

Multifunction Electronic Modules -**Torque Specifications**

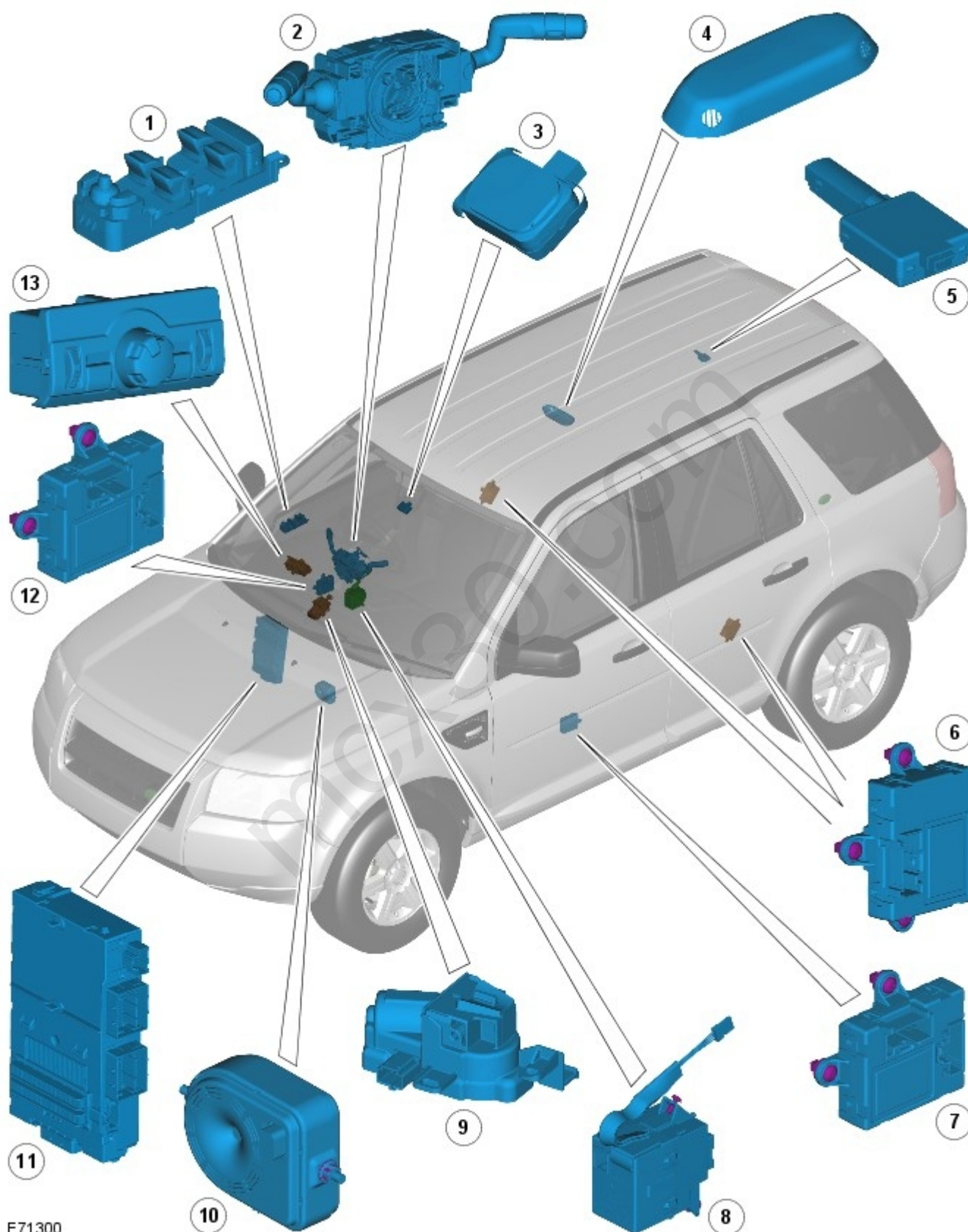
Description	Nm	lb-ft
Cellular phone antenna Torx screw	10	7
Front door module	1	1
Rear door module	1	1

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Multifunction Electronic Modules - Module Controlled Functions

Description and Operation

COMPONENT LOCATION - LIN BUS (SHEET 1 OF 2)

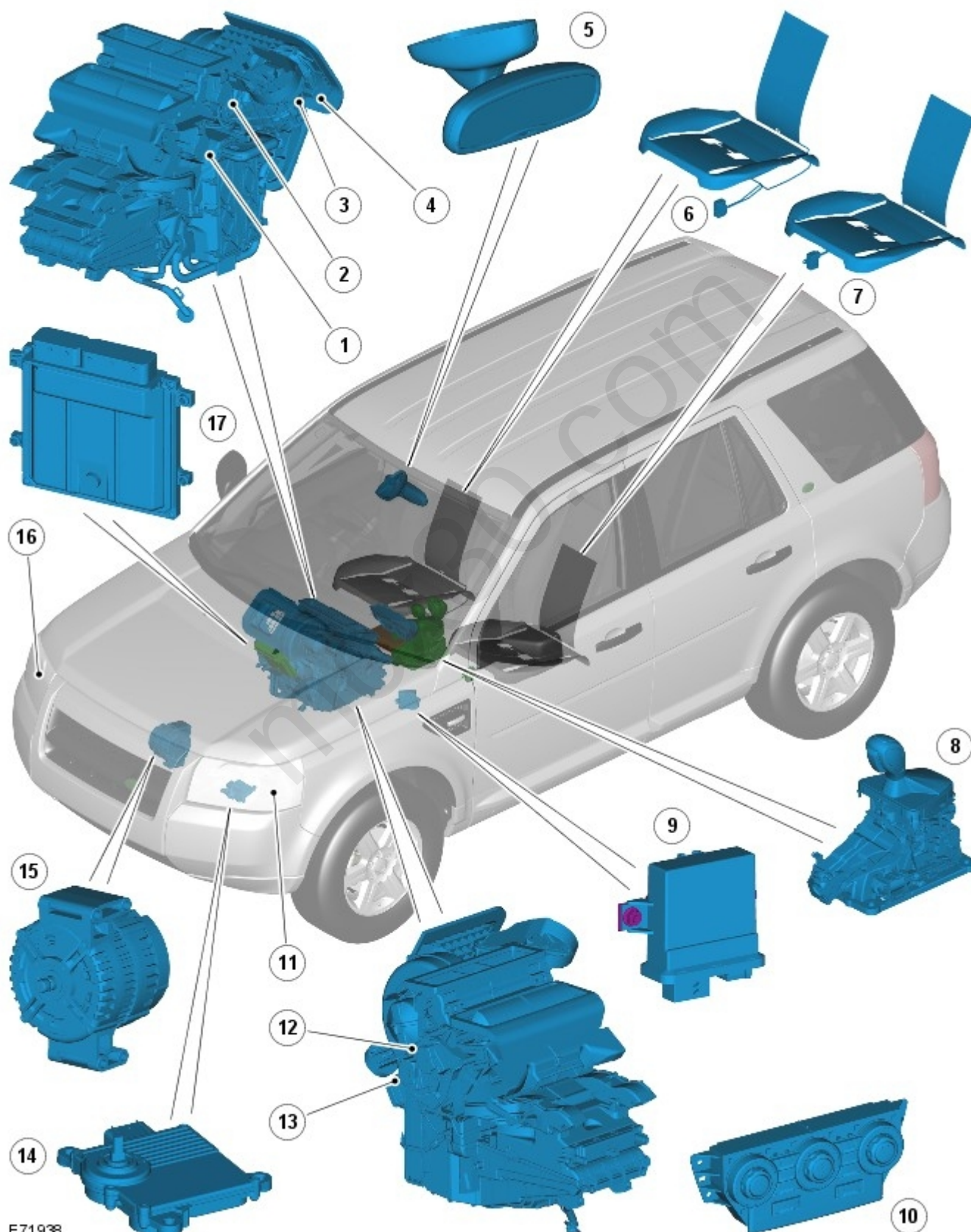


E71300

Item	Part Number	Description
1	-	Driver's door switchpack
2	-	Steering wheel module
3	-	Rain sensor
4	-	Volumetric sensor

5	-	RF receiver
6	-	Left Hand (LH) / Right Hand (RH) rear door modules
7	-	Passenger door module
8	-	Start control module
9	-	Electronic steering column lock
10	-	Battery Backed-Up Sounder (BBUS)
11	-	Central Junction Box (CJB)
12	-	Driver's door module
13	-	Light switch module

COMPONENT LOCATION - LIN BUS (SHEET 2 OF 2)

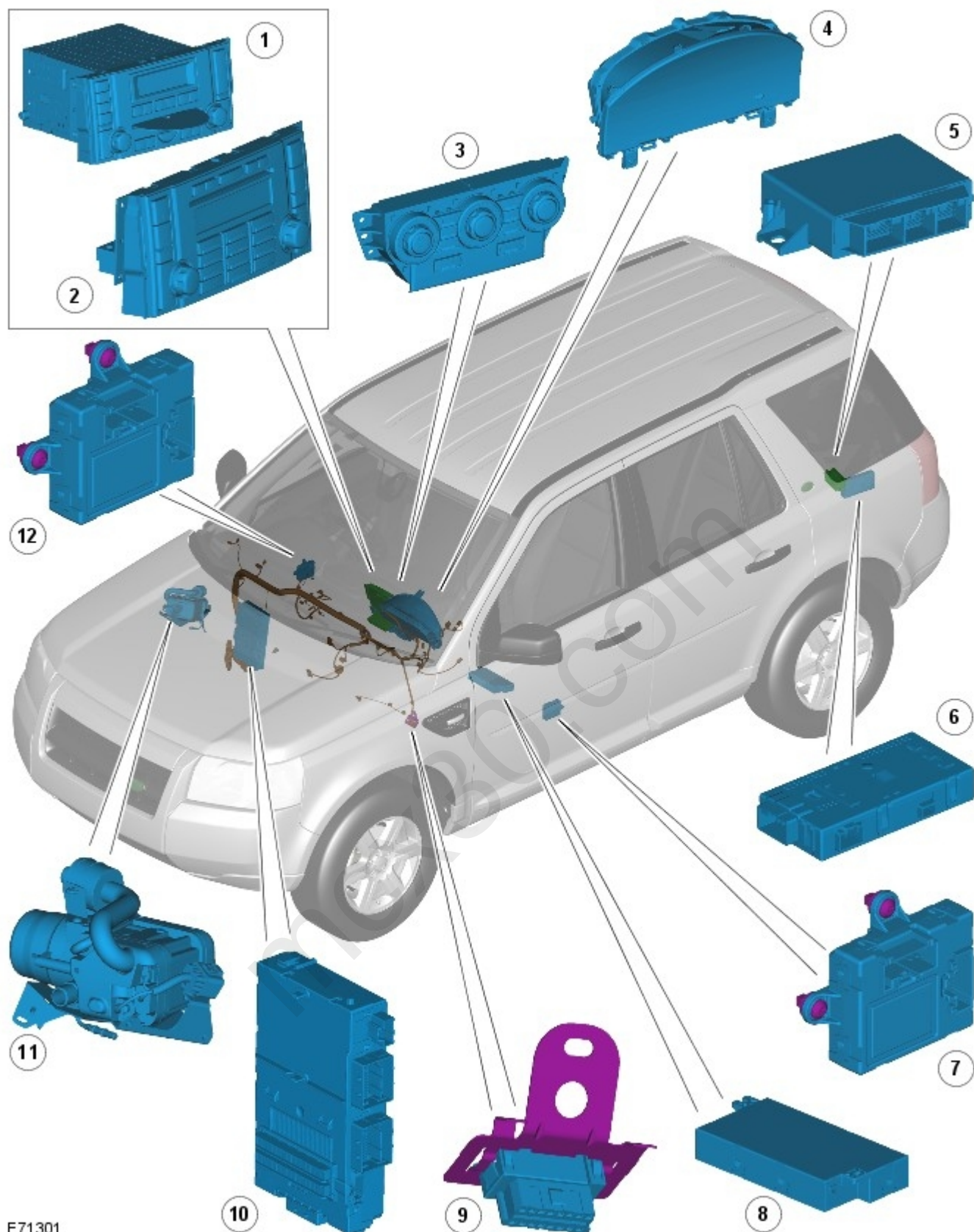


Item	Part Number	Description
1	-	Flap actuator module 1
2	-	Flap actuator module 2
3	-	Flap actuator module 3
4	-	Air quality sensor
5	-	Humidity sensor
6	-	RH seat heat module
7	-	LH seat heat module
8	-	Selector lever module
9	-	Headlamp levelling control module
10	-	Automatic Temperature Control (ATC) module
11	-	LH headlamp control unit
12	-	Flap actuator module 4
13	-	Flap actuator module 5
14	-	Transmission Control Module (TCM)
15	-	Generator control module
16	-	RH headlamp control unit
17	-	Engine Control Module (ECM)

COMPONENT LOCATION - MEDIUM SPEED CAN BUS

- NOTE: NOTE: Left hand drive vehicle shown

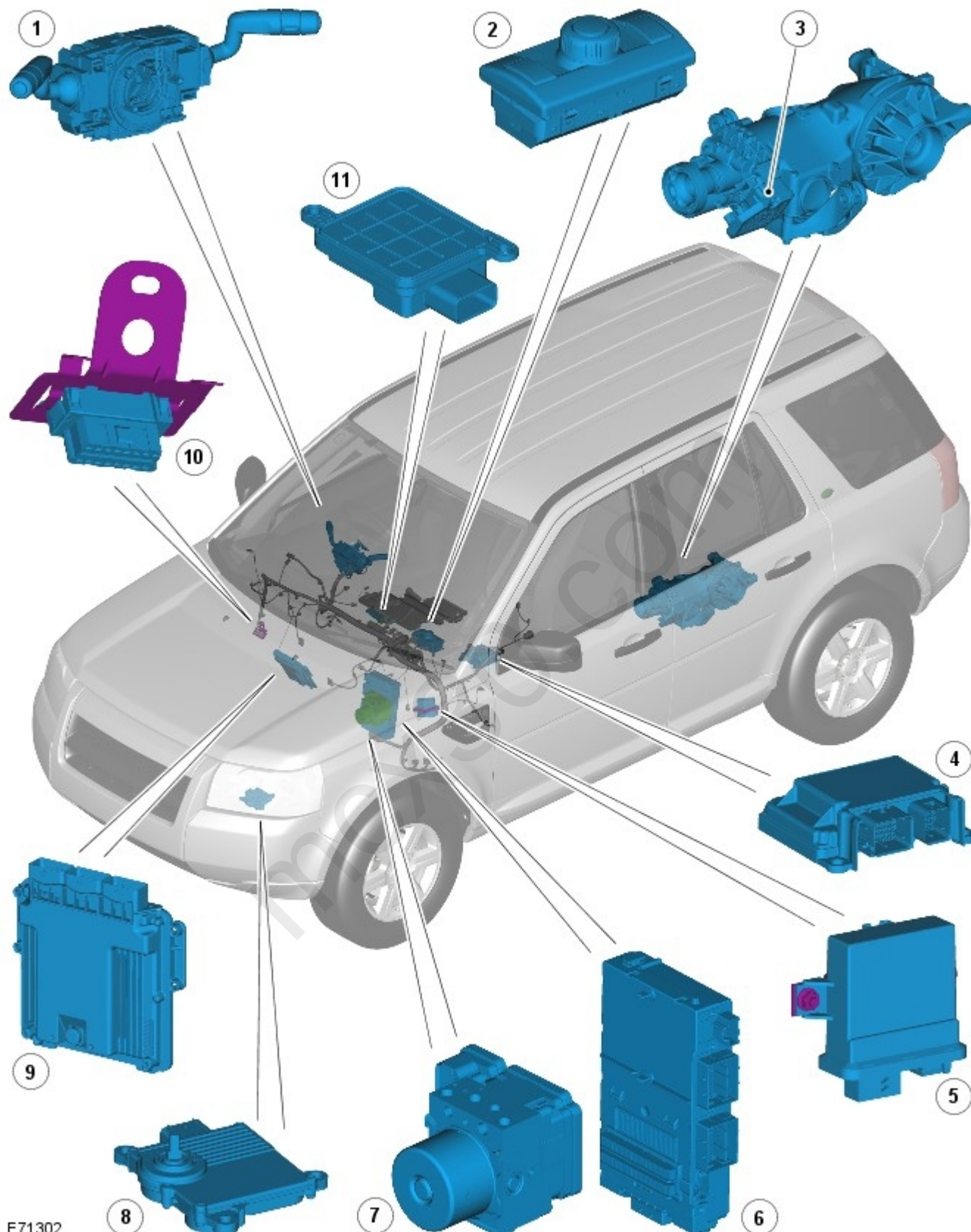
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E71301

Item	Part Number	Description
1	-	Integrated Control Module (ICM) - Lo-Line audio system
2	-	Integrated Control Module (ICM) - Hi-Line audio system
3	-	ATC module
4	-	Instrument cluster
5	-	Parking aid module
6	-	Trailer module
7	-	Driver's door module
8	-	Seat memory module
9	-	Diagnostic socket
10	-	CJB
11	-	Fuel fired heater module

COMPONENT LOCATION - HIGH SPEED CAN BUS



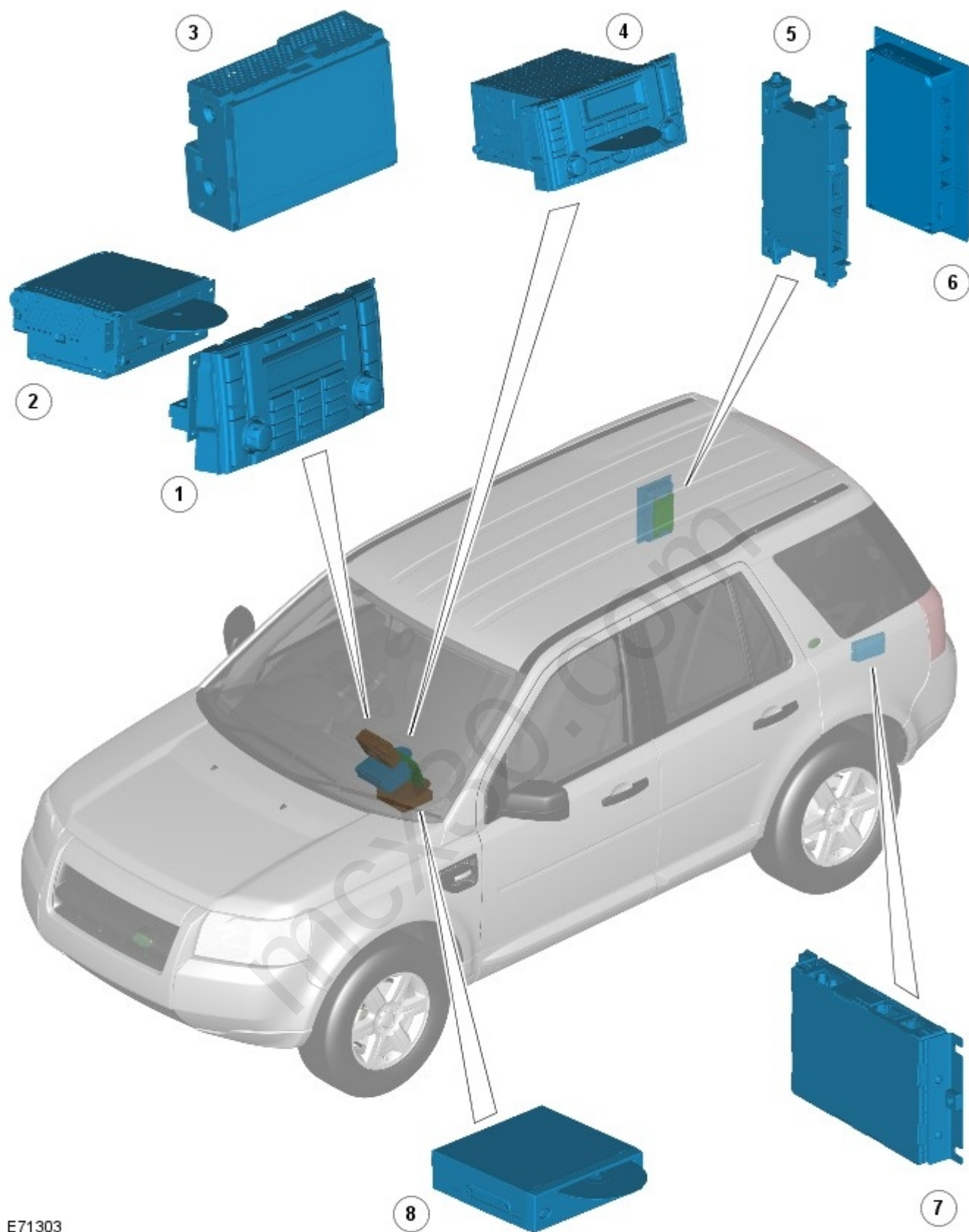
E71302

Item	Part Number	Description
1	-	Steering angle sensor
2	-	Terrain Response control module
3	-	Electronic rear differential control module
4	-	Restraints Control Module (RCM)
5	-	Headlamp levelling control module
6	-	CJB
7	-	Anti-lock Brake System module

8	-	TCM
9	-	Engine Control Module (ECM)
10	-	Diagnostic socket
11	-	Occupant Classification Sensor (OCS - NAS only)

COMPONENT LOCATION - MOST

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E71303

Item	Part Number	Description
1	-	Integrated control Module (ICM) - Face plate
2	-	Integrated Head Unit (IHU) - Hi-Line

3	-	Touch Screen Display (TAD)
4	-	Integrated Head Unit (IHU) - Hi-Line
5	-	Bluetooth phone module
6	-	Amplifier/tuner
7	-	Digital Audio Broadcast (DAB) receiver
8	-	Navigation computer

OVERVIEW

The vehicle electrical system comprises a number of control modules which are interconnected via several network systems.

The following network systems are used on the vehicle:

- High Speed Controller Area Network bus
- Medium speed CAN bus
- Local Interconnect Network (LIN) bus
- Media Orientated Systems Transport (MOST) system.

The 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 system. The MOST system 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
CJB	High speed CAN bus	Controls body functions and power distribution	Passenger footwell, behind glovebox
Steering angle sensor	High speed CAN bus	Transmits steering positional information	Integral with the steering wheel clockspring
Diagnostic socket	High speed CAN bus	Allows the transfer of vehicle information using IDS or other diagnostic tool	Driver's footwell on underside of instrument panel
RCM	High speed CAN bus	Controls deployment of supplementary restraint components	Rear of centre console, below arm rest
TCM	High speed CAN bus	Controls automatic transmission operation	Mounted on the top of the transmission housing
ECM	High speed CAN bus	Controls engine management and fuel system operation	Mounted between the bulkheads in the engine compartment
ABS module	High speed CAN bus	Controls all aspects of the braking system	Mounted between the bulkheads on LH side of engine compartment
Headlamp levelling module	High speed CAN bus	Controls the dynamic headlamp levelling function	Passenger footwell, behind the glovebox
Occupant classification sensor (NAS only)	High speed CAN bus	Detects when a passenger is in the front passenger seat	Underside of passenger seat
Terrain Response module	High speed CAN bus	Controls the Terrain Response system using data from other vehicle systems	Integral with Terrain Response rotary control
Electronic differential control module	High speed CAN bus	Controls the operation of the electronic differential	Mounted on front of rear differential
CJB	Medium speed CAN bus	Controls body functions and power distribution	Passenger footwell, behind glovebox
Fuel fired heater module	Medium speed CAN bus	Controls operation of the fuel fired heater	Integrated with the ATC module
Diagnostic socket	Medium speed CAN bus	Allows the transfer of vehicle information using IDS or other diagnostic tool	Driver's footwell on underside of instrument panel
Passenger door module	Medium speed CAN bus	Controls window and locking functions	Mounted in passenger door
Parking aid module	Medium speed CAN bus	Controls parking aid system	Mounted on LH rear suspension turret
Seat memory module	Medium speed CAN bus	Controls driver seat positioning and also memory functions of other driver personalised functions	Under driver's seat
Trailer module	Medium speed CAN bus	Controls operation of trailer lamps and also informs CJB that trailer connected	LH side of luggage compartment, behind suspension turret
Instrument cluster/Driver Information Module	Medium speed CAN bus	Receives data from other systems to provide driver information	Instrument panel
Driver's door module	Medium speed CAN bus	Controls window and locking functions	Mounted in driver's door
ATC module	Medium speed CAN bus	Contains controls for the heating and air conditioning systems	Mounted in centre console

Module	Network System	Function	Vehicle Location
Integrated Control Module	Medium speed CAN bus	Contains controls for the entertainment system and gateway between audio system and other vehicle systems	Integral part of head unit, located in centre console
Integrated Head Unit (IHU)	Medium speed CAN bus	Contains controls for the entertainment system	Integral part of head unit, located in centre console
RH rear door module	LIN	Controls window and locking operation	Mounted in RH rear door
LH rear door module	LIN	Controls window and locking operation	Mounted in LH rear door
Generator	LIN	Provide load signal to ECM	Located in engine compartment. Location on engine dependent on engine fitment.
RH front seat heat module	LIN	Used by ATC to control seat heater temperature	Underside of seat
LH front seat heat module	LIN	Used by ATC to control seat heater temperature	Underside of seat
Air quality sensor	LIN	Measures air quality in the vehicle interior	Fitted to the heater assembly
Flap actuator module 1	LIN	Moves flaps within the heater assembly to direct air flow to different parts of the interior	Part of the heater assembly
Flap actuator module 2	LIN	Moves flaps within the heater assembly to direct air flow to different parts of the interior	Part of the heater assembly
Flap actuator module 3	LIN	Moves flaps within the heater assembly to direct air flow to different parts of the interior	Part of the heater assembly
Flap actuator module 4	LIN	Moves flaps within the heater assembly to direct air flow to different parts of the interior	Part of the heater assembly
Flap actuator module 5	LIN	Moves flaps within the heater assembly to direct air flow to different parts of the interior	Part of the heater assembly
Humidity sensor	LIN	Measures air quality in the vehicle interior	Integral with the interior rear view mirror
HVAC control module	LIN	Controls operation of the HVAC system functions	Integral with HVAC controls panel in centre console
Steering wheel module	LIN	Converts analogue signals from steering wheel switches into digital messages	Behind steering wheel clockspring
Battery backed sounder	LIN	Activated by CJB when alarm trigger is received	Mounted in a central position between the bulkheads in the engine compartment
Electric steering column lock	LIN	Controls the locking and unlocking of the steering column	On underside of steering column, under lower column shroud
CJB	LIN	Control body functions and power distribution	Passenger footwell, behind glovebox
Light switch module	LIN	Control of headlamp operation and levelling	Driver's side of instrument panel
Volumetric sensor	LIN	Detects movement in vehicle interior and activates anti-theft alarm system	In housing in centre of headlining
Rain sensor module	LIN	Detects moisture on the windshield	At top of windshield
Start control unit	LIN	Used to identify the remote handset - component of the keyless start system	In instrument panel, adjacent to the steering column
RF receiver	LIN	Receives RF transmissions from the TPMS system and the remote handset	Positioned adjacent to the rear interior lamp, behind the headlining
Headlamp levelling module	LIN	Controls the dynamic headlamp levelling functions	Passenger footwell, behind glovebox, integral with headlamp levelling module
RH headlamp	LIN	Provides positional information to the headlamp levelling module	Attached to the headlamp assembly
LH headlamp	LIN	Provides positional data to the headlamp levelling module	Attached to the headlamp assembly
Driver's window switch	LIN	Controls operation of the driver's window	Mounted in driver's door
Driver's door module	LIN	Controls window and locking functions	Mounted in driver's door
Passenger door module	LIN	Controls window and locking functions	Mounted in passenger door
Transmission selector lever module	LIN	Sends selector lever position to the TCM	Located below centre console
TCM	LIN	Receives selector lever position information to control transmission operation	Mounted on the top of the transmission housing
Integrated Control Module	MOST	Contains controls for the entertainment system and gateway between audio system and other vehicle systems	Integral part of head unit, located in centre console
Integrated Head Unit	MOST	Contains controls for the entertainment system	Integral part of head unit, located in centre console
Digital Audio Broadcast (DAB) receiver	MOST	Receives digital radio broadcasts	Mounted in LH side of the luggage compartment
Bluetooth phone module	MOST	Controls the operation of the Bluetooth phone system	Mounted in RH side of the luggage compartment
Amplifier/Tuner	MOST	Provides amplification for the entertainment systems and reception of radio RF broadcasts	Mounted in RH side of the luggage compartment
Navigation computer	MOST	Reads map data from a DVD to calculate and display visual route guidance information via the TAD and audible guidance via the amplifier to the driver	Below the IHU in the centre console

Module	Network System	Function	Vehicle Location
Touch Screen Display (TAD)	MOST	Provides the driver interface to the entertainment, navigation and driver personalisation functions	Above the IHU in the centre console

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Multifunction Electronic Modules - Multifunction Electronic Module

Diagnosis and Testing

Description and Operation

For a detailed description of the multifunction electronic control modules, refer to the relevant Description and Operation section 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. **1.** Verify the customer concern.
2. **2.** Visually inspect for obvious signs of electrical damage.

Visual Inspection

Electrical
● Fuse(s) ● Electrical connector(s) ● Wiring Harness

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

DTC Index

• **NOTE:** If the control module is suspect and the vehicle remains under manufacturer warranty, refer to the Warranty Policy and Procedures manual (section B1.2), or determine if any prior approval programme is in operation, prior to the installation of a new module.

• **NOTE:** The DTC Index in this section shows information for DTCs that could be logged in the Driver Door Module (DDM) or Passenger Door Module (PDM). For diagnosis and testing information for: Driver Seat module.

REFER to: [Seats](#) (501-10 Seating, Diagnosis and Testing).

Information and Entertainment module.

REFER to: [Information and Entertainment System](#) (415-01 Information and Entertainment System, Diagnosis and Testing).

• **NOTE:** Generic scan tools may not read the codes listed, or may read only five digit codes. Match the five digits from the scan tool to the first five digits of the seven digit code listed to identify the fault (the last two digits give additional information read by the manufacturer approved diagnostic system).

• **NOTE:** When performing electrical voltage or resistance tests, always use a digital multimeter (DMM) accurate to three decimal places, and with an up-to-date calibration certificate. When testing resistance, always take the resistance of the DMM leads into account.

• **NOTE:** Check and rectify basic faults before beginning diagnostic routines involving pinpoint tests.

• **NOTE:** Inspect connectors for signs of water ingress, and pins for damage and/or corrosion.

• **NOTE:** If DTCs 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.

DTC	Description	Possible Cause	Action
B108F23	Cabin Lock/Unlock Switch	● Signal stuck low	Carry out the pinpoint test associated with this DTC using the manufacturer approved diagnostic system
B109C15	Front Courtesy Light	● Short to power or open circuit	Refer to the electrical circuit diagrams and test front courtesy light circuit for short to power or open circuit
B109D11	Front Courtesy Light	● Short to ground	Refer to the electrical circuit diagrams and test front courtesy light circuit for short ground
B10EB11	Driver door double locking motor	● Short to ground	Refer to the electrical circuit diagrams and test driver door double locking motor circuit for short ground
B10EB15	Driver door double locking motor	● Short to power or open circuit	Refer to the electrical circuit diagrams and test driver door double locking motor circuit for short to power or open circuit
B10EC11	Passenger door double locking motor	● Short to ground	Refer to the electrical circuit diagrams and test passenger door double locking motor circuit for short ground
B10EC15	Passenger door double locking motor	● Short to power or open circuit	Refer to the electrical circuit diagrams and test passenger door double locking motor circuit for short to power or open circuit

DTC	Description	Possible Cause	Action
B10ED11	Rear door driver side double locking motor	● Circuit short to ground	Refer to the electrical circuit diagrams and check rear door driver side double locking motor control circuit for short to ground
B10ED15	Rear door driver side double locking motor	● Circuit short to power or open	Refer to the electrical circuit diagrams and check rear door driver side double locking motor control circuit for short to power, open circuit
B10EE11	Rear door passenger side double locking motor	● Circuit short to ground	Refer to the electrical circuit diagrams and check rear door passenger side double locking motor control circuit for short to ground
B10EE15	Rear door passenger side double locking motor	● Circuit short to power or open	Refer to the electrical circuit diagrams and check rear door passenger side double locking motor control circuit for short to power, open circuit
B110811	Driver door central locking motor	● Short to ground	Refer to the electrical circuit diagrams and test driver door central locking motor circuit for short ground
B110815	Driver door central locking motor	● Short to power or open circuit	Refer to the electrical circuit diagrams and test driver door central locking motor circuit for short to power or open circuit
B110911	Passenger door central locking motor	● Short to ground	Refer to the electrical circuit diagrams and test passenger door central locking motor circuit for short ground
B110915	Passenger door central locking motor	● Short to power or open circuit	Refer to the electrical circuit diagrams and test passenger door central locking motor circuit for short to power or open circuit
B110A11	Rear door driver side central locking motor	● Circuit short to ground	Refer to electrical circuit diagrams and check rear door driver side central locking motor control circuit for short to ground
B110A15	Rear door driver side central locking motor	● Circuit short to power or open	Refer to electrical circuit diagrams and check rear door driver side central locking motor control circuit for short to power, open circuit
B110B11	Rear door passenger side central locking motor	● Circuit short to ground	Refer to electrical circuit diagrams and check rear door passenger side central locking motor control circuit for short to ground
B110B15	Rear door passenger side central locking motor	● Circuit short to power or open	Refer to electrical circuit diagrams and check rear door passenger side central locking motor control circuit for short to power, open circuit
B116311	Left Mirror Heater Output short to ground	● Short to ground	Refer to the electrical circuit diagrams and test left mirror heater output circuit for short to ground
B116315	Left Mirror Heater Output short to power	● Short to power or open circuit	Refer to the electrical circuit diagrams and test left mirror heater output circuit for short to power or open circuit
B116411	Right Mirror Heater Output short to ground	● Short to ground	Refer to the electrical circuit diagrams and test right mirror heater output circuit for short to ground
B116415	Right Mirror Heater Output short to power	● Short to power or open circuit	Refer to the electrical circuit diagrams and test right mirror heater output circuit for short to power or open circuit
B116511	Left Front Puddle Lamp Output short to ground	● Short to ground	Refer to the electrical circuit diagrams and test left front puddle lamp output circuit for short to ground
B116515	Left Front Puddle Lamp Output open load or short to power	● Short to power or open circuit	Refer to the electrical circuit diagrams and test left front puddle lamp output circuit for short to power or open circuit
B116611	Right Front Puddle Lamp Output short to ground	● Short to ground	Refer to the electrical circuit diagrams and test right front puddle lamp output circuit for short to ground
B116615	Right Front Puddle Lamp Output open load or short to power	● Short to power or open circuit	Refer to the electrical circuit diagrams and test right front puddle lamp output circuit for short to power or open circuit
B117C07	Rear Power Window up	● Mechanical Failure	Check for mechanical failure of rear window mechanism
B117C72	Rear Power Window up	● Actuator Stuck Open	Clear DTC and re-test. If DTC returns, install a new rear door module, refer to the new module installation note at the top of the DTC Index
B117C73	Rear Power Window up	● Actuator Stuck Closed	Clear DTC and re-test. If DTC returns, install a new rear door module, refer to the new module installation note at the top of the DTC Index
B117C92	Rear Power Window up	● Performance or incorrect operation	Refer to electrical circuit diagrams and check power and ground supplies to rear door module
B117D72	Rear Power Window down	● Actuator Stuck Open	Clear DTC and re-test. If DTC returns, install a new rear door module, refer to the new module installation note at the top of the DTC Index
B117D73	Rear Power Window down	● Actuator Stuck Closed	Clear DTC and re-test. If DTC returns, install a new rear door module, refer to the new module installation note at the top of the DTC Index
B117E07	Front Power Window up	● Mechanical failure	Check for mechanical failure of front window mechanism

DTC	Description	Possible Cause	Action
B117E72	Front Power Window up	Actuator stuck open	Clear DTC and re-test. If DTC returns, install a new DDM/PDM, refer to the new module installation note at the top of the DTC Index
B117E73	Front Power Window up	Actuator stuck closed	Clear DTC and re-test. If DTC returns, install a new DDM/PDM, refer to the new module installation note at the top of the DTC Index
B117F72	Front Power Window down	Actuator stuck open	Clear DTC and re-test. If DTC returns, install a new DDM/PDM, refer to the new module installation note at the top of the DTC Index
B117F73	Front Power Window down	Actuator stuck closed	Clear DTC and re-test. If DTC returns, install a new DDM/PDM, refer to the new module installation note at the top of the DTC Index
B118929	Front Window Position Sensor	Signal invalid	Carry out pinpoint tests associated with this DTC using the manufacturer approved diagnostic system
B118A29	Rear Window Position Sensor	Signal invalid	Carry out pinpoint tests associated with this DTC using the manufacturer approved diagnostic system
B11D183	LIN Bus Circuit "C"	Value of signal protection calculation incorrect	Refer to the electrical circuit diagrams and test LIN circuit between driver switch pack and DDM for short/open circuits, clear DTC and re-test. If DTC remains install a new switch pack. REFER to: Driver Door Window Control Switch (501-11 Glass, Frames and Mechanisms, Removal and Installation).
B11D186	LIN Bus Circuit "C"	Signal Invalid	Refer to the electrical circuit diagrams and test LIN circuit between driver switch pack and DDM for short/open circuits, clear DTC and re-test. If DTC remains install a new switch pack. REFER to: Driver Door Window Control Switch (501-11 Glass, Frames and Mechanisms, Removal and Installation).
B11D187	LIN Bus Circuit "C"	Missing Message	Refer to the electrical circuit diagrams and test LIN circuit between driver switch pack and DDM for short/open circuits, clear DTC and re-test. If DTC remains install a new switch pack. REFER to: Driver Door Window Control Switch (501-11 Glass, Frames and Mechanisms, Removal and Installation).
B11F611	Driver Folding Mirror Motor	Short To Ground	Refer to electrical circuit diagrams and check driver folding mirror motor for short to ground
B11F615	Driver Folding Mirror Motor	Short to power or open	Refer to electrical circuit diagrams and check driver folding mirror motor for short to power, open circuit
B11F711	Passenger Folding Mirror Motor	Short To Ground	Refer to electrical circuit diagrams and check passenger folding mirror motor for short to ground
B11F715	Passenger Folding Mirror Motor	Short to power or open	Refer to electrical circuit diagrams and check passenger folding mirror motor for short to power, open circuit
B1A9411	Driver Mirror	Short to ground	Refer to the electrical circuit diagrams and test driver mirror fold motor circuit for short to ground
B1A9415	Driver Mirror	Short to power or open circuit	Refer to the electrical circuit diagrams and test driver mirror fold motor circuit for short to power or open circuit
B1A9511	Passenger Mirror	Short to ground	Refer to the electrical circuit diagrams and test passenger mirror fold motor circuit for short to ground
B1A9515	Passenger Mirror	Short to power or open circuit	Refer to the electrical circuit diagrams and test passenger mirror fold motor circuit for short to power or open circuit
B1A9883	LIN Bus Circuit #1	Value of signal protection calculation incorrect	Carry out the pinpoint test associated with this DTC using the manufacturer approved diagnostic system. Refer to the electrical circuit diagrams and test LIN circuit between driver side rear door module and DDM for short/open circuits, clear DTC and re-test. If DTC remains install a new switch pack. REFER to: Driver Door Window Control Switch (501-11 Glass, Frames and Mechanisms, Removal and Installation).
B1A9886	LIN Bus Circuit #1	Signal Invalid	Refer to the electrical circuit diagrams and test LIN circuit between driver side rear door module and DDM for short/open circuits, clear DTC and re-test. If DTC remains install a new switch pack. REFER to: Driver Door Window Control Switch (501-11 Glass, Frames and Mechanisms, Removal and Installation).
B1A9887	LIN Bus Circuit #1	Missing Message	Refer to the electrical circuit diagrams and test LIN circuit between driver side rear door module and DDM for short/open circuits, clear DTC and re-test. If DTC remains install a new switch pack. REFER to: Driver Door Window Control Switch (501-11 Glass, Frames and Mechanisms, Removal and Installation).

DTC	Description	Possible Cause	Action
B1C0911	Driver Left/Right Mirror Motor Circuit	Short to ground	Refer to the electrical circuit diagrams and test driver left/right mirror motor circuit for short to ground
B1C0915	Driver Left/Right Mirror Motor Circuit	Short to power or open circuit	Refer to the electrical circuit diagrams and test driver left/right mirror motor circuit for short to power or open circuit
B1C1011	Driver Up/Down Mirror Motor Circuit	Short to ground	Refer to the electrical circuit diagrams and test driver up/down mirror motor circuit for short to ground
B1C1015	Driver Up/Down Mirror Motor Circuit	Short to power or open circuit	Refer to the electrical circuit diagrams and test driver up/down mirror motor circuit for short to power or open circuit
B1C1111	Passenger Left/Right Mirror Motor Circuit	Short to ground	Refer to the electrical circuit diagrams and test passenger left/right mirror motor circuit for short to ground
B1C1115	Passenger Left/Right Mirror Motor Circuit	Short to power or open circuit	Refer to the electrical circuit diagrams and test passenger left/right mirror motor circuit for short to power or open circuit
B1C1211	Passenger Up/Down Mirror Motor Circuit	Short to ground	Refer to the electrical circuit diagrams and test passenger up/down mirror motor circuit for short to ground
B1C1215	Passenger Up/Down Mirror Motor Circuit	Short to power or open circuit	Refer to the electrical circuit diagrams and test passenger up/down mirror motor circuit for short to power or open circuit
B1C1311	Driver Up/Down Mirror Motor Feedback Circuit	Short to ground	Refer to the electrical circuit diagrams and test driver up/down mirror motor feedback circuit for short to ground
B1C1315	Driver Up/Down Mirror Motor Feedback Circuit	Short to power or open circuit	Refer to the electrical circuit diagrams and test driver up/down mirror motor feedback circuit for short to power or open circuit
B1C1411	Driver Left/Right Mirror Motor Feedback Circuit	Short to ground	Refer to the electrical circuit diagrams and test driver left/right mirror motor feedback circuit for short to ground
B1C1415	Driver Left/Right Mirror Motor Feedback Circuit	Short to power or open circuit	Refer to the electrical circuit diagrams and test driver left/right mirror motor feedback circuit for short to power or open circuit
B1C1511	Passenger Up/Down Mirror Motor Feedback Circuit	Short to ground	Refer to the electrical circuit diagrams and test passenger up/down mirror motor feedback circuit for short to ground
B1C1515	Passenger Up/Down Mirror Motor Feedback Circuit	Short to power or open circuit	Refer to the electrical circuit diagrams and test passenger up/down mirror motor feedback circuit for short to power or open circuit
B1C1611	Passenger Left/Right Mirror Motor Feedback Circuit	Short to ground	Refer to the electrical circuit diagrams and test passenger left/right mirror motor feedback circuit for short to ground
B1C1615	Passenger Left/Right Mirror Motor Feedback Circuit	Short to power or open circuit	Refer to the electrical circuit diagrams and test passenger left/right mirror motor feedback circuit for short to power or open circuit
B1C3929	Key Lock Switch	Signal invalid	Carry out the associated pinpoint tests associated with this DTC using the manufacturer approved diagnostic system
C1B1411	Sensor Supply #1	Short to ground	Refer to the electrical circuit diagrams and test front window sensor supply circuit for short to ground
C1B1415	Sensor Supply #1	Short to power or open circuit	Refer to the electrical circuit diagrams and test front window sensor supply circuit for short to power or open circuit
C1B1511	Sensor Supply #2	Short to ground	Refer to the electrical circuit diagrams and test rear window sensor supply circuit for short to ground
C1B1515	Sensor Supply #2	Short to power or open circuit	Refer to the electrical circuit diagrams and test rear window sensor supply circuit for short to power or open circuit
U001000	Medium speed CAN communication Bus	Medium speed CAN communication Bus	Carry out pinpoint tests associated with this DTC using the manufacturer approved diagnostic system
U014000	Lost communication with CJB	Logged when subscribed CAN message missing from CJB	Carry out pinpoint tests associated with this DTC using the manufacturer approved diagnostic system
U020800	Lost communication With Driver Seat Module (DSM)	Missing message	Carry out pinpoint tests associated with this DTC using the manufacturer approved diagnostic system
U030000	Internal control module software incompatibility	Invalid configuration message is received	Re-configure the CJB using the manufacturer approved diagnostic system. Clear the DTC and retest. If the DTC is still logged suspect the DDM/PDM, refer to the new module installation note at the top of the DTC Index
U200224	Switch	Signal stuck high	Clear DTC and re-test. If DTC remains, install a new passenger side window switch
U200424	Auxiliary Switch Pack	Signal stuck high	Carry out the pinpoint tests associated with this DTC using the manufacturer approved diagnostic system

DTC	Description	Possible Cause	Action
U201011	Switch illumination	● Circuit short to ground	Carry out CAN network tests using the manufacturer approved diagnostic system
U201012	Switch illumination	● Circuit short to power	Carry out CAN network tests using the manufacturer approved diagnostic system
U201208	Car Configuration Parameter(s)	● Bus signal/message failures	Cycle the ignition status and re-test. If DTC remains, re-configure the RJB using the manufacturer approved diagnostic system
U201324	Switch Pack	● Signal stuck high	Carry out the pinpoint tests associated with this DTC using the manufacturer approved diagnostic system. Clear DTC and re-test. If DTC remains, install a new driver side window switch pack. REFER to: Driver Door Window Control Switch (501-11 Glass, Frames and Mechanisms, Removal and Installation).
U201444	Control module hardware	● Data Memory Failure	Install a new DDM/PDM, refer to the new module installation note at the top of the DTC Index
U210000	Initial configuration not complete	● No sub type information	Re-configure the DDM/PDM using the manufacturer approved diagnostic system
U300049	Control module	● Internal electronic failure	Install a new DDM/PDM, refer to the new module installation note at the top of the DTC Index
U300255	Vehicle Identification Number (VIN)	● Not configured	Re-configure the relevant module as new using the manufacturer approved diagnostic system and re-test. If DTC remains install a new module, refer to the new module installation note at the top of the DTC Index
U300281	Vehicle Identification Number (VIN)	● Vehicle/component mis-match. Corrupt VIN data being transmitted, module previously installed to other vehicle	Install original module, check for DTCs and refer to relevant DTC Index
U300362	power voltage	● Mis-match of power voltage, of 2 volts or lower, between DDM/PDM and CJB	Carry out pinpoint tests associated with this DTC using the manufacturer approved diagnostic system

Multifunction Electronic Modules - Front Door Module (FDM)

Removal and Installation

Removal

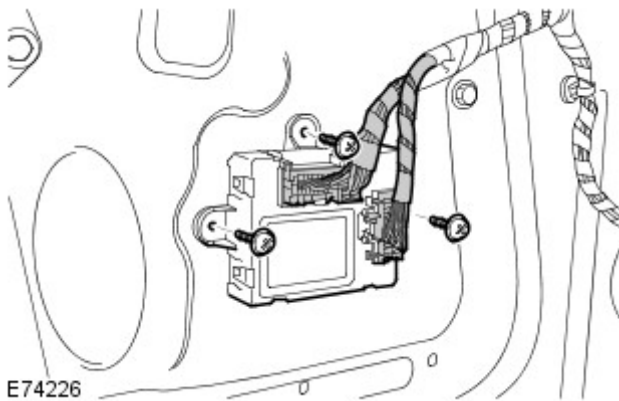
1. Disconnect the battery ground cable.

Refer to: [Specifications](#) (414-00 Battery and Charging System - General Information, Specifications).

2. Remove the front door trim panel.

Refer to: [Rear Door Trim Panel](#) (501-05 Interior Trim and Ornamentation, Removal and Installation).

- 3.



Installation

1. To install, reverse the removal procedure.

2. Connect the battery ground cable.

Refer to: [Specifications](#) (414-00 Battery and Charging System - General Information, Specifications).

3. If a new component has been installed, configure using Land Rover approved diagnostic equipment.

Multifunction Electronic Modules - Rear Door Module (RDM)

Removal and Installation

Removal

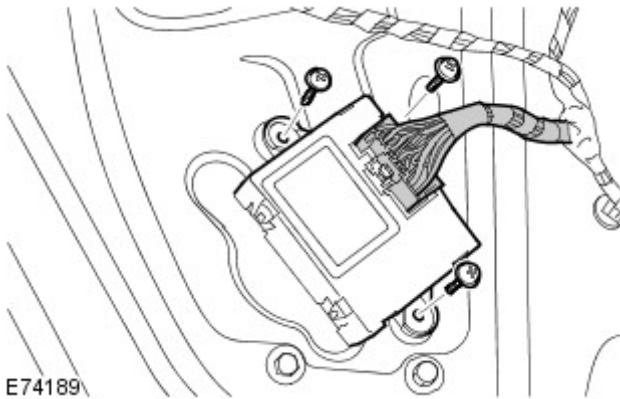
1. Disconnect the battery ground cable.

Refer to: [Specifications](#) (414-00 Battery and Charging System - General Information, Specifications).

2. Remove the rear door trim panel.

Refer to: [Rear Door Trim Panel](#) (501-05 Interior Trim and Ornamentation, Removal and Installation).

- 3.



Installation

1. To install, reverse the removal procedure.

2. Connect the battery ground cable.

Refer to: [Specifications](#) (414-00 Battery and Charging System - General Information, Specifications).

3. If a new component has been installed, configure using Land Rover approved diagnostic equipment.

Multifunction Electronic Modules - Driver Seat Module (DSM)

Removal and Installation

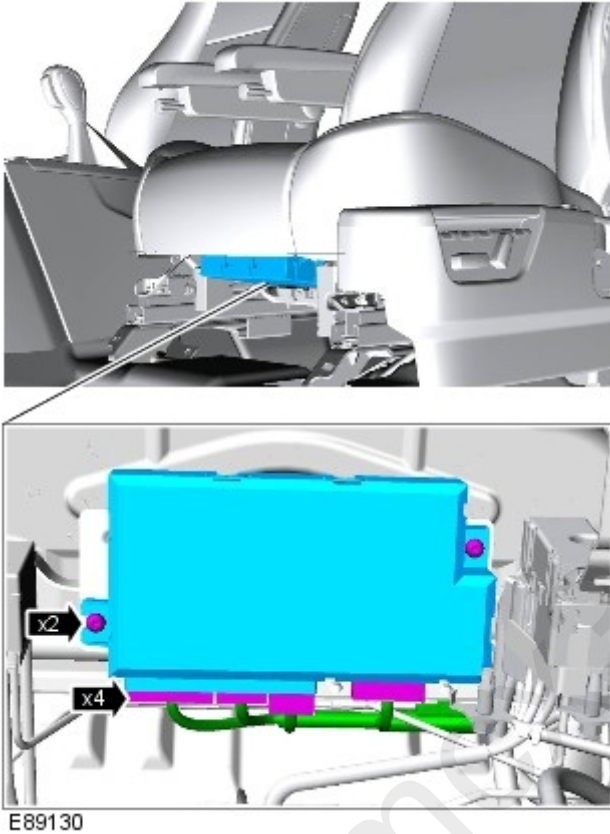
Removal

- NOTE: Removal steps in this procedure may contain installation details.

1. Remove the cover and disconnect the battery ground cable.

Refer to: [Specifications](#) (414-00 Battery and Charging System - General Information, Specifications).

2. Torque: 7 Nm



Installation

1. To install, reverse the removal procedure.
2. Using the Land Rover approved diagnostic system, calibrate a new module.