are connected on a fiber optic MOST ring. The MOST ring can send and receive information to/from the other network systems via a 'gateway' in the Integrated Control Module.

The following table shows each vehicle control module, the network system to which it is connected, its function and location in the vehicle.

MODULE	NETWORK SYSTEM	FUNCTION	VEHICLE LOCATION
Instrument Cluster (IC)	High speed CAN (controller)	Receives data from other vehicle systems to provide information to the driver. Also functions as the gateway for the bus systems.	Instrument panel.

	area network) bus		
Steering column	High speed CAN bus	Controls the locking and unlocking of the steering column.	Upper steering column.
Diagnostic socket	High speed CAN bus	Allows the transfer of vehicle information using a Jaguar approved diagnostic system or other diagnostic tool.	In the lower instrument panel on the driver side, adjacent to the start control module.
RCM (restraints control module)	High speed CAN bus	Controls the deployment of the supplementary restraint components.	At rear of floor console.
ECM (engine control module)	High speed CAN bus	Controls engine management and fuel system operation.	Rear of the engine compartment on the bulkhead.
ABS (anti-lock brake system)	High speed CAN bus	Controls all aspects of the braking system	Rear of the engine compartment on the bulkhead.
Headlamp Leveling Control Module (HLCM)	High speed CAN bus	Controls the static dynamic headlamp leveling function.	In the lower instrument panel.
GateWay Module (GWM)	High speed CAN bus	Allows the transfer between High and Medium Speed Can bus connections	Left of the engine compartment on the bulkhead.
Occupant Classification Sensor Control Module (OCSCM) (NAS only)	High speed CAN bus	Detects when a passenger is in the front passenger seat and can determine their size and weight.	Below the passenger seat.
Electronic	High speed	Controls the application and	In the

Parking Brake (EPB) module	CAN bus	release of the electronic parking brake.	luggage compartment, above the rear left wheel arch.
Electronic Transmission Selector (ETS)	High speed CAN bus	Allows the driver to electronically select the required automatic transmission mode. Transmits driver selections to the TCM (transmission control module) .	In the floor console.
Jaguar Drive control module	High speed CAN bus	Controls the Jaguar Drive function and communicates with other system modules.	Integral with the ETS software in the floor console.
Auxiliary Junction Box (AJB)	Medium speed CAN bus	Controls body functions and power distribution.	On left 'A' pillar.
Diagnostic socket	Medium speed CAN bus	Allows the transfer of vehicle information using a Jaguar approved diagnostic system or other diagnostic tool.	In the lower instrument panel on the driver side.
GateWay Module (GWM)	Medium speed CAN bus	Allows the transfer between High and Medium Speed Can bus connections	Left of the engine compartment on the bulkhead.
Passenger Door Module (PDM)	Medium speed CAN bus	Controls window and locking functions.	In the passenger door.
Park Distance Control Module (PDC)	Medium speed CAN bus	Controls the parking aid system.	In the left side of the engine compartment.
Driver Seat Module (DSM)	Medium speed CAN bus	Controls driver seat positioning and also memory functions of other personalized functions.	Below the driver seat.
Instrument Cluster (IC)	Medium speed CAN bus	Receives data from other systems to provide driver information.	In the instrument panel.
Driver Door Module (DDM)	Medium speed CAN bus	Controls window and locking functions.	In the driver door.

Automatic Temperature Control Module (ATCM)	Medium speed CAN bus	Contains controls for the heating and air conditioning systems.	On the end of the air conditioning evaporator and blower assembly.
Integrated Control Panel (ICP)	Medium speed CAN bus	Contains controls for the entertainment systems and gateway between audio system and other vehicle systems.	In the instrument panel.
Left Blindspot Monitoring Control Module (BMCM)	Medium speed CAN bus	Controls the operating parameters of the system and provides driver indications and fault monitoring.	Behind the outer part of the rear bumper, rearward of the rear wheel.
Right Blindspot Monitoring Control Module (BMCM)	Medium speed CAN bus	Controls the operating parameters of the system and provides driver indications and fault monitoring.	Behind the outer part of the rear bumper, rearward of the rear wheel.
Keyless Vehicle Module (KVM)	Medium speed CAN bus	Allows the vehicle to be opened and closed without the use of a key.	In the right side of the engine compartment.
Quiescent Current Control Module (QCCM)	Medium speed CAN bus	Controls body functions and power distribution.	Center of luggage compartment.
DDM	LIN (local interconnect network)	Memory/adjustment functions for seat, steering column and mirrors and door security functions.	In the driver door.
PDM	LIN	Memory/adjustment functions for seat, steering column and mirrors and door security functions.	In the passenger door.
Driver door switchpack	LIN	Transmit driver selections to the driver's door module.	In the driver door panel.
Engine Control Module	LIN	Receives a load signal from the generator.	In the engine compartment on the

(ECM)			bulkhead.
Generator	LIN	Provide load signal to the ECM	On the right side at the front of the engine.
Driver Seat Module (DSM)	LIN	Control position of driver's seat.	Below the driver's seat on the floor pan.
Driver seat switchpack	LIN	Provide driver selection inputs to the driver's seat module.	On the outside of the trim panel on the driver seat.
Electric booster heater	LIN	Controls operation of the electric booster heater.	Inside the heater assembly.
Left outer face level vent	LIN	Controls the operation of the face level vent stepper motor.	In the instrument panel.
Left inner face level vent	LIN	Controls the operation of the face level vent stepper motor.	In the instrument panel.
Right inner face level vent	LIN	Controls operation of the face level vent stepper motor.	In the instrument panel.
Right outer face level vent	LIN	Controls operation of the face level vent stepper motor.	In the instrument panel.
Automatic Temperature Control Module (ATCM)	LIN	Controls operation of the climate system functions.	In the instrument panel.
Steering wheel right switchpack	LIN	Converts analogue signals from steering wheel switches into digital messages.	On the steering wheel.
Clockspring (CLKSPG)	LIN	Passes digital messages from the steering wheel audio switches to the IC.	Behind the steering wheel, on the upper steering column.

Instrument Cluster (IC)	LIN	Receives digital signals from other vehicle systems.	On the driver side of the instrument panel.
Battery Back-Up Sounder (BBUS)	LIN	Activated by CJB (central junction box) when alarm trigger is received.	In the left side of the engine compartment, near the bulkhead.
Central Junction Box (CJB)	LIN	Controls body functions and power distribution.	On the right 'A' pillar.
Quiescent Current Control Module (QCCM)	LIN	Controls body functions and power distribution.	On the center of the luggage compartment.
Battery Monitoring System control module (BMS)	LIN	Monitors the condition and charge of the vehicle battery.	On the vehicle battery positive terminal in the luggage compartment.
Volumetric sensor	LIN	Detects movement in the vehicle interior and activates the anti-theft system.	In the front overhead console.
Rain/light sensor	LIN	Detects ambient light levels and moisture on the windshield for operation of the automatic headlamps and wiper systems.	On the inside of the windshield behind the interior rear view mirror.
Driver door switchpack	LIN	Controls operation of the driver window.	In the driver door trim panel.
Integrated Control Panel (ICP)	MOST	Contains controls for the entertainment system.	In the instrument panel.
Digital Audio Broadcast (DAB) receiver (SDARS NAS only)	MOST	Receives digital radio broadcasts.	In the center of the luggage compartment, behind the seats.

Audio Amplifier Module (AAM)/tuner	MOST	Provides amplification for the entertainment systems and reception of radio RF broadcasts.	Behind the passenger compartment rear trim
Navigation computer	MOST	Reads map data from a DVD (digital versatile disc) to calculate and display visual route guidance information via the TS and audible guidance via the amplifier to the driver.	In the right side of the luggage compartment.
Touch Screen (TS)	MOST	Provides the driver interface to the entertainment, navigation and driver personalization functions.	In the center of the instrument panel.
TV tuner	MOST	Controls the reception of television signals and audio /visual inputs.	In the right side of the luggage compartment.
Portable Audio Interface Panel	MOST	Controls the auxiliary inputs for additional audio inputs via the portable audio interface.	Inside of the compartment lid.
MOST diagnostic connector	MOST	Allows for diagnostic fault detection of the MOST ring.	Below the air ducting in the floor console.

2015.0 F-TYPE (X152), 419-10

MULTIFUNCTION ELECTRONIC MODULES

MODULE CONTROLLED FUNCTIONS - SYSTEM OPERATION AND COMPONENT DESCRIPTION

(G1565915)

DESCRIPTION AND OPERATION

SYSTEM OPERATION

MODULE CONTROLLED FUNCTIONS

Refer to the relevant section for details of system operation.

COMPONENT DESCRIPTION

MODULES, SYSTEMS AND FUNCTION

The Central Junction Box (CJB) is the 'gateway' for the network systems which allows information to be exchanged between networks.

The entertainment system components are connected on a fiber optic MOST ring. The MOST ring can send and receive information to/from the other network systems via a 'gateway' in the Integrated Control Module.

The following table shows each vehicle control module, the network system to which it is connected, its function and location in the vehicle.

MODULE	NETWORK SYSTEM	FUNCTION	VEHICLE LOCATION
Instrument Cluster (IC)	High speed CAN (controller area network) bus	Receives data from other vehicle systems to provide information to the driver. Also functions as the gateway for the bus systems.	Instrument panel.
Steering column	High speed CAN bus	Controls the locking and unlocking of the steering column.	Upper steering column.
Diagnostic socket	High speed CAN bus	Allows the transfer of vehicle information using a Jaguar approved diagnostic system or other diagnostic tool.	In the lower instrument panel on the driver side, adjacent to the start control module.
RCM (restraints control module)	High speed CAN bus	Controls the deployment of the supplementary restraint components.	At rear of floor console.
ECM (engine control module)	High speed CAN bus	Controls engine management and fuel system operation.	Rear of the engine compartment on the bulkhead.
ABS (anti-lock brake system)	High speed CAN bus	Controls all aspects of the braking system	Rear of the engine compartment on the bulkhead.
Headlamp Leveling Control Module (HLCM)	High speed CAN bus	Controls the static dynamic headlamp leveling function.	In the lower instrument panel.
GateWay Module (GWM)	High speed CAN bus	Allows the transfer between High and Medium Speed Can bus connections	Left of the engine compartment on the bulkhead.
Occupant Classification Sensor	High speed CAN bus	Detects when a passenger is in the front passenger seat and can determine their size and	Below the passenger seat.

Control Module (OCSCM) (NAS only)		weight.	
Electronic Parking Brake (EPB) module	High speed CAN bus	Controls the application and release of the electronic parking brake.	In the luggage compartment, above the rear left wheel arch.
Electronic Transmission Selector (ETS)	High speed CAN bus	Allows the driver to electronically select the required automatic transmission mode. Transmits driver selections to the TCM (transmission control module) .	In the floor console.
Jaguar Drive control module	High speed CAN bus	Controls the Jaguar Drive function and communicates with other system modules.	Integral with the ETS software in the floor console.
Auxiliary Junction Box (AJB)	Medium speed CAN bus	Controls body functions and power distribution.	On left 'A' pillar.
Diagnostic socket	Medium speed CAN bus	Allows the transfer of vehicle information using a Jaguar approved diagnostic system or other diagnostic tool.	In the lower instrument panel on the driver side.
GateWay Module (GWM)	Medium speed CAN bus	Allows the transfer between High and Medium Speed Can bus connections	Left of the engine compartment on the bulkhead.
Passenger Door Module (PDM)	Medium speed CAN bus	Controls window and locking functions.	In the passenger door.
Park Distance Control Module (PDC)	Medium speed CAN bus	Controls the parking aid system.	In the left side of the engine compartment.
Driver Seat Module (DSM)	Medium speed CAN bus	Controls driver seat positioning and also memory functions of other personalized functions.	Below the driver seat.
Instrument Cluster (IC)	Medium speed CAN	Receives data from other systems to provide driver	In the instrument

	bus	information.	panel.
Driver Door Module (DDM)	Medium speed CAN bus	Controls window and locking functions.	In the driver door.
Automatic Temperature Control Module (ATCM)	Medium speed CAN bus	Contains controls for the heating and air conditioning systems.	On the end of the air conditioning evaporator and blower assembly.
Integrated Control Panel (ICP)	Medium speed CAN bus	Contains controls for the entertainment systems and gateway between audio system and other vehicle systems.	In the instrument panel.
Left Blindspot Monitoring Control Module (BMCM)	Medium speed CAN bus	Controls the operating parameters of the system and provides driver indications and fault monitoring.	Behind the outer part of the rear bumper, rearward of the rear wheel.
Right Blindspot Monitoring Control Module (BMCM)	Medium speed CAN bus	Controls the operating parameters of the system and provides driver indications and fault monitoring.	Behind the outer part of the rear bumper, rearward of the rear wheel.
Keyless Vehicle Module (KVM)	Medium speed CAN bus	Allows the vehicle to be opened and closed without the use of a key.	In the right side of the engine compartment.
Quiescent Current Control Module (QCCM)	Medium speed CAN bus	Controls body functions and power distribution.	Center of luggage compartment.
DDM	LIN (local interconnect network)	Memory/adjustment functions for seat, steering column and mirrors and door security functions.	In the driver door.
PDM	LIN	Memory/adjustment functions for seat, steering column and mirrors and door security functions.	In the passenger door.

Driver door switchpack	LIN	Transmit driver selections to the driver's door module.	In the driver door panel.
Engine Control Module (ECM)	LIN	Receives a load signal from the generator.	In the engine compartment on the bulkhead.
Generator	LIN	Provide load signal to the ECM .	On the right side at the front of the engine.
Driver Seat Module (DSM)	LIN	Control position of driver's seat.	Below the driver's seat on the floor pan.
Driver seat switchpack	LIN	Provide driver selection inputs to the driver's seat module.	On the outside of the trim panel on the driver seat.
Electric booster heater	LIN	Controls operation of the electric booster heater.	Inside the heater assembly.
Left outer face level vent	LIN	Controls the operation of the face level vent stepper motor.	In the instrument panel.
Left inner face level vent	LIN	Controls the operation of the face level vent stepper motor.	In the instrument panel.
Right inner face level vent	LIN	Controls operation of the face level vent stepper motor.	In the instrument panel.
Right outer face level vent	LIN	Controls operation of the face level vent stepper motor.	In the instrument panel.
Automatic Temperature Control Module (ATCM)	LIN	Controls operation of the climate system functions.	In the instrument panel.
Steering wheel right switchpack	LIN	Converts analogue signals from steering wheel switches into digital messages.	On the steering wheel.
Clockspring	LIN	Passes digital messages from	Behind the

(CLKSPG)		the steering wheel audio switches to the IC.	steering wheel, on the upper steering column.
Instrument Cluster (IC)	LIN	Receives digital signals from other vehicle systems.	On the driver side of the instrument panel.
Battery Back-Up Sounder (BBUS)	LIN	Activated by CJB (central junction box) when alarm trigger is received.	In the left side of the engine compartment, near the bulkhead.
Central Junction Box (CJB)	LIN	Controls body functions and power distribution.	On the right 'A' pillar.
Quiescent Current Control Module (QCCM)	LIN	Controls body functions and power distribution.	On the center of the luggage compartment.
Battery Monitoring System control module (BMS)	LIN	Monitors the condition and charge of the vehicle battery.	On the vehicle battery positive terminal in the luggage compartment.
Volumetric sensor	LIN	Detects movement in the vehicle interior and activates the anti-theft system.	In the front overhead console.
Rain/light sensor	LIN	Detects ambient light levels and moisture on the windshield for operation of the automatic headlamps and wiper systems.	On the inside of the windshield behind the interior rear view mirror.
Driver door switchpack	LIN	Controls operation of the driver window.	In the driver door trim panel.
Integrated Control Panel (ICP)	MOST	Contains controls for the entertainment system.	In the instrument panel.
Digital Audio	MOST	Receives digital radio	In the center

Broadcast (DAB) receiver (SDARS NAS only)		broadcasts.	of the luggage compartment, behind the seats.
Audio Amplifier Module (AAM)/tuner	MOST	Provides amplification for the entertainment systems and reception of radio RF broadcasts.	Behind the passenger compartment rear trim
Navigation computer	MOST	Reads map data from a DVD (digital versatile disc) to calculate and display visual route guidance information via the TS and audible guidance via the amplifier to the driver.	In the right side of the luggage compartment.
Touch Screen (TS)	MOST	Provides the driver interface to the entertainment, navigation and driver personalization functions.	In the center of the instrument panel.
TV tuner	MOST	Controls the reception of television signals and audio /visual inputs.	In the right side of the luggage compartment.
Portable Audio Interface Panel	MOST	Controls the auxiliary inputs for additional audio inputs via the portable audio interface.	Inside of the compartment lid.
MOST diagnostic connector	MOST	Allows for diagnostic fault detection of the MOST ring.	Below the air ducting in the floor console.

2015.0 F-TYPE (X152), 419-10

MULTIFUNCTION ELECTRONIC MODULES

DRIVER SEAT MODULE (DSM) (G1580273)

REMOVAL AND INSTALLATION

76.70.18	SEAT MEMORY ELECTRONIC CONTROL MODULE - RENEW	ALL DERIVATIVES	0.4	USED WITHINS
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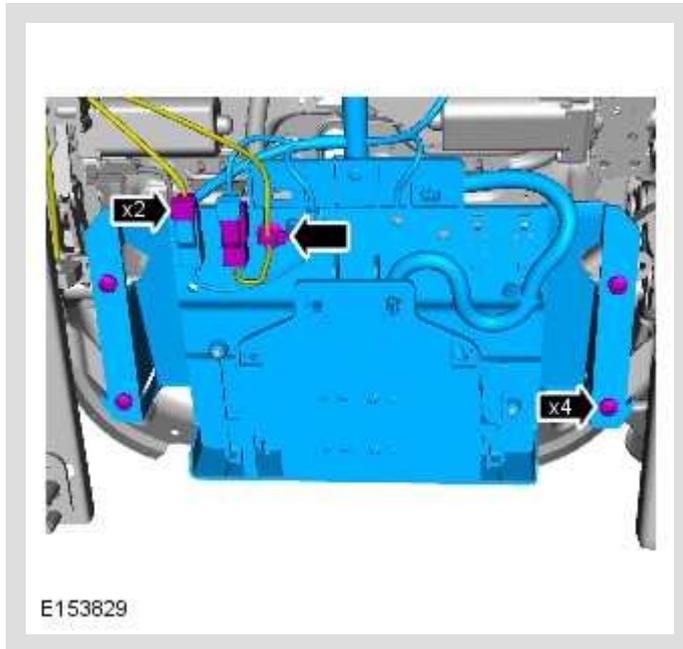
REMOVAL

NOTES:

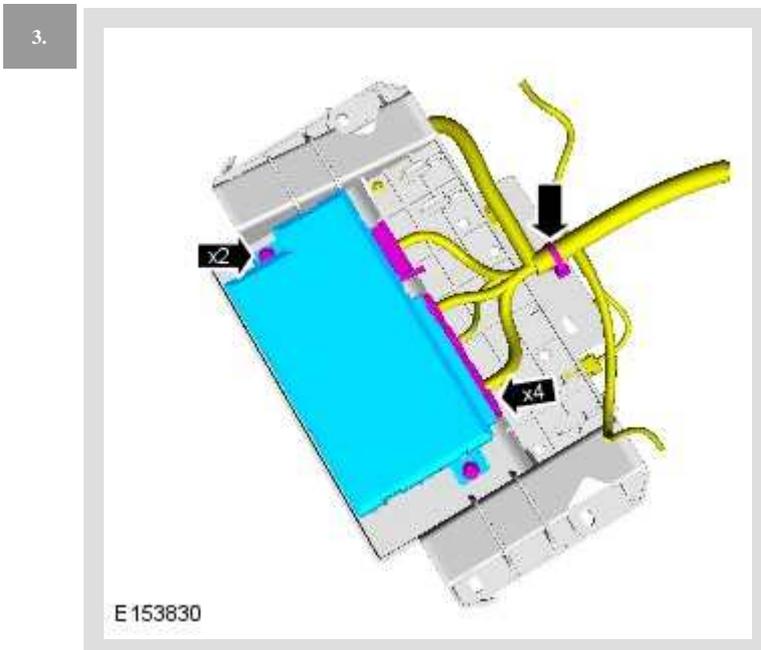
- Some variation in the illustrations may occur, but the essential information is always correct.
- Removal steps in this procedure may contain installation details.
- RH illustration shown, LH is similar.

1. Refer to: [Front Seat - Vehicles With: Sports Seats \(501-10 Seating, Removal and Installation\)](#).

2.



Torque: 8 Nm



INSTALLATION

1. To install, reverse the removal procedure.

2. If a new component has been installed, configure using Jaguar approved diagnostic equipment.

2015.0 F-TYPE (X152), 501-10

SEATING

FRONT SEAT - VEHICLES WITH: SPORTS SEATS (G1707574)

REMOVAL AND INSTALLATION

76.70.01	FRONT SEAT - RENEW	ALL DERIVATIVES	0.3	USED WITHINS	
76.70.01.82	FRONT SEAT - RENEW - WITH SPORTS SEATS FITTED	ALL DERIVATIVES	0.2	USED WITHINS	

REMOVAL



WARNINGS:

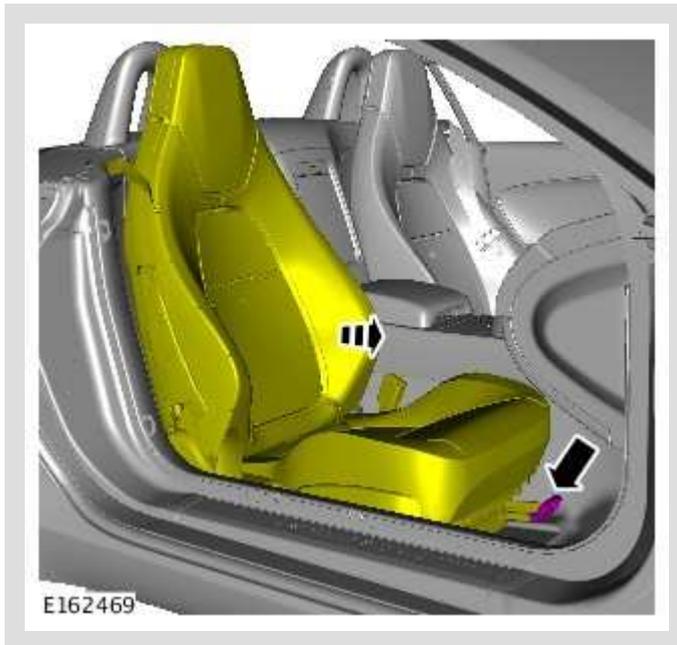
- To avoid accidental deployment and possible personal injury, the backup power supply must be depleted before repairing or replacing any air bag supplemental restraint system (SRS) components. To deplete the backup power supply energy, disconnect the battery ground cable and wait one minute. Failure to follow this instruction may result in personal injury.
- Always wear safety glasses when working on an air bag equipped vehicle and when handling an air bag module. Failure to follow this instruction may result in personal injury.
- To minimize the possibility of premature deployment, do not use radio key code savers when working on the supplemental restraint system. Failure to follow this instruction may result in personal injury.
- To minimize the possibility of injury in the event of premature deployment, always carry a live air bag module with the bag and trim cover pointed away from the body. Failure to follow this instruction may result in personal injury.
- To minimize the possibility of premature deployment, live air bag modules must only be placed on work benches which have been ground bonded and with the trim cover facing up. Failure to follow these instructions may result in personal injury.
- Never probe the electrical connectors of air bag modules or any other supplemental restraint system component. Failure to follow this instruction may result in personal injury.
- Painting over the driver air bag module trim cover or instrument panel could lead to deterioration of the trim cover and air bags. Do not for any reason attempt to paint discolored or damaged air bag module trim covers or instrument panel. Install a new component. Failure to follow this instruction may result in personal injury.

△ NOTES:

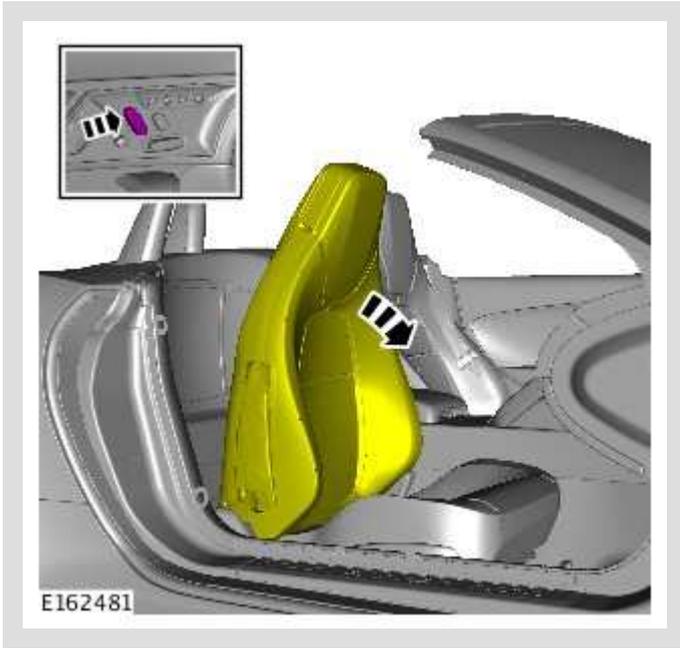
- Some variation in the illustrations may occur, but the essential information is always correct.
- Removal steps in this procedure may contain installation details.
- RH illustration shown, LH is similar.

1. Refer to: [Supplemental Restraint System \(SRS\) Health and Safety Precautions](#) (100-00 General Information, Description and Operation).

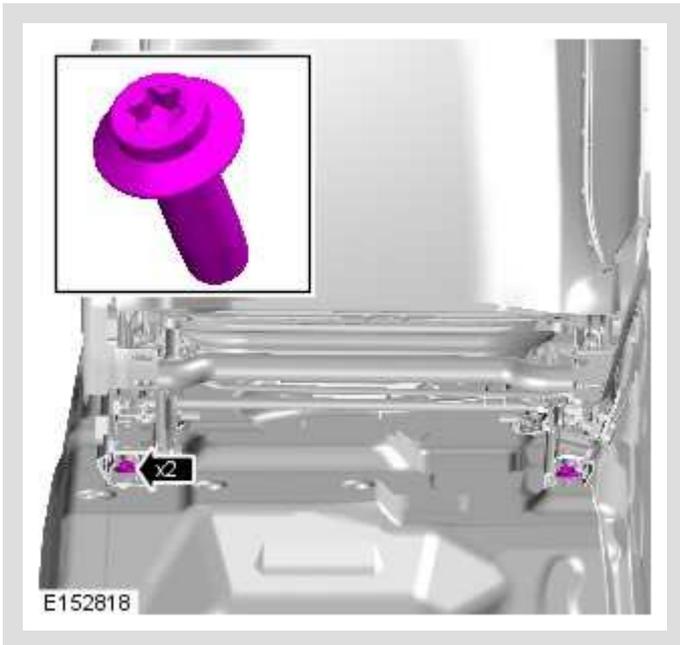
2.



3.

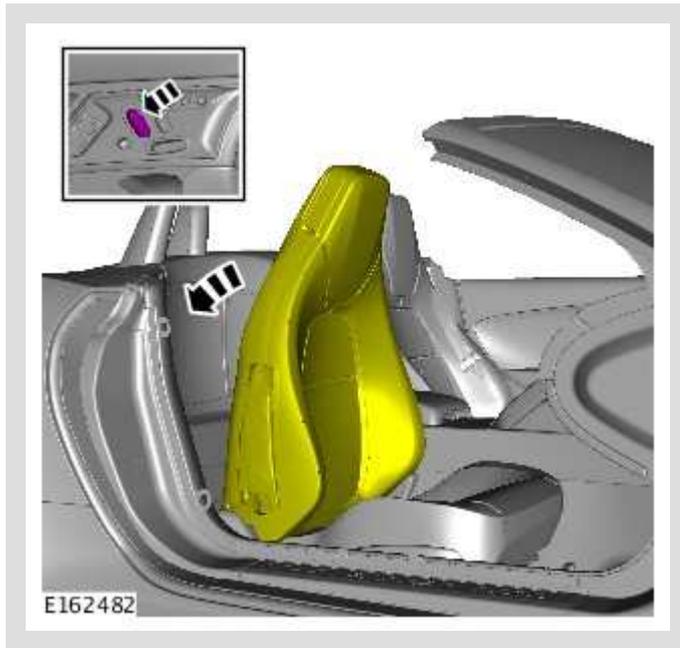


4.

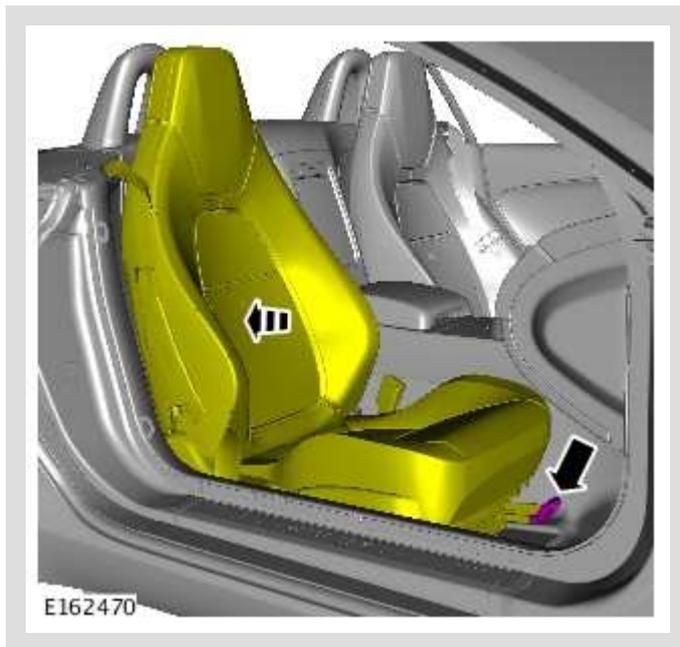


Torque: 47 Nm

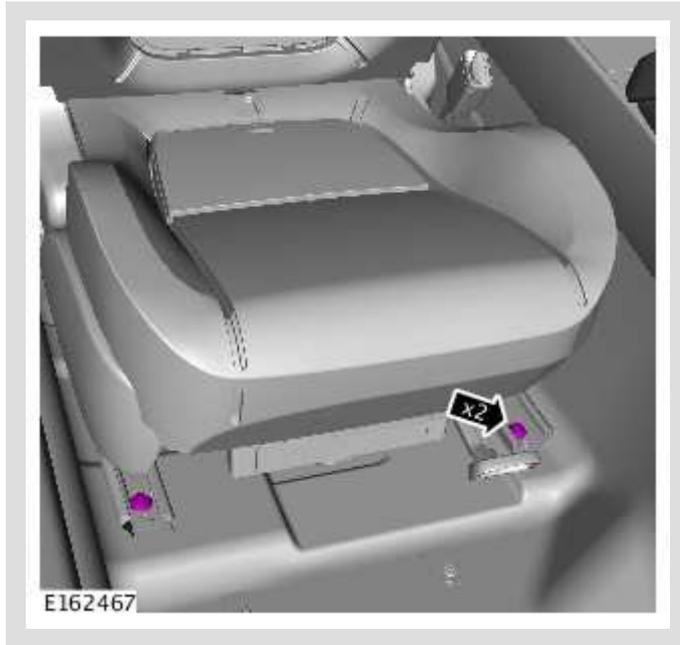
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6.



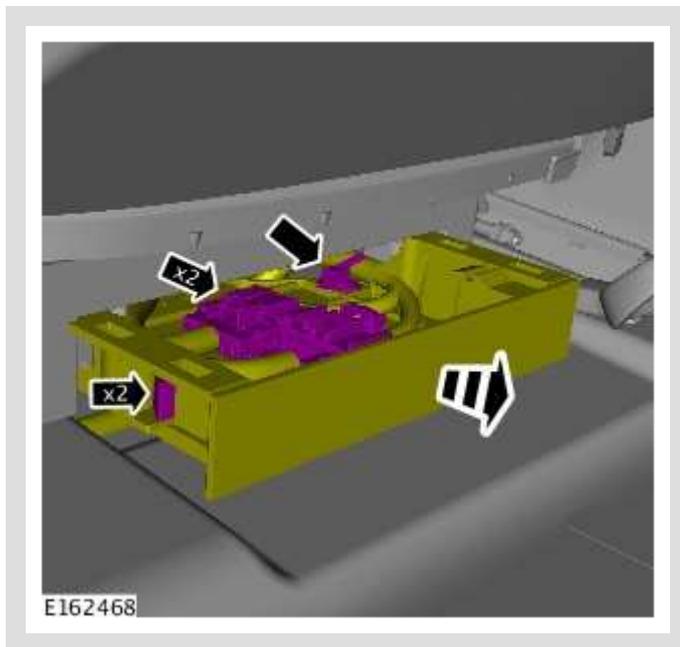
7.



Torque: 47 Nm

8. Refer to: [Battery Disconnect and Connect](#) (414-01 Battery, Mounting and Cables, General Procedures).

- 9.



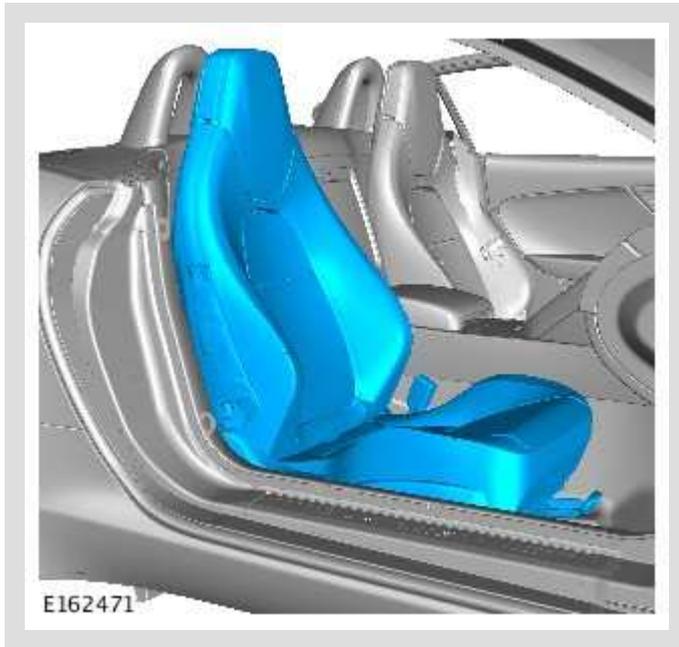
10.

⚠ WARNING:

This step requires the aid of another technician.

ⓘ CAUTIONS:

- Protect the surrounding paintwork to avoid damage.
- Protect the surrounding trim to avoid damage.



INSTALLATION

1. To install, reverse the removal procedure.

2015.0 F-TYPE (X152), 419-10

MULTIFUNCTION ELECTRONIC MODULES

FRONT DOOR MODULE (FDM) (G1580272)

REMOVAL AND INSTALLATION

86.80.29	DRIVER DOOR MODULE - RENEW	ALL DERIVATIVES	0.4	USED WITHINS
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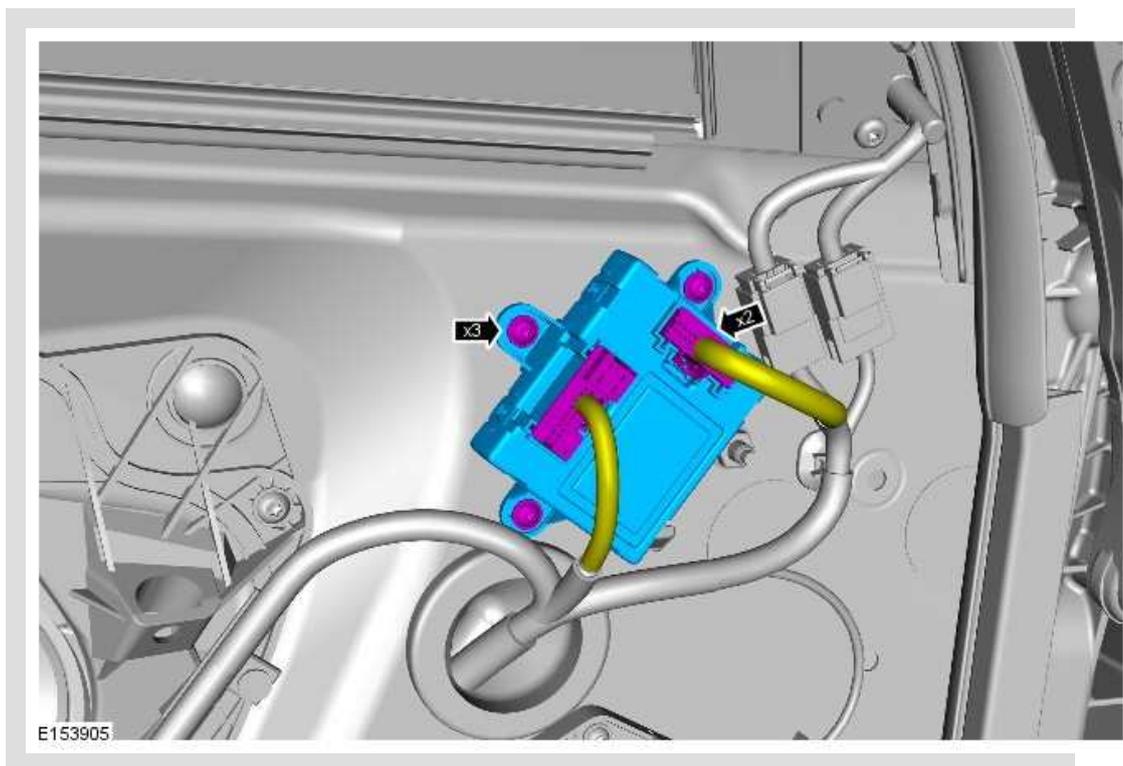
REMOVAL

NOTE:

Removal steps in this procedure may contain installation details.

1. Refer to: [Battery Disconnect and Connect](#) (414-01 Battery, Mounting and Cables, General Procedures).
2. Refer to: [Front Door Trim Panel](#) (501-05 Interior Trim and Ornamentation, Removal and Installation).

3.



INSTALLATION

1.

NOTE:

If a new component has been installed, configure using Jaguar approved diagnostic equipment.

To install, reverse the removal procedure.

2015.0 F-TYPE (X152), 414-01

BATTERY, MOUNTING AND CABLES

BATTERY DISCONNECT AND CONNECT (G1579511)

GENERAL PROCEDURES

86.15.15	BATTERY DISCONNECTION AND RECONNECTION PROCEDURE **** DO NOT ISSUE ****	ALL DERIVATIVES	0.2	USED WITHINS
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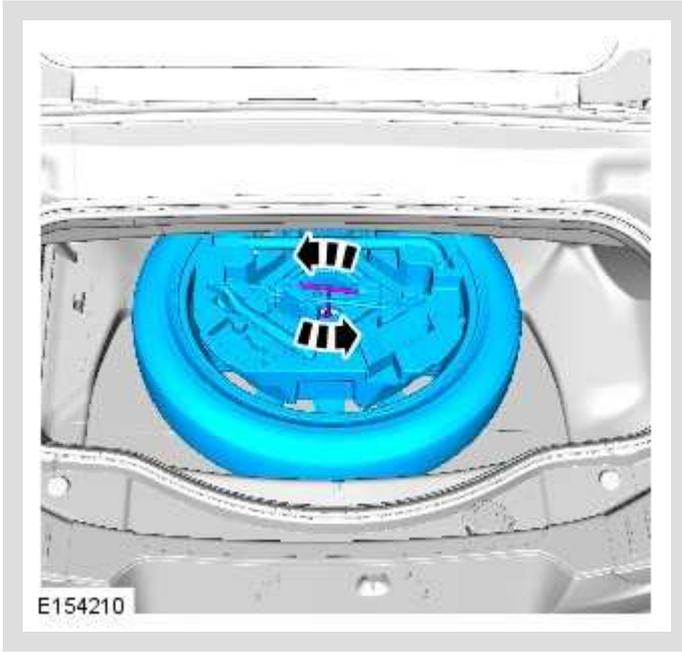
NOTES:

- Some variation in the illustrations may occur, but the essential information is always correct.
- Removal steps in this procedure may contain installation details.
- If a new battery is installed, the battery monitoring system (BMS) must be reset using Jaguar approved diagnostic equipment.

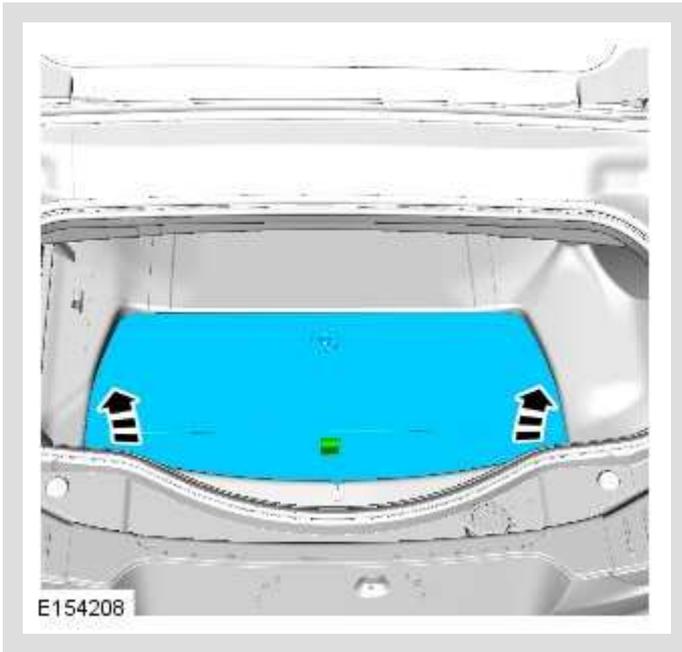
1. Refer to: [Battery Care Requirements](#) (414-00 Battery and Charging System - General Information, Description and Operation).

2. Obtain and record the audio unit preset radio frequencies.

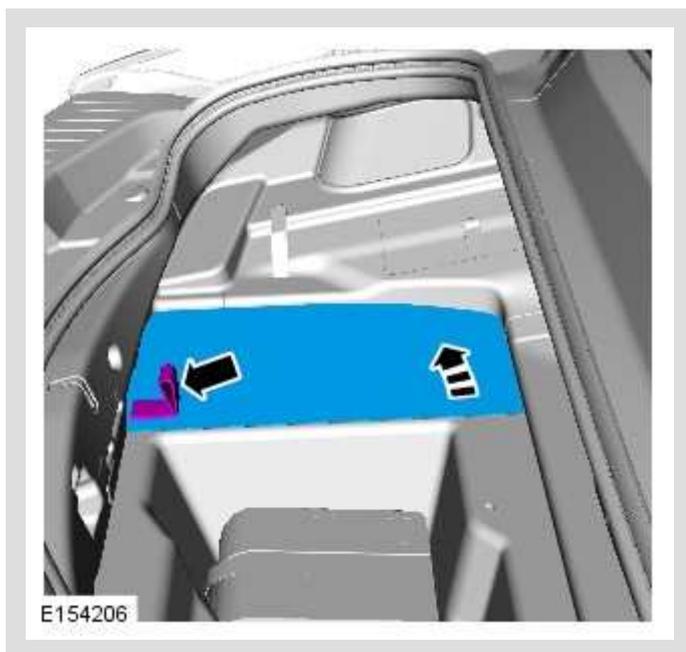
3.



4.



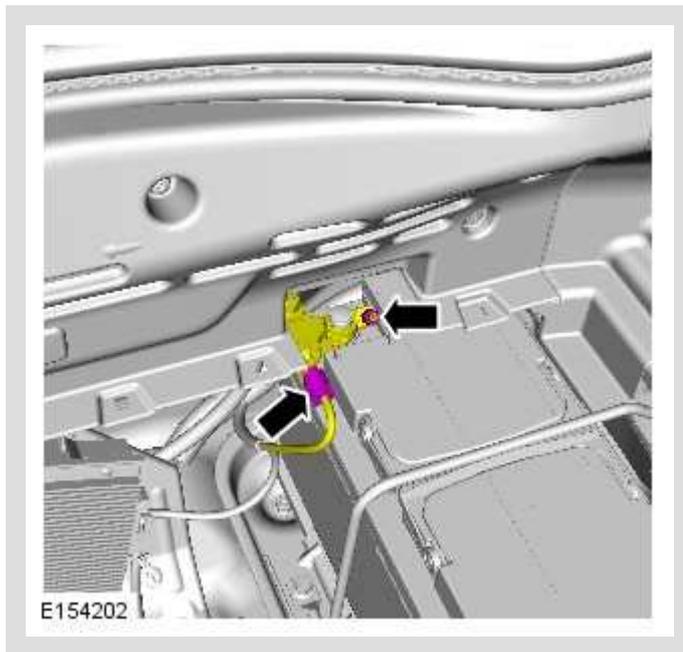
5.



6.

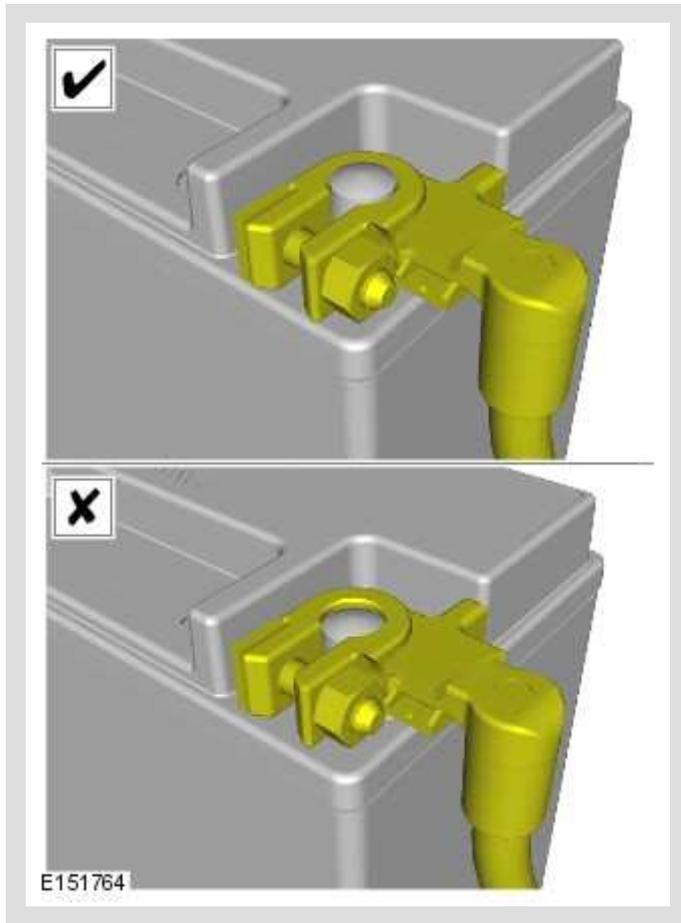
ⓘ CAUTION:

Take extra care not to damage the wiring harnesses.



Torque: 6 Nm

7.



8. To install, reverse the removal procedure.

9.

 **NOTE:**

This step is only necessary when installing a new battery.

Using Jaguar approved diagnostic equipment, reset the battery monitoring system (BMS).

10. Door Window Motor Initialization
11. Enter the audio unit preset radio frequencies.
12. Reset the clock to the correct time.
13. Start the engine and allow to idle until the engine reaches normal operating temperature.
14. Switch the engine off.

2015.0 F-TYPE (X152), 501-05

INTERIOR TRIM AND ORNAMENTATION

FRONT DOOR TRIM PANEL (G1584209)

REMOVAL AND INSTALLATION

76.34.01	FRONT DOOR TRIM PAD - RENEW	ALL DERIVATIVES	0.9	USED WITHINS
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FRONT

76.34.01

DOOR
TRIM PAD
- RENEW

COUPE

0.9

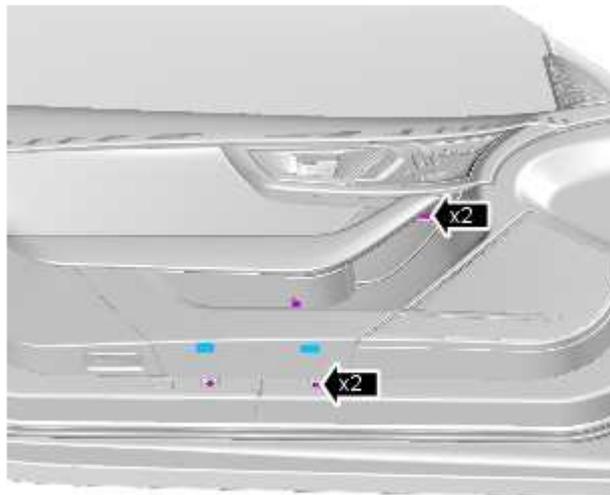
USED
WITHINS

REMOVAL

NOTE:

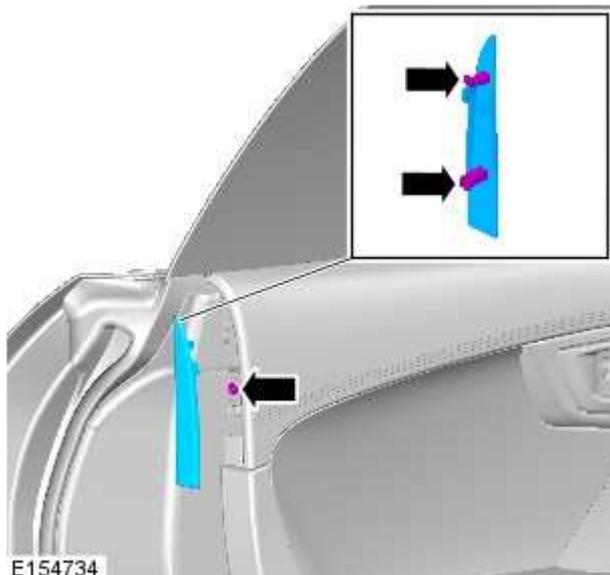
Removal steps in this procedure may contain installation details.

1.



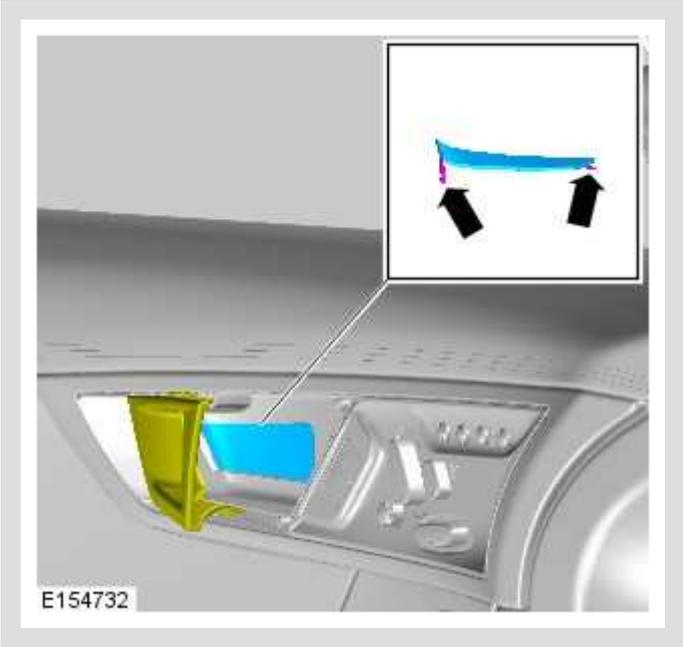
E154738

2.



E154734

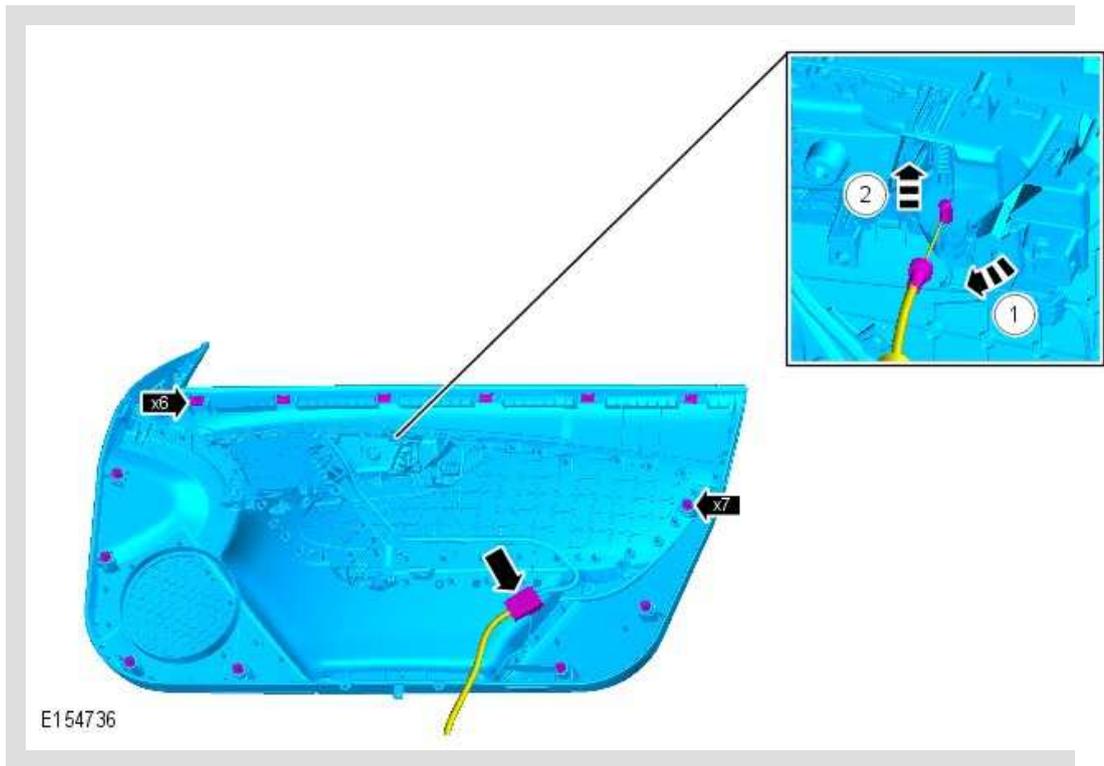
3.



4.



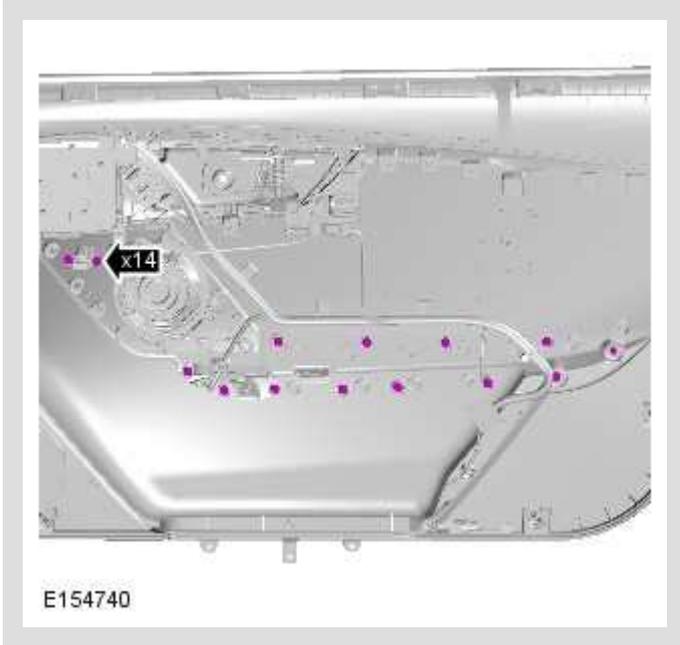
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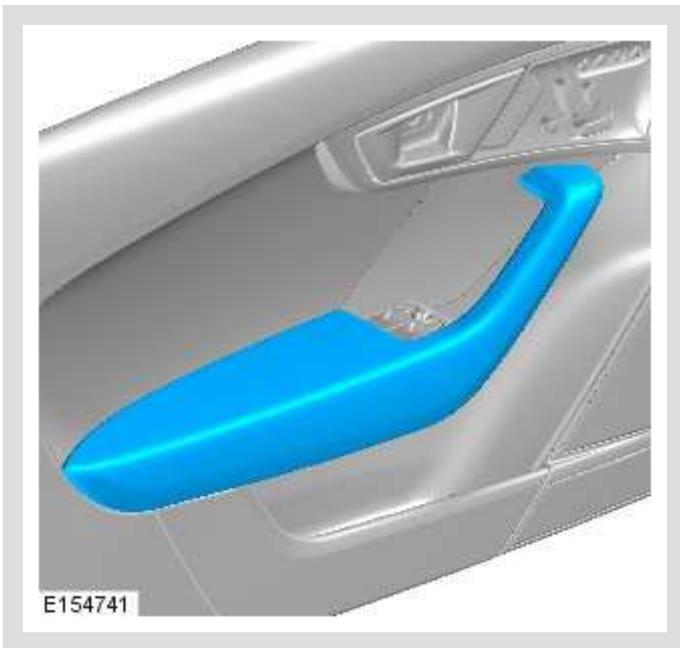
6.

 **NOTE:**

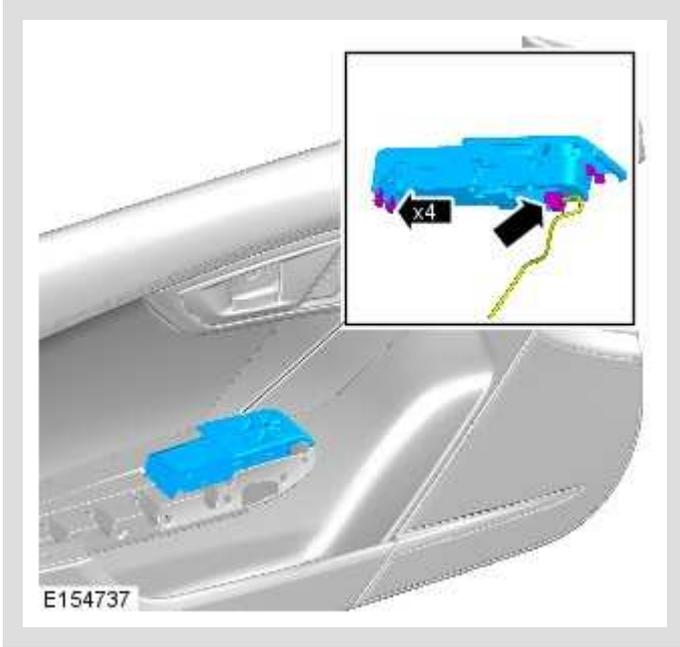
Do not disassemble further if the component is removed for access only.



7.



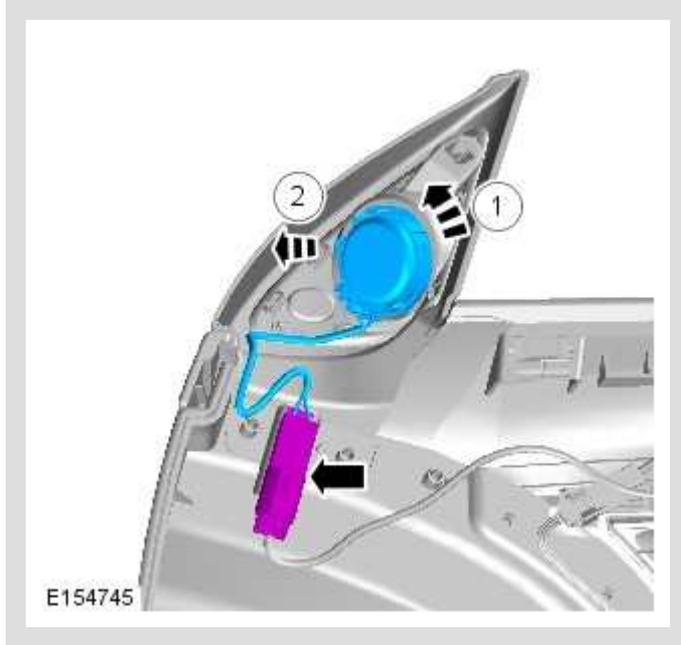
8.



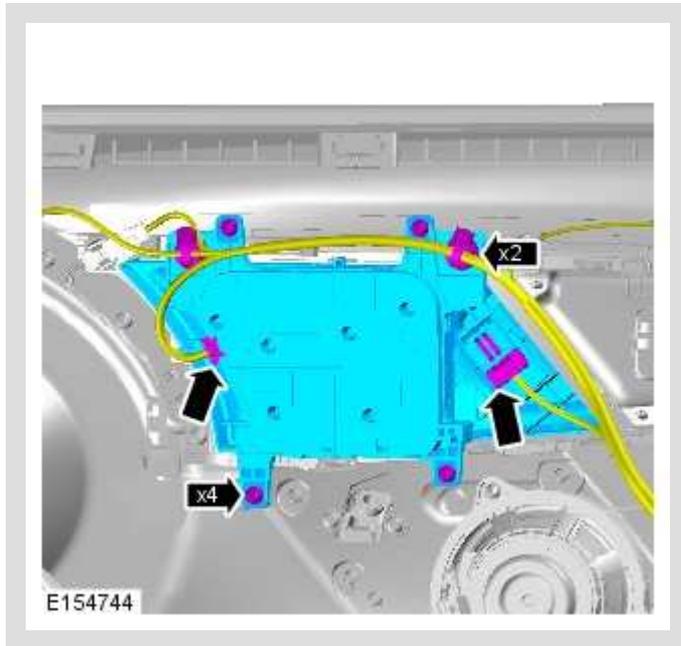
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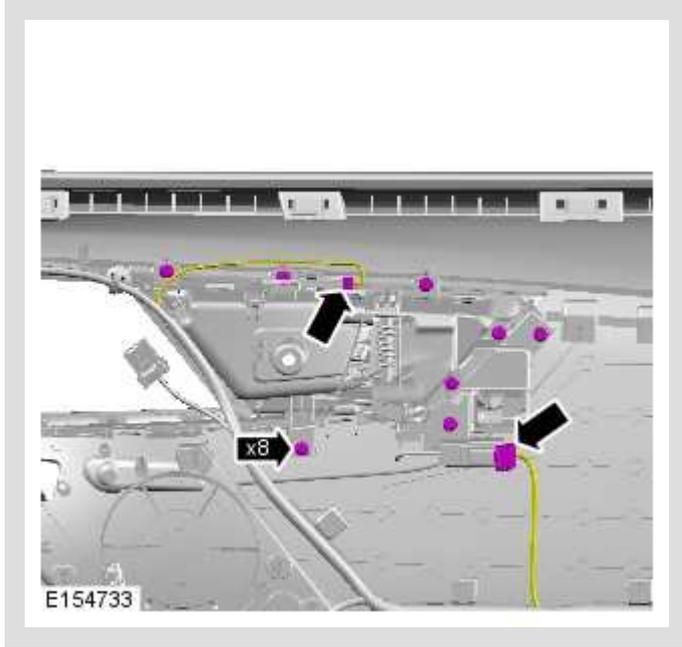
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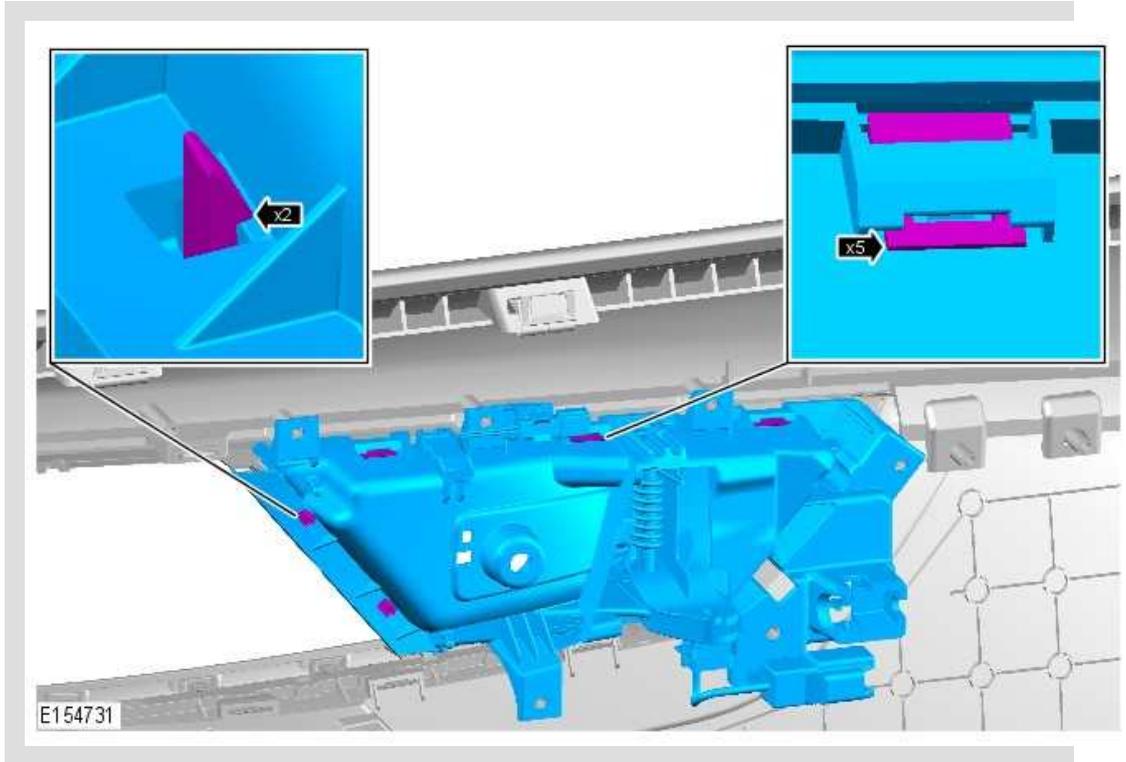
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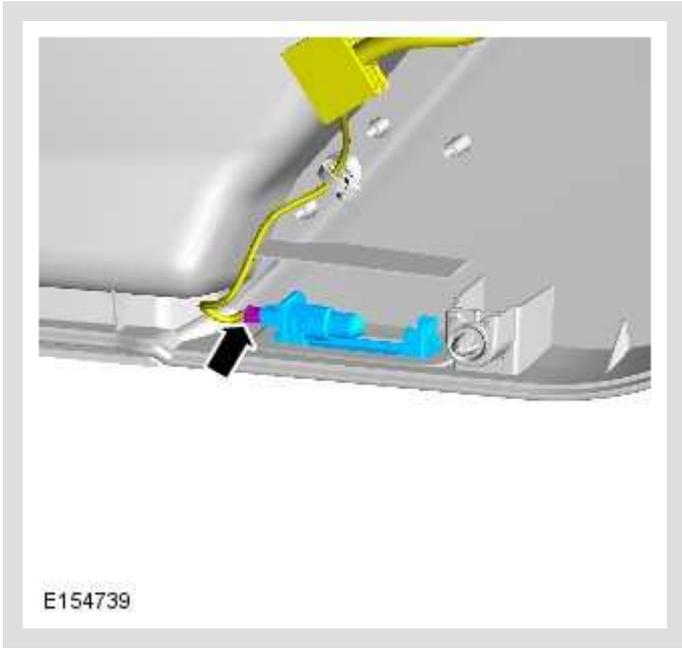
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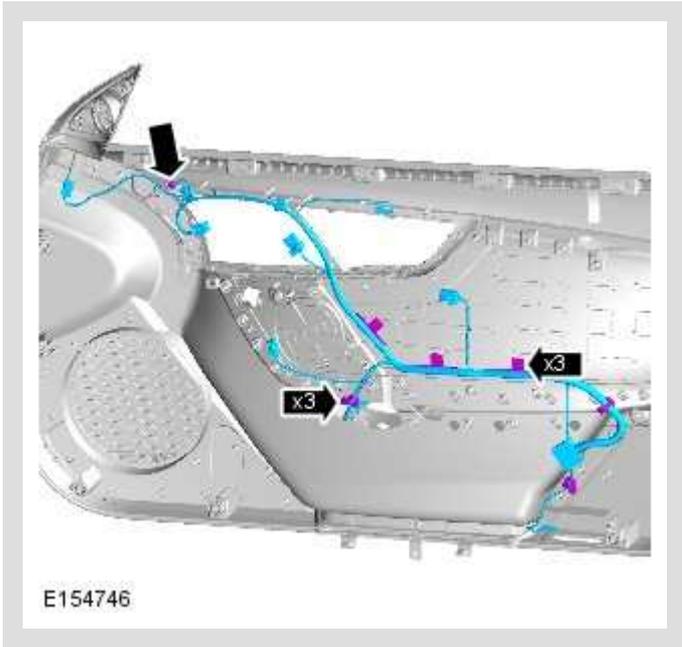
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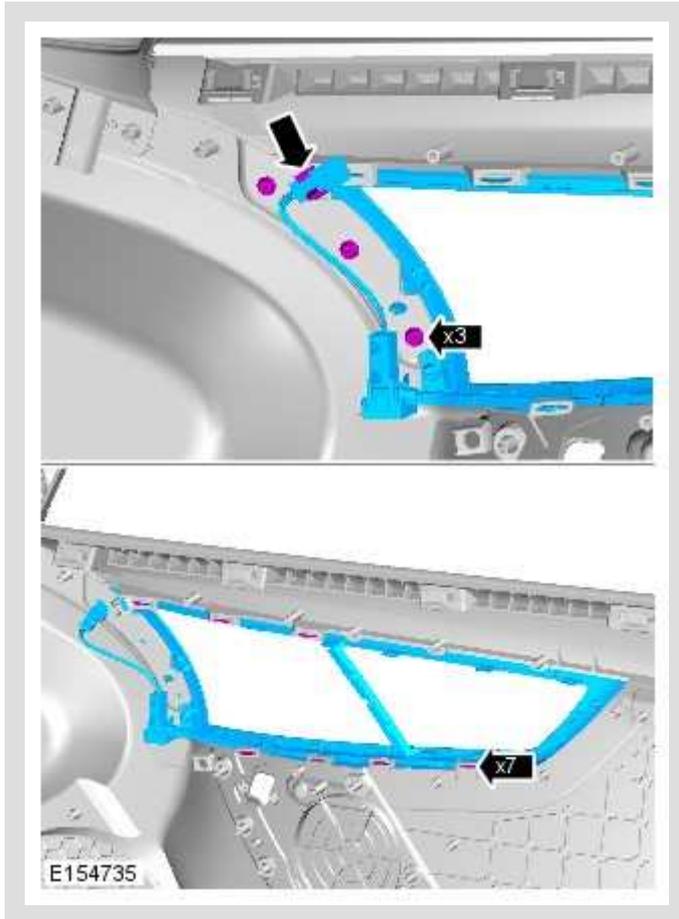
14.



15.



16.



INSTALLATION

1. To install, reverse the removal procedure.

2015.0 F-TYPE (X152), 419-10

MULTIFUNCTION ELECTRONIC MODULES

KEYLESS VEHICLE MODULE (KVM) (G1586891)

REMOVAL AND INSTALLATION

86.80.10	KEYLESS VEHICLE MODULE - RENEW	ALL DERIVATIVES	0.3	USED WITHINS
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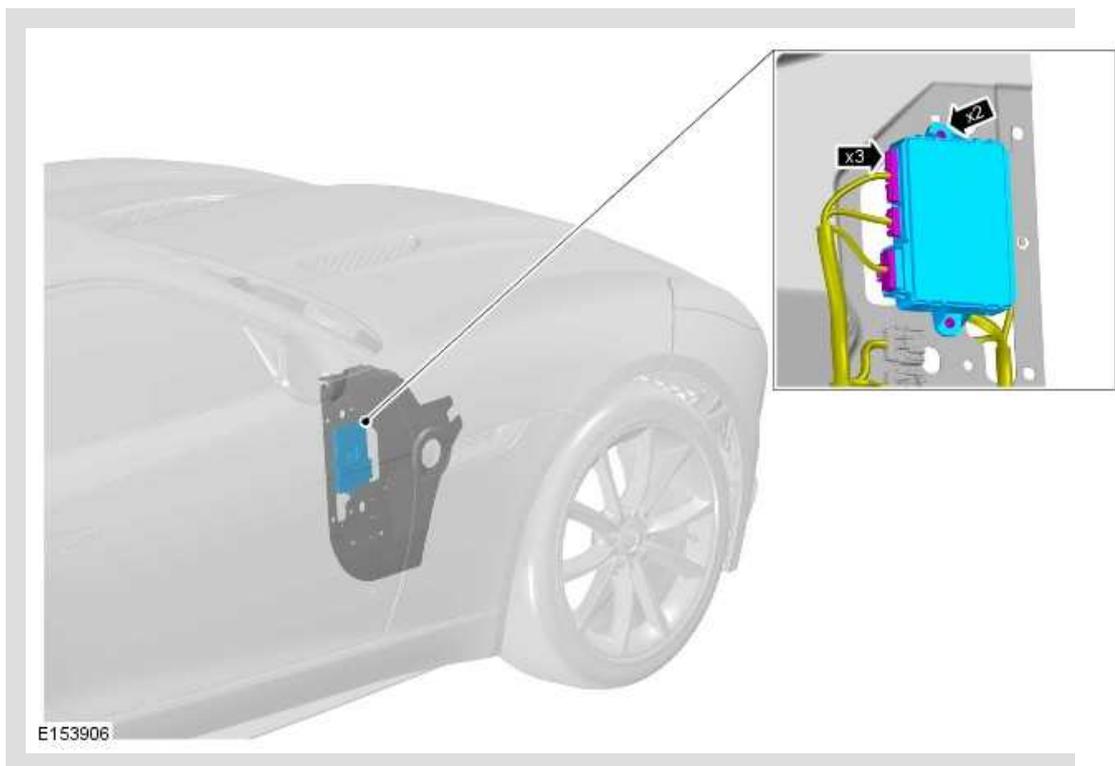
REMOVAL

NOTE:

Removal steps in this procedure may contain installation details.

1. Refer to: [Battery Disconnect and Connect](#) (414-01 Battery, Mounting and Cables, General Procedures).
2. Refer to: [Cowl Side Trim Panel](#) (501-05 Interior Trim and Ornamentation, Removal and Installation).

3.



INSTALLATION

1. To install, reverse the removal procedure.
2. If a new component has been installed, configure using Jaguar approved diagnostic equipment.

BATTERY, MOUNTING AND CABLES

BATTERY DISCONNECT AND CONNECT (G1579511)

GENERAL PROCEDURES

86.15.15	BATTERY DISCONNECTION AND RECONNECTION PROCEDURE **** DO NOT ISSUE ****	ALL DERIVATIVES	0.2	USED WITHINS
----------	---	--------------------	-----	-----------------

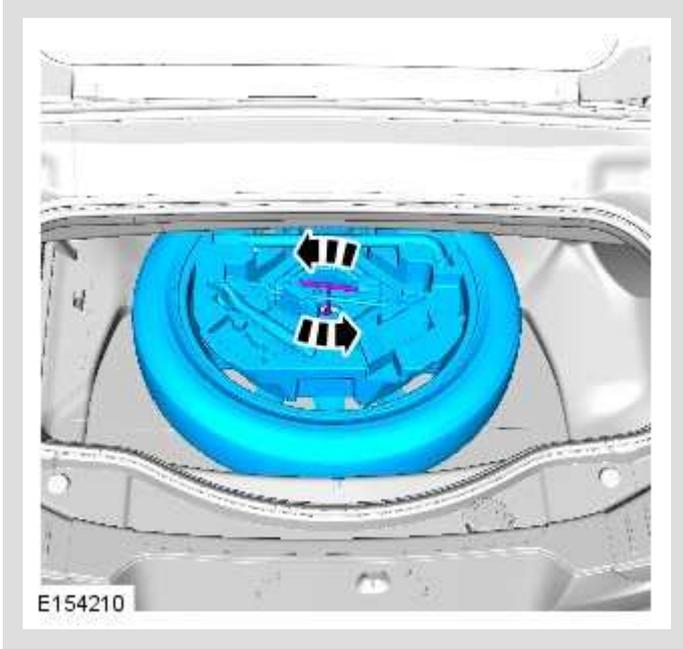
NOTES:

- Some variation in the illustrations may occur, but the essential information is always correct.
- Removal steps in this procedure may contain installation details.
- If a new battery is installed, the battery monitoring system (BMS) must be reset using Jaguar approved diagnostic equipment.

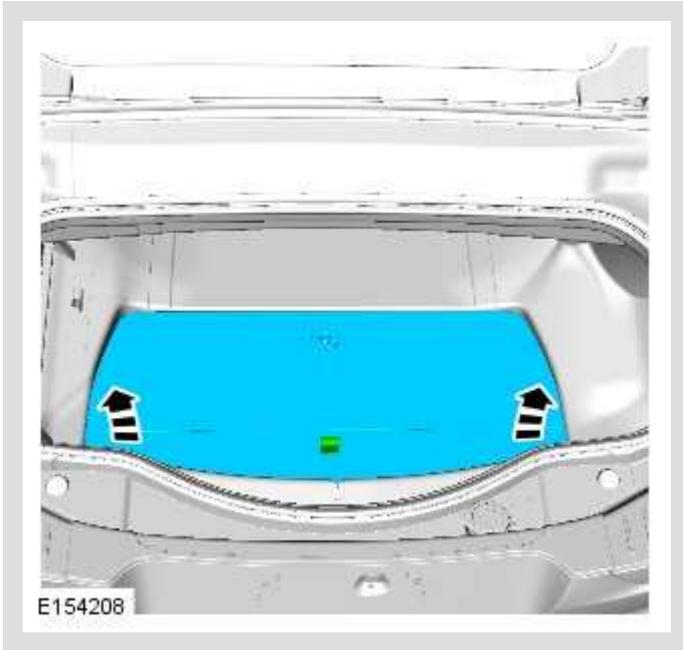
1. Refer to: [Battery Care Requirements](#) (414-00 Battery and Charging System - General Information, Description and Operation).

2. Obtain and record the audio unit preset radio frequencies.

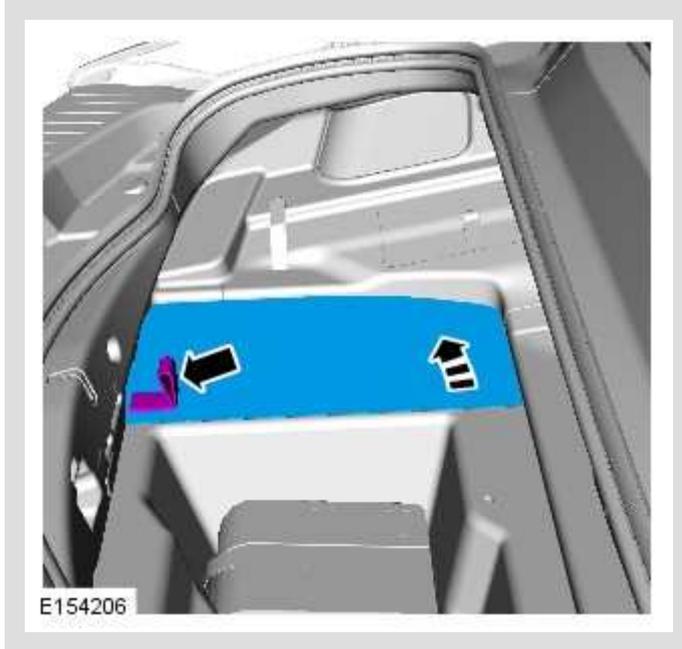
3.



4.

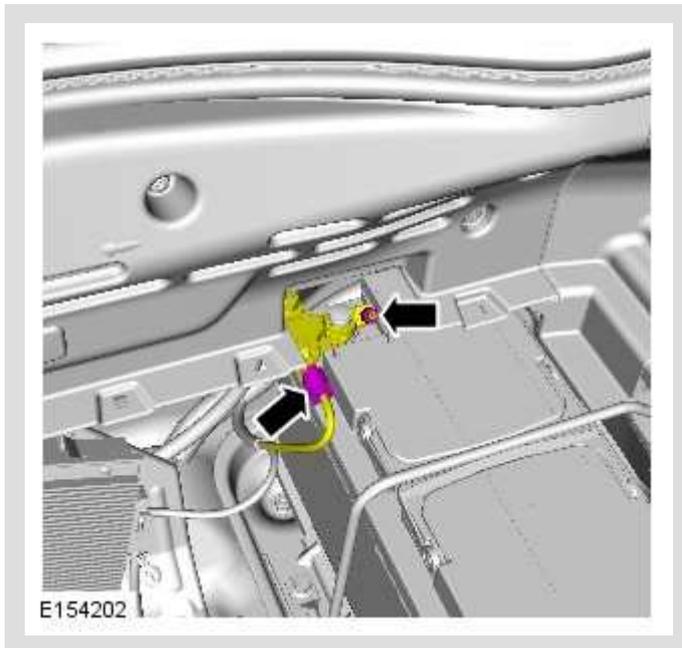


5.

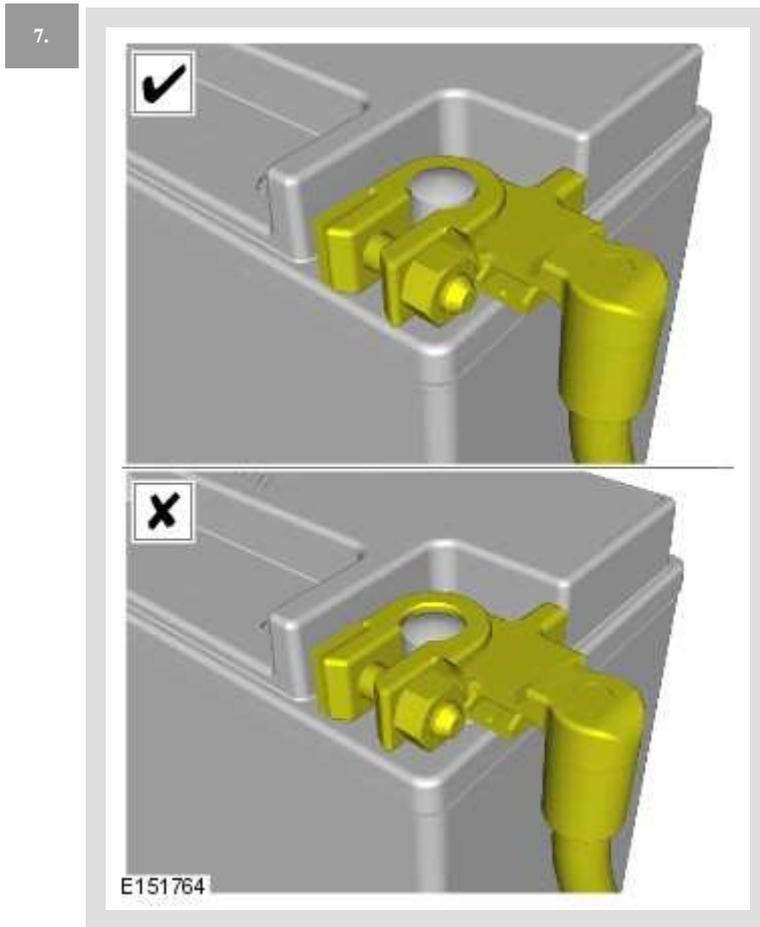


6. **⚠ CAUTION:**

Take extra care not to damage the wiring harnesses.



Torque: **6 Nm**



8. To install, reverse the removal procedure.

9.  **NOTE:**

This step is only necessary when installing a new battery.

Using Jaguar approved diagnostic equipment, reset the battery monitoring system (BMS).

10. Door Window Motor Initialization

11. Enter the audio unit preset radio frequencies.

12. Reset the clock to the correct time.

13. Start the engine and allow to idle until the engine reaches normal operating temperature.

14. Switch the engine off.

2015.0 F-TYPE (X152), 501-05

INTERIOR TRIM AND ORNAMENTATION

COWL SIDE TRIM PANEL (G1584208)

REMOVAL AND INSTALLATION

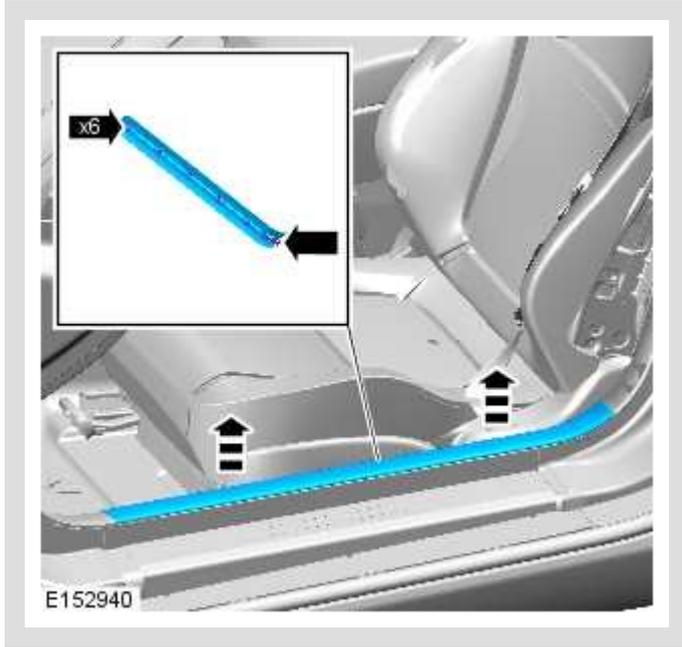
76.13.30	A-POST LOWER TRIM PAD - RENEW	ALL DERIVATIVES	0.1	USED WITHINS
----------	--	--------------------	-----	-----------------

REMOVAL

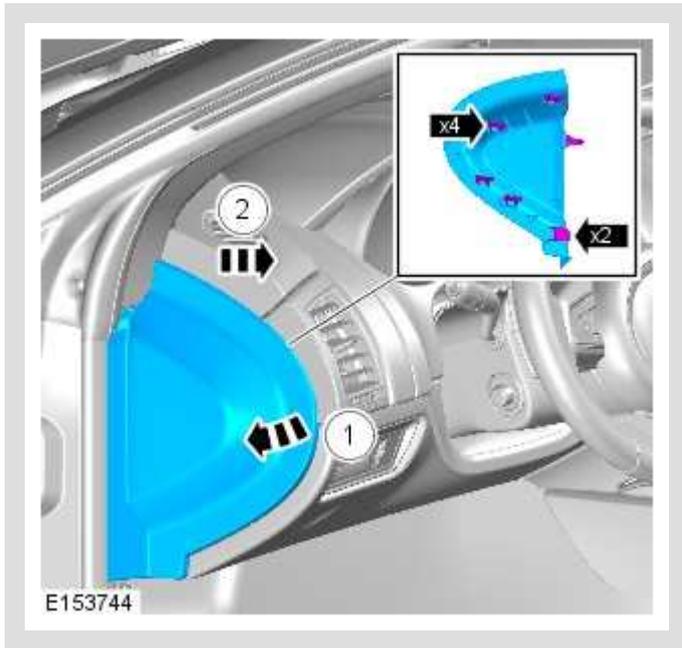
NOTES:

- LH illustration shown, RH is similar.
- Removal steps in this procedure may contain installation details.

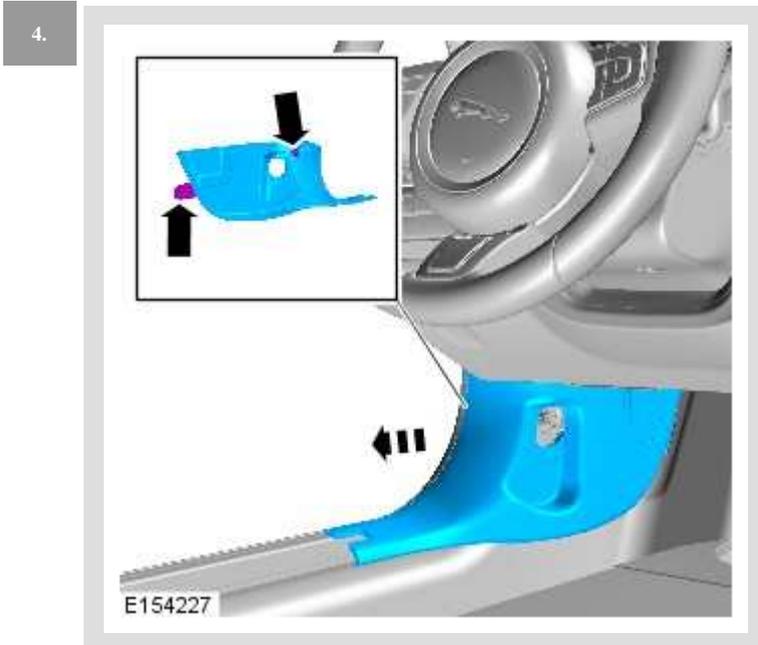
1.



2.



3.



INSTALLATION

1. To install, reverse the removal procedure.

2015.0 F-TYPE (X152), 419-10

MULTIFUNCTION ELECTRONIC MODULES

DIAGNOSIS AND TESTING

PRINCIPLES OF OPERATION

For a detailed description of the Keyless Vehicle Module (KVM) operation, refer to the relevant description and operation sections in 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

⚠ NOTE:

Check and rectify basic faults before beginning diagnostic routines involving pinpoint tests.

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">▪ Misaligned door(s), hood or luggage compartment lid▪ Door latch(s)▪ Actuating rod(s)▪ Exterior door handle(s)▪ Interior door handle(s)▪ Door lock cylinder▪ Cable(s)▪ Door mirror - Powerfold▪ Stop / start switch▪ Luggage compartment lid exterior release switch	<ul style="list-style-type: none">▪ Fuse(s)▪ Wiring harness▪ Electrical connector(s)▪ Door lock actuator(s)▪ Remote transmitter batteries▪ Vehicle battery▪ Remote transmitter (Key-fob or smart key)▪ Door lock switch(s)▪ Central junction box (CJB)▪ Radio frequency (RF) receiver▪ Immobilizer antenna unit (IAU)▪ Keyless vehicle module (KVM)▪ Instrument cluster (IC)▪ Stop / start switch▪ Hazard warning lamp switch▪ Low frequency antenna (LF antenna)

1. If an obvious cause for an observed or reported concern is found, correct the cause (if possible) before proceeding to the next step
1. If the cause is not visually evident, check for diagnostic trouble codes (DTCs) and refer to the DTC index
1. Check DDW for open campaigns. Refer to the corresponding bulletins and SSMs which may be valid for the specific customer complaint and carry out the recommendations as required

 **NOTE:**

PINPOINT TEST A : NON START FROM KEYLESS VEHICLE ENTRY

Do not disconnect the battery or perform a hard reset on the vehicle, at least until this flow chart has been followed

TEST CONDITIONS

DETAILS/RESULTS/ACTIONS

Do not disconnect the battery or perform a hard reset on the vehicle, at least until this flow chart has been followed

A1: VEHICLE ENTRY

- | | | | | |
|---|---|--|--|--|
| 1 Note the position of the following items | 2 Are the door mirrors folded in or out? (Powerfold vehicles only) | 3 Looking through the windows, are the doors locked or not on the inside? | 4 Are the smart keys in the vehicle or outside? | 5 Record these details and include in the Technical Assistance report |
|---|---|--|--|--|

Press the key fob or pull the door handle on passive entry vehicles.

Do the doors unlock and powerfold mirrors fold out? (If fitted)

Yes

Record these details and include in the Technical Assistance report

Gain entry [GO to A2](#) .

No

Gain entry using the key blade and if the alarm sounds, muffle the sounder as required [GO to A2](#) .

A2: SDD CAN LINK SETUP

- | | | | | | | |
|---|---------------------------------------|---|--|--------------------------------|-----------------------|----------|
| 1 DO NOT PRESS THE IGNITION STOP | 2 Connect the diagnostic tool. | 3 Start CAN link Monitor (instructions must be obtained from | 4 Select 'START' (Windows 7) or the Windows | 5 Select 'All Programs' | 6 Select 'JLR' | 7 |
|---|---------------------------------------|---|--|--------------------------------|-----------------------|----------|

**/START
SWITCH**

DTS), start icon
CAN log as (Windows
per correct XP) from
process. bottom
Ensure that tool bar
MONITOR
WITHOUT
DIAGNOSTICS
is selected

Is the ignition on?

Yes

Are the KVM & CJB responding as required?

Follow SDD system mapping and navigate to:- Powertrain / Engine system / Starting system (& further sub symptoms) or Electrical / Battery / Power distribution / Ignition supplies (& further sub symptoms), then perform the Security-start authorisation status app following this process

Stop SDD session then stop CAN link monitor. Raise Technical Assistance report and then attach CAN log and session file. Mention any further comments from customer that may be relevant. Raise Technical Assistance report and send all data to DTS

No

[GO to A3 .](#)

A3: CHECK THE SMART KEY IS FOUND

- 1 Is 'smart key not found' displayed?
- 2 Place the key at the IAU. Press the stop / start switch without pressing the brake pedal

Is the ignition on?

Yes

[GO to A4](#) .

No

Confirm the correct keys are being used by confirming the correct key blades

Run SDD IAU replacement App

[GO to A2](#) . Ignition on question

A4: CJB RESET

- 1 Switch the ignition OFF
- 2 Remove and put back fuse 17 from the CJB

Are all functions restored?

Yes

Follow SDD system mapping and navigate to:- Powertrain / Engine system / Starting system (& further sub symptoms) or Electrical / Battery / Power distribution / Ignition supplies (& further sub symptoms), then perform the Security-start authorisation status app following this process

Stop SDD session then stop CAN link monitor. Raise Technical Assistance report and then attach CAN log and session file. Mention any further comments from the customer that may be relevant. Raise Technical Assistance report and send all data to DTS

No

[GO to A5](#) .

A5: CHECK FOR LOST COMMUNICATIONS

- 1 Check RFR for any KVM lost comms with RFR related DTCs. Rectify as required

Are all the functions restored?

Yes

Follow SDD system mapping and navigate to:- Powertrain / Engine system / Starting system (& further sub symptoms) or Electrical / Battery / Power distribution / Ignition supplies (& further sub

symptoms), then perform the Security-start authorisation status app following this process

Stop SDD session then stop CAN link monitor. Raise Technical Assistance report and then attach CAN log and session file. Mention any further comments from the customer that may be relevant. Raise Technical Assistance report and send all data to DTS

No

[GO to A6 .](#)

A6: CJB TEST

- 1 Now you need to confirm, if the CJB is functioning correctly
- 2 Carry out flasher test, press the hazard warning lamp switch

Do the front and rear turn signal indicators work?

Yes

[GO to A7 .](#)

No

[GO to A8 .](#)

A7: SIDE REPEATER LAMP OPERATION

- 1 Check the vehicle for side repeater lamp operation

Do the side repeater lamps work?

Yes

The CJB is responding as required

Now outside the scope of this pin point test

Record this detail and include in the Technical Assistance report

Stop SDD session then stop CAN link monitor. Raise Technical Assistance report and then attach CAN log and session file. Mention any further comments from the customer that may be relevant. Raise Technical Assistance report and send all data to DTS

No

[GO to A9 .](#)

A8: SIDE REPEATER SWITCH OPERATION

- 1 Check vehicle for side repeater operation

Do the side repeater lamps work?

Yes

Record this detail and include in the Technical Assistance report

Stop SDD session then stop CAN link monitor. Raise Technical Assistance report and then attach CAN log and session file. Mention any further comments from the customer that may be relevant. Raise Technical Assistance report and send all data to DTS

No

[GO to A9](#) .

A9: HAZARD ILLUMINATION LAMP SWITCH OPERATION

1 Check the hazard illumination lamp switch is operational

Does the hazard lamp switch illumination work?

Yes

[GO to A10](#) .

No

[GO to A11](#) .

A10: CAN INTEGRITY CHECK

1 Check for CAN integrity MS or MS (BODY), repair as necessary

Are the KVM & CJB Start & Entry functions restored?

Yes

The CJB is responding as required

Now outside the scope of this pin point test

Record this detail and include in the Technical Assistance report

Stop SDD session then stop CAN link monitor. Raise Technical Assistance report and then attach CAN log and session file. Mention any further comments from the customer that may be relevant. Raise Technical Assistance report and send all data to DTS

No

Now outside the scope of this pin point test

Record this detail and include in the Technical Assistance report

Stop SDD session then stop CAN link monitor. Raise Technical Assistance report and then attach CAN log and session file. Mention any further comments from the customer that may be relevant. Raise Technical Assistance report and send all data to DTS

A11: HAZARD WARNING LAMP IC TELL-TALE CHECK

1 Check that the IC is operational

Does the IC tell-tale work?

Yes

Now outside the scope of this pin point test

Record this detail and include in the Technical Assistance report

When the vehicle function has completed, select CAN link Monitor tab from the tool bar

Select 'CAPTURE'

Select 'STOP LOGGING'. A pop-up window will display 'Logging stopped successfully'

Locate the CAN link Monitor file on the USB

Open file and make sure the data has recorded correctly

Close the file

Remove the USB flash drive from SDD machine

Stop SDD session then stop CAN link monitor. Raise Technical Assistance report and then attach CAN log and session file. Mention any further comments from the customer that may be relevant. Raise Technical Assistance report and send all data to DTS

No

Record this detail and include in the Technical Assistance report

Stop SDD session then stop CAN link monitor. Raise Technical Assistance report and then attach CAN log and session file. Mention any further comments from the customer that may be relevant. Raise Technical Assistance report and send all data to DTS

DTC INDEX

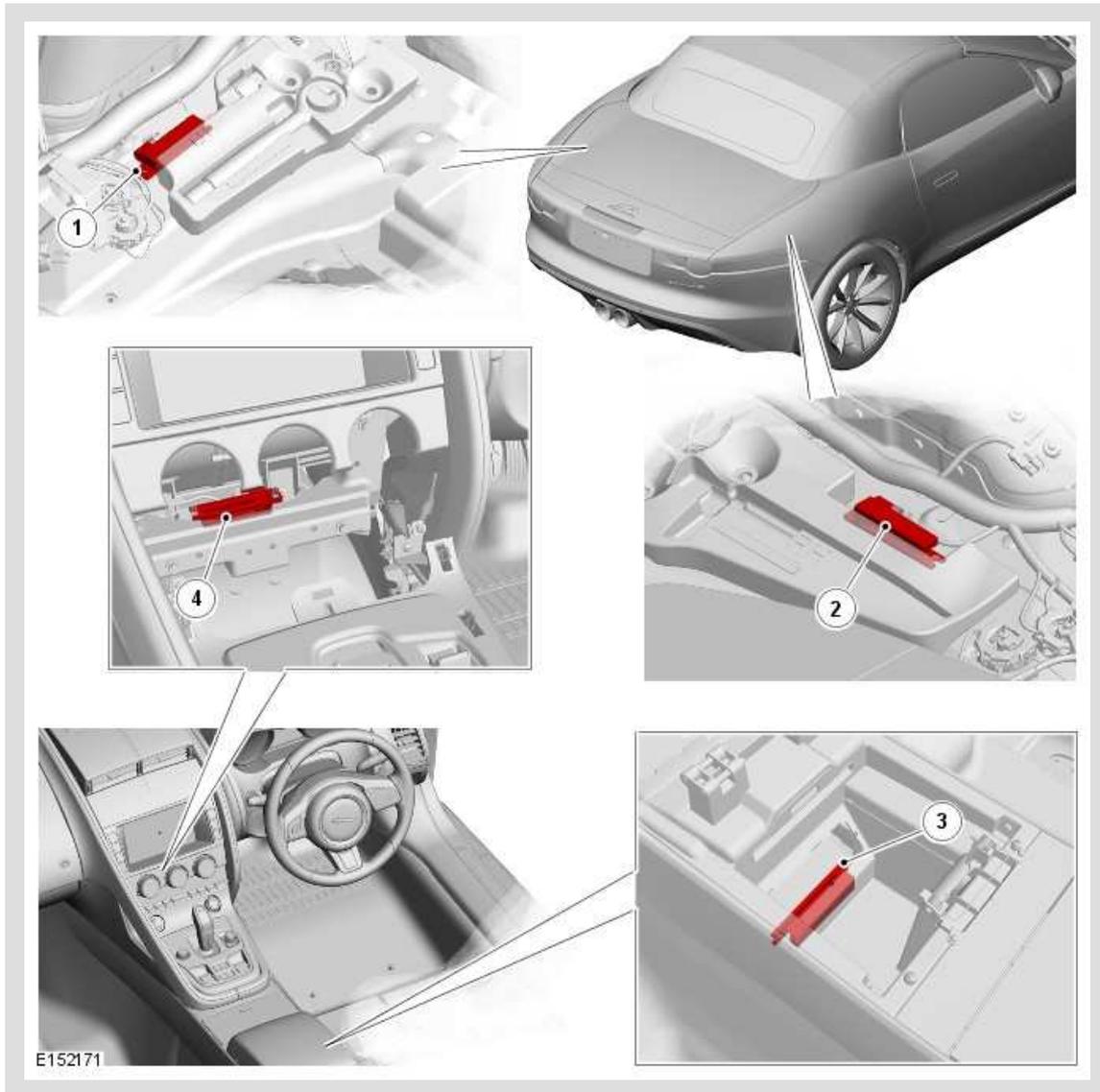
For a list of diagnostic trouble codes that could be logged on this vehicle, please refer to Section 100-00.

REFER to: [Diagnostic Trouble Code \(DTC\) Index - DTC: Keyless Vehicle Module \(KVM\)](#) (100-00 General Information, Description and Operation).

2015.0 F-TYPE (X152), 419-01
ANTI-THEFT - PASSIVE

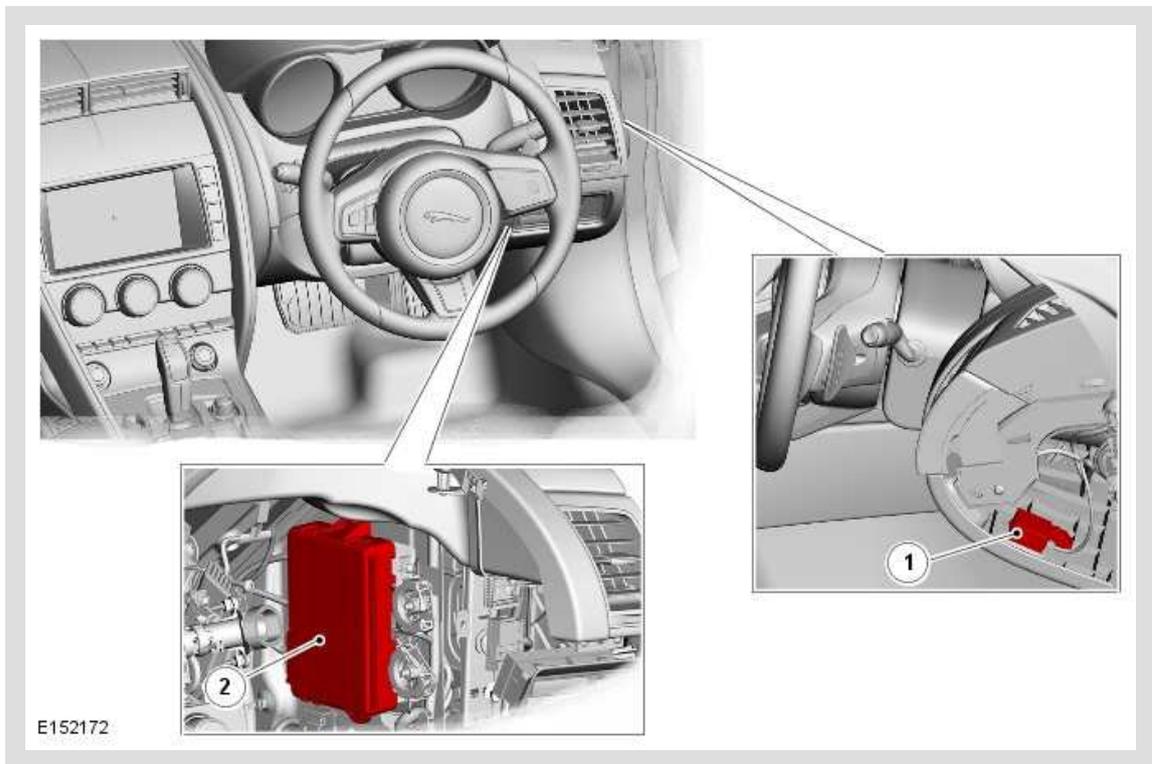
DESCRIPTION AND OPERATION

COMPONENT LOCATION - SHEET 1 OF 2



ITEM	DESCRIPTION
1	LF antenna - luggage compartment left side
2	LF antenna - luggage compartment right side
3	LF antenna - floor console

COMPONENT LOCATION - SHEET 2 OF 2



ITEM	DESCRIPTION
1	Immobilizer antenna unit
2	Keyless vehicle module

OVERVIEW

The PATS (passive anti-theft system) prevents the vehicle from being driven away by unauthorized persons. This is achieved by having uniquely coded keys (both passive and transponder) and an encoded data exchange between multiple control modules. Unauthorized starting is prevented by inhibiting the engine crank, fuel and ignition systems.

The PATS is a function of the passive start system. The system uses the following components:

- A KVM (keyless vehicle module).
- Four LF (low frequency) antennas.
- An IAU (immobilizer antenna unit).
- Smart key(s).

For additional information, refer to: [Handles, Locks, Latches and Entry Systems](#) (501-14 Handles, Locks, Latches and Entry Systems, Description and Operation).

- The RF (radio frequency) receiver.
For additional information, refer to: [Handles, Locks, Latches and Entry Systems](#) (501-14 Handles, Locks, Latches and Entry Systems, Description and Operation).
- The CJB (central junction box) .
- The ECM (engine control module) .
- The instrument cluster.

The system is automatic and requires no input from the driver. Engine starting is initiated by pressing the stop/start switch with the transmission in park and the brake pedal pressed. The engine management system will then allow engine crank and fueling when an authorization data message is received from the CJB .

DESCRIPTION

LOW FREQUENCY ANTENNAS

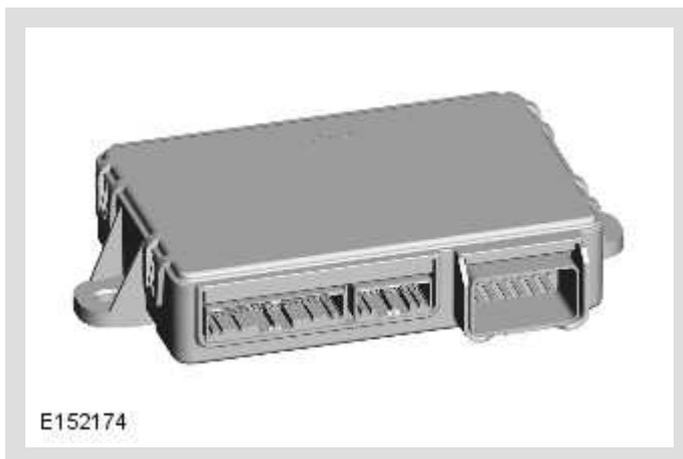


Four LF antennas for the passive start system are positioned in the following locations:

- On the instrument panel cross-car beam, behind the center stack carriers.
- In the floor console, under the stowage compartment.
- On the rear floor, under the left and right side trims of the luggage compartment.

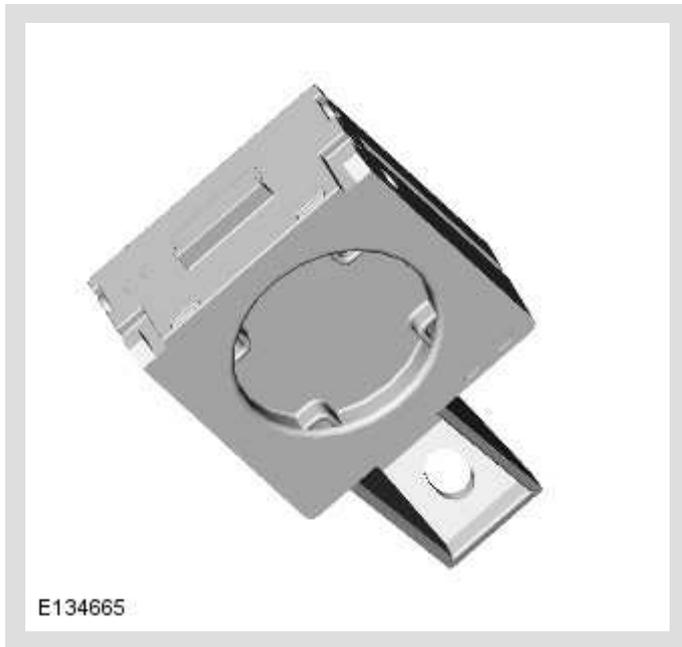
The KVM transmits an LF signal via the antennas which is received by the smart key. The smart key then responds by transmitting a RF signal, which is received by the RF receiver and passed to the KVM for authorization.

KEYLESS VEHICLE MODULE



The KVM is located on the right A pillar. The module controls signal transmissions to and from the smart key and provides authorization to allow the vehicle to be entered and started. The KVM has a serial communication line connection to the RF receiver and a medium speed CAN (controller area network) connection to the CJB for authorizing vehicle unlocking and starting.

IMMOBILIZER ANTENNA UNIT



The IAU is installed on the inside of the steering column opening cover of the instrument panel.

The IAU is used if the KVM is unable to authorize the smart key. If the KVM is unable to identify the smart key, for example if the smart key battery voltage is low or there is local RF interference, the driver will be alerted to this by a chime and a message in the instrument cluster message center. The transponder within the smart key can then be read by the IAU.

OPERATION

When it receives a hardwired signal from the stop/start switch, the CJB sends a message via the medium speed CAN bus to the KVM initiating the vehicle starting process. The KVM then prompts each of the internal LF antennas to output a signal. When a smart key is in the vehicle, it detects the LF signal and responds with a RF identification signal back to the KVM via the RF receiver. If the data received matches that stored in the KVM it continues the passive

start process by communicating a 'smart key valid' signal to the CJB via the medium speed CAN bus.

Once the CJB receives the authorization and confirms the response with an internal calculation, it passes coded data to the instrument cluster on the medium speed CAN bus. Upon confirmation from the instrument cluster the ignition is enabled.

Before CJB sends a mobilization signal to the ECM , it will exchange encrypted data with the electric steering column lock (where fitted) to authorize unlocking of the steering column. The instrument cluster only provides a ground for the steering lock motor.

Provided there is a hardwired P/N (park/neutral) signal from the TCS (transmission control switch), and a valid brake pressure signal from the ABS (anti-lock brake system) control module on the high speed CAN bus, the CJB then allows the start request and:

- Energizes the fuel pump relay, which supplies battery voltage to the FPDM (fuel pump driver module) to operate the fuel pump in conjunction with the ECM
- Sends a hardwired crank request to the ECM to start the engine.

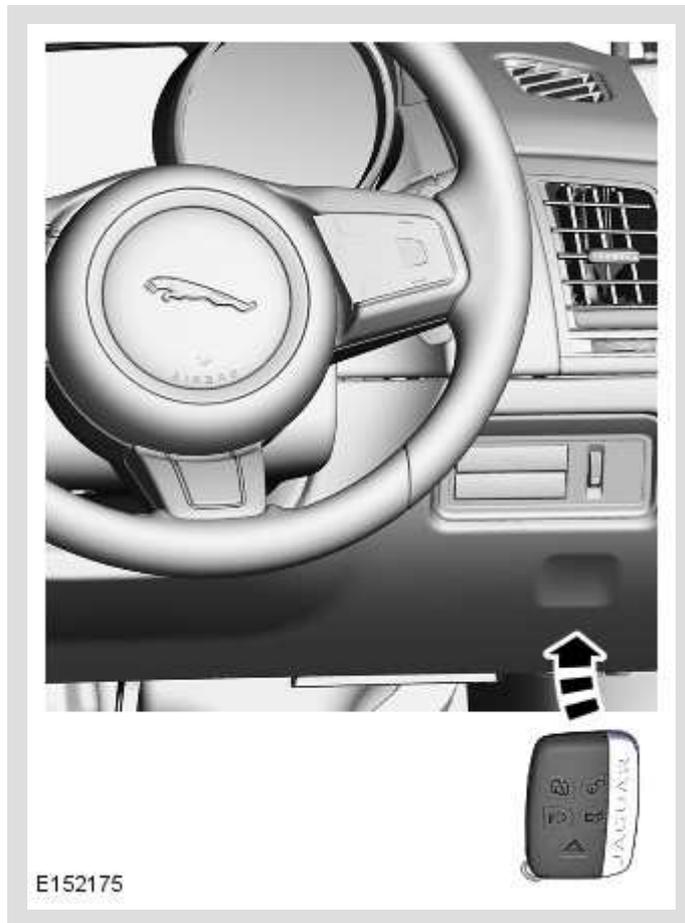
 **NOTE:**

For the brake pressure signal to be valid it must be greater than a threshold value stored in the CJB . This ensures the vehicle remains stationary when the engine starts.

To ensure optimum long term reliability of the smart key the battery must be replaced with a brand new, unused battery. If a used battery is installed the "SMART KEY BATTERY LOW" message may not be cleared. To avoid contamination of the contacts the battery should be removed from its packaging and installed into the smart key while wearing gloves. To confirm that the replacement battery is working correctly press the unlock button twice while holding the smart key

outside the vehicle, then enter the vehicle with the smart key, press the start button and confirm that the "SMART KEY BATTERY LOW" message is not displayed.

KEYLESS START BACKUP



If the vehicle has been unlocked using the emergency key blade or the smart key is not detected by the vehicle, it will be necessary to use the keyless start backup to disarm the alarm and start the engine. The following process must be followed in this event:

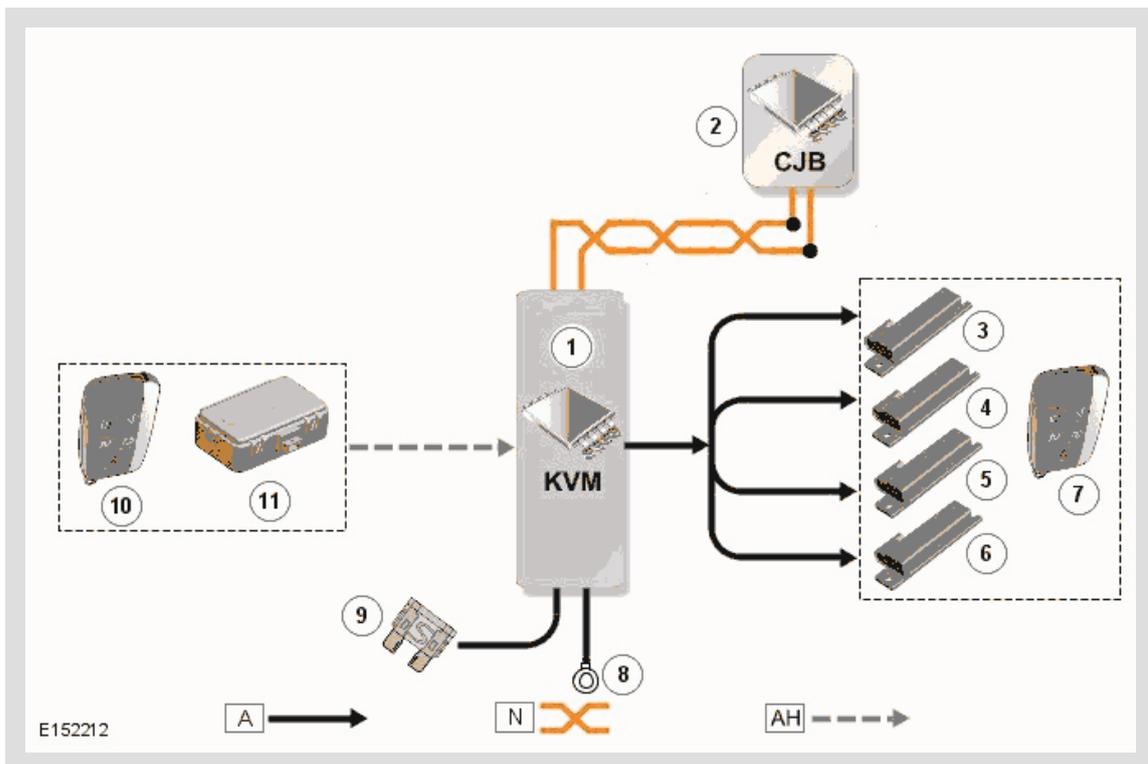
- 1 Press the stop/start switch, if the KVM fails to locate the smart key a message to that effect is displayed in the message center.
- 2 Position the smart key in the depression in the instrument panel, below the auxiliary lighting switch, with the not found key switches facing outwards.
- 3 Press the stop/start switch with the brake pedal depressed to start the engine.

NOTE:

If the smart key not found message is no longer displayed (only displayed for 10 seconds), then the sequence would have to be repeated.

This process bypasses the data exchange between the KVM and the CJB . This is an inductive process and will operate even if the battery in the smart key is discharged. A transponder within the smart key is detected by the IAU. The IAU communicates this code with the CJB via a LIN (local interconnect network) bus connection. The CJB then initiates the vehicle start process in the normal manner.

INPUT/OUTPUT DIAGRAM - KEY DETECTION

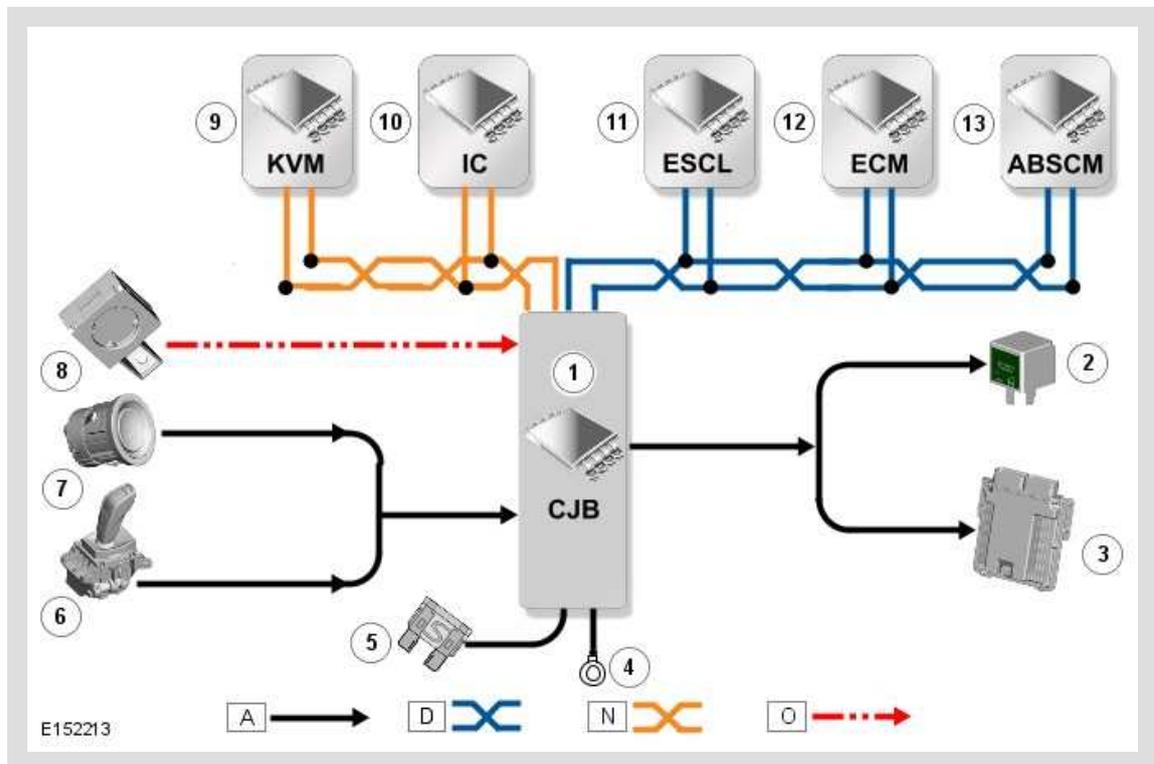


A = HARDWIRED CONNECTION; N = MEDIUM SPEED CAN BUS; AH = SERIAL COMMUNICATION LINE.

ITEM	DESCRIPTION
1	Keyless vehicle module
2	Central junction box

3	LF antenna - luggage compartment left side
4	LF antenna - luggage compartment right side
5	LF antenna - floor console
6	LF antenna - cross-car beam
7	Smart key
8	Ground
9	Permanent power feed
10	Smart key
11	RF receiver

INPUT/OUTPUT DIAGRAM - PASSIVE START



A = HARDWIRED CONNECTION; D = HIGH SPEED CAN BUS; N = MEDIUM SPEED CAN BUS; O = LIN BUS.

ITEM	DESCRIPTION
1	Central junction box
2	Fuel pump relay
3	Engine control module

4	Ground
5	Permanent power feed
6	Transmission selector switch
7	Stop/Start switch
8	Immobilizer antenna unit
9	Keyless vehicle module
10	Instrument cluster
11	Electric steering column lock
12	Engine control module
13	Anti-lock brake system control module

2015.0 F-TYPE (X152), 100-00

GENERAL INFORMATION

DESCRIPTION AND OPERATION

KEYLESS VEHICLE MODULE (KVM)

ⓘ 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

NOTES:

- If the control module or a component is suspect and the vehicle remains under manufacturer warranty, refer to the Warranty Policy and Procedures manual, or determine if any prior approval programme is in operation, prior to the installation of a new module/component
- Generic scan tools may not read the codes listed, or may read only 5-digit codes. Match the 5 digits from the scan tool to the first 5 digits of the 7-digit code listed to identify the fault (the last 2 digits give extra information read by the manufacturer-approved diagnostic system)
- When performing voltage or resistance tests, always use a digital multimeter accurate to three decimal places and with a current 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
- Inspect connectors for signs of water ingress, and pins for damage and/or corrosion
- If diagnostic trouble codes are recorded and, after performing the pinpoint tests, a fault is not present, an intermittent concern may be the cause. Always check for loose connections and corroded terminals
- Where an 'on demand self-test' is referred to, this can be accessed via the 'diagnostic trouble code monitor' tab on the manufacturers approved diagnostic system
- Check DDW for open campaigns. Refer to the corresponding bulletins and SSMs which may be valid for the specific customer complaint and carry out the recommendations as required

The table below lists all Diagnostic Trouble Codes (DTCs) that could be logged in the keyless vehicle module, for additional Diagnosis and Testing information refer to the relevant Diagnosis and Testing Section.

For additional information, refer to: [Locks, Latches and Entry Systems](#) (501-14 Handles, Locks, Latches and Entry Systems, Diagnosis and Testing) /

[Anti-Theft - Passive](#) (419-01B Anti-Theft - Passive, Diagnosis and Testing).

DTC	DESCRIPTION	POSSIBLE CAUSES	ACTION
B102B-00	Passive Key - No sub type information	<p> NOTE:</p> <p>This DTC is set after four failed attempts to recognise the smart key</p> <ul style="list-style-type: none"> Encryption error. Incorrect smart key Smart key is not configured correctly 	<p> NOTE:</p> <p>This DTC is set if an invalid smart key is detected when the ECO switch is operated</p> <ul style="list-style-type: none"> Check the smart key being used is the correct key Using the manufacturer approved diagnostic system, clear the DTCs and retest. If the fault persists, re-configure the smart key with the latest level software
B10A9-00	Remote Keyless Entry Less Than 2 Keys Programmed - No sub type information	<ul style="list-style-type: none"> Less than 2 key fobs have been programmed 	<ul style="list-style-type: none"> Clear DTC and retest. If the fault persists, configure the key fobs using the manufacturers approved diagnostic system
B10C1-15	Left Front Unlock Pull Switch - Short circuit to battery or open	<p> NOTE:</p> <p>Circuit reference - FL UNLOCK SW</p>	

		<ul style="list-style-type: none"> ■ Front left exterior door handle power or ground circuit open circuit, high resistance ■ Front left exterior door handle unlock switch circuit short circuit to power, open circuit, high resistance ■ Front left exterior door handle switch internal failure 	<div style="background-color: #e0f2f7; padding: 5px; border: 1px solid #ccc;"> <p> NOTE:</p> <p>This DTC is set after the front left latch switch has been activated six times, without the front left unlock switch being activated</p> </div> <ul style="list-style-type: none"> ■ Refer to the electrical circuit diagrams and check the front left exterior door handle power and ground circuits for open circuit, high resistance ■ Refer to the electrical circuit diagrams and check the front left exterior door handle unlock switch circuit for short circuit to power, open circuit, high resistance ■ Using the manufacturer approved diagnostic system, clear the DTCs and retest. If the fault persists, check and install a new front left exterior door handle as required
B10C1-23	Left Front Unlock Pull Switch - Signal stuck low	<div style="background-color: #e0f2f7; padding: 5px; border: 1px solid #ccc;"> <p> NOTE:</p> <p>Circuit reference - FL UNLOCK SW</p> </div> <ul style="list-style-type: none"> ■ Front left exterior door handle unlock switch circuit short circuit to ground ■ Front left exterior door handle switch internal failure 	<div style="background-color: #e0f2f7; padding: 5px; border: 1px solid #ccc;"> <p> NOTE:</p> <p>This DTC is set when the door handle unlock switch is pressed for 45 seconds. If the switch is released before 45 seconds have passed, the timer will stop and DTC will not set</p> </div>

			<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check the front left exterior door handle unlock switch circuit for short circuit to ground Using the manufacturer approved diagnostic system, clear the DTCs and retest. If the fault persists, check and install a new front left exterior door handle as required
B10C2-15	Left Rear Unlock Pull Switch - Short circuit to battery or open	<p> NOTE:</p> <p>This DTC is not applicable to two-door vehicles</p> <ul style="list-style-type: none"> No power supply to door handle Unlock switch circuit - Short circuit to power, open circuit, high resistance Switch fault 	<p> NOTE:</p> <p>This DTC is not applicable to two-door vehicles</p> <ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check the power and ground circuits to the door handle. Repair circuit as required. Clear DTC and retest Refer to the electrical circuit diagrams and check the unlock switch circuit for short circuit to power, open circuit, high resistance. Repair circuit as required. Clear DTC and retest If fault persists, check and install a new door handle as required
B10C2-23	Left Rear Unlock Pull Switch - Signal stuck low	<p> NOTE:</p> <p>This DTC is not applicable to two-door vehicles</p>	<p> NOTE:</p> <p>This DTC is not applicable to two-door vehicles</p>

		<ul style="list-style-type: none"> Unlock switch circuit - Short circuit to ground Switch fault 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check the unlock switch circuit for short circuit to ground. Repair circuit as required. Clear DTC and retest If fault persists, check and install a new door handle as required
B10C3-15	Right Front Unlock Pull Switch - Short circuit to battery or open	<p> NOTE:</p> <p>Circuit reference - FRONT RIGHT UNLOCK SW</p> <ul style="list-style-type: none"> Front right exterior door handle power or ground circuit open circuit, high resistance Front right exterior door handle unlock switch circuit short circuit to power, open circuit, high resistance Front right exterior door handle switch internal failure 	<p> NOTE:</p> <p>This DTC is set after the front right latch switch has been activated six times, without the front right unlock switch being activated</p> <ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check the front right exterior door handle power and ground circuits for open circuit, high resistance Refer to the electrical circuit diagrams and check the front right exterior door handle unlock switch circuit for short circuit to power, open circuit, high resistance Using the manufacturer approved diagnostic system, clear the DTCs and retest. If the fault persists, check and install a new front right exterior door handle as required
B10C3-23	Right Front Unlock Pull Switch - Signal	<p> NOTE:</p>	<p> NOTE:</p>

	stuck low	<p>Circuit reference - FRONT RIGHT UNLOCK SW</p> <ul style="list-style-type: none"> Front right exterior door handle unlock switch circuit short circuit to ground Front right exterior door handle switch internal failure 	<p>This DTC is set when the door handle unlock switch is pressed for 45 seconds. If the switch is released before 45 seconds have passed, the timer will stop and DTC will not set</p> <ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check the front right exterior door handle unlock switch circuit for short circuit to ground Using the manufacturer approved diagnostic system, clear the DTCs and retest. If the fault persists, check and install a new front right exterior door handle as required
B10C4-15	Right Rear Unlock Pull Switch - Short circuit to battery or open	<p> NOTE:</p> <p>This DTC is not applicable to two-door vehicles</p> <ul style="list-style-type: none"> No power supply to door handle Unlock switch circuit - Short circuit to power, open circuit, high resistance Switch fault 	<p> NOTE:</p> <p>This DTC is not applicable to two-door vehicles</p> <ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check the power and ground circuits to the door handle. Repair circuit as required. Clear DTC and retest Refer to the electrical circuit diagrams and check the unlock switch circuit for short circuit to power, open circuit, high resistance. Repair circuit as required. Clear DTC and retest

			<ul style="list-style-type: none"> ▪ If fault persists, check and install a new door handle as required
B10C4-23	Right Rear Unlock Pull Switch - Signal stuck low	<p> NOTE:</p> <p>This DTC is not applicable to two-door vehicles</p> <ul style="list-style-type: none"> ▪ Unlock switch circuit - Short circuit to ground ▪ Switch fault 	<p> NOTE:</p> <p>This DTC is not applicable to two-door vehicles</p> <ul style="list-style-type: none"> ▪ Refer to the electrical circuit diagrams and check the unlock switch circuit for short circuit to ground. Repair circuit as required. Clear DTC and retest ▪ If fault persists, check and install a new door handle as required
B10C5-23	Trunk Unlock Pull Switch - Signal stuck low	<p> NOTE:</p> <p>Circuit reference - EXT BOOT RELEASE SW</p> <ul style="list-style-type: none"> ▪ Upper tailgate exterior switch circuit short circuit to ground ▪ Upper tailgate exterior switch internal failure 	<p> NOTE:</p> <p>This DTC is set when the tailgate unlock switch is pressed for 45 seconds. If the switch is released before 45 seconds have passed, the timer will stop and the DTC will not set</p> <ul style="list-style-type: none"> ▪ Refer to the electrical circuit diagrams and check the upper tailgate exterior switch circuit for short circuit to ground ▪ Using the manufacturer approved diagnostic system, clear the DTCs and retest. If the fault persists, check and install a new upper tailgate exterior switch as required

<p>B10C6-00</p>	<p>Exterior Trunk Antenna - No sub type information</p>	<p> NOTE:</p> <p>For the antenna to be tested once, the vehicle must go through five ignition on cycles and exceed a speed of 20 kph each cycle</p> <ul style="list-style-type: none"> ■ Tailgate antenna circuit short circuit to ground, short circuit to power ■ Tailgate antenna incorrect position ■ Tailgate antenna internal failure 	<p> NOTE:</p> <p>This DTC may be logged as a result of a short to power fault on another antenna. Before proceeding further, first perform an on demand self-test and monitor the test output to check for any short circuit to power DTCs on other antennas. If any such faults are found, they should be resolved first. Once all short circuit to power faults on other antennas have been resolved, then continue with the diagnostic actions detailed below</p> <ul style="list-style-type: none"> ■ Using the manufacturer approved diagnostic system, clear the DTCs and retest. Perform routine - On Demand Self Test (0x0202). If the fault persists, refer to the electrical circuit diagrams and check the tailgate antenna circuit for short circuit to ground, short circuit to power ■ Check the position of the tailgate exterior antenna and reposition as required ■ If the fault persists, check and install a new tailgate antenna as required
<p>B10C6-</p>	<p>Exterior Trunk</p>	<p> NOTE:</p>	<p> NOTE:</p>

11	Antenna - Circuit short to ground	<p>For the antenna to be tested once, the vehicle must go through five ignition on cycles and exceed a speed of 20 kph each cycle</p> <ul style="list-style-type: none"> ■ Tailgate antenna circuit short circuit to ground or short circuit between positive and negative 	<p>This DTC may be logged as a result of a short to power fault on another antenna. Before proceeding further, first perform an on demand self-test and monitor the test output to check for any short circuit to power DTCs on other antennas. If any such faults are found, they should be resolved first. Once all short circuit to power faults on other antennas have been resolved, then continue with the diagnostic actions detailed below</p> <ul style="list-style-type: none"> ■ Using the manufacturer approved diagnostic system, clear the DTCs and retest. Perform routine - On Demand Self Test (0x0202). If the fault persists, refer to the electrical circuit diagrams and check the tailgate antenna circuit for short circuit to ground, short circuit between positive and negative
B10C6-12	Exterior Trunk Antenna - Circuit short to battery	<p> NOTE:</p> <p>For the antenna to be tested once, the vehicle must go through five ignition on cycles and exceed a</p>	<ul style="list-style-type: none"> ■ Using the manufacturer approved diagnostic system, clear the DTCs and retest. Perform routine - On Demand Self Test (0x0202). If the fault persists, refer to the electrical circuit diagrams and check the tailgate antenna circuit for short circuit to power

		<p>speed of 20 kph each cycle</p> <ul style="list-style-type: none"> ■ Tailgate antenna circuit short circuit to power 	
B10C6-13	Exterior Trunk Antenna - Circuit open	<p> NOTE:</p> <p>For the antenna to be tested once, the vehicle must go through five ignition on cycles and exceed a speed of 20 kph each cycle</p> <ul style="list-style-type: none"> ■ Tailgate antenna circuit open circuit, high resistance 	<p> NOTE:</p> <p>This DTC may be logged as a result of a short to power fault on another antenna. Before proceeding further, first perform an on demand self-test and monitor the test output to check for any short circuit to power DTCs on other antennas. If any such faults are found, they should be resolved first. Once all short circuit to power faults on other antennas have been resolved, then continue with the diagnostic actions detailed below</p> <ul style="list-style-type: none"> ■ Using the manufacturer approved diagnostic system, clear the DTCs and retest. Perform routine - On Demand Self Test (0x0202). If the fault persists, refer to the electrical circuit diagrams and check the tailgate antenna circuit for open circuit, high resistance
B10C7-00	Interior Trunk Antenna - No sub type	<p> NOTE:</p>	<p> NOTE:</p>

information

For the antenna to be tested once, the vehicle must go through five ignition on cycles and exceed a speed of 20 kph each cycle

- Luggage compartment left antenna circuit short circuit to ground, short circuit to power
- Luggage compartment left antenna incorrect position
- Luggage compartment left antenna internal failure

This DTC may be logged as a result of a short to power fault on another antenna. Before proceeding further, first perform an on demand self-test and monitor the test output to check for any short circuit to power DTCs on other antennas. If any such faults are found, they should be resolved first. Once all short circuit to power faults on other antennas have been resolved, then continue with the diagnostic actions detailed below

- Using the manufacturer approved diagnostic system, clear the DTCs and retest. Perform routine - On Demand Self Test (0x0202). If the fault persists, refer to the electrical circuit diagrams and check the luggage compartment left antenna circuit for short circuit to ground, short circuit to power
- Check the position of the luggage compartment left antenna and reposition as required
- If the fault persists, check and install a new luggage compartment left antenna as required

B10C7-11

Interior Trunk Antenna - Circuit short to ground



NOTE:

For the antenna to be



NOTE:

This DTC may be logged as a result of

		<p>tested once, the vehicle must go through five ignition on cycles and exceed a speed of 20 kph each cycle</p> <ul style="list-style-type: none"> ■ Luggage compartment left low frequency antenna circuit short circuit to ground or short circuit between positive and negative 	<p>a short to power fault on another antenna. Before proceeding further, first perform an on demand self-test and monitor the test output to check for any short circuit to power DTCs on other antennas. If any such faults are found, they should be resolved first. Once all short circuit to power faults on other antennas have been resolved, then continue with the diagnostic actions detailed below</p> <ul style="list-style-type: none"> ■ Using the manufacturer approved diagnostic system, clear the DTCs and retest. Perform routine - On Demand Self Test (0x0202). If the fault persists, refer to the electrical circuit diagrams and check the luggage compartment left low frequency antenna circuit for short circuit to ground, short circuit between positive and negative
B10C7-12	Interior Trunk Antenna - Circuit short to battery	<p> NOTE:</p> <p>For the antenna to be tested once, the vehicle must go through five ignition on cycles and exceed a speed of 20 kph each cycle</p>	<ul style="list-style-type: none"> ■ Using the manufacturer approved diagnostic system, clear the DTCs and retest. Perform routine - On Demand Self Test (0x0202). If the fault persists, refer to the electrical circuit diagrams and check the luggage compartment left antenna circuit for short circuit to power

		<ul style="list-style-type: none"> ▪ Luggage compartment left antenna circuit short circuit to power 	
B10C7-13	Interior Trunk Antenna - Circuit open	<p> NOTE:</p> <p>For the antenna to be tested once, the vehicle must go through five ignition on cycles and exceed a speed of 20 kph each cycle</p> <ul style="list-style-type: none"> ▪ Luggage compartment left antenna circuit open circuit, high resistance 	<p> NOTE:</p> <p>This DTC may be logged as a result of a short to power fault on another antenna. Before proceeding further, first perform an on demand self-test and monitor the test output to check for any short circuit to power DTCs on other antennas. If any such faults are found, they should be resolved first. Once all short circuit to power faults on other antennas have been resolved, then continue with the diagnostic actions detailed below</p> <ul style="list-style-type: none"> ▪ Using the manufacturer approved diagnostic system, clear the DTCs and retest. Perform routine - On Demand Self Test (0x0202). If the fault persists, refer to the electrical circuit diagrams and check the luggage compartment left antenna circuit for open circuit, high resistance
B10C8-00	Interior Center Antenna - No	<p> NOTES:</p>	<p> NOTE:</p>

sub type information

- For the antenna to be tested once, the vehicle must go through five ignition on cycles and exceed a speed of 20 kph each cycle
- Circuit reference - REAR CABIN ANT POS / REAR CABIN ANT NEG

This DTC may be logged as a result of a short to power fault on another antenna. Before proceeding further, first perform an on demand self-test and monitor the test output to check for any short circuit to power DTCs on other antennas. If any such faults are found, they should be resolved first. Once all short circuit to power faults on other antennas have been resolved, then continue with the diagnostic actions detailed below

- Passenger compartment right antenna circuit short circuit to ground, short circuit to power
- Passenger compartment right antenna incorrect position
- Passenger compartment right antenna internal failure

- Using the manufacturer approved diagnostic system, clear the DTCs and retest. Perform routine - On Demand Self Test (0x0202). If the fault persists, refer to the electrical circuit diagrams and check the passenger compartment right antenna circuit for short circuit to ground, short circuit to power
- Check the position of the passenger compartment right antenna and reposition as required
- If the fault persists, check and install a new passenger compartment right antenna as required

B10C8-11

Interior Center Antenna - Circuit short to ground



NOTES:



NOTE:

		<ul style="list-style-type: none"> 20 kph each cycle ■ Circuit reference - REAR CABIN ANT POS / REAR CABIN ANT NEG 	
		<ul style="list-style-type: none"> ■ Passenger compartment right antenna circuit short circuit to power 	
B10C8-13	Interior Center Antenna - Circuit open	<p> NOTES:</p> <ul style="list-style-type: none"> ■ For the antenna to be tested once, the vehicle must go through five ignition on cycles and exceed a speed of 20 kph each cycle ■ Circuit reference - REAR CABIN ANT POS / REAR CABIN ANT NEG 	<p> NOTE:</p> <p>This DTC may be logged as a result of a short to power fault on another antenna. Before proceeding further, first perform an on demand self-test and monitor the test output to check for any short circuit to power DTCs on other antennas. If any such faults are found, they should be resolved first. Once all short circuit to power faults on other antennas have been resolved, then continue with the diagnostic actions detailed below</p>
		<ul style="list-style-type: none"> ■ Passenger compartment right antenna circuit open circuit, high resistance 	<ul style="list-style-type: none"> ■ Using the manufacturer approved diagnostic system, clear the DTCs and retest. Perform routine - On Demand Self Test (0x0202). If the fault persists, refer to

			the electrical circuit diagrams and check the passenger compartment right antenna circuit for open circuit, high resistance
B10C9-00	Interior Front Antenna - No sub type information	<p> NOTES:</p> <ul style="list-style-type: none"> ■ For the antenna to be tested once, the vehicle must go through five ignition on cycles and exceed a speed of 20 kph each cycle ■ Circuit reference - FRONT CABIN ANT POS / FRONT CABIN ANT NEG 	<p> NOTE:</p> <p>This DTC may be logged as a result of a short to power fault on another antenna. Before proceeding further, first perform an on demand self-test and monitor the test output to check for any short circuit to power DTCs on other antennas. If any such faults are found, they should be resolved first. Once all short circuit to power faults on other antennas have been resolved, then continue with the diagnostic actions detailed below</p>
		<ul style="list-style-type: none"> ■ Passenger compartment front antenna circuit short circuit to ground, short circuit to power ■ Passenger compartment front antenna incorrect position ■ Passenger compartment front antenna internal failure 	<ul style="list-style-type: none"> ■ Using the manufacturer approved diagnostic system, clear the DTCs and retest. Perform routine - On Demand Self Test (0x0202). If the fault persists, refer to the electrical circuit diagrams and check the passenger compartment front antenna circuit for short circuit to ground, short circuit to power ■ Check the passenger compartment front antenna position and reposition as required

			<ul style="list-style-type: none"> ▪ If the fault persists, check and install a new passenger compartment front antenna as required
B10C9-11	Interior Front Antenna - Circuit short to ground	<p> NOTES:</p> <ul style="list-style-type: none"> ▪ For the antenna to be tested once, the vehicle must go through five ignition on cycles and exceed a speed of 20 kph each cycle ▪ Circuit reference - FRONT CABIN ANT POS / FRONT CABIN ANT NEG <p>▪ Passenger compartment front antenna circuit short circuit to ground or short circuit between positive and negative</p>	<p> NOTE:</p> <p>This DTC may be logged as a result of a short to power fault on another antenna. Before proceeding further, first perform an on demand self-test and monitor the test output to check for any short circuit to power DTCs on other antennas. If any such faults are found, they should be resolved first. Once all short circuit to power faults on other antennas have been resolved, then continue with the diagnostic actions detailed below</p> <p>▪ Using the manufacturer approved diagnostic system, clear the DTCs and retest. Perform routine - On Demand Self Test (0x0202). If the fault persists, refer to the electrical circuit diagrams and check the passenger compartment front antenna circuit for short circuit to ground, short circuit between positive and negative</p>
B10C9-12	Interior Front Antenna - Circuit short to battery	<p> NOTES:</p>	<ul style="list-style-type: none"> ▪ Using the manufacturer approved diagnostic system, clear the DTCs and retest. Perform

		<ul style="list-style-type: none"> ■ For the antenna to be tested once, the vehicle must go through five ignition on cycles and exceed a speed of 20 kph each cycle ■ Circuit reference - FRONT CABIN ANT POS / FRONT CABIN ANT NEG 	<p>routine - On Demand Self Test (0x0202). If the fault persists, refer to the electrical circuit diagrams and check the passenger compartment front antenna circuit for short circuit to power</p>
<p>B10C9-13</p>	<p>Interior Front Antenna - Circuit open</p>	<p> NOTES:</p> <ul style="list-style-type: none"> ■ For the antenna to be tested once, the vehicle must go through five ignition on cycles and exceed a speed of 20 kph each cycle ■ Circuit reference - FRONT CABIN ANT POS / FRONT CABIN ANT NEG 	<p> NOTE:</p> <p>This DTC may be logged as a result of a short to power fault on another antenna. Before proceeding further, first perform an on demand self-test and monitor the test output to check for any short circuit to power DTCs on other antennas. If any such faults are found, they should be resolved first. Once all short circuit to power faults on other antennas have been resolved, then</p>

		<ul style="list-style-type: none"> Passenger compartment front antenna circuit open circuit, high resistance 	<p>continue with the diagnostic actions detailed below</p> <ul style="list-style-type: none"> Using the manufacturer approved diagnostic system, clear the DTCs and retest. Perform routine - On Demand Self Test (0x0202). If the fault persists, refer to the electrical circuit diagrams and check the passenger compartment front antenna circuit for open circuit, high resistance
B10CA-00	Left rear door handle Antenna - No sub type information	<p> NOTE:</p> <p>This DTC is not applicable to two-door vehicles</p> <ul style="list-style-type: none"> Passive rear left door open does not function, antenna failure 	<p> NOTES:</p> <ul style="list-style-type: none"> This DTC is not applicable to two-door vehicles This DTC may be logged as a result of a short to power fault on another LF antenna. Before proceeding further, first perform an on demand self-test and monitor the test output to check for any short circuit to power DTCs on other antennas. If any such faults are found, they should be resolved first. Once all short circuit to power faults on other antennas have been resolved, then continue with the diagnostic actions detailed below

			<ul style="list-style-type: none"> ■ First record, then clear the DTC. Using the manufacturer approved diagnostic system, perform an on demand self-test and monitor the test output to check if DTC reoccurs ■ If the fault persists, refer to the electrical circuit diagrams and check the rear left door handle antenna circuit for short circuit to ground, short circuit to power. Repair circuit as required. Clear DTC and retest ■ If the fault persists, check and install a new rear left door handle antenna as required
B10CA-11	Left rear door handle Antenna - Circuit short to ground	<div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <p> NOTE:</p> <p>This DTC is not applicable to two-door vehicles</p> </div> <ul style="list-style-type: none"> ■ Rear left door handle antenna circuit - One or both antenna wires short circuit to ground or shorted to each other 	<div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <p> NOTES:</p> </div> <ul style="list-style-type: none"> ■ This DTC is not applicable to two-door vehicles ■ This DTC may be logged as a result of a short to power fault on another LF antenna. Before proceeding further, first perform an on demand self-test and monitor the test output to check for any short circuit to power DTCs on other antennas. If any such faults are found, they should be resolved first. Once all short circuit to power faults on other antennas have been resolved,

			<p>then continue with the diagnostic actions detailed below</p> <ul style="list-style-type: none"> First record, then clear the DTC. Using the manufacturer approved diagnostic system, perform an on demand self-test and monitor the test output to check if DTC reoccurs If the fault persists, refer to the electrical circuit diagrams and check the rear left door handle antenna circuit antenna wires for short circuit to ground or short to each other. Repair circuit as required. Clear DTC and retest
B10CA-12	Left rear door handle Antenna - Circuit short to battery	<p> NOTE:</p> <p>This DTC is not applicable to two-door vehicles</p> <ul style="list-style-type: none"> Rear left door handle antenna circuit - One or both antenna wires short circuit to power 	<p> NOTES:</p> <ul style="list-style-type: none"> This DTC is not applicable to two-door vehicles This fault may cause other DTCs to log on other antennas. If this DTC has logged alongside other antenna circuit fault DTCs, this short circuit to power fault should be addressed first. Once this short circuit to power fault has been resolved, using the manufacturer approved diagnostic system, perform an on demand self-test

			<p>and monitor the test output to check if any other antenna circuit DTCs reoccur</p> <ul style="list-style-type: none"> First record, then clear the DTC. Using the manufacturer approved diagnostic system, perform an on demand self-test and monitor the test output to check if DTC reoccurs If the fault persists, refer to the electrical circuit diagrams and check the rear left door handle antenna circuit antenna wires for short circuit to power. Repair circuit as required. Clear DTC and retest
B10CA-13	Left rear door handle Antenna - Circuit open	<p> NOTE:</p> <p>This DTC is not applicable to two-door vehicles</p> <ul style="list-style-type: none"> Rear left door handle antenna circuit - One or both antenna wires open circuit, high resistance 	<p> NOTES:</p> <ul style="list-style-type: none"> This DTC is not applicable to two-door vehicles This DTC may be logged as a result of a short to power fault on another LF antenna. Before proceeding further, first perform an on demand self-test and monitor the test output to check for any short circuit to power DTCs on other antennas. If any such faults are found, they should be resolved first. Once all short circuit to power faults on other

			<p>antennas have been resolved, then continue with the diagnostic actions detailed below</p> <ul style="list-style-type: none"> First record, then clear the DTC. Using the manufacturer approved diagnostic system, perform an on demand self-test and monitor the test output to check if DTC reoccurs If the fault persists, refer to the electrical circuit diagrams and check the rear left door handle antenna circuit antenna wires for open circuit, high resistance. Repair circuit as required. Clear DTC and retest
B10CB-00	Right rear door handle Antenna - No sub type information	<p> NOTE:</p> <p>This DTC is not applicable to two-door vehicles</p> <ul style="list-style-type: none"> Passive rear right door open does not function, antenna failure 	<p> NOTES:</p> <ul style="list-style-type: none"> This DTC is not applicable to two-door vehicles This DTC may be logged as a result of a short to power fault on another LF antenna. Before proceeding further, first perform an on demand self-test and monitor the test output to check for any short circuit to power DTCs on other antennas. If any such faults are found, they should be resolved first. Once all short circuit to power

faults on other antennas have been resolved, then continue with the diagnostic actions detailed below

- First record, then clear the DTC. Using the manufacturer approved diagnostic system, perform an on demand self-test and monitor the test output to check if DTC reoccurs
- If the fault persists, refer to the electrical circuit diagrams and check the rear right door handle antenna circuit for short circuit to ground, short circuit to power. Repair circuit as required. Clear DTC and retest
- If the fault persists, check and install a new rear right door handle antenna as required

B10CB-11

Right rear door handle Antenna - Circuit short to ground

 **NOTE:**

This DTC is not applicable to two-door vehicles

- Rear right door handle antenna circuit - One or both antenna wires short circuit to ground or shorted to each other

 **NOTES:**

- This DTC is not applicable to two-door vehicles
- This DTC may be logged as a result of a short to power fault on another LF antenna. Before proceeding further, first perform an on demand self-test and monitor the test output to check for any short circuit to power DTCs on other

antennas. If any such faults are found, they should be resolved first. Once all short circuit to power faults on other antennas have been resolved, then continue with the diagnostic actions detailed below

- First record, then clear the DTC. Using the manufacturer approved diagnostic system, perform an on demand self-test and monitor the test output to check if DTC reoccurs
- If the fault persists, refer to the electrical circuit diagrams and check the rear right door handle antenna circuit antenna wires for short circuit to ground or short to each other. Repair circuit as required. Clear DTC and retest

<p>B10CB-12</p>	<p>Right rear door handle Antenna - Circuit short to battery</p>	<div style="background-color: #e0f2f1; padding: 5px; margin-bottom: 10px;">  NOTE: </div> <div style="border: 1px solid #ccc; padding: 10px; margin-bottom: 10px;"> <p>This DTC is not applicable to two-door vehicles</p> </div> <ul style="list-style-type: none"> ■ Rear right door handle antenna circuit - One or both antenna wires short circuit to power 	<div style="background-color: #e0f2f1; padding: 5px; margin-bottom: 10px;">  NOTES: </div> <ul style="list-style-type: none"> ■ This DTC is not applicable to two-door vehicles ■ This fault may cause other DTCs to log on other antennas. If this DTC has logged alongside other antenna circuit fault DTCs, this short circuit to power fault should be addressed first.
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			<p>Once this short circuit to power fault has been resolved, using the manufacturer approved diagnostic system, perform an on demand self-test and monitor the test output to check if any other antenna circuit DTCs reoccur</p> <ul style="list-style-type: none"> ■ First record, then clear the DTC. Using the manufacturer approved diagnostic system, perform an on demand self-test and monitor the test output to check if DTC reoccurs ■ If the fault persists, refer to the electrical circuit diagrams and check the rear right door handle antenna circuit antenna wires for short circuit to power. Repair circuit as required. Clear DTC and retest
<p>B10CB-13</p>	<p>Right rear door handle Antenna - Circuit open</p>	<p> NOTE:</p> <p>This DTC is not applicable to two-door vehicles</p> <ul style="list-style-type: none"> ■ Rear right door handle antenna circuit - One or both antenna wires open circuit, high resistance 	<p> NOTES:</p> <ul style="list-style-type: none"> ■ This DTC is not applicable to two-door vehicles ■ This DTC may be logged as a result of a short to power fault on another LF antenna. Before proceeding further, first perform an on demand self-test and monitor the test output to check for any short

circuit to power DTCs on other antennas. If any such faults are found, they should be resolved first. Once all short circuit to power faults on other antennas have been resolved, then continue with the diagnostic actions detailed below

- First record, then clear the DTC. Using the manufacturer approved diagnostic system, perform an on demand self-test and monitor the test output to check if DTC reoccurs
- If the fault persists, refer to the electrical circuit diagrams and check the rear right door handle antenna circuit antenna wires for open circuit, high resistance. Repair circuit as required. Clear DTC and retest

<p>B10CC-23</p>	<p>Left Front Latch Clutch Switch - Signal stuck low</p>	<div style="background-color: #e0f2f1; padding: 5px; border: 1px solid #ccc;"> <p> NOTE:</p> <p>Circuit reference - FL CLUTCH SW</p> </div> <ul style="list-style-type: none"> ■ Front left door latch clutch switch circuit short circuit to ground ■ Front left door latch clutch switch internal failure 	<div style="background-color: #e0f2f1; padding: 5px; border: 1px solid #ccc;"> <p> NOTE:</p> <p>This DTC is set when the front left door latch clutch switch is pressed for 45 seconds. If the switch is released before 45 seconds have passed, the timer will stop and the DTC will not set</p> </div>
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			<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check the front left door latch clutch switch circuit for short circuit to ground Using the manufacturer approved diagnostic system, clear the DTCs and retest. If the fault persists, check and install a new front left door latch clutch switch as required
B10CD-23	Left Rear Latch Clutch Switch - Signal stuck low	<p> NOTE:</p> <p>This DTC is not applicable to two-door vehicles</p> <ul style="list-style-type: none"> Rear left latch clutch switch circuit - Short circuit to ground Switch fault 	<p> NOTE:</p> <p>This DTC is not applicable to two-door vehicles</p> <ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check the rear left latch clutch switch circuit for short circuit to ground. Repair circuit as required. Clear DTC and retest If fault persists, check and install a new front left latch clutch switch as required
B10CE-23	Right Front Latch Clutch Switch - Signal stuck low	<p> NOTE:</p> <p>Circuit reference - FR CLUTCH SW</p> <ul style="list-style-type: none"> Front right door latch clutch switch circuit short circuit to ground Front right door latch clutch switch internal failure 	<p> NOTE:</p> <p>This DTC is set when the front right door latch clutch switch is pressed for 45 seconds. If the switch is released before 45 seconds have passed, the timer will stop and the DTC will not set</p>

			<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check the front right door latch clutch switch circuit for short circuit to ground Using the manufacturer approved diagnostic system, clear the DTCs and retest. If the fault persists, check and install a new front right door latch clutch switch as required
B10CF-23	Right Rear Latch Clutch Switch - Signal stuck low	<p> NOTE:</p> <p>This DTC is not applicable to two-door vehicles</p> <ul style="list-style-type: none"> Rear right latch clutch switch circuit - Short circuit to ground Switch fault 	<p> NOTE:</p> <p>This DTC is not applicable to two-door vehicles</p> <ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check the rear right latch clutch switch circuit for short circuit to ground. Repair circuit as required. Clear DTC and retest If fault persists, check and install a new front right latch clutch switch as required
B10D1-23	Left Front Lock Button - Signal stuck low	<p> NOTE:</p> <p>Circuit reference - FL CLUTCH SW</p> <ul style="list-style-type: none"> Front left door exterior handle lock switch circuit short circuit to ground 	<p> NOTE:</p> <p>This DTC is set when the rear right door latch clutch switch is pressed for 45 seconds. If the switch is released before 45 seconds have passed, the timer will stop and the DTC will not set</p>

		<ul style="list-style-type: none"> Front left door exterior handle lock switch internal failure 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check the front left door exterior handle lock switch circuit for short circuit to ground Using the manufacturer approved diagnostic system, clear the DTCs and retest. If the fault persists, check and install a new front left door exterior handle lock switch as required
B10D2-23	Left Rear Lock Button - Signal stuck low	<p> NOTE:</p> <p>This DTC is not applicable to two-door vehicles</p> <ul style="list-style-type: none"> Rear left lock switch circuit - Short circuit to ground Switch fault 	<p> NOTE:</p> <p>This DTC is not applicable to two-door vehicles</p> <ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check the rear left lock switch circuit for short circuit to ground. Repair circuit as required. Clear DTC and retest If fault persists, check and install a new rear left door handle as required
B10D3-23	Right Front Lock Button - Signal stuck low	<p> NOTE:</p> <p>Circuit reference - FR CLUTCH SW</p> <ul style="list-style-type: none"> Front right door exterior handle lock switch circuit short circuit to ground Front right exterior handle 	<p> NOTE:</p> <p>This DTC is set when the front right door latch clutch switch is pressed for 45 seconds. If the switch is released before 45 seconds have passed, the timer will stop and the DTC will not set</p>

		lock switch internal failure	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check the front right door exterior handle lock switch circuit for short circuit to ground Using the manufacturer approved diagnostic system, clear the DTCs and retest. If the fault persists, check and install a new front right door exterior handle lock switch as required
B10D4-23	Right Rear Lock Button - Signal stuck low	<p> NOTE:</p> <p>This DTC is not applicable to two-door vehicles</p> <ul style="list-style-type: none"> Rear right lock switch circuit - Short circuit to ground Switch fault 	<p> NOTE:</p> <p>This DTC is not applicable to two-door vehicles</p> <ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check the rear right lock switch circuit for short circuit to ground. Repair circuit as required. Clear DTC and retest If fault persists, check and install a new rear right door handle as required
B12D5-16	Door Handle Proximity Sensor - Circuit voltage below threshold	<p> NOTE:</p> <p>Circuit reference - DOOR HANDLE SUPPLY</p> <ul style="list-style-type: none"> Door handle proximity sensor circuit short circuit to ground Keyless vehicle module power or 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check the door handle proximity sensor circuit for short circuit to ground Using the manufacturer approved diagnostic system, check datalogger signal - ECU Power Supply Voltage (0xD111). Refer to the electrical circuit diagrams and check the keyless vehicle module power and ground circuits for

		<p>ground circuit open circuit, high resistance</p> <ul style="list-style-type: none"> Keyless vehicle module internal failure 	<p>open circuit, high resistance</p> <ul style="list-style-type: none"> Using the manufacturer approved diagnostic system, clear the DTCs and retest. If the fault persists, check and install a new keyless vehicle module as required
B12D6-11	Fast Door Unlock/Open Actuator - Circuit short to ground	<p> NOTES:</p> <ul style="list-style-type: none"> This DTC only applies to vehicles fitted with an active e-latch system Circuit reference FL E-LATCH MOTOR NEG, FR E-LATCH MOTOR NEG, RL E-LATCH MOTOR NEG, RR E-LATCH MOTOR NEG. Faults on individual pins/circuits cannot be detected. A short on any one output pin will be detected as a short on all pins /circuits <p>■ E latch circuit(s) - Short circuit to ground</p>	<p> NOTES:</p> <ul style="list-style-type: none"> This DTC only applies to vehicles fitted with an active e-latch system Circuit reference FL E-LATCH MOTOR NEG, FR E-LATCH MOTOR NEG, RL E-LATCH MOTOR NEG, RR E-LATCH MOTOR NEG. Faults on individual pins /circuits cannot be detected. A short on any one output pin will be detected as a short on all pins/circuits Refer to electrical circuit diagrams and check E latch relay output circuits for short circuit to ground. Repair circuit as required. Clear DTC and retest

<p>B12D6-12</p>	<p>Fast Door Unlock/Open Actuator - Circuit short to battery</p>	<p> NOTES:</p> <ul style="list-style-type: none"> ■ This DTC only applies to vehicles fitted with an active e-latch system ■ Circuit reference FL E-LATCH MOTOR NEG, FR E-LATCH MOTOR NEG, RL E-LATCH MOTOR NEG, RR E-LATCH MOTOR NEG. Faults on individual pins/circuits cannot be detected. A short on any one output pin will be detected as a short on all pins /circuits <p>■ E latch circuit(s) - Short circuit to power</p>	<p> NOTES:</p> <ul style="list-style-type: none"> ■ This DTC only applies to vehicles fitted with an active e-latch system ■ Circuit reference FL E-LATCH MOTOR NEG, FR E-LATCH MOTOR NEG, RL E-LATCH MOTOR NEG, RR E-LATCH MOTOR NEG. Faults on individual pins /circuits cannot be detected. A short on any one output pin will be detected as a short on all pins/circuits ■ Refer to electrical circuit diagrams and check E latch relay output circuits for short circuit to power. Repair circuit as required. Clear DTC and retest
<p>B12EA-96</p>	<p>Radio Frequency (RF) Receiver - Component internal failure</p>	<ul style="list-style-type: none"> ■ RF receiver - Internal failure 	<ul style="list-style-type: none"> ■ Clear DTC and retest. If the fault persists, check and install a new RF receiver as required
<p>B1334-23</p>	<p>Tailgate Glass Release Switch - Signal stuck low</p>	<p> NOTE:</p> <p>This circuit /switch is</p>	<p> NOTE:</p> <p>This DTC is set when the tailgate window</p>

		<p>available as an option</p> <ul style="list-style-type: none"> ■ Tailgate window release switch circuit - Short circuit to ground ■ Tailgate window release switch internal failure 	<p>release switch is pressed for 45 seconds. If the switch is released before 45 seconds have passed, the timer will stop and the DTC will not set</p> <ul style="list-style-type: none"> ■ Refer to the electrical circuit diagrams and check the tailgate glass release switch circuit for short circuit to ground. Repair circuit as required. Clear DTC and retest ■ If the fault persists, check and install a new tailgate window release switch as required
<p>B1335-00</p>	<p>Front Triangulation / Loadspace Antenna - No sub type information</p>	<p> NOTE:</p> <p>For the antenna to be tested once, the vehicle must go through five ignition on cycles and exceed a speed of 20 kph each cycle</p> <ul style="list-style-type: none"> ■ Luggage compartment right antenna circuit short circuit to ground, short circuit to power ■ Luggage compartment right antenna incorrect position ■ Luggage compartment right 	<p> NOTE:</p> <p>This DTC may be logged as a result of a short to power fault on another antenna. Before proceeding further, first perform an on demand self-test and monitor the test output to check for any short circuit to power DTCs on other antennas. If any such faults are found, they should be resolved first. Once all short circuit to power faults on other antennas have been resolved, then continue with the diagnostic actions detailed below</p>

		<p>antenna internal failure</p>	<ul style="list-style-type: none"> ■ Using the manufacturer approved diagnostic system, clear the DTCs and retest. Perform routine - On Demand Self Test (0x0202). If the fault persists, refer to the electrical circuit diagrams and check the luggage compartment right antenna circuit for short circuit to ground, short circuit to power ■ Check the luggage compartment right antenna position and reposition as required ■ If the fault persists, check and install a new luggage compartment right antenna as required
<p>B1335-11</p>	<p>Front Triangulation / Loadspace Antenna - Circuit short to ground</p>	<div style="border: 1px solid #ccc; background-color: #e0f2f1; padding: 5px; margin-bottom: 10px;"> <p> NOTE:</p> <p>For the antenna to be tested once, the vehicle must go through five ignition on cycles and exceed a speed of 20 kph each cycle</p> </div> <ul style="list-style-type: none"> ■ Luggage compartment right antenna circuit short circuit to ground or short circuit between positive and negative 	<div style="border: 1px solid #ccc; background-color: #e0f2f1; padding: 5px; margin-bottom: 10px;"> <p> NOTE:</p> <p>This DTC may be logged as a result of a short to power fault on another antenna. Before proceeding further, first perform an on demand self-test and monitor the test output to check for any short circuit to power DTCs on other antennas. If any such faults are found, they should be resolved first. Once all short circuit to power faults on other antennas have been resolved, then continue with the diagnostic actions detailed below</p> </div> <ul style="list-style-type: none"> ■ Using the manufacturer approved diagnostic

			<p>system, clear the DTCs and retest. Perform routine - On Demand Self Test (0x0202). If the fault persists, refer to the electrical circuit diagrams and check the luggage compartment right antenna circuit for short circuit to ground, short circuit between positive and negative</p>
B1335-12	Front Triangulation / Loadspace Antenna - Circuit short to battery	<p> NOTE:</p> <p>For the antenna to be tested once, the vehicle must go through five ignition on cycles and exceed a speed of 20 kph each cycle</p> <ul style="list-style-type: none"> ▪ Luggage compartment right antenna circuit short circuit to power 	<ul style="list-style-type: none"> ▪ Using the manufacturer approved diagnostic system, clear the DTCs and retest. Perform routine - On Demand Self Test (0x0202). If the fault persists, refer to the electrical circuit diagrams and check the luggage compartment right antenna circuit for short circuit to power
B1335-13	Front Triangulation / Loadspace Antenna - Circuit open	<p> NOTE:</p> <p>For the antenna to be tested once, the vehicle must go through five ignition on cycles and exceed a speed of 20 kph each cycle</p>	<p> NOTE:</p> <p>This DTC may be logged as a result of a short to power fault on another antenna. Before proceeding further, first perform an on demand self-test and monitor the test output to check for any short circuit to power DTCs on other antennas. If any such faults are</p>

		<ul style="list-style-type: none"> ▪ Luggage compartment right antenna circuit open circuit, high resistance 	<p>found, they should be resolved first. Once all short circuit to power faults on other antennas have been resolved, then continue with the diagnostic actions detailed below</p> <ul style="list-style-type: none"> ▪ Using the manufacturer approved diagnostic system, clear the DTCs and retest. Perform routine - On Demand Self Test (0x0202). If the fault persists, refer to the electrical circuit diagrams and check the luggage compartment right antenna circuit for open circuit, high resistance
B1336-00	Left Front Door External Antenna - No sub type information	<p> NOTES:</p> <ul style="list-style-type: none"> ▪ For the antenna to be tested once, the vehicle must go through five ignition on cycles and exceed a speed of 20 kph each cycle ▪ Circuit reference - LEFT ANT POS / LEFT ANT NEG <ul style="list-style-type: none"> ▪ Front left door handle antenna 	<p> NOTE:</p> <p>This DTC may be logged as a result of a short to power fault on another antenna. Before proceeding further, first perform an on demand self-test and monitor the test output to check for any short circuit to power DTCs on other antennas. If any such faults are found, they should be resolved first. Once all short circuit to power faults on other antennas have been resolved, then continue with the diagnostic actions detailed below</p>

		<p>circuit short circuit to ground, short circuit to power</p> <ul style="list-style-type: none"> ■ Front left door handle antenna incorrect position ■ Front left door handle antenna internal failure 	<ul style="list-style-type: none"> ■ Using the manufacturer approved diagnostic system, clear the DTCs and retest. Perform routine - On Demand Self Test (0x0202). If the fault persists, refer to the electrical circuit diagrams and check the front left door handle antenna circuit for short circuit to ground, short circuit to power ■ Check the front left door handle antenna position and reposition as required ■ If the fault persists, check and install a new front left door handle antenna as required
B1336-11	Left Front Door External Antenna - Circuit short to ground	<div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <p> NOTES:</p> <ul style="list-style-type: none"> ■ For the antenna to be tested once, the vehicle must go through five ignition on cycles and exceed a speed of 20 kph each cycle ■ Circuit reference - LEFT ANT POS / LEFT ANT NEG </div> <ul style="list-style-type: none"> ■ Front left door handle antenna circuit short circuit to ground or short circuit between positive and negative 	<div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <p> NOTE:</p> <p>This DTC may be logged as a result of a short to power fault on another antenna. Before proceeding further, first perform an on demand self-test and monitor the test output to check for any short circuit to power DTCs on other antennas. If any such faults are found, they should be resolved first. Once all short circuit to power faults on other antennas have been resolved, then continue with the diagnostic actions detailed below</p> </div> <ul style="list-style-type: none"> ■ Using the manufacturer approved diagnostic system, clear the DTCs

			and retest. Perform routine - On Demand Self Test (0x0202). If the fault persists, refer to the electrical circuit diagrams and check the front left door handle antenna circuit for short circuit to ground, short circuit between positive and negative
B1336-12	Left Front Door External Antenna - Circuit short to battery	<p> NOTES:</p> <ul style="list-style-type: none"> For the antenna to be tested once, the vehicle must go through five ignition on cycles and exceed a speed of 20 kph each cycle Circuit reference - LEFT ANT POS / LEFT ANT NEG <p>■ Front left door handle antenna circuit short circuit to power</p>	<ul style="list-style-type: none"> Using the manufacturer approved diagnostic system, clear the DTCs and retest. Perform routine - On Demand Self Test (0x0202). If the fault persists, refer to the electrical circuit diagrams and check the front left door handle antenna circuit for short circuit to power
B1336-13	Left Front Door External Antenna - Circuit open	<p> NOTES:</p> <ul style="list-style-type: none"> For the antenna to be tested once, the vehicle must go through five ignition on cycles 	<p> NOTE:</p> <p>This DTC may be logged as a result of a short to power fault on another antenna. Before proceeding further, first perform an on demand self-test and</p>

		<p>and exceed a speed of 20 kph each cycle</p> <ul style="list-style-type: none"> ■ Circuit reference - LEFT ANT POS / LEFT ANT NEG 	<p>monitor the test output to check for any short circuit to power DTCs on other antennas. If any such faults are found, they should be resolved first. Once all short circuit to power faults on other antennas have been resolved, then continue with the diagnostic actions detailed below</p>
		<ul style="list-style-type: none"> ■ Front left door handle antenna circuit open circuit, high resistance 	<ul style="list-style-type: none"> ■ Using the manufacturer approved diagnostic system, clear the DTCs and retest. Perform routine - On Demand Self Test (0x0202). If the fault persists, refer to the electrical circuit diagrams and check the front left door handle antenna circuit for open circuit, high resistance
B1337-00	Right Front Door External Antenna - No sub type information	<p> NOTES:</p> <ul style="list-style-type: none"> ■ For the antenna to be tested once, the vehicle must go through five ignition on cycles and exceed a speed of 20 kph each cycle ■ Circuit reference - RIGHT ANT POS / RIGHT ANT NEG 	<p> NOTE:</p> <p>This DTC may be logged as a result of a short to power fault on another antenna. Before proceeding further, first perform an on demand self-test and monitor the test output to check for any short circuit to power DTCs on other antennas. If any such faults are found, they should be resolved first. Once all short circuit to power faults on other antennas have been resolved, then</p>

		<ul style="list-style-type: none"> ■ Front right door handle antenna circuit short circuit to ground, short circuit to power ■ Front right door handle antenna incorrect position ■ Front right door handle antenna internal failure 	<p>continue with the diagnostic actions detailed below</p> <ul style="list-style-type: none"> ■ Using the manufacturer approved diagnostic system, clear the DTCs and retest. Perform routine - On Demand Self Test (0x0202). If the fault persists, refer to the electrical circuit diagrams and check the front right door handle antenna circuit for short circuit to ground, short circuit to power ■ Check the front right door handle antenna position and reposition as required ■ If the fault persists, check and install a new front right door handle antenna as required
<p>B1337-11</p>	<p>Right Front Door External Antenna - Circuit short to ground</p>	<p> NOTES:</p> <ul style="list-style-type: none"> ■ For the antenna to be tested once, the vehicle must go through five ignition on cycles and exceed a speed of 20 kph each cycle ■ Circuit reference - RIGHT ANT POS / RIGHT ANT NEG 	<p> NOTE:</p> <p>This DTC may be logged as a result of a short to power fault on another antenna. Before proceeding further, first perform an on demand self-test and monitor the test output to check for any short circuit to power DTCs on other antennas. If any such faults are found, they should be resolved first. Once all short circuit to power faults on other antennas have been resolved, then</p>

		<ul style="list-style-type: none"> Front right door handle low frequency antenna circuit short circuit to ground or short circuit between positive and negative 	<p>continue with the diagnostic actions detailed below</p> <ul style="list-style-type: none"> Using the manufacturer approved diagnostic system, clear the DTCs and retest. Perform routine - On Demand Self Test (0x0202). If the fault persists, refer to the electrical circuit diagrams and check the front right door handle antenna circuit for short circuit to ground, short circuit between positive and negative
B1337-12	Right Front Door External Antenna - Circuit short to battery	<p> NOTES:</p> <ul style="list-style-type: none"> For the antenna to be tested once, the vehicle must go through five ignition on cycles and exceed a speed of 20 kph each cycle Circuit reference - RIGHT ANT POS / RIGHT ANT NEG <ul style="list-style-type: none"> Front right door handle antenna circuit short circuit to power 	<ul style="list-style-type: none"> Using the manufacturer approved diagnostic system, clear the DTCs and retest. Perform routine - On Demand Self Test (0x0202). If the fault persists, refer to the electrical circuit diagrams and check the front right door handle antenna circuit for short circuit to power
B1337-13	Right Front Door External	<p> NOTES:</p>	<p> NOTE:</p>

	Antenna - Circuit open	<ul style="list-style-type: none"> ■ For the antenna to be tested once, the vehicle must go through five ignition on cycles and exceed a speed of 20 kph each cycle ■ Circuit reference - RIGHT ANT POS / RIGHT ANT NEG <ul style="list-style-type: none"> ■ Front right door handle antenna circuit open circuit, high resistance 	<p>This DTC may be logged as a result of a short to power fault on another antenna. Before proceeding further, first perform an on demand self-test and monitor the test output to check for any short circuit to power DTCs on other antennas. If any such faults are found, they should be resolved first. Once all short circuit to power faults on other antennas have been resolved, then continue with the diagnostic actions detailed below</p> <ul style="list-style-type: none"> ■ Using the manufacturer approved diagnostic system, clear the DTCs and retest. Perform routine - On Demand Self Test (0x0202). If the fault persists, refer to the electrical circuit diagrams and check the front right door handle antenna circuit for open circuit, high resistance
B133D-00	Loadspace /Interior Boot Antenna - No sub type information	<p> NOTES:</p> <ul style="list-style-type: none"> ■ For the antenna to be tested once, the vehicle must go through five ignition on cycles and exceed 	<p> NOTE:</p> <p>This DTC may be logged as a result of a short to power fault on another antenna. Before proceeding further, first perform an on demand self-test and monitor the test output to check for any short circuit to</p>

		<p>a speed of 20 kph each cycle</p> <ul style="list-style-type: none"> ■ Circuit reference - LOADSPACE ANT POS / LOADSPACE ANT NEG <ul style="list-style-type: none"> ■ Luggage compartment left antenna circuit short circuit to ground, short circuit to power ■ Luggage compartment left antenna incorrect position ■ Luggage compartment left antenna internal failure 	<p>power DTCs on other antennas. If any such faults are found, they should be resolved first. Once all short circuit to power faults on other antennas have been resolved, then continue with the diagnostic actions detailed below</p> <ul style="list-style-type: none"> ■ Using the manufacturer approved diagnostic system, clear the DTCs and retest. Perform routine - On Demand Self Test (0x0202). If the fault persists, refer to the electrical circuit diagrams and check the luggage compartment left antenna circuit for short circuit to ground, short circuit to power ■ Check the luggage compartment left antenna position and reposition as required ■ If the fault persists, check and install a new luggage compartment left antenna as required
B133D-11	Loadspace /Interior Boot Antenna - Circuit short to ground	<p> NOTES:</p> <ul style="list-style-type: none"> ■ For the antenna to be tested once, the vehicle must go through five ignition on cycles and exceed a speed of 20 kph each cycle 	<p> NOTE:</p> <p>This DTC may be logged as a result of a short to power fault on another antenna. Before proceeding further, first perform an on demand self-test and monitor the test output to check for any short circuit to power DTCs on other antennas. If any</p>

		<ul style="list-style-type: none"> ■ Circuit reference - LOADSPACE ANT POS / LOADSPACE ANT NEG ■ Luggage compartment left antenna circuit short circuit to ground or short circuit between positive and negative 	<p>such faults are found, they should be resolved first. Once all short circuit to power faults on other antennas have been resolved, then continue with the diagnostic actions detailed below</p> <ul style="list-style-type: none"> ■ Using the manufacturer approved diagnostic system, clear the DTCs and retest. Perform routine - On Demand Self Test (0x0202). If the fault persists, refer to the electrical circuit diagrams and check the luggage compartment left antenna circuit for short circuit to ground, short circuit between positive and negative
B133D-12	Loadspace /Interior Boot Antenna - Circuit short to battery	<p> NOTES:</p> <ul style="list-style-type: none"> ■ For the antenna to be tested once, the vehicle must go through five ignition on cycles and exceed a speed of 20 kph each cycle ■ Circuit reference - LOADSPACE ANT POS / LOADSPACE ANT NEG 	<ul style="list-style-type: none"> ■ Using the manufacturer approved diagnostic system, clear the DTCs and retest. Perform routine - On Demand Self Test (0x0202). If the fault persists, refer to the electrical circuit diagrams and check the luggage compartment left antenna circuit for short circuit to power

		<ul style="list-style-type: none"> ▪ Luggage compartment left antenna circuit short circuit to power 	
B133D-13	Loadspace /Interior Boot Antenna - Circuit open	<p> NOTES:</p> <ul style="list-style-type: none"> ▪ For the antenna to be tested once, the vehicle must go through five ignition on cycles and exceed a speed of 20 kph each cycle ▪ Circuit reference - LOADSPACE ANT POS / LOADSPACE ANT NEG <ul style="list-style-type: none"> ▪ Luggage compartment left antenna circuit open circuit, high resistance 	<p> NOTE:</p> <p>This DTC may be logged as a result of a short to power fault on another antenna. Before proceeding further, first perform an on demand self-test and monitor the test output to check for any short circuit to power DTCs on other antennas. If any such faults are found, they should be resolved first. Once all short circuit to power faults on other antennas have been resolved, then continue with the diagnostic actions detailed below</p> <ul style="list-style-type: none"> ▪ Using the manufacturer approved diagnostic system, clear the DTCs and retest. Perform routine - On Demand Self Test (0x0202). If the fault persists, refer to the electrical circuit diagrams and check the luggage compartment left antenna circuit for open circuit, high resistance
C1017-23	Boot/Trunk Primary Switch - Signal stuck	<p> NOTE:</p>	<p> NOTE:</p>

	low	<p>This DTC will set when the lock switch is pressed on continuously for 45 seconds. If the switch is released the timer will stop</p> <ul style="list-style-type: none"> ■ Tailgate lock switch circuit short circuit to ground ■ Tailgate lock switch internal failure 	<p>This circuit/switch is available as an option</p> <ul style="list-style-type: none"> ■ Refer to the electrical circuit diagrams and check the tailgate lock switch circuit for short circuit to ground ■ If the fault persists, check and install a new tailgate lock switch as required
U0010-88	Medium Speed CAN Communication Bus - Bus off	<ul style="list-style-type: none"> ■ Medium speed CAN failure - Bus off 	<ul style="list-style-type: none"> ■ Refer to the electrical circuit diagrams and check the keyless vehicle module medium speed CAN bus for short circuit to ground, short circuit to power, open circuit, high resistance, or short circuit between the paired CAN wires
U0300-00	Internal Control Module Software Incompatibility - No sub type information	<ul style="list-style-type: none"> ■ Signal configuration file not loaded 	<ul style="list-style-type: none"> ■ Using the manufacturer approved diagnostic system check and update the car configuration file as required. Clear DTC and retest
U201F-00	External Receiver - No sub type information	<p> NOTES:</p> <ul style="list-style-type: none"> ■ This DTC is set if there is no response from the RF receiver when a data request is made by the keyless 	<ul style="list-style-type: none"> ■ Refer to the electrical circuit diagrams and check the LIN bus circuit for short circuit to ground, short circuit to power, open circuit, high resistance ■ Using the manufacturer approved diagnostic system, clear the DTCs and retest. If the fault persists, check and install a new RF receiver

		<p>vehicle module.</p> <ul style="list-style-type: none"> ▪ Circuit reference RX SERIAL DATA 	<ul style="list-style-type: none"> ▪ Using the manufacturer approved diagnostic system, clear the DTCs and retest. If the fault persists, check and install a new keyless vehicle module as required.
U201F-31	External Receiver - No signal	<p> NOTE:</p> <p>Circuit reference RX SERIAL DATA</p> <ul style="list-style-type: none"> ▪ LIN bus circuit short circuit to ground, short circuit to power, open circuit, high resistance ▪ RF receiver failure ▪ Keyless vehicle module internal failure 	<ul style="list-style-type: none"> ▪ Refer to the electrical circuit diagrams and check the RF receiver power and ground circuits for open circuit, high resistance ▪ Refer to the electrical circuit diagrams and check the LIN bus circuit for short circuit to ground, short circuit to power, open circuit, high resistance ▪ Using the manufacturer approved diagnostic system, clear the DTCs and retest. If the fault persists, check and install a new RF receiver ▪ Using the manufacturer approved diagnostic system, clear the DTCs and retest. If the fault persists, install a new keyless vehicle module as required
U201F-95	External Receiver - Incorrect	<ul style="list-style-type: none"> ▪ The RF receiver frequency does not match the car 	<ul style="list-style-type: none"> ▪ Verify car configuration value for RF frequency is correct. If not,

	assembly	configuration file parameter	<p>reconfigure central junction box with correct car configuration file. Clear DTC and retest</p> <ul style="list-style-type: none"> ■ If fault persists, check and install a new RF receiver as required. Clear DTC and retest
U2100-00	Initial Configuration Not Complete - No sub type information	<ul style="list-style-type: none"> ■ Calibration file has not been received or is incomplete 	<ul style="list-style-type: none"> ■ Clear DTC and retest. If fault persists, reload the correct calibration file for the vehicle type into the module using the manufacturer approved diagnostic system
U2101-00	Control Module Configuration Incompatible - No sub type information	<ul style="list-style-type: none"> ■ Car configuration parameter is outside expected value 	<ul style="list-style-type: none"> ■ Verify car configuration value sent by central junction box is correct for the vehicle. If not, reconfigure central junction box with correct car configuration file. Clear DTC and retest ■ If fault persists, reload the correct calibration file for the vehicle type into the keyless vehicle module using the manufacturer approved diagnostic system
U3000-44	Control Module - Data memory failure	<ul style="list-style-type: none"> ■ Keyless vehicle module RAM memory failure 	<ul style="list-style-type: none"> ■ First record, then clear the DTC. Using the manufacturer approved diagnostic system, perform an on demand self-test and monitor the test output to check if DTC reoccurs ■ If fault persists, check and install a new keyless vehicle module as required. Clear DTC and retest
U3000-45	Control Module - Program		<ul style="list-style-type: none"> ■ First record, then clear the DTC. Using the

	memory failure	<ul style="list-style-type: none"> ▪ Keyless vehicle program flash memory failure 	<p>manufacturer approved diagnostic system, perform an on demand self-test and monitor the test output to check if DTC reoccurs</p> <ul style="list-style-type: none"> ▪ If fault persists, check and install a new keyless vehicle module as required. Clear DTC and retest
U3000-46	Control Module - Calibration /parameter memory failure	<ul style="list-style-type: none"> ▪ Keyless vehicle module EEPROM memory failure 	<ul style="list-style-type: none"> ▪ First record, then clear the DTC. Using the manufacturer approved diagnostic system, perform an on demand self-test and monitor the test output to check if DTC reoccurs ▪ If fault persists, check and install a new keyless vehicle module as required. Clear DTC and retest
U3000-49	Control Module - Internal electronic failure	<ul style="list-style-type: none"> ▪ Internal electronic failure 	<ul style="list-style-type: none"> ▪ Refer to the electrical circuit diagrams and check the power and ground circuits to the module. Clear DTC and retest ▪ If fault persists, check and install a new keyless vehicle module as required. Clear DTC and retest
U3000-63	Control Module - Circuit /Component Protection Time-Out	<ul style="list-style-type: none"> ▪ Keyless vehicle module internal electronic failure 	<ul style="list-style-type: none"> ▪ Check for other keyless vehicle module output circuit short circuit to ground/power DTCs and perform the relevant corrective action(s) ▪ First record, then clear the DTC. Using the manufacturer approved diagnostic system, perform an on demand

			<p>self-test and monitor the test output to check if DTC reoccurs</p> <ul style="list-style-type: none"> ■ If fault persists, check and install a new keyless vehicle module as required. Clear DTC and retest
U3000-95	Control Module - Incorrect assembly	<ul style="list-style-type: none"> ■ Incorrect keyless vehicle module installed ■ Car configuration parameter indicates the vehicle should support full passive entry /passive start functionality, but installed module supports passive start only 	<ul style="list-style-type: none"> ■ Clear DTC and retest. If fault persists, check and install the correct keyless vehicles module as required. Clear DTC and retest
U3002-81	Vehicle Identification Number - Invalid serial data received	<ul style="list-style-type: none"> ■ Invalid vehicle identification number 	<ul style="list-style-type: none"> ■ Clear DTC and retest. If fault persists, configure the car configuration file using the manufacturer approved diagnostic system