

General Information - General Service Information

Description and Operation

Introduction

This manual has been written in a format that is designed to meet the needs of Land Rover technicians worldwide and to assist them in the efficient repair and maintenance of Land Rover vehicles.

This manual provides descriptions and methods for accomplishing adjustment, service and repair work using tested and effective procedures. Following these procedures will help ensure product reliability.

Special Tools

The Special Tool(s) Table provided at the beginning of each procedure lists the special tool(s) required to carry out repair operations within that specific procedure. Wherever possible, illustrations are provided which will assist technicians in identifying the special tool(s) required and also showing such tool(s) in use.

Special tools may be obtained from the manufacturer, SPX Tools, the addresses of their branches will be found in the Special Tools Glossary.

For additional information, refer to: [Special Tool Glossary](#) (100-00 General Information, Description and Operation).

Important Safety Instructions

Appropriate service methods and correct repair procedures are essential for the safe and reliable operation of all motor vehicles as well as ensuring the personal safety of the individual carrying out the work.

This manual cannot possibly anticipate all such variations and provide advice or cautions as to each. Any person who departs from the instructions provided in this manual must first establish that they compromise neither their personal safety nor the vehicle integrity by their choice of methods, tools or parts.

Individuals who undertake their own repairs should have some skill or training and limit repairs to components which could not affect the safety of the vehicle or its passengers. Any repairs required to safety critical items such as steering, brakes, suspension or supplemental restraint system should be carried out by a Land Rover Dealer. Repairs to such items should NEVER be attempted by untrained individuals.

Warnings, Cautions and Notes which appear in this manual

As you read through this manual, you will come across Warnings, Cautions and Notes. A Warning, Caution or Note is placed at the beginning of a series of steps. If the warning, caution or note only applies to one step, it is placed at the beginning of the specific step after the step number.

Warnings, Cautions and Notes have the following meanings:

Warning: Procedures which must be followed to avoid the possibility of personal injury.

Caution: Calls attention to procedures which must be followed to avoid damage to components.

Note: Gives helpful information.

References

References to the Left Hand (LH) or Right Hand (RH) side given in this manual are made when viewing the vehicle or unit from the rear.

Fault Diagnostic Equipment

The vehicle is equipped with a number of electronic control systems to provide optimum performance of the vehicle's systems.

Land Rover approved diagnostic equipment is available and must be used where specified. The use of this equipment will assist with the fault diagnostic abilities of the Dealer workshop. In particular, the equipment can be used to interrogate the electronic systems for diagnosis of faults which may become evident during the life of the vehicle.

This manual is produced as a reference source to supplement Land Rover approved diagnostic equipment.

Features of the equipment include:

- a. Fully upgradeable support for the technician
- b. Structured diagnostics to accommodate all skill levels
- c. Direct print-out of screen information and test results

Testing the vehicle

Operations covered in this manual do not include reference to testing the vehicle after repair. It is essential that work is inspected and tested after completion and if necessary, a road test of the vehicle is carried out, particularly where safety related items are concerned.

Repairs and Replacement Parts

Land Rover parts are manufactured to the same exacting standards as the original factory fitted components. For this reason, it is essential that only genuine Land Rover parts are used during maintenance or repair.

Attention is particularly drawn to the following points concerning repairs and the fitting of replacement parts and accessories.

Safety features and corrosion prevention treatments embodied in the vehicle may be impaired if other than Land Rover recommended parts are fitted. In certain territories, legislation prohibits the fitting of parts not to manufacturer's specification. Torque wrench setting figures, where given, must be adhered to and locking devices, where specified must be used. If the efficiency of a locking device is impaired during removal it must be replaced.

Owners purchasing accessories whilst travelling abroad must ensure that the accessory and its fitted location on the vehicle conform to legal requirements.

The terms of the vehicle warranty may be invalidated by the fitting of parts other than those recommended by Land Rover.

NOTE: The fitting of non-approved Land Rover parts and accessories or the carrying out of non-approved alterations or conversions may be dangerous. Any of the foregoing could affect the safety of the vehicle and occupants; also, the terms and conditions of the vehicle warranty may also be invalidated .

All Land Rover recommended parts have the full backing of the vehicle warranty.

Land Rover Dealers are obliged to supply only Land Rover recommended parts.

Specifications

Land Rover are constantly seeking to improve the specification, design and production of their vehicles and alterations take place accordingly. Whilst every effort is made to ensure the accuracy of this Manual, it should not be regarded as an infallible guide to current specifications of any particular vehicle.

This Manual does not constitute an offer for sale of any particular vehicle. Land Rover dealers are not agents of Land Rover and have no authority to bind the manufacturer by any expressed or implied undertaking or representation.

General Information - About This Manual

Description and Operation

Introduction

This manual has been written in a format that is designed to meet the needs of technicians worldwide. The objective is to use common formats and include similar content in each manual.

This manual provides general descriptions for accomplishing diagnosis and testing, service and repair work with tested and effective techniques. Following them will help to ensure reliability.

Important Safety Instructions

Appropriate service methods and correct repair procedures are essential for the safe, reliable operation of all motor vehicles as well as the personal safety of the individual carrying out the work.

Anyone who departs from the instructions provided in this manual must first establish that personal safety or vehicle integrity is not compromised by the choice of method, tools or components.

Warnings, Cautions and Notes in This Manual



WARNING: Warnings are used to indicate that failure to follow a procedure correctly may result in personal injury.



CAUTION: Cautions are used to indicate that failure to follow a procedure correctly may result in damage to the vehicle or equipment being used.

NOTE: Notes are used to provide additional essential information required to carry out a complete and satisfactory repair.

Generic warnings or cautions are in their relevant description and operation procedure within section 100-00. If the generic warnings or cautions are required for a procedure, there will be a referral to the appropriate description and operation procedure.

If a warning, caution or note only applies to one step, it is placed at the beginning of the specific step.

Trustmark Authoring Standards (TAS) Removal and Installation Procedures

NOTE: TAS style procedures can be identified by steps that have no accompanying step text and the magenta color of the electrical connectors and fasteners such as nuts, bolts, clamps or clips.

A TAS removal and installation procedure uses a sequence of color illustrations to indicate the order to be followed when removing/disassembling or installing/assembling a component.

Many of the TAS procedures will have the installation information within the removal steps. These procedures will have the following note at the beginning of the procedure:

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

Items such as O-ring seals, gaskets, seals, self-locking nuts and bolts are to be discarded and new components installed unless otherwise stated within the procedure. Coated nuts or bolts are to be reused, unless damaged or otherwise stated within the procedure.

Specification procedures will contain all technical data that are not part of a repair procedure.

TAS Graphics

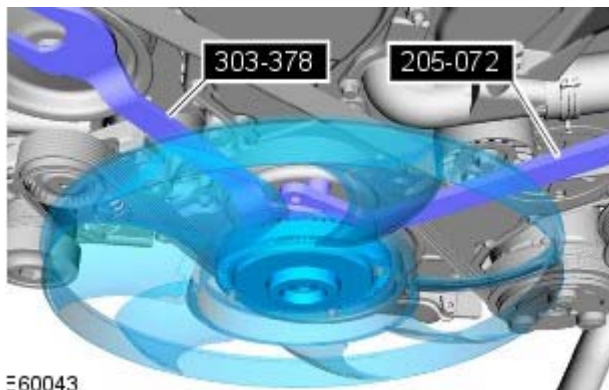
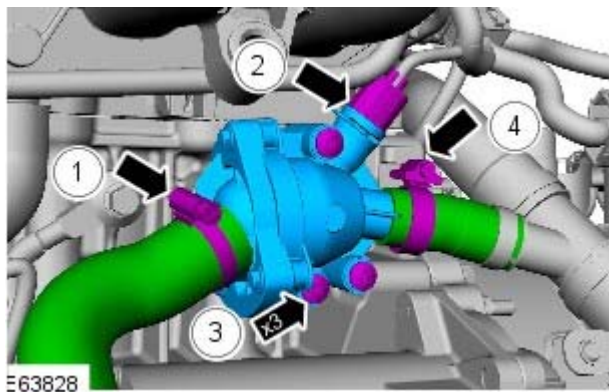
Colors used in the graphic are as follows:

- Blue - Indicates the target item, item to be removed/installed or disassembled/assembled
- Green and Brown - Indicates a secondary item that needs to be detached, removed/installed or disassembled/assembled prior to the target item
- Magenta - Indicates electrical connectors and fasteners such as nuts, bolts, clamps or clips
- Pale Blue - is for the special tool(s) and general equipment.

There may be multiple steps assigned to one illustration.

Numbered pointers are used to indicate the number of electrical connectors and fasteners such as nuts, bolts, clamps or clips.

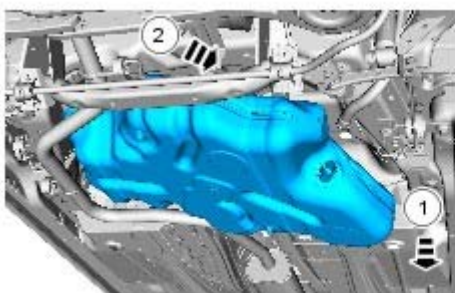
Items in the illustration can be transparent or use cutouts to show hidden detail(s).



TAS Symbols

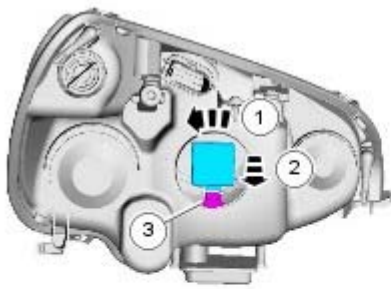
Symbols are used inside the graphics and in the text area to enhance the information display. The following paragraphs describe the various types and categories of symbols.

Prohibition symbols advise on prohibited actions to either avoid damage or health and safety related risks.



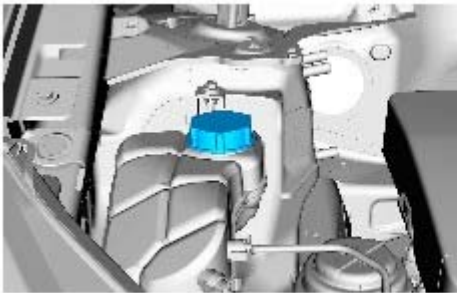
E85026

Health and Safety symbols recommend the use of particular protection equipment to avoid or at least reduce the risk or severity of possible injuries.



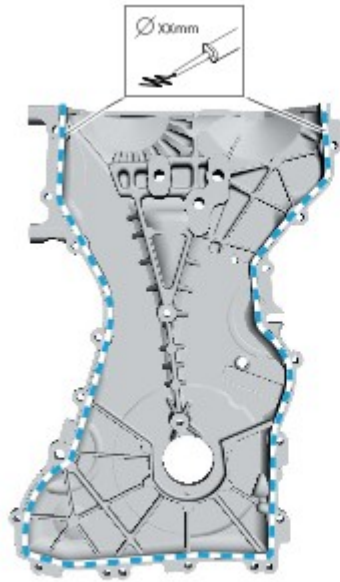
E8 5027

Warning symbols are used to indicate potential risks resulting from a certain component or area.



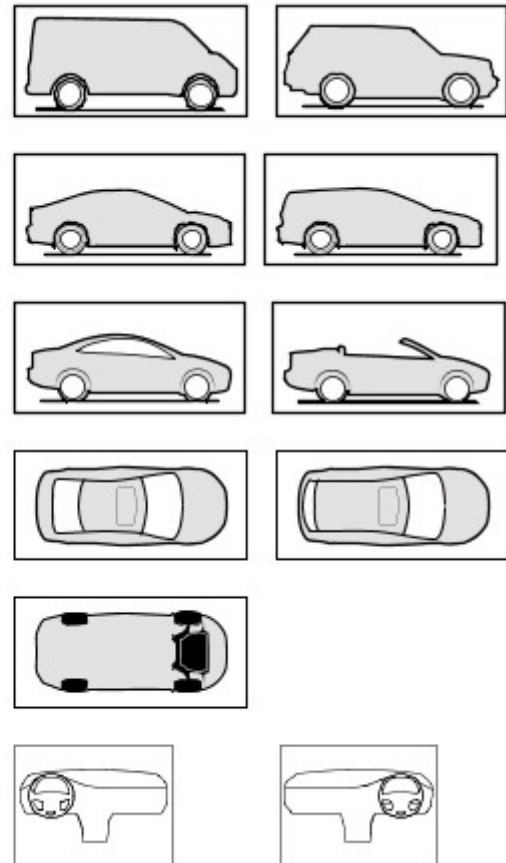
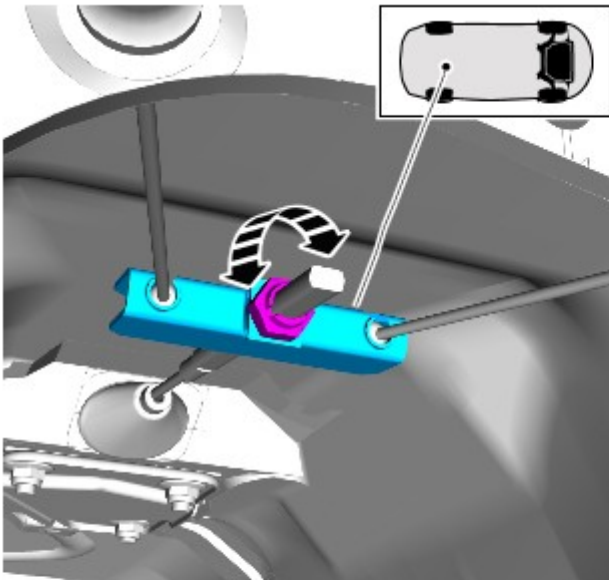
E8 5028

Instruction symbols are used to apply sealer, lubricant, weight, tape or cleaning detergent to a component.



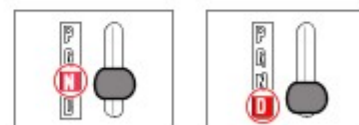
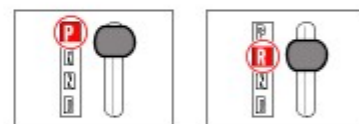
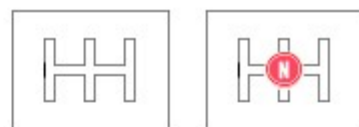
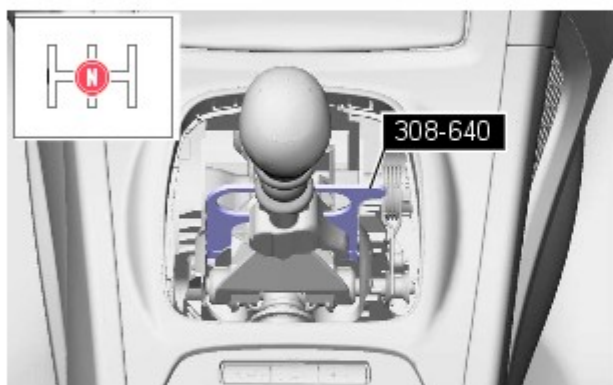
E84834

Location symbols are used to show the location of a component or system within the vehicle.



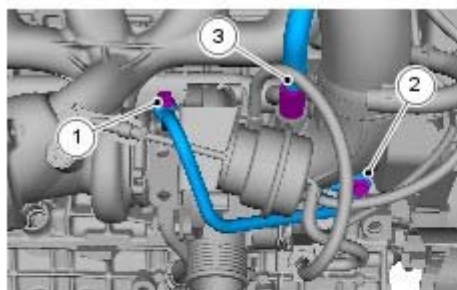
E84835

Gearshift lever or selector lever position symbols are used to show which gearshift lever or selector lever position is to be set.

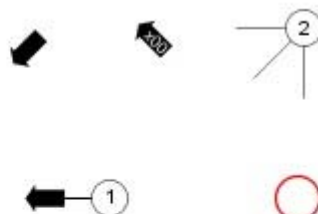


E84836

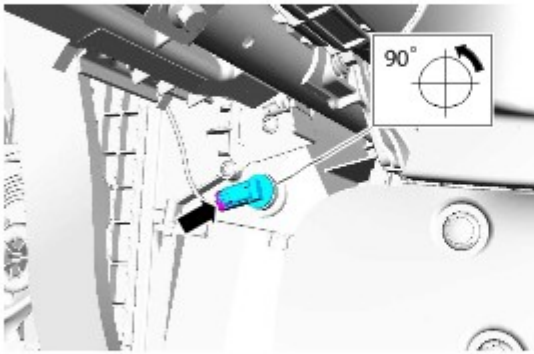
Pointer symbols are used to draw the attention to components and give special instructions such as a required sequence or number of components. The number of components is reflected by the value inside the luty arrow. A sequence number is located inside the circle. Numbers inside circles are also used to allocate special information such as tightening torques or chemicals to a particular component.



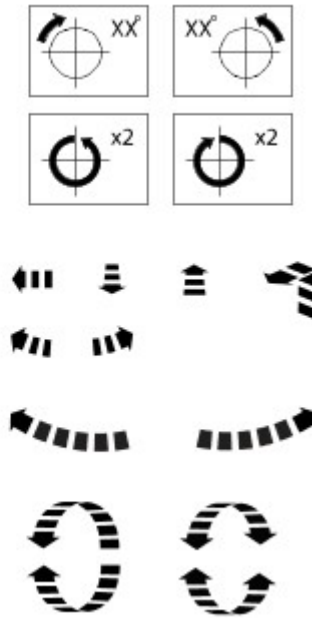
E84837



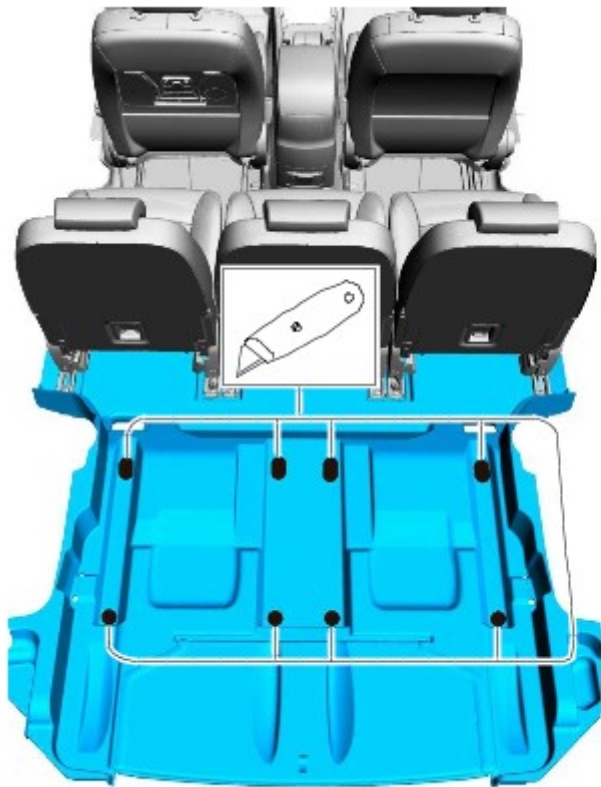
Movement arrows are used to show three dimensional or rotational movements. These movements can include specific values inside the symbol if required.



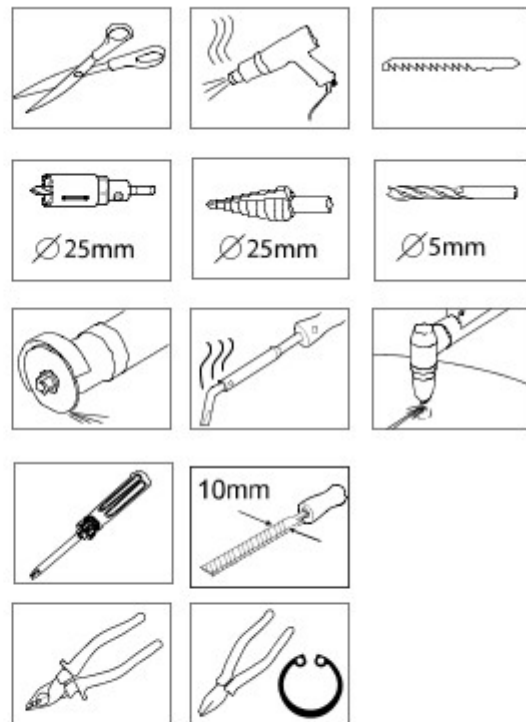
E84838



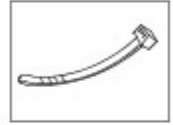
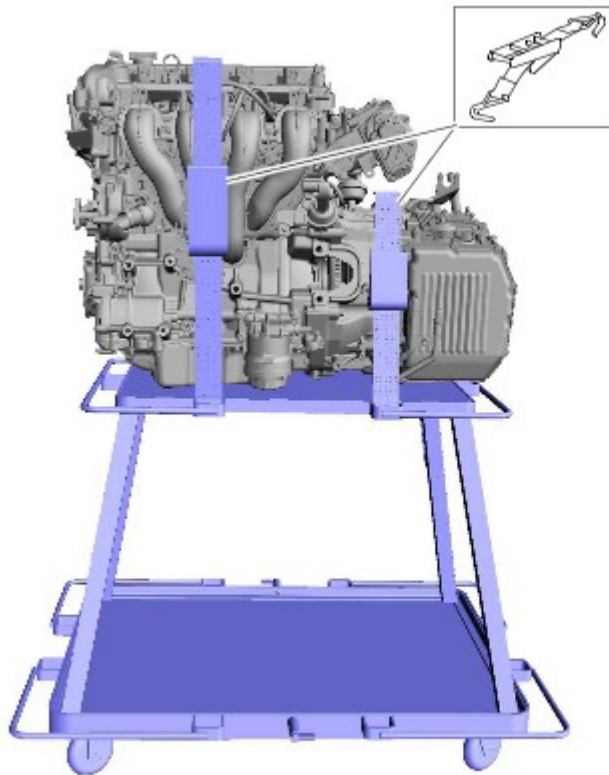
Standard tool symbols recommend the use of certain standard tools. These tools can include dimension values if required.



E84839

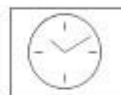
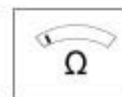
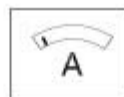
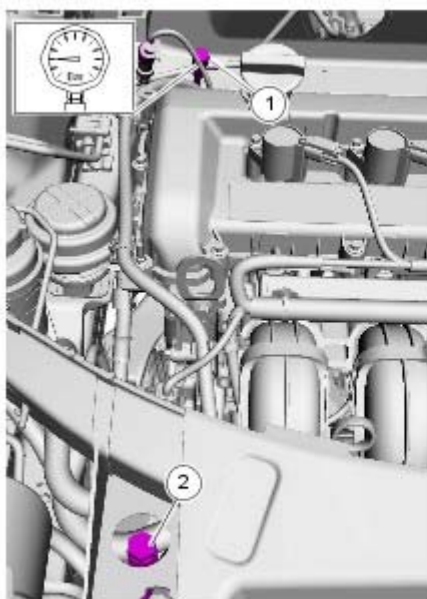


The following graphic illustrates a set of symbols that are used to provide detailed information on where to apply a material.



E84840

Measurement symbols provide detailed information on where to carry out a specific measurement. These symbols can include specific values if required.



E84841

Special Tools and Torque Figure(s)

Special tools will be shown with the tool number in the illustration. The special tool number(s), general equipment, material(s) and torque figure(s) used for the procedure step will be shown in the text column.

General Information - How To Use This Manual

Description and Operation

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How To Use This Manual

This manual covers all aspects necessary in order to service the vehicle effectively.

The manual is structured into five main sections, General Information, Chassis, Powertrain, Electrical and Body and Paint with each section dealing with a specific part of a vehicle system.

Each of the five main sections contain sub-sections dealing with items which form a part of that specific system.

Pages at the start of the manual list all sections available. Each section has a contents list detailing, where applicable, Specifications, Description and Operation, Diagnosis and Testing, General Procedures and Repair Procedures.

Where components need to be removed or disassembled in sequence, each operation in the sequence will be identified numerically and also graphically in an accompanying illustration.

All left-hand and right-hand references to the vehicle are taken from a position sitting in the driver seat looking forward.

All left-hand and right-hand references to the engine are taken from a position at the flywheel looking towards the front camshaft pulley.

Inspection and Verification

Visual Inspection Charts, Symptom Charts and other information charts (such as diagnostic routines) or supplement test procedures with technical specifications will navigate the user to a specific test procedure.

Symptom Chart

The symptom chart indicates symptoms, sources and actions to address a condition.

Pinpoint Tests

For electrical systems, pinpoint test steps are used to identify the source of a concern in a logical, step-by-step manner. Pinpoint tests have two columns: CONDITIONS and DETAILS/RESULTS/ACTIONS.

The CONDITIONS column is used exclusively for graphics and icons (with or without captions) and the DETAILS/RESULTS /ACTIONS column provides direction to another test step or specific corrective actions.

The boxed numbers indicate the order in which the described action is to be carried out.

Component Tests

A component test is used when a component is tested in multiple pinpoint tests, or if a procedure is too complicated to be formatted within a single page of the pinpoint test.

Graphics

Test graphics show the measurement or test to be carried out in a test step.

A representative tester graphic is used for voltmeters and ohmmeters.

If multiple measurements are made in a single graphic, the test leads are drawn with a solid line until the test lead splits to indicate the multiple measurements, at which point dashed lines are used.

Breakout box type testers are represented by a double circle test pin. Test pins are labelled with the pin number.

NOTE: Dimensions quoted are to design engineering specifications with service limits quoted, where applicable.

Workshop Manual Organization

The five main sections, together with the areas which they cover are given below:

- **Section 1** - General Information.
- **Section 2** - Chassis.
- **Section 3** - Powertrain.
- **Section 4** - Electrical.

- **Section 5** - Body and Paint.

Sub-section numbers appear after the initial section number, for example, **Section 412-01** covers Climate Control, which is part of the electrical section.

In the number given above, the first digit of the number '**4**' indicates the section **i.e. Electrical**.

The second and third digits '**12**' of the number indicate the vehicle system **i.e. Climate Control**.

The last two digits of the number '**01**' indicate the part of the system covered by the sub-section **i.e. Air Conditioning (A/C) Compressor**.

General Information - Solvents, Sealants and Adhesives

Description and Operation

Solvents



WARNING: Always handle all solvents, sealers and adhesives with extreme care. Some contain chemicals or give off fumes which can be dangerous to health. Always follow the manufacturers instructions. If in doubt about any substance, particularly a solvent, DO NOT use it.



CAUTION: If in doubt about the suitability of any proprietary solvent or sealer for a particular application, contact the manufacturer of the product for information.

The Health and Safety Precautions subsection refers to some commonly used chemicals and materials, hazards associated with their use, and safety measures to be taken. Some of these chemicals may be included as an ingredient in a sealer or adhesive.

Sealers

Certain procedures in this manual involve the use of sealants during installation of components. Where a sealant is required, the application, together with the Land Rover part number is given in the General Specification at the start of each section and an instruction that a sealant must be used appears in the relevant repair procedure.

It is essential that the sealant(s) specified for a particular procedure are used, DO NOT use any other sealant.

Always remove traces of old sealant using a plastic scraper or suitable solvent, never use emery cloth or metal scrapers.

Adhesives

Whenever a procedure involves the use of an adhesive, the adhesive specified must be used and the manufacturer's instructions regarding application together with any health and safety precautions must be followed.

General Information - Road/Roller Testing

Description and Operation

Road or rolling road testing may be carried out for various reasons and a procedure detailing pre-test checks, through engine starting and stopping, pre-driving checks, on-test checks to final checks on completion of the test are given.

Unless complete vehicle performance is being checked, the full road test procedure need not be carried out. Instead, those items particularly relevant to the system(s) being checked can be extracted.

Pre-Test Checks



WARNING: If the brake system hydraulic fluid level is low, pedal travel is excessive or a hydraulic leak is found, do not attempt to road test the vehicle until the reason for the low fluid level, excessive pedal travel or hydraulic leak is found and rectified.

It is suggested that pre-test and functional tests of those systems/circuits which affect the safe and legal operations of the vehicle, such as brakes, lights and steering, should always be carried out before the road or rolling road test.

- Engine oil level
- Engine coolant level
- Tires, for correct pressure, compatible types and tread patterns, and wear within limits.
- There is sufficient fuel in the tank to complete the test.
- Check all around the engine, transmission and under the vehicle for oil, coolant, hydraulic and fuel leaks. Make a note of any apparent leaks and wipe off the surrounding areas to make it easier to identify the extent of the leak on completion of the test.

Starting the Engine

NOTE: On initial drive away from cold and within the first 1.5 km (1 mile), do not depress accelerator pedal beyond half travel until the vehicle has attained a minimum speed of 25 km/h (15 miles/h). Never operate at high engine speed or with the accelerator pedal at full travel whilst the engine is cold.

With the ignition off, check:

- The parking brake is applied.
- **Automatic transmission:** The selector lever is in 'P' - PARK.
- **Manual transmission:** The gear lever is in NEUTRAL.
- All instrument gauges read zero.

With the ignition on, check:

- Ignition controlled warning lights come on.
- Engine temperature gauge registers a reading compatible with the engine temperature.
- Fuel gauge registers a reading appropriate to the fuel level in the tank.
- The operation of the parking brake warning light and fluid level warning indicator light.

On Road Test Check:



CAUTION: At commencement of road testing, check the brake operation while still travelling at low speed before continuing with the test. If the brakes pull to one side, or appear to be otherwise faulty, do not continue with the road test until the fault has been found and rectified.

- The parking brake releases completely.
- Gear changing is smooth, and there are no abnormal noises or vibrations from the transmission.
- The engine power output is satisfactory, acceleration is smooth and accelerator pedal operation is not stiff or heavy, and engine speed returns to idle correctly.
- There is no excessive or abnormally colored smoke from the engine under normal driving, heavy load or overrun conditions.
- Steering operation is smooth, accurate, not excessively heavy or with excessive free play or vibration. Does not pull to one side and self centres smoothly after cornering.
- All instruments register the correct readings and operate correctly.
- Switches and controls operate smoothly and positively, warning or indicator lights operate correctly and the direction indicator control self cancels when the steering is returned to the straight ahead position.
- Heating and ventilation systems work correctly and effectively.
- Brakes operate efficiently.

Brake Testing

Avoid brake testing on busy roads where it can cause inconvenience or danger to other road users.



CAUTION: Brake testing which includes heavy brake applications should not be carried out with new brake pads/discs until the components have bedded-in. New brake friction components will not reach full efficiency until the bedding-in process is complete. Note that when new parking brake shoes or rear brake discs have been installed, it is essential that the 'bedding-in' procedure is carried out. For additional information, refer to: [Parking Brake Shoes Bedding-In](#) (206-05 Parking Brake and Actuation, General Procedures).

Test the brakes at several speeds within the normal operating range using both light and heavy pedal pressure. Note any tendency to snatch, pull or drag, and any undue delay in application or release.

Allow the vehicle to coast and note any tendency to pull to one side, or evidence that the brakes are binding.

After stopping the vehicle (not immediately after a period of heavy braking), carefully check the brake temperature. A disc which feels appreciably hotter than the others, could indicate that the pads on that disc are binding.

After completion of the test, check for:

- Oil, coolant, hydraulic, air and fuel leaks.
- Abnormal temperature of any moving components or assemblies, e.g. wheel hubs, transmission etc., which might indicate over tightness or lack of lubrication.

Rolling Road Testing

Four-Wheel Rolling Road



CAUTION: When utilising a four-wheel rolling road for testing, ensure all relevant health and safety requirements are adhered to.

Provided that front and rear rollers are rotating at identical speeds and that normal workshop safety standards are applied, there is no speed restriction during testing except any that may apply to the tires.

Ensure that the parking brake is released prior to engaging roller driving mechanism.

Two-Wheel Rolling Road



CAUTION: On no account should an attempt be made to carry out any form of testing on a two-wheel rolling road.

General Information - Special Tool Glossary

Description and Operation

Service Tools

Special service tools have been developed to facilitate removal, dismantling and assembly of mechanical components in a cost effective and time efficient manner. The use of such special tools also helps prevent the potential for damage to components.

Some operations described in this manual cannot be carried out properly without the aid of the relevant service tools.

All orders and enquiries from the United Kingdom and European countries except Germany, Austria, Switzerland and Spain and countries not in the following list should be sent direct to:

SPX UK Ltd.,

Genoa House,

Everdon Park,

Daventry,

Northants,

NN11 5YJ

England

Tel: 0044 (0) 1327 303467/303455

Fax: 0044 (0) 1327 706632

e-mail: spxsalesuk@servicesolutions.spx.com

Overseas orders for the following countries should be placed with the local distributor.

Germany, Austria and Switzerland

SPX Europe GMBH,

Porschestrasse 4,

63512 Hainburg,

Germany

Tel: 0049 61829590

Fax: 0049 6182959299

Spain

SPX Iberica SA,

C/Francisco Aritio,

158 nave 72 (Nudo Oeste),

19004 Guadalajara,

Spain

Tel: 0034 949208381

Fax: 0034 949208327

North America

SPX Corporation

665, Eisenhower Drive,

Owatonna,

MN 55060,

USA

Tel: 0018 772979110

Fax: 0018 005787375

Australia

SPX Australia,

28, Clayton Road,

Notting Hill,

Victoria 3168,

Australia

Tel: 0061 00395446222

Fax: 0061 00395445222

e-mail: sales@spx.com.au

Japan and East Asia

Jatek Ltd.,

5 - 53, Minawacho 2-chome,

Kohoku-ku,

Yokohama,

Kanagawa 223-0051,

Japan

Tel: 0081 455627700

Fax: 0081 455627800

General Information - Diagnostic Trouble Code (DTC) Index DTC: Audio Amplifier Module (AAM)

Description and Operation

NOTE: If a control module or component 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 program is in operation, before the replacement of a component.

NOTE: 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).

NOTE: When performing 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.

Description And Operation

For a detailed description of the audio amplifier system, refer to the relevant Description and Operation section in the workshop manual.

For additional information, refer to: [Audio System](#) (415-01 Information and Entertainment System, Description and Operation).

Audio Amplifier Module (AAM)

DTC	Description	Possible Cause	Action
B1A01-11	Speaker #1	<ul style="list-style-type: none"> Front Left Tweeter Speaker circuit - short to ground 	Refer to electrical circuit diagrams and check Front Left Tweeter Speaker circuit for short to ground
B1A01-12	Speaker #1	<ul style="list-style-type: none"> Front Left Tweeter Speaker circuit - short to power 	Refer to electrical circuit diagrams and check Front Left Tweeter Speaker circuit for short to power
B1A01-13	Speaker #1	<ul style="list-style-type: none"> Front Left Tweeter Speaker circuit - open circuit 	Refer to electrical circuit diagrams and check Front Left Tweeter Speaker circuit for open circuit
B1A01-1A	Speaker #1	<ul style="list-style-type: none"> Front Left Tweeter Speaker circuit - resistance below threshold 	Refer to electrical circuit diagrams and check Front left tweeter speaker connection for crossload
B1A01-49	Speaker #1	<ul style="list-style-type: none"> Internal electronic failure 	Install a new module, refer to the new module/component installation note at the top of the DTC Index
B1A02-11	Speaker #2	<ul style="list-style-type: none"> Front Right Tweeter Speaker circuit - short to ground 	Refer to electrical circuit diagrams and check Front Right Tweeter Speaker circuit for short to ground
B1A02-12	Speaker #2	<ul style="list-style-type: none"> Front Right Tweeter Speaker circuit - short to power 	Refer to electrical circuit diagrams and check Front Right Tweeter Speaker circuit for short to power
B1A02-13	Speaker #2	<ul style="list-style-type: none"> Front Right Tweeter Speaker circuit - open circuit 	Refer to electrical circuit diagrams and check Front Right Tweeter Speaker circuit for open circuit
B1A02-1A	Speaker #2	<ul style="list-style-type: none"> Front Right Tweeter Speaker circuit - resistance below threshold 	Refer to electrical circuit diagrams and check Front right tweeter speaker connection for crossload
B1A02-49	Speaker #2	<ul style="list-style-type: none"> Internal electronic failure 	Install a new module, refer to the new module/component installation note at the top of the DTC Index

DTC	Description	Possible Cause	Action
B1A03-11	Speaker #3	<ul style="list-style-type: none"> Front Left Woofer Speaker circuit - short to ground 	Refer to electrical circuit diagrams and check Front Left Woofer Speaker circuit for short to ground
B1A03-12	Speaker #3	<ul style="list-style-type: none"> Front Left Woofer Speaker circuit - short to power 	Refer to electrical circuit diagrams and check Front Left Woofer Speaker circuit for short to power
B1A03-13	Speaker #3	<ul style="list-style-type: none"> Front Left Woofer Speaker circuit - open circuit 	Refer to electrical circuit diagrams and check Front Left Woofer Speaker circuit for open circuit
B1A03-1A	Speaker #3	<ul style="list-style-type: none"> Front Left Woofer Speaker circuit - resistance below threshold 	Refer to electrical circuit diagrams and check Front left woofer speaker connection for crossload
B1A03-49	Speaker #3	<ul style="list-style-type: none"> Internal electronic failure 	Install a new module, refer to the new module/component installation note at the top of the DTC Index
B1A04-11	Speaker #4	<ul style="list-style-type: none"> Front Right Woofer Speaker circuit - short to ground 	Refer to electrical circuit diagrams and check Front Right Woofer Speaker circuit for short to ground
B1A04-12	Speaker #4	<ul style="list-style-type: none"> Front Right Woofer Speaker circuit - short to power 	Refer to electrical circuit diagrams and check Front Right Woofer Speaker circuit for short to power
B1A04-13	Speaker #4	<ul style="list-style-type: none"> Front Right Woofer Speaker circuit - open circuit 	Refer to electrical circuit diagrams and check Front Right Woofer Speaker circuit for open circuit
B1A04-1A	Speaker #4	<ul style="list-style-type: none"> Front Right Woofer Speaker circuit - resistance below threshold 	Refer to electrical circuit diagrams and check Front right woofer speaker connection for crossload
B1A04-49	Speaker #4	<ul style="list-style-type: none"> Internal electronic failure 	Install a new module, refer to the new module/component installation note at the top of the DTC Index
B1A05-11	Speaker #5	<ul style="list-style-type: none"> Rear Left Speaker circuit - short to ground 	Refer to electrical circuit diagrams and check Rear Left Speaker circuit for short to ground
B1A05-12	Speaker #5	<ul style="list-style-type: none"> Rear Left Speaker circuit - short to power 	Refer to electrical circuit diagrams and check Rear Left Speaker circuit for short to power
B1A05-13	Speaker #5	<ul style="list-style-type: none"> Rear Left Speaker circuit - open circuit 	Refer to electrical circuit diagrams and check Rear Left Speaker circuit for open circuit
B1A05-1A	Speaker #5	<ul style="list-style-type: none"> Rear Left Speaker circuit - resistance below threshold 	Refer to electrical circuit diagrams and check Rear left speaker connection for crossload
B1A05-49	Speaker #5	<ul style="list-style-type: none"> Internal electronic failure 	Install a new module, refer to the new module/component installation note at the top of the DTC Index
B1A06-11	Speaker #6	<ul style="list-style-type: none"> Rear Right Speaker circuit - short to ground 	Refer to electrical circuit diagrams and check Rear Right Speaker circuit for short to ground
B1A06-12	Speaker #6	<ul style="list-style-type: none"> Rear Right Speaker circuit - short to power 	Refer to electrical circuit diagrams and check Rear Right Speaker circuit for short to power
B1A06-13	Speaker #6	<ul style="list-style-type: none"> Rear Right Speaker circuit - open circuit 	Refer to electrical circuit diagrams and check Rear Right Speaker circuit for open circuit
B1A06-1A	Speaker #6	<ul style="list-style-type: none"> Rear Right Speaker circuit - resistance below threshold 	Refer to electrical circuit diagrams and check Rear right speaker connection for crossload
B1A06-49	Speaker #6	<ul style="list-style-type: none"> Internal electronic failure 	Install a new module, refer to the new module/component installation note at the top of the DTC Index

DTC	Description	Possible Cause	Action
B1A07-11	Speaker #7	<ul style="list-style-type: none"> Rear Left Surround Speaker circuit - short to ground 	Refer to electrical circuit diagrams and check Rear Left Surround Speaker circuit for short to ground
B1A07-12	Speaker #7	<ul style="list-style-type: none"> Rear Left Surround Speaker circuit - short to power 	Refer to electrical circuit diagrams and check Rear Left Surround Speaker circuit for short to power
B1A07-13	Speaker #7	<ul style="list-style-type: none"> Rear Left Surround Speaker circuit - open circuit 	Refer to electrical circuit diagrams and check Rear Left Surround Speaker circuit for open circuit
B1A07-1A	Speaker #7	<ul style="list-style-type: none"> Rear Left Surround Speaker circuit - resistance below threshold 	Refer to electrical circuit diagrams and check Rear left surround speaker connection for crossload
B1A07-49	Speaker #7	<ul style="list-style-type: none"> Internal electronic failure 	Install a new module, refer to the new module/component installation note at the top of the DTC Index
B1A08-11	Speaker #8	<ul style="list-style-type: none"> Rear Right Surround Speaker circuit - short to ground 	Refer to electrical circuit diagrams and check Rear Right Surround Speaker circuit for short to ground
B1A08-12	Speaker #8	<ul style="list-style-type: none"> Rear Right Surround Speaker circuit - short to power 	Refer to electrical circuit diagrams and check Rear Right Surround Speaker circuit for short to power
B1A08-13	Speaker #8	<ul style="list-style-type: none"> Rear Right Surround Speaker circuit - open circuit 	Refer to electrical circuit diagrams and check Rear Right Surround Speaker circuit for open circuit
B1A08-1A	Speaker #8	<ul style="list-style-type: none"> Rear Right Surround Speaker circuit - resistance below threshold 	Refer to electrical circuit diagrams and check Rear right surround speaker connection for crossload
B1A08-49	Speaker #8	<ul style="list-style-type: none"> Internal electronic failure 	Install a new module, refer to the new module/component installation note at the top of the DTC Index
B1A09-11	Speaker #9	<ul style="list-style-type: none"> Center Speaker circuit - short to ground 	Refer to electrical circuit diagrams and check Center Speaker circuit for short to ground
B1A09-12	Speaker #9	<ul style="list-style-type: none"> Center Speaker circuit - short to power 	Refer to electrical circuit diagrams and check Center Speaker circuit for short to power
B1A09-13	Speaker #9	<ul style="list-style-type: none"> Center Speaker circuit - open circuit 	Refer to electrical circuit diagrams and check Center Speaker circuit for open circuit
B1A09-1A	Speaker #9	<ul style="list-style-type: none"> Center Speaker circuit - resistance below threshold 	Refer to electrical circuit diagrams and check Center speaker connection for crossload
B1A09-49	Speaker #9	<ul style="list-style-type: none"> Internal electronic failure 	Install a new module, refer to the new module/component installation note at the top of the DTC Index
B1A10-11	Speaker #10	<ul style="list-style-type: none"> Left Subwoofer Speaker circuit - short to ground 	Refer to electrical circuit diagrams and check Left Subwoofer Speaker circuit for short to ground
B1A10-12	Speaker #10	<ul style="list-style-type: none"> Left Subwoofer Speaker circuit - short to power 	Refer to electrical circuit diagrams and check Left Subwoofer Speaker circuit for short to power
B1A10-13	Speaker #10	<ul style="list-style-type: none"> Left Subwoofer Speaker circuit - open circuit 	Refer to electrical circuit diagrams and check Left Subwoofer Speaker circuit for open circuit
B1A10-1A	Speaker #10	<ul style="list-style-type: none"> Left Subwoofer Speaker circuit - resistance below threshold 	Refer to electrical circuit diagrams and check Left subwoofer speaker connection for crossload

DTC	Description	Possible Cause	Action
B1A10-49	Speaker #10	<ul style="list-style-type: none"> Internal electronic failure 	Install a new module, refer to the new module/component installation note at the top of the DTC Index
B1A11-11	Speaker #11	<ul style="list-style-type: none"> Right Subwoofer Speaker circuit - short to ground 	Refer to electrical circuit diagrams and check Right Subwoofer Speaker circuit for short to ground
B1A11-12	Speaker #11	<ul style="list-style-type: none"> Right Subwoofer Speaker circuit - short to power 	Refer to electrical circuit diagrams and check Right Subwoofer Speaker circuit for short to power
B1A11-13	Speaker #11	<ul style="list-style-type: none"> Right Subwoofer Speaker circuit - open circuit 	Refer to electrical circuit diagrams and check Right Subwoofer Speaker circuit for open circuit
B1A11-1A	Speaker #11	<ul style="list-style-type: none"> Right Subwoofer Speaker circuit - resistance below threshold 	Refer to electrical circuit diagrams and check Right subwoofer speaker connection for crossload
B1A11-49	Speaker #11	<ul style="list-style-type: none"> Internal electronic failure 	Install a new module, refer to the new module/component installation note at the top of the DTC Index
B1D84-11	Headphone panel 1	<ul style="list-style-type: none"> Headphone panel 1 left or right signal circuit - short to ground 	Refer to electrical circuit diagrams and check headphone panel 1 left or right signal circuit for short to ground
B1D84-13	Headphone panel 1	<ul style="list-style-type: none"> Headphone panel 1 left or right signal circuit - open circuit 	Refer to electrical circuit diagrams and check headphone panel 1 left or right signal circuit for open circuit
B1D84-23	Headphone panel 1	<ul style="list-style-type: none"> Headphone panel 1 control line circuit - signal stuck low 	Refer to electrical circuit diagrams and check headphone panel 1 control line for short to ground. Check for stuck switch/button
B1D85-11	Headphone panel 2	<ul style="list-style-type: none"> Headphone panel 2 left or right signal circuit - short to ground 	Refer to electrical circuit diagrams and check headphone panel 2 left or right signal circuit for short to ground
B1D85-13	Headphone panel 2	<ul style="list-style-type: none"> Headphone panel 2 left or right signal circuit - open circuit 	Refer to electrical circuit diagrams and check headphone panel 2 left or right signal circuit for open circuit
B1D85-23	Headphone panel 2	<ul style="list-style-type: none"> Headphone panel 2 control line circuit - signal stuck low 	Refer to electrical circuit diagrams and check headphone panel 2 control line for short to ground. Check for stuck switch/button
B1D86-11	Headphone panel 3	<ul style="list-style-type: none"> Headphone panel 3 left or right signal circuit - short to ground 	Only 2 headphone panels available on this vehicle. If this DTC is logged, check/amend Car Configuration File to reflect 2 panels only using the manufacturer approved diagnostic system
B1D86-13	Headphone panel 3	<ul style="list-style-type: none"> Headphone panel 3 left or right signal circuit - open circuit 	Only 2 headphone panels available on this vehicle. If this DTC is logged, check/amend Car Configuration File to reflect 2 panels only using the manufacturer approved diagnostic system
B1D86-23	Headphone panel 3	<ul style="list-style-type: none"> Headphone panel 3 control line circuit - signal stuck low 	Only 2 headphone panels available on this vehicle. If this DTC is logged, check/amend Car Configuration File to reflect 2 panels only using the manufacturer approved diagnostic system
B1D87-11	Headphone panel 4	<ul style="list-style-type: none"> Headphone panel 4 left or right signal circuit - short to ground 	Only 2 headphone panels available on this vehicle. If this DTC is logged, check/amend Car Configuration File to reflect 2 panels only using the manufacturer approved diagnostic system
B1D87-13	Headphone panel 4	<ul style="list-style-type: none"> Headphone panel 4 left or right signal circuit - open circuit 	Only 2 headphone panels available on this vehicle. If this DTC is logged, check/amend Car Configuration File to reflect 2 panels only using the manufacturer approved diagnostic system
B1D87-23	Headphone panel 4	<ul style="list-style-type: none"> Headphone panel 4 control line circuit - signal stuck low 	Only 2 headphone panels available on this vehicle. If this DTC is logged, check/amend Car Configuration File to reflect 2 panels only using the manufacturer approved diagnostic system

DTC	Description	Possible Cause	Action
U3000-05	Control module - system programming failures	<ul style="list-style-type: none"> ● Software incompatibility ● The version of the Local Configuration file does not match that expected 	Re-configure the audio amplifier as an existing control module, using the manufacturer approved diagnostic system
U3000-42	Control module - general memory failure	<ul style="list-style-type: none"> ● General memory failure 	Re-configure the audio amplifier as an existing control module, using the manufacturer approved diagnostic system. Clear DTC, cycle ignition and read DTCs. If DTC returns, suspect audio amplifier module and install a new module. Refer to the new module/component installation note at the top of the DTC Index
U3000-44	Control module - data memory failure	<ul style="list-style-type: none"> ● Data memory failure 	Re-configure the audio amplifier as an existing control module, using the manufacturer approved diagnostic system. Clear DTC, cycle ignition and read DTCs. If DTC returns, suspect audio amplifier module and install a new module. Refer to the new module/component installation note at the top of the DTC Index
U3000-55	Control Module	<ul style="list-style-type: none"> ● Incorrect car configuration data received 	Check/up-date Car Configuration File using manufacturer approved diagnostic system
U3000-87	Control Module	<ul style="list-style-type: none"> ● Missing message 	Check CJB for DTCs and refer to DTC Index. For additional information, refer to: Communications Network (418-00 Module Communications Network, Diagnosis and Testing). Check information and entertainment module for Car Configuration File and MOST network DTCs and refer to relevant DTC Index. Carry out MOST/CAN network tests using the manufacturer approved diagnostic system
U3003-16	Battery Voltage	<ul style="list-style-type: none"> ● Circuit voltage below threshold 	Carry out pinpoint tests associated with this DTC using the manufacturer approved diagnostic system
U3003-17	Battery Voltage	<ul style="list-style-type: none"> ● Circuit voltage above threshold 	Carry out pinpoint tests associated with this DTC using the manufacturer approved diagnostic system

General Information - Diagnostic Trouble Code (DTC) Index **DTC: Anti-Lock Braking System (ABS)**

Description and Operation

NOTE: If a control module or component 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 program is in operation, before the replacement of a component.

NOTE: 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).

NOTE: When performing 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.

Description And Operation

For a detailed description of the anti lock breaking system, refer to the relevant Description and Operation section in the workshop manual.

For additional information, refer to: [Anti-Lock Control - Stability Assist](#) (206-09C Anti-Lock Control - Stability Assist, Description and Operation).

DTC	Description	Possible Cause	Action
B10DF-46	Master cylinder isolation valve - calibration / parameter memory failure	<ul style="list-style-type: none"> Valve not calibrated Internal ABS module failure 	<ul style="list-style-type: none"> Clear DTC and retest if DTC returns. Install a new ABS module, refer to the new module/component installation note at the top of the DTC Index
C0001-01	Master Cylinder Isolation Valve 1 - electrical failure	<ul style="list-style-type: none"> Internal ABS module fault 	<ul style="list-style-type: none"> Clear DTC and retest if DTC returns. Install a new ABS module, refer to the new module/component installation note at the top of the DTC Index
C0002-01	Master Cylinder Isolation Valve 2 - electrical failure	<ul style="list-style-type: none"> Internal ABS module fault 	<ul style="list-style-type: none"> Clear DTC and retest if DTC returns. Install a new ABS module, refer to the new module/component installation note at the top of the DTC Index
C0003-01	Low Pressure Feed Valve 1 - electrical failure	<ul style="list-style-type: none"> Internal ABS module fault 	<ul style="list-style-type: none"> Clear DTC and retest if DTC returns. Install a new ABS module, refer to the new module/component installation note at the top of the DTC Index
C0004-01	Low Pressure Feed Valve 2 - electrical failure	<ul style="list-style-type: none"> Internal ABS module fault 	<ul style="list-style-type: none"> Clear DTC and retest if DTC returns. Install a new ABS module, refer to the new module/component installation note at the top of the DTC Index
C0010-01	Left Front Inlet Control - General electrical failure	<ul style="list-style-type: none"> Internal ABS module fault 	<ul style="list-style-type: none"> Clear DTC and retest if DTC returns. Install a new ABS module, refer to the new module/component installation note at the top of the DTC Index
C0011-01	Left Front Outlet Control - General electrical failure	<ul style="list-style-type: none"> Internal ABS module fault 	<ul style="list-style-type: none"> Clear DTC and retest if DTC returns. Install a new ABS module, refer to the new module/component installation note at the top of the DTC Index
C0014-01	Right Front Inlet Control - General electrical failure	<ul style="list-style-type: none"> Internal ABS module fault 	<ul style="list-style-type: none"> Clear DTC and retest if DTC returns. Install a new ABS module, refer to the new module/component installation note at the top of the DTC Index
C0015-01	Right Front Outlet Control - General electrical failure	<ul style="list-style-type: none"> Internal ABS module fault 	<ul style="list-style-type: none"> Clear DTC and retest if DTC returns. Install a new ABS module, refer to the new module/component installation note at the top of the DTC Index
C0018-01	Left Rear Inlet Control - General electrical failure	<ul style="list-style-type: none"> Internal ABS module fault 	<ul style="list-style-type: none"> Clear DTC and retest if DTC returns. Install a new ABS module, refer to the new module/component installation note at the top of the DTC Index

DTC	Description	Possible Cause	Action
C0019-01	Left Rear Outlet Control - General electrical failure	<ul style="list-style-type: none"> ● Internal ABS module fault 	<ul style="list-style-type: none"> ● Clear DTC and retest if DTC returns. Install a new ABS module, refer to the new module/component installation note at the top of the DTC Index
C001C-01	Right Rear Inlet Control - General electrical failure	<ul style="list-style-type: none"> ● Internal ABS module fault 	<ul style="list-style-type: none"> ● Clear DTC and retest if DTC returns. Install a new ABS module, refer to the new module/component installation note at the top of the DTC Index
C001D-01	Right Rear Outlet Control - General electrical failure	<ul style="list-style-type: none"> ● Internal ABS module fault 	<ul style="list-style-type: none"> ● Clear DTC and retest if DTC returns. Install a new ABS module, refer to the new module/component installation note at the top of the DTC Index
C0020-01	ABS Pump Motor Control - General electrical failure	<ul style="list-style-type: none"> ● Power supply to pump motor - short circuit ● Power supply to pump motor - incorrect voltage ● Pump ground circuit fault ● Mechanical pump fault 	<ul style="list-style-type: none"> ● Carry out pinpoint tests associated with this DTC using the manufacturer approved diagnostic system. Clear DTC and retest if DTC returns. Install a new ABS module. Refer to the new module/component installation note at the top of the DTC Index
C0020-1C	ABS Pump Motor Control - Circuit voltage out of range	<ul style="list-style-type: none"> ● Power supply to pump motor - short circuit, high resistance ● Pump ground circuit fault ● Internal ABS module fault 	<ul style="list-style-type: none"> ● Carry out pinpoint tests associated with this DTC using the manufacturer approved diagnostic system. Clear DTC and retest if DTC returns. Install a new ABS module. Refer to the new module/component installation note at the top of the DTC Index
C0020-71	ABS pump motor control - actuator stuck	<ul style="list-style-type: none"> ● Power supply to pump motor - short circuit, high resistance ● Mechanical pump fault 	<ul style="list-style-type: none"> ● Carry out pinpoint tests associated with this DTC using the manufacturer approved diagnostic system. Clear DTC and retest if DTC returns. Install a new ABS module. Refer to the new module/component installation note at the top of the DTC Index
C0030-07	Left Front Tone Wheel - Mechanical Failure	<ul style="list-style-type: none"> ● Bearing encoder damaged 	<ul style="list-style-type: none"> ● Install a new left front wheel bearing. For additional information, refer to: Front Wheel Bearing (204-01 Front Suspension, Removal and Installation).
C0031-01	Left Front Wheel Speed Sensor - General electrical failure	<ul style="list-style-type: none"> ● Wheel speed sensor circuit - short to ground, short to power, open circuit ● Wheel speed sensor failure 	<ul style="list-style-type: none"> ● Carry out pinpoint tests associated with this DTC using the manufacturer approved diagnostic system. Clear DTC and retest if DTC returns. Install a new wheel speed sensor as required. For additional information, refer to: Front Wheel Speed Sensor (206-09A Anti-Lock Control, Removal and Installation).
C0031-07	Left Front Wheel Speed Sensor - Mechanical Failure	<ul style="list-style-type: none"> ● Wheel speed sensor faulty/incorrectly installed 	<ul style="list-style-type: none"> ● Carry out pinpoint tests associated with this DTC using the manufacturer approved diagnostic system. Clear DTC and retest if DTC returns. Check sensor for correct installation. Install a new wheel speed sensor as required. For additional information, refer to: Front Wheel Speed Sensor (206-09A Anti-Lock Control, Removal and Installation).
C0033-07	Right Front Tone Wheel - Mechanical Failure	<ul style="list-style-type: none"> ● Bearing encoder damaged 	<ul style="list-style-type: none"> ● Install a new right front wheel bearing. For additional information, refer to: Front Wheel Bearing (204-01 Front Suspension, Removal and Installation).
C0034-01	Right Front Wheel Speed Sensor - General electrical failure	<ul style="list-style-type: none"> ● Wheel speed sensor circuit - short to ground, short to power, open circuit ● Wheel speed sensor failure 	<ul style="list-style-type: none"> ● Carry out pinpoint tests associated with this DTC using the manufacturer approved diagnostic system. Clear DTC and retest if DTC returns. Install a new wheel speed sensor as required. For additional information, refer to: Front Wheel Speed Sensor (206-09A Anti-Lock Control, Removal and Installation).

General Information - Diagnostic Trouble Code (DTC) IndexDTC: Audio Front Control Module (ACM)

Description and Operation

NOTE: If a control module or component 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 program is in operation, before the replacement of a component.

NOTE: 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).

NOTE: When performing 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.

Description And Operation

For a detailed description of the audio front control system, refer to the relevant Description and Operation section in the workshop manual.

For additional information, refer to: [Audio System](#) (415-01 Information and Entertainment System, Description and Operation).

Audio Front Control Module (ACM)

DTC	Description	Possible Cause	Action
B1134-11	Phone input	<ul style="list-style-type: none"> Phone input circuit - short to ground 	Refer to electrical circuit diagrams and check phone input circuit for short to ground
B1134-12	Phone input	<ul style="list-style-type: none"> Phone input circuit - short to power 	Refer to electrical circuit diagrams and check phone input circuit for short to power
B1134-13	Phone input	<ul style="list-style-type: none"> Phone input circuit - open circuit 	Refer to electrical circuit diagrams and check phone input circuit for open circuit
B1A01-11	Speaker #1	<ul style="list-style-type: none"> Left front speaker circuit - short to ground 	Refer to electrical circuit diagrams and check left front speaker circuit for short to ground
B1A01-12	Speaker #1	<ul style="list-style-type: none"> Left front speaker circuit - short to power 	Refer to electrical circuit diagrams and check left front speaker circuit for short to power
B1A01-1A	Speaker #1	<ul style="list-style-type: none"> Left front speaker circuit - resistance below threshold 	Carry out pinpoint tests associated with this DTC using the manufacturer approved diagnostic system
B1A01-1B	Speaker #1	<ul style="list-style-type: none"> Left front speaker circuit - resistance above threshold 	Carry out pinpoint tests associated with this DTC using the manufacturer approved diagnostic system
B1A01-1C	Speaker #1	<ul style="list-style-type: none"> Left front speaker circuit - voltage out of range 	Carry out pinpoint tests associated with this DTC using the manufacturer approved diagnostic system
B1A02-11	Speaker #2	<ul style="list-style-type: none"> Right front speaker circuit - short to ground 	Refer to electrical circuit diagrams and check right front speaker circuit for short to ground
B1A02-12	Speaker #2	<ul style="list-style-type: none"> Right front speaker circuit - short to power 	Refer to electrical circuit diagrams and check right front speaker circuit for short to power
B1A02-1A	Speaker #2	<ul style="list-style-type: none"> Right front speaker circuit - resistance below threshold 	Carry out pinpoint tests associated with this DTC using the manufacturer approved diagnostic system
B1A02-1B	Speaker #2	<ul style="list-style-type: none"> Right front speaker circuit - resistance above threshold 	Carry out pinpoint tests associated with this DTC using the manufacturer approved diagnostic system
B1A02-1C	Speaker #2	<ul style="list-style-type: none"> Right front speaker circuit - voltage out of range 	Carry out pinpoint tests associated with this DTC using the manufacturer approved diagnostic system
B1A03-11	Speaker #3	<ul style="list-style-type: none"> Left rear speaker circuit - short to ground 	Refer to electrical circuit diagrams and check left rear speaker circuit for short to ground

DTC	Description	Possible Cause	Action
B1A03-12	Speaker #3	<ul style="list-style-type: none"> Left rear speaker circuit - short to power 	Refer to electrical circuit diagrams and check left rear speaker circuit for short to power
B1A03-1A	Speaker #3	<ul style="list-style-type: none"> Left rear speaker circuit - resistance below threshold 	Carry out pinpoint tests associated with this DTC using the manufacturer approved diagnostic system
B1A03-1B	Speaker #3	<ul style="list-style-type: none"> Left rear speaker circuit - resistance above threshold 	Carry out pinpoint tests associated with this DTC using the manufacturer approved diagnostic system
B1A03-1C	Speaker #3	<ul style="list-style-type: none"> Left rear speaker circuit - voltage out of range 	Carry out pinpoint tests associated with this DTC using the manufacturer approved diagnostic system
B1A04-11	Speaker #4	<ul style="list-style-type: none"> Right rear speaker circuit - short to ground 	Refer to electrical circuit diagrams and check right rear speaker circuit for short to ground
B1A04-12	Speaker #4	<ul style="list-style-type: none"> Right rear speaker circuit - short to power 	Refer to electrical circuit diagrams and check right rear speaker circuit for short to power
B1A04-1A	Speaker #4	<ul style="list-style-type: none"> Right rear speaker circuit - resistance below threshold 	Carry out pinpoint tests associated with this DTC using the manufacturer approved diagnostic system
B1A04-1B	Speaker #4	<ul style="list-style-type: none"> Right rear speaker circuit - resistance above threshold 	Carry out pinpoint tests associated with this DTC using the manufacturer approved diagnostic system
B1A04-1C	Speaker #4	<ul style="list-style-type: none"> Right front speaker circuit - voltage out of range 	Carry out pinpoint tests associated with this DTC using the manufacturer approved diagnostic system
B1A56-13	Antenna	<ul style="list-style-type: none"> Antenna circuit - open circuit 	Refer to electrical circuit diagrams and check antenna circuit for open circuit
B1B69-11	Antenna 12 volt supply circuit	<ul style="list-style-type: none"> Antenna 12 volt supply circuit - short to ground 	Refer to electrical circuit diagrams and check antenna 12 volt supply circuit for short to ground
B1B69-15	Antenna 12 volt supply circuit	<ul style="list-style-type: none"> Antenna 12 volt supply circuit - short to power, open circuit 	Refer to electrical circuit diagrams and check antenna 12 volt supply circuit for short to power, open circuit
B1D19-16	Compact disc unit	<ul style="list-style-type: none"> Circuit voltage below threshold 	Install a new integrated audio module, refer to the new module/component installation note at the top of the DTC Index. For additional information, refer to: Audio Unit (415-01 Information and Entertainment System, Removal and Installation).
B1D19-77	Compact disc unit	<ul style="list-style-type: none"> Commanded position not reachable 	Install a new integrated audio module, refer to the new module/component installation note at the top of the DTC Index. For additional information, refer to: Audio Unit (415-01 Information and Entertainment System, Removal and Installation).
B1D19-93	Compact disc unit	<ul style="list-style-type: none"> No operation 	Install a new integrated audio module, refer to the new module/component installation note at the top of the DTC Index. For additional information, refer to: Audio Unit (415-01 Information and Entertainment System, Removal and Installation).
B1D78-11	Auxiliary input	<ul style="list-style-type: none"> Auxiliary input circuit - short to ground 	Refer to electrical circuit diagrams and check auxiliary input circuit for short to ground
B1D78-12	Auxiliary input	<ul style="list-style-type: none"> Auxiliary input circuit - short to power 	Refer to electrical circuit diagrams and check auxiliary input circuit for short to power
B1D78-13	Auxiliary input	<ul style="list-style-type: none"> Auxiliary input circuit - open circuit 	Refer to electrical circuit diagrams and check auxiliary input circuit for open circuit
B1D79-11	Microphone input	<ul style="list-style-type: none"> Microphone input circuit - short to ground 	Refer to electrical circuit diagrams and check microphone input circuit for short to ground
B1D79-12	Microphone input	<ul style="list-style-type: none"> Microphone input circuit - short to power 	Refer to electrical circuit diagrams and check microphone input circuit for short to power
B1D79-13	Microphone input	<ul style="list-style-type: none"> Microphone input circuit - open circuit 	Refer to electrical circuit diagrams and check microphone input circuit for open circuit

DTC	Description	Possible Cause	Action
U3000-49	Control module	<ul style="list-style-type: none"> Internal electronic failure 	Install a new control module, refer to the new module/component installation note at the top of the DTC Index. For additional information, refer to: Audio Unit (415-01 Information and Entertainment System, Removal and Installation).
U3000-55	Control module	<ul style="list-style-type: none"> Incorrect car configuration data received 	Check/up-date Car Configuration File using manufacturer approved diagnostic system
U3000-87	Control module	<ul style="list-style-type: none"> Missing message 	Check CJB for DTCs and refer to DTC Index. For additional information, refer to: Communications Network (418-00 Module Communications Network, Diagnosis and Testing). Check information and entertainment module for Car Configuration File and MOST network DTCs and refer to relevant DTC Index. Carry out MOST/CAN network tests using the manufacturer approved diagnostic system
U3000-98	Control module	<ul style="list-style-type: none"> Component or system over temperature 	Check for additional DTCs and refer to relevant DTC Index, check/monitor system for re-occurrence
U3003-62	Battery voltage	<ul style="list-style-type: none"> Mis-match in voltage, of 2 volts or more, between integrated control module and CJB 	Carry out pinpoint tests associated with this DTC using the manufacturer approved diagnostic system

General Information - Diagnostic Trouble Code (DTC) Index DTC: Auxiliary Heater Control Module (AHCM)

Description and Operation

NOTE: If a control module or component 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 program is in operation, before the replacement of a component.

NOTE: 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).

NOTE: When performing 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.

Description And Operation

For a detailed description of the fuel fired booster heater control system, refer to the relevant Description and Operation section in the workshop manual.

For additional information, refer to: [Fuel Fired Booster Heater](#) (412-02B Auxiliary Climate Control, Description and Operation).

NOTE: Where an 'on demand self-test' is referred to, this can be accessed via the 'DTC Monitor' tab on the manufacturers approved diagnostic system.

DTC	Description	Possible Causes	Action
B1D22-11	Coolant Temperature Sensor - circuit short to ground	<ul style="list-style-type: none"> Fuel fired booster heater coolant temperature sensor internal fault 	<ul style="list-style-type: none"> Check and install a new fuel fired booster heater coolant temperature sensor Using the manufacturer approved diagnostic system, record then clear any stored diagnostic trouble codes then conduct the fuel fired booster heater operation test (Setup and configuration/auxiliary heater/operation test) Check for stored diagnostic trouble codes Check for correct operation
B1D22-15	Coolant Temperature Sensor - circuit short to battery or open	<ul style="list-style-type: none"> Fuel fired booster heater coolant temperature sensor internal fault 	<ul style="list-style-type: none"> Check and install a new fuel fired booster heater coolant temperature sensor Using the manufacturer approved diagnostic system, record then clear any stored diagnostic trouble codes then conduct the fuel fired booster heater operation test (Setup and configuration/auxiliary heater/operation test) Check for stored diagnostic trouble codes Check for correct operation
B1D23-13	Overheat Sensor - circuit open	<ul style="list-style-type: none"> Fuel fired booster heater coolant temperature sensor internal fault 	<ul style="list-style-type: none"> Check and install a new fuel fired booster heater coolant temperature sensor Using the manufacturer approved diagnostic system, record then clear any stored diagnostic trouble codes then conduct the fuel fired booster heater operation test (Setup and configuration/auxiliary heater/operation test) Check for stored diagnostic trouble codes Check for correct operation
B1D24-11	Glow Plug - circuit short to ground	<ul style="list-style-type: none"> Fuel fired booster heater glow plug internal fault 	<ul style="list-style-type: none"> Carry out circuit checks, inspect the glow plug cables and connector. Repair the circuit or check and install a new fuel fired booster heater glow plug as required For additional information, refer to: Fuel Fired Booster Heater Glow Plug And Burner Assembly (412-02B Auxiliary Climate Control, Removal and Installation). Using the manufacturer approved diagnostic system, record then clear any stored diagnostic trouble codes then conduct the fuel fired booster

DTC	Description	Possible Causes	Action
			heater operation test (Setup and configuration/auxiliary heater/operation test) <ul style="list-style-type: none"> ● Check for stored diagnostic trouble codes ● Check for correct operation
B1D24-15	Glow Plug - circuit short to battery or open	<ul style="list-style-type: none"> ● Fuel fired booster heater glow plug internal fault 	<ul style="list-style-type: none"> ● Carry out circuit checks, inspect the glow plug cables and connector. Repair the circuit or check and install a new fuel fired booster heater glow plug as required For additional information, refer to: Fuel Fired Booster Heater Glow Plug And Burner Assembly (412-02B Auxiliary Climate Control, Removal and Installation). ● Using the manufacturer approved diagnostic system, record then clear any stored diagnostic trouble codes then conduct the fuel fired booster heater operation test (Setup and configuration/auxiliary heater/operation test) ● Check for stored diagnostic trouble codes ● Check for correct operation
B1D25-11	Heater Fuel Pump - circuit short to ground	<ul style="list-style-type: none"> ● Heater fuel pump circuit short to ground ● Heater fuel pump failure 	<ul style="list-style-type: none"> ● Refer to the electrical circuit diagrams and check the fuel fired booster heater fuel pump and circuit for short to ground ● Repair the circuit or check and install a new fuel fired booster heater fuel pump as required For additional information, refer to: Fuel Fired Booster Heater Fuel Pump (412-02B Auxiliary Climate Control, Removal and Installation). ● Using the manufacturer approved diagnostic system, record then clear any stored diagnostic trouble codes then conduct the fuel fired booster heater operation test (Setup and configuration/auxiliary heater/operation test) ● Check for stored diagnostic trouble codes ● Check for correct operation
B1D25-15	Heater Fuel Pump - circuit short to battery or open	<ul style="list-style-type: none"> ● Heater fuel pump circuit short to power, open circuit ● Heater fuel pump failure 	<ul style="list-style-type: none"> ● Refer to the electrical circuit diagrams and check the fuel fired booster heater fuel pump and circuit for short to power, open circuit ● Repair the circuit or check and install a new fuel fired booster heater fuel pump as required For additional information, refer to: Fuel Fired Booster Heater Fuel Pump (412-02B Auxiliary Climate Control, Removal and Installation). ● Using the manufacturer approved diagnostic system, record then clear any stored diagnostic trouble codes then conduct the fuel fired booster heater operation test (Setup and configuration/auxiliary heater/operation test) ● Check for stored diagnostic trouble codes ● Check for correct operation
B1D26-11	Combustion Air Blower - circuit short to ground	<ul style="list-style-type: none"> ● Fuel fired booster heater module failure 	<ul style="list-style-type: none"> ● Using the manufacturer approved diagnostic system, record then clear any stored diagnostic trouble codes then conduct the fuel fired booster heater operation test (Setup and configuration/auxiliary heater/operation test) ● If the diagnostic trouble code reoccurs check and install a new fuel fired booster heater module as required For additional information, refer to: Fuel Fired Booster Heater (412-02B Auxiliary Climate Control, Removal and Installation). ● 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
B1D26-15	Combustion Air Blower - circuit short to battery or open	<ul style="list-style-type: none"> ● Fuel fired booster heater module failure 	<ul style="list-style-type: none"> ● Using the manufacturer approved diagnostic system, record then clear any stored diagnostic trouble codes then conduct the fuel fired booster heater operation test (Setup and

DTC	Description	Possible Causes	Action
			configuration/auxiliary heater/operation test) <ul style="list-style-type: none"> ● If the diagnostic trouble code reoccurs check and install a new fuel fired booster heater module as required For additional information, refer to: Fuel Fired Booster Heater (412-02B Auxiliary Climate Control, Removal and Installation). <ul style="list-style-type: none"> ● 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
B1D26-92	Combustion Air Blower - performance or incorrect operation	<ul style="list-style-type: none"> ● Fuel fired booster heater module failure 	<ul style="list-style-type: none"> ● Using the manufacturer approved diagnostic system, record then clear any stored diagnostic trouble codes then conduct the fuel fired booster heater operation test (Setup and configuration/auxiliary heater/operation test) ● Check for reoccurrence of the diagnostic trouble code ● If the diagnostic trouble code reoccurs check and install a new fuel fired booster heater module as required For additional information, refer to: Fuel Fired Booster Heater (412-02B Auxiliary Climate Control, Removal and Installation). <ul style="list-style-type: none"> ● 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
B1D26-93	Combustion Air Blower - no operation	<ul style="list-style-type: none"> ● Fuel fired booster heater module failure 	<ul style="list-style-type: none"> ● Using the manufacturer approved diagnostic system, record then clear any stored diagnostic trouble codes then conduct the fuel fired booster heater operation test (Setup and configuration/auxiliary heater/operation test) ● Check for reoccurrence of the diagnostic trouble code ● If the diagnostic trouble code reoccurs check and install a new fuel fired booster heater module as required For additional information, refer to: Fuel Fired Booster Heater (412-02B Auxiliary Climate Control, Removal and Installation). <ul style="list-style-type: none"> ● 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
B1D27-11	Heater Coolant Pump - circuit short to ground	<ul style="list-style-type: none"> ● Heater coolant pump circuit short to ground ● Heater coolant pump failure 	<ul style="list-style-type: none"> ● Refer to the electrical circuit diagrams and check the fuel fired booster heater water pump and circuit for short to ground ● Repair the circuit or check and install a new fuel fired booster heater water pump as required For additional information, refer to: Fuel Fired Booster Heater Coolant Pump (412-02B Auxiliary Climate Control, Removal and Installation). <ul style="list-style-type: none"> ● Using the manufacturer approved diagnostic system, record then clear any stored diagnostic trouble codes then conduct the fuel fired booster heater operation test (Setup and configuration/auxiliary heater/operation test) ● Check for stored diagnostic trouble codes ● Check for correct operation
B1D27-15	Heater Coolant Pump - circuit short to battery or open	<ul style="list-style-type: none"> ● Heater coolant pump circuit short to power, open circuit ● Heater coolant pump failure 	<ul style="list-style-type: none"> ● Refer to the electrical circuit diagrams and check the fuel fired booster heater water pump and circuit for short to power, open circuit ● Repair the circuit or check and install a new fuel fired booster heater water pump as required For additional information, refer to: Fuel Fired Booster Heater Coolant Pump (412-02B Auxiliary Climate Control, Removal and Installation).

DTC	Description	Possible Causes	Action
			<ul style="list-style-type: none"> ● Using the manufacturer approved diagnostic system, record then clear any stored diagnostic trouble codes then conduct the fuel fired booster heater operation test (Setup and configuration/auxiliary heater/operation test) ● Check for stored diagnostic trouble codes ● Check for correct operation
B1D28-11	Fuel Pre-heater - circuit short to ground	<p>NOTE: The pre heat is performed by the ignition glow plug</p> <ul style="list-style-type: none"> ● Fuel fired booster heater glow plug internal fault 	<ul style="list-style-type: none"> ● Carry out circuit checks, inspect the glow plug cables and connector ● Check and install a new fuel fired booster heater glow plug as required For additional information, refer to: Fuel Fired Booster Heater Glow Plug And Burner Assembly (412-02B Auxiliary Climate Control, Removal and Installation). ● Using the manufacturer approved diagnostic system, record then clear any stored diagnostic trouble codes then conduct the fuel fired booster heater operation test (Setup and configuration/auxiliary heater/operation test) ● Check for stored diagnostic trouble codes ● Check for correct operation
B1D28-15	Fuel Pre-heater - circuit short to battery or open	<p>NOTE: The pre heat is performed by the ignition glow plug</p> <ul style="list-style-type: none"> ● Fuel fired booster heater glow plug internal fault 	<ul style="list-style-type: none"> ● Carry out circuit checks, inspect the glow plug cables and connector ● Check and install a new fuel fired booster heater glow plug as required For additional information, refer to: Fuel Fired Booster Heater Glow Plug And Burner Assembly (412-02B Auxiliary Climate Control, Removal and Installation). ● Using the manufacturer approved diagnostic system, record then clear any stored diagnostic trouble codes then conduct the fuel fired booster heater operation test (Setup and configuration/auxiliary heater/operation test) ● Check for stored diagnostic trouble codes ● Check for correct operation
B1D29-93	No Start, Even After Restart Attempt - no operation	<ul style="list-style-type: none"> ● No fuel present at fuel fired booster heater module ● Exhaust system blocked ● Air intake blocked 	<ul style="list-style-type: none"> ● Check vehicle fuel level ● Check fuel lines to fuel fired booster heater module for blockage, kinking or damage ● Check exhaust system and air intake for blockage, kinking or damage ● Check fuel for aeration and correct fuel delivery ● Check vehicle is not parked on an incline when parking heater is operated ● Using the manufacturer approved diagnostic system, record then clear any stored diagnostic trouble codes then conduct the fuel fired booster heater operation test (Setup and configuration/auxiliary heater/operation test) ● Check for stored diagnostic trouble codes ● Check for correct operation
B1D30-93	No Start In Test Mode - no operation	<ul style="list-style-type: none"> ● No fuel present at fuel fired booster heater module ● Exhaust system blocked ● Air intake blocked 	<ul style="list-style-type: none"> ● Check vehicle fuel level ● Check fuel lines to fuel fired booster heater module for blockage, kinking or damage ● Check exhaust system and air intake for blockage, kinking or damage ● Check fuel for aeration and correct fuel delivery ● Check vehicle is not parked on an incline when parking heater is operated ● Using the manufacturer approved diagnostic system, record then clear any stored diagnostic trouble codes then conduct the fuel fired booster heater operation test (Setup and configuration/auxiliary heater/operation test) ● Check for stored diagnostic trouble codes ● Check for correct operation

DTC	Description	Possible Causes	Action
B1D31-94	Flame Detected Prior to Normal Operation - unexpected operation	<p>NOTE: The glow plug and flame sensor are a combined unit</p> <ul style="list-style-type: none"> Glow plug circuit fault 	<ul style="list-style-type: none"> Check exhaust system and air intake for blockage, kinking or damage Carry out circuit checks, inspect the glow plug cables and connector. Repair the circuit or check and install a new fuel fired booster heater glow plug as required For additional information, refer to: Fuel Fired Booster Heater Glow Plug And Burner Assembly (412-02B Auxiliary Climate Control, Removal and Installation). Using the manufacturer approved diagnostic system, record then clear any stored diagnostic trouble codes then conduct the fuel fired booster heater operation test (Setup and configuration/auxiliary heater/operation test) Check for stored diagnostic trouble codes Check for correct operation
B1D32-92	Multiple Flame Interruption During Heating Cycle - performance or incorrect operation	<ul style="list-style-type: none"> No fuel present at fuel fired booster heater module Exhaust system blocked Air intake blocked 	<ul style="list-style-type: none"> Check vehicle fuel level Check fuel lines to Fuel fired booster heater module for blockage, kinking or damage Check exhaust system and air intake for blockage, kinking or damage Check fuel for aeration and correct fuel delivery Check vehicle is not parked on an incline when parking heater is operated Using the manufacturer approved diagnostic system, record then clear any stored diagnostic trouble codes then conduct the fuel fired booster heater operation test (Setup and configuration/auxiliary heater/operation test) Check for stored diagnostic trouble codes Check for correct operation
B1D33-92	Flame Interruption During Normal Operation - performance or incorrect operation	<ul style="list-style-type: none"> No fuel present at fuel fired booster heater module Exhaust system blocked Air intake blocked 	<ul style="list-style-type: none"> Check vehicle fuel level Check fuel lines to fuel fired booster heater module for blockage, kinking or damage Check exhaust system and air intake for blockage, kinking or damage Check fuel for aeration and correct fuel delivery Check vehicle is not parked on an incline when parking heater is operated Using the manufacturer approved diagnostic system, record then clear any stored diagnostic trouble codes then conduct the fuel fired booster heater operation test (Setup and configuration/auxiliary heater/operation test) Check for stored diagnostic trouble codes Check for correct operation
B1D34-68	Heater In Lock Out Mode - event information	<ul style="list-style-type: none"> Fuel fired booster heater system fault 	<p>NOTE: For information only, rectify other stored fuel fired booster heater diagnostic trouble codes prior to this diagnostic trouble code</p> <ul style="list-style-type: none"> Using the manufacturer approved diagnostic system, record then clear any stored diagnostic trouble codes then conduct the fuel fired booster heater operation test (Setup and configuration/auxiliary heater/operation test) Check for stored diagnostic trouble codes Check for correct operation
B1D63-11	External Control Relay - circuit short to ground	<ul style="list-style-type: none"> Fuel fired booster heater module failure 	<ul style="list-style-type: none"> Check and install a new fuel fired booster heater module as required For additional information, refer to: Fuel Fired Booster Heater (412-02B Auxiliary Climate Control, Removal and Installation). 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

DTC	Description	Possible Causes	Action
B1D63-15	External Control Relay - circuit short to battery or open	<ul style="list-style-type: none"> Fuel fired booster heater module failure 	<ul style="list-style-type: none"> Check and install a new fuel fired booster heater module as required For additional information, refer to: Fuel Fired Booster Heater (412-02B Auxiliary Climate Control, Removal and Installation). 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
U0010-00	Medium Speed CAN Communication Bus - no sub type information	<ul style="list-style-type: none"> Medium speed CAN communication bus off 	<ul style="list-style-type: none"> Using the manufacturer approved diagnostic system, complete a CAN network integrity test
U0028-08	Vehicle Communication Bus A - Bus Signal / Message Failures	<ul style="list-style-type: none"> Medium speed CAN communication bus off Fuel fired booster heater module failure 	<ul style="list-style-type: none"> Using the manufacturer approved diagnostic system, complete a CAN network integrity test
U0300-00	Internal Control Module Software Incompatibility - no sub type information	<ul style="list-style-type: none"> Fuel fired booster heater module not configured or incorrectly configured 	<ul style="list-style-type: none"> Re-configure the fuel fired booster heater module using the manufacturer approved diagnostic system (Module programming/Configure existing module/Auxiliary heater control module)
U1A37-87	Crash Status Telegram Bus Signal / Message Failures Missing message	<ul style="list-style-type: none"> Crash signal received over CAN network 	<p>NOTE: Event information - the restraints control module has recorded a crash event</p> <ul style="list-style-type: none"> Using the manufacturer approved diagnostic system, check other modules for related diagnostic trouble codes
U2101-00	Control Module Configuration Incompatible - no sub type information	<ul style="list-style-type: none"> Fuel fired booster heater module not configured or incorrectly configured Central junction box not configured correctly 	<ul style="list-style-type: none"> Using the manufacturer approved diagnostic system, record then clear any stored diagnostic trouble codes then conduct the fuel fired booster heater operation test (Setup and configuration/auxiliary heater/operation test) Check for reoccurrence of the diagnostic trouble code If the diagnostic trouble code returns Using the manufacturer approved diagnostic system check and up-date the car configuration file as required Re-configure the Fuel fired booster heater module using the manufacturer approved diagnostic system Check for stored diagnostic trouble codes Check for correct operation
U3000-16	Control Module - circuit voltage below threshold	<ul style="list-style-type: none"> Fuel fired booster heater module power circuit fault Battery/charging system fault 	<ul style="list-style-type: none"> Check other modules for related diagnostic trouble codes If other modules contain low voltage related diagnostic trouble codes, suspect a common cause (battery/charging system fault) If not, refer to the electrical circuit diagrams and check the power and ground circuits to the fuel fired booster heater module Check for stored diagnostic trouble codes Check for correct operation
U3000-17	Control Module - circuit voltage above threshold	<ul style="list-style-type: none"> Charging system fault Fuel fired booster heater module failure 	<ul style="list-style-type: none"> Check other modules for related diagnostic trouble codes If other modules contain high voltage related diagnostic trouble codes, suspect a common cause (battery/charging system fault) If not, refer to the electrical circuit diagrams and check the power and ground circuits to the fuel fired booster heater module Check for stored diagnostic trouble codes Check for correct operation

DTC	Description	Possible Causes	Action
U3000-43	Control Module - special memory failure	<ul style="list-style-type: none"> Fuel fired booster heater module failure 	<ul style="list-style-type: none"> Using the manufacturer approved diagnostic system, record then clear any stored diagnostic trouble codes then conduct the fuel fired booster heater operation test (Setup and configuration/auxiliary heater/operation test) Check for reoccurrence of the diagnostic trouble code If the diagnostic trouble code returns Install a new fuel fired booster heater module as required <p>For additional information, refer to: Fuel Fired Booster Heater (412-02B Auxiliary Climate Control, Removal and Installation).</p> <ul style="list-style-type: none"> 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
U3000-49	Control Module - internal electronic failure	<ul style="list-style-type: none"> Fuel fired booster heater module failure 	<ul style="list-style-type: none"> Using the manufacturer approved diagnostic system, record then clear any stored diagnostic trouble codes then conduct the fuel fired booster heater operation test (Setup and configuration/auxiliary heater/operation test) Check for reoccurrence of the diagnostic trouble code If the diagnostic trouble code returns Install a new fuel fired booster heater module as required <p>For additional information, refer to: Fuel Fired Booster Heater (412-02B Auxiliary Climate Control, Removal and Installation).</p> <ul style="list-style-type: none"> 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
U3003-62	Battery Voltage - signal compare failure	<ul style="list-style-type: none"> There is a difference of more than 2 volts between the power supply to the fuel fired booster heater and the battery voltage value broadcast via the CAN bus 	<ul style="list-style-type: none"> Check other modules for related diagnostic trouble codes If other modules contain voltage related diagnostic trouble codes, suspect a common cause (battery/charging system fault) If not, refer to the electrical circuit diagrams and check the power and ground circuits to the fuel fired booster heater module

General Information - Diagnostic Trouble Code (DTC) Index DTC: Terrain Response Control Module (ATCM)

Description and Operation

Inspection and Verification



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

1. Verify the customer concern.
2. Visually inspect for obvious signs of mechanical or electrical damage.

Visual Inspection

Mechanical	Electrical
<ul style="list-style-type: none"> • * Tire condition, pressures, etc • Driveline, Engine, Transmission, Suspension, components (correct installation, damage, etc) 	<ul style="list-style-type: none"> • Fuses • Harnesses/Connectors • Terrain response module • Engine Control Module (ECM) • Transmission Control Module (TCM) • Anti-Lock Brake System control module • Active On-demand control module • Dynamic suspension control module * Controller area network (CAN) circuits

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

DTC Index

NOTE: If the control module/transmission 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/transmission.

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.

Description And Operation

For a detailed description of the Terrain Response system, refer to the relevant Description and Operation section in the workshop manual.

For additional information, refer to: [Ride and Handling Optimization](#) (204-06 Ride and Handling Optimization, Description and Operation).

Terrain Response Control Module

DTC	Description	Possible Cause	Action
C1A00-46	Control Module - calibration / parameter memory failure	<ul style="list-style-type: none"> • The Terrain Response Control Module has indicated a calibration / parameter memory failure for embedded systems using FLASH memory. This is equivalent to EEPROM in RAM/ROM/EEPROM embedded systems • Corruption in the 	Rectify this DTC before attempting to rectify others. Record all DTCs logged and clear them. With ignition on select a terrain response special program, turn off the ignition, then turn back on the ignition and verify the selected special program is still active. If the selected terrain response special program is not still active and has returned to the general program, confirm if DTC has returned. Repeat procedure again once more. If DTC is still present install a new terrain response rotary control and control module. Refer to the warranty policy and procedures manual if a module is suspect

DTC	Description	Possible Cause	Action
		non-volatile memory storage system (EEPROM) in the Terrain Response Control Module	
C1A01-96	LED Circuit - component internal failure	<ul style="list-style-type: none"> ● Terrain response rotary control and control module - LED short circuit to ground ● Terrain response rotary control and control module - LED open circuit 	<p>NOTE: If the system is in 'failsafe default mode due to another issue no LEDs will illuminate. This fault does not cause the system to go to 'failsafe default'.</p> <p>Refer to the Description and Operation section of workshop manual. Check terrain response system, special program LEDs. One or more of the LEDs is suspected of not illuminating as appropriate. With the engine running move the terrain response rotary control through all five programs and confirm the appropriate special program LED does not illuminate when the terrain response rotary control is in that position. Suspect the terrain response rotary control and control module, check and install a new terrain response rotary control and control module as required, refer to the new module/component installation note at the top of the DTC Index.</p>
C1A02-94	Rotary Encoder Stuck In Intermediate Position - unexpected operation	<ul style="list-style-type: none"> ● The terrain response rotary control is held in an intermediate position (between the special programs) for more than 60 seconds ● Foreign object preventing correct operation of terrain response rotary control ● Mechanical damage to the terrain response rotary control 	<p>NOTE: Suspect driver error do not replace the terrain response rotary control at this time</p> <p>Check for foreign object preventing correct operation of terrain response rotary control. Start the vehicle engine, rotate the terrain response rotary control until it has located a genuine detent, wait 60 seconds. Stop the vehicle engine, clear the DTC and retest</p>
U0073-88	Control Module Communication Bus "A" Off - bus off	<ul style="list-style-type: none"> ● Bus off. The Terrain Response Control Module has detected the data bus is not available ● CAN bus open circuit ● CAN bus short circuit to ground ● CAN bus short circuit to power ● Failure of another control module on the CAN bus 	Refer to electrical circuit diagrams, check CAN circuit for open circuit, short to ground, short to power, repair/renew as necessary. Using the manufacturer approved diagnostic system, carry out network integrity test. Check the system is operating correctly and the DTC does not return.
U0100-87	Lost Communication With ECM/PCM "A" - missing message	<ul style="list-style-type: none"> ● The Terrain Response Control Module has not received one or more expected messages from the Engine Control Module ● High speed CAN circuit communications failure ● Open circuit Engine Control Module, powerfeed ● Open circuit Engine Control Module, ground supply ● Engine Control Module disconnected from the high speed CAN communication bus ● Open circuit Engine Control Module high speed CAN low circuit ● Open circuit Engine Control Module high speed CAN high circuit ● Engine Control Module not configured 	Using the manufacturer approved diagnostic system, check the Engine Control Module for DTCs and refer to the relevant DTC index. Using the manufacturer approved diagnostic system, carry out network integrity test. Using the manufacturer approved diagnostic system, re-configure the Engine Control Module. Refer to electrical circuit diagrams, check power feed and ground supplies, to Engine Control Module for open circuit. Check for open circuit Engine Control Module high speed CAN low circuit. Check for open circuit Engine Control Module high speed CAN high circuit, repair as necessary

DTC	Description	Possible Cause	Action
		<ul style="list-style-type: none"> Engine Control Module failure 	
U0101-87	Lost Communication with TCM - missing message	<ul style="list-style-type: none"> The Terrain Response Control Module has not received one or more expected messages from the Transmission Control Module High speed CAN circuit communications failure Open circuit Transmission Control Module, powerfeed Open circuit Transmission Control Module, ground supply Transmission Control Module disconnected from the high speed CAN communication bus Open circuit Transmission Control Module high speed CAN low circuit Open circuit Transmission Control Module high speed CAN high circuit Transmission Control Module not configured Transmission Control Module failure 	Using the manufacturer approved diagnostic system, check the Transmission Control Module for DTCs and refer to the relevant DTC index. Using the manufacturer approved diagnostic system, carry out network integrity test. Using the manufacturer approved diagnostic system, re-configure the Transmission Control Module. Refer to electrical circuit diagrams, check power feed and ground supplies, to Transmission Control Module for open circuit. Check for open circuit Transmission Control Module high speed CAN low circuit. Check for open circuit Transmission Control Module high speed CAN high circuit, repair as necessary
U0121-87	Lost Communication With Anti-Lock Brake System (ABS) Control Module - missing message	<ul style="list-style-type: none"> The Terrain Response Control Module has not received one or more expected messages from the Anti-Lock Brake System Control Module High speed CAN circuit communications failure Open circuit Anti-Lock Brake System Control Module, powerfeed Open circuit Anti-Lock Brake System Control Module, ground supply Anti-Lock Brake System Control Module disconnected from the high speed CAN communication bus Open circuit Anti-Lock Brake System Control Module high speed CAN low circuit Open circuit Anti-Lock Brake System Control Module high speed CAN high circuit Anti-Lock Brake System Control Module not configured Anti-Lock Brake System Control Module failure 	Using the manufacturer approved diagnostic system, check the Anti-Lock Brake System Control Module for DTCs and refer to the relevant DTC index. Using the manufacturer approved diagnostic system, carry out network integrity test. Using the manufacturer approved diagnostic system, re-configure the Anti-Lock Brake System Control Module. Refer to electrical circuit diagrams, check power feed and ground supplies, to Anti-Lock Brake System Control Module for open circuit. Check for open circuit Anti-Lock Brake System Control Module high speed CAN low circuit. Check for open circuit Anti-Lock Brake System Control Module high speed CAN high circuit, repair as necessary. Suspect the Anti-Lock Brake System Control Module, check and install a new Anti-Lock Brake System Control Module as required, refer to the new module/component installation note at the top of the DTC Index. Check the system is operating correctly and the DTC does not return.
U0136-87	Lost Communication With Differential Control Module - Rear - missing	<ul style="list-style-type: none"> The Terrain Response Control Module has not received one or more expected messages from the Rear Differential 	Using the manufacturer approved diagnostic system, check the Rear Differential Control Module for DTCs and refer to the relevant DTC index. Using the manufacturer approved diagnostic system, carry out network integrity test. Using the manufacturer approved diagnostic system, re-configure the

DTC	Description	Possible Cause	Action
	message	<p>Control Module</p> <ul style="list-style-type: none"> ● High speed CAN circuit communications failure ● Open circuit Rear Differential Control Module, powerfeed ● Open circuit Rear Differential Control Module, ground supply ● Rear Differential Control Module disconnected from the high speed CAN communication bus ● Open circuit Rear Differential Control Module high speed CAN low circuit ● Open circuit Rear Differential Control Module high speed CAN high circuit ● Rear Differential Control Module not configured ● Rear Differential Control Module failure 	<p>Rear Differential Control Module. Refer to electrical circuit diagrams, check power feed and ground supplies, to Rear Differential Control Module for open circuit. Check for open circuit Rear Differential Control Module high speed CAN low circuit. Check for open circuit Rear Differential Control Module high speed CAN high circuit, repair as necessary. Suspect the Rear Differential Control Module, check and install a new Rear Differential Control Module as required, refer to the new module/component installation note at the top of the DTC Index. Check the system is operating correctly and the DTC does not return.</p>
U0140-87	Lost Communication With Body Control Module - missing message	<ul style="list-style-type: none"> ● The Terrain Response Control Module has not received one or more expected messages from the Body Control Module ● High speed CAN circuit communications failure ● Open circuit Body Control Module, powerfeed ● Open circuit Body Control Module, ground supply ● Body Control Module disconnected from the high speed CAN communication bus ● Open circuit Body Control Module high speed CAN low circuit ● Open circuit Body Control Module high speed CAN high circuit ● Body Control Module not configured ● Body Control Module failure 	<p>Using the manufacturer approved diagnostic system, check the Body Control Module for DTCs and refer to the relevant DTC index. Using the manufacturer approved diagnostic system, carry out network integrity test. Using the manufacturer approved diagnostic system, re-configure the Body Control Module. Refer to electrical circuit diagrams, check power feed and ground supplies, to Body Control Module for open circuit. Check for open circuit Body Control Module high speed CAN low circuit. Check for open circuit Body Control Module high speed CAN high circuit, repair as necessary. Suspect the Body Control Module, check and install a new Body Control Module as required, refer to the new module/component installation note at the top of the DTC Index. Check the system is operating correctly and the DTC does not return.</p>
U0300-55	Internal Control Module Software Incompatibility - not configured	<ul style="list-style-type: none"> ● The Terrain Response Control Module has failed to recognise a matching master configuration ID from the CAN data bus master ● Terrain Response Control Module has incorrect CAN configuration ● CAN bus master not correctly configured ● Message containing configuration ID not received due to CAN bus issue ● Message containing configuration ID not transmitted by CAN bus 	<p>Using the manufacturer approved diagnostic system, check the CAN configuration in the Terrain Response Control Module, check correct software versions installed and update as necessary. If similar DTCs from other modules suspect CAN bus or CAN bus master ECU, check CAN bus operation, check the CAN configuration in the CAN bus master module, check correct software versions installed and update as necessary. Check the system is operating correctly and the DTC does not return.</p>

DTC	Description	Possible Cause	Action
		master	
U0401-94	Invalid Data Received From ECM/PCM - unexpected operation	<ul style="list-style-type: none"> ● The Terrain Response Control Module has detected that the Engine Control Module component had operated in a way or at a time that it had not been commanded to operate ● The engine management system, Engine Control Module is unable to support normal terrain response functionality, the terrain response system will go into default condition ● Engine management system fault ● Engine Control Module failure 	Using the manufacturer approved diagnostic system, check the Engine Control Module for DTCs and refer to the relevant DTC index, rectify as required. Check the system is operating correctly and the DTC does not return
U0402-94	Invalid Data Received From Transmission Control Module - unexpected operation	<ul style="list-style-type: none"> ● The Terrain Response Control Module has detected that the Transmission Control Module component had operated in a way or at a time that it had not been commanded to operate ● The transmission system, Transmission Control Module is unable to support normal terrain response functionality, the terrain response system will go into default condition ● Transmission system fault ● Transmission Control Module failure 	Using the manufacturer approved diagnostic system, check the Transmission Control Module for DTCs and refer to the relevant DTC index, rectify as required. Check the system is operating correctly and the DTC does not return
U0415-94	Invalid Data Received From Anti-Lock Brake System Control Module - unexpected operation	<ul style="list-style-type: none"> ● The Terrain Response Control Module has detected that the Anti-Lock Brake System control module component had operated in a way or at a time that it had not been commanded to operate ● The Anti-Lock Brake System , Anti-Lock Brake System control module is unable to support normal terrain response functionality, the terrain response system will go into default condition ● Anti-Lock Brake System fault ● Anti-Lock Brake System control module failure 	Using the manufacturer approved diagnostic system, check the Anti-Lock Brake System control module for DTCs and refer to the relevant DTC index, rectify as required. Check the system is operating correctly and the DTC does not return. Suspect the Anti-Lock Brake System control module, check and install a new Anti-Lock Brake System control module as required, refer to the new module/component installation note at the top of the DTC Index.
U0437-94	Invalid Data Received From Differential Control Module-Rear - unexpected	<ul style="list-style-type: none"> ● The Terrain Response Control Module has detected that the Rear Differential Control Module component had 	Using the manufacturer approved diagnostic system, check the Rear Differential Module for DTCs and refer to the relevant DTC index, rectify as required. Check the system is operating correctly and the DTC does not return. Suspect the Rear Differential Module, check and install a new Rear Differential

DTC	Description	Possible Cause	Action
	operation	<p>operated in a way or at a time that it had not been commanded to operate</p> <ul style="list-style-type: none"> ● The Rear Differential system, Rear Differential Control Module is unable to support normal terrain response functionality, the terrain response system will go into default condition ● Rear Differential system fault ● Rear Differential Control Module failure 	Module as required, refer to the new module/component installation note at the top of the DTC Index.
U2012-4A	Car Configuration Parameter(s) - incorrect component installed	<ul style="list-style-type: none"> ● The Terrain Response Control Module has detected a mismatch between the hardware connected and the hardware expected ● Vehicle not correctly configured ● Incorrect components installed for vehicle configuration 	Using the manufacturer approved diagnostic system, check the vehicle configuration file, rectify as necessary. Check correct components for vehicle configuration are installed, rectify as necessary. Check the system is operating correctly and the DTC does not return.

General Information - Diagnostic Trouble Code (DTC) Index DTC: Body Control Module (BCM)

Description and Operation

NOTE: If a control module or component 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 program is in operation, before the replacement of a component.

NOTE: 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).

NOTE: When performing 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.

For additional information, refer to: [Communications Network](#) (418-00 Module Communications Network, Description and Operation).

Body control module (BCM)

DTC	Description	Possible Cause	Action
B100A-11	Fuel Pump Authorisation - circuit short to ground	<ul style="list-style-type: none"> Fuel pump authorisation circuit - short to ground 	Refer to electrical circuit diagrams and check fuel pump authorisation circuit for short to ground
B100A-15	Fuel Pump Authorisation - circuit short to power or open	<ul style="list-style-type: none"> Fuel pump authorisation circuit - short to power, open circuit 	Refer to electrical circuit diagrams and check fuel pump authorisation circuit for short to power, open circuit
B1024-08	Transponder - Bus signal/Message Failures	<ul style="list-style-type: none"> Transponder - Bus signal/message failures 	Carry out the pinpoint tests associated to this DTC using the manufacturer approved diagnostic system
B1024-51	Start Control Unit - not programmed	<ul style="list-style-type: none"> Start control unit - not configured 	Re-configure the start control unit using the manufacturer approved diagnostic system
B1024-81	Start Control unit - invalid serial data received	<ul style="list-style-type: none"> Invalid serial data received 	Carry out the pinpoint tests associated to this DTC using the manufacturer approved diagnostic system
B1024-87	Start control unit - missing message	<ul style="list-style-type: none"> Missing message 	Carry out the pinpoint tests associated to this DTC using the manufacturer approved diagnostic system
B1024-96	Start control unit - component internal failure	<ul style="list-style-type: none"> Internal failure 	Install a new start control unit, refer to new module/component installation note at the top of the DTC Index
B1025-81	Transponder - invalid serial data	<ul style="list-style-type: none"> Invalid serial data received 	Carry out the pinpoint tests associated to this DTC using the manufacturer approved diagnostic system
B1026-08	Steering Column Lock - Bus Signal/Message Failures	<ul style="list-style-type: none"> Steering column lock - Bus signal/message failures 	Carry out the pinpoint tests associated to this DTC using the manufacturer approved diagnostic system
B1026-51	Steering Column Lock - not programmed	<ul style="list-style-type: none"> Steering column lock - not configured 	Re-configure the steering column lock using the manufacturer approved diagnostic system
B1026-52	Steering Column Lock - not activated	<ul style="list-style-type: none"> Request to enable the steering column lock supply not approved 	Check LIN circuit between steering column lock and CJB
B1026-71	Steering Column Lock - actuator stuck	<ul style="list-style-type: none"> Should be set if the SCL is unable to reach locked and OK position 	Carry out the pinpoint tests associated to this DTC using the manufacturer approved diagnostic system
B1026-82	Steering Column Lock	<ul style="list-style-type: none"> Steering column lock incorrectly programmed 	Install a new steering column lock
B1026-92	Steering Column Lock - performance or incorrect operation	<ul style="list-style-type: none"> Micro switch/sensor fault 	Carry out the pinpoint tests associated to this DTC using the manufacturer approved diagnostic system

DTC	Description	Possible Cause	Action
B1026-94	Steering Column Lock - unexpected operation	<ul style="list-style-type: none"> Status messages are received from the SCL when SCL should be turned off 	Carry out the pinpoint tests associated to this DTC using the manufacturer approved diagnostic system
B1026-96	Steering Column Lock - component internal failure	<ul style="list-style-type: none"> Internal failure 	Install a new steering column lock, refer to the new module/component installation note at the top of the DTC Index
B1029-21	Accelerator Pedal Sensor signal amplitude < minimum	<ul style="list-style-type: none"> Accelerator pedal sensor signal <3% of supply(5V) 	Carry out the pinpoint tests associated to this DTC using the manufacturer approved diagnostic system
B1029-22	Accelerator Pedal Sensor signal amplitude > maximum	<ul style="list-style-type: none"> Accelerator pedal sensor signal ≥97% of supply(5V) 	Carry out the pinpoint tests associated to this DTC using the manufacturer approved diagnostic system
B108A-23	Start button - signal stuck low	<ul style="list-style-type: none"> SW1 and SW2 constantly active 	Carry out the pinpoint tests associated to this DTC using the manufacturer approved diagnostic system
B108B-23	Start Button Circuit "A" - signal stuck low	<ul style="list-style-type: none"> SW1 constantly active for long time while button press detected at SW2 	Carry out the pinpoint tests associated to this DTC using the manufacturer approved diagnostic system
B108B-24	Start button circuit "A" - signal stuck high	<ul style="list-style-type: none"> SW1 never active while button press detected at SW2 	Carry out the pinpoint tests associated to this DTC using the manufacturer approved diagnostic system
B108C-23	Start button circuit "B" - signal stuck low	<ul style="list-style-type: none"> SW2 constantly active for long time while button press detected at SW1 	Carry out the pinpoint tests associated to this DTC using the manufacturer approved diagnostic system
B108C-24	Start button circuit "B" - signal stuck high	<ul style="list-style-type: none"> SW2 never active while button press detected at SW1 	Carry out the pinpoint tests associated to this DTC using the manufacturer approved diagnostic system
B108D-24	Start button circuit "C" signal stuck high	<ul style="list-style-type: none"> SW3 never active while button press detected at SW1 	Carry out the pinpoint tests associated to this DTC using the manufacturer approved diagnostic system
B1095-12	Wiper On/Off Relay - circuit short to power	<ul style="list-style-type: none"> Wiper On/Off relay circuit - short to power 	Refer to electrical circuit diagrams and check wiper On/Off relay circuit for short to power
B1095-14	Wiper On/Off Relay - circuit short to ground or open	<ul style="list-style-type: none"> Wiper On/Off relay circuit - short to ground, open circuit 	Refer to electrical circuit diagrams and check wiper On/Off relay circuit for short to ground, open circuit
B1096-12	Wiper High/Low Relay - circuit short to power	<ul style="list-style-type: none"> Wiper High/Low relay circuit - short to power 	Refer to electrical circuit diagrams and check wiper High/Low relay circuit for short to power
B1096-14	Wiper High/Low Relay - circuit short to ground or open	<ul style="list-style-type: none"> Wiper High/Low relay circuit - short to ground, open circuit 	Refer to electrical circuit diagrams and check wiper High/Low relay circuit for short to ground, open circuit
B1097-12	Heated Windshield Relay - circuit short to power	<ul style="list-style-type: none"> Heated windshield relay circuit - short to power 	Refer to electrical circuit diagrams and check heated windshield relay circuit for short to power
B1097-14	Heated Windshield Relay - circuit short to ground or open	<ul style="list-style-type: none"> Heated windshield relay circuit - short to ground, open circuit 	Refer to electrical circuit diagrams and check heated windshield relay circuit for short to ground, open circuit
B109B-11	License Plate Light - circuit short to ground	<ul style="list-style-type: none"> License plate lamp circuit - short to ground 	Refer to electrical circuit diagrams and check license plate lamp circuit for short to ground
B109B-13	License Plate Light - open circuit	<ul style="list-style-type: none"> License plate lamp circuit - open circuit 	Refer to electrical circuit diagrams and check license plate lamp circuit for open circuit
B10A2-02	Crash Input - general signal failure	<ul style="list-style-type: none"> Incorrect signal received 	Carry out the pinpoint tests associated to this DTC using the manufacturer approved diagnostic system
B10A2-11	Crash Input - circuit short to ground	<ul style="list-style-type: none"> Crash input circuit - short to ground 	Carry out the pinpoint tests associated to this DTC using the manufacturer approved diagnostic system
B10A2-15	Crash signal - circuit short to power or open	<ul style="list-style-type: none"> Crash signal circuit - short to power, open circuit 	Carry out the pinpoint tests associated to this DTC using the manufacturer approved diagnostic system

DTC	Description	Possible Cause	Action
B10A2-68	Crash signal - event information	<ul style="list-style-type: none"> Crash signal - event information 	Check RCM for DTCs and refer to the relevant DTC Index
B10A5-12	Alarm Siren - circuit short to power	<ul style="list-style-type: none"> Alarm siren circuit - short to power 	Refer to electrical circuit diagrams and check alarm siren circuit for short to power
B10A5-14	Alarm Siren - circuit short to ground or open	<ul style="list-style-type: none"> Alarm siren circuit - short to ground, open circuit 	Refer to electrical circuit diagrams and check alarm siren circuit for short to ground, open circuit
B10AC-86	Cruise Control Switch - Signal invalid	<ul style="list-style-type: none"> Signal invalid 	Carry out the pinpoint tests associated to this DTC using the manufacturer approved diagnostic system
B10AC-87	Cruise Control Switch - Missing message	<ul style="list-style-type: none"> Missing message 	Carry out the pinpoint tests associated to this DTC using the manufacturer approved diagnostic system
B10AC-95	Cruise Control Switch - Wrong assembly	<ul style="list-style-type: none"> Mis-match between Car Configuration File and vehicle 	Check/up-date Car Configuration File using the manufacturer approved diagnostic system
B10AD-04	Rain Sensor - System Internal Failure	<ul style="list-style-type: none"> Internal sensor failure 	Install a new rain sensor, refer to new module/component installation note at the top of the DTC Index
B10AD-09	Rain Sensor - Component Failures	<ul style="list-style-type: none"> Rain sensor incorrectly installed Rain sensor internal failure 	Check for correct installation of rain sensor. Install a new sensor as required, refer to new module/component installation note at the top of the DTC Index
B10BE-11	Solar Sensor - circuit short to ground	<ul style="list-style-type: none"> Sunload sensor circuit - short to ground 	Refer to electrical circuit diagrams and check sunload sensor for short to ground
B10BE-13	Solar Sensor - open circuit	<ul style="list-style-type: none"> Sunload sensor circuit - open circuit 	Refer to electrical circuit diagrams and check sunload sensor for open circuit
B10C0-12	Fuel Pump Power Supply - circuit short to power	<ul style="list-style-type: none"> Fuel pump power supply circuit - short to power 	Refer to electrical circuit diagrams and check fuel pump power supply circuit for short to power
B10C0-14	Fuel Pump Power Supply - circuit short to ground or open	<ul style="list-style-type: none"> Fuel pump power supply circuit - short to ground, open circuit 	Refer to electrical circuit diagrams and check fuel pump power supply circuit for short to ground, open circuit
B10D7-94	PATS Key - unexpected operation	<ul style="list-style-type: none"> No response from transponder in key 	Replace key
B10E5-11	PCM wake-up signal - circuit short to ground	<ul style="list-style-type: none"> Engine Control Module (ECM) wake-up signal circuit - short to ground 	Refer to electrical circuit diagrams and check ECM wake-up signal circuit for short to ground
B10E5-15	PCM wake-up signal - circuit short to power or open	<ul style="list-style-type: none"> Engine Control Module (ECM) wake-up signal circuit - short to power, open circuit 	Refer to electrical circuit diagrams and check ECM wake-up signal circuit for short to power, open circuit
B10E7-12	Ignition On Relay - circuit short to power	<ul style="list-style-type: none"> EJB ignition On relay control circuit - short to power 	Refer to electrical circuit diagrams and check EJB ignition relay control circuit for short to power
B10E7-14	Ignition On Relay - circuit short to ground or open	<ul style="list-style-type: none"> EJB ignition On relay control circuit - short to ground, open circuit 	Refer to electrical circuit diagrams and check EJB ignition relay control circuit for short to ground, open circuit
B10EA-12	Positive temperature coefficient heater - circuit short to power	<ul style="list-style-type: none"> Positive temperature coefficient heater circuit - short to power 	Refer to electrical circuit diagrams and check positive temperature coefficient heater circuit for short to power
B10EA-14	Positive temperature coefficient heater - circuit short to ground or open	<ul style="list-style-type: none"> Positive temperature coefficient heater circuit - short to ground, open circuit 	Refer to electrical circuit diagrams and check positive temperature coefficient heater circuit for short to ground, open circuit
B10EB-77	Driver door double locking motor - commanded position not reachable	<ul style="list-style-type: none"> Incorrect feedback from DDM 	Check for Lost Communications DTCs and carry out associated pinpoint test using manufacturer approved diagnostic system. If no lost communication DTC, check double locking mechanism for mechanical failure

DTC	Description	Possible Cause	Action
B10EC-77	Passenger door double locking motor - commanded position not reachable	<ul style="list-style-type: none"> Incorrect feedback from PDM 	Check for Lost Communications DTCs and carry out associated pinpoint test using manufacturer approved diagnostic system. If no lost communication DTC, check double locking mechanism for mechanical failure
B10ED-77	Rear door driver side double locking motor - commanded position not reachable	<ul style="list-style-type: none"> Incorrect feedback from rear door driver side 	Check DDM for Lost Communications DTCs and carry out associated pinpoint test using manufacturer approved diagnostic system. If no lost communication DTC, Carry out the pinpoint tests associated to this DTC using the manufacturer approved diagnostic system, check double locking mechanism for mechanical failure
B10EE-77	Rear door passenger side double locking motor - commanded position not reachable	<ul style="list-style-type: none"> Incorrect feedback from rear door passenger side 	Check PDM for Lost Communications DTCs and carry out associated pinpoint test using manufacturer approved diagnostic system. If no lost communication DTC, Carry out the pinpoint tests associated to this DTC using the manufacturer approved diagnostic system, check double locking mechanism for mechanical failure
B10EF-12	Sunroof Speed Output - circuit short to power	<ul style="list-style-type: none"> Sunroof speed output circuit - short to power 	Refer to electrical circuit diagrams and check sunroof speed output circuit for short to power
B10EF-14	Sunroof Speed Output - circuit short to ground or open	<ul style="list-style-type: none"> Sunroof speed output circuit - short to ground, open circuit 	Refer to electrical circuit diagrams and check sunroof speed output circuit for short to ground, open circuit
B10F2-12	Sunroof control - circuit short to power	<ul style="list-style-type: none"> Sunroof control circuit - short to power 	Refer to electrical circuit diagrams and check sunroof control circuit for short to power
B10F2-14	Sunroof control - circuit short to ground or open	<ul style="list-style-type: none"> Sunroof control circuit - short to ground, open circuit 	Refer to electrical circuit diagrams and check sunroof control circuit for short to ground, open circuit
B10F3-11	Left front position light - circuit short to ground	<ul style="list-style-type: none"> Left front position light circuit - short to ground 	Refer to electrical circuit diagrams and check left front position light circuit for short to ground
B10F4-11	Right front position light - circuit short to ground	<ul style="list-style-type: none"> Right front position light circuit - short to ground 	Refer to electrical circuit diagrams and check right front position light circuit for short to ground
B10F5-11	Left rear position light - circuit short to ground	<ul style="list-style-type: none"> Left rear position light circuit - short to ground 	Refer to electrical circuit diagrams and check left rear position light circuit for short to ground
B10F5-12	Left Rear Position light – short circuit to power	<ul style="list-style-type: none"> Left rear position light circuit - short to power 	Refer to electrical circuit diagrams and check left rear position light circuit for short to power
B10F6-11	Right rear position light - circuit short to ground	<ul style="list-style-type: none"> Right rear position light circuit - short to ground 	Refer to electrical circuit diagrams and check right rear position light circuit for short to ground
B10F6-12	Right rear position light - short circuit to power	<ul style="list-style-type: none"> Right rear position light circuit - short to power 	Refer to electrical circuit diagrams and check right rear position light circuit for short to power
B1101-12	Comfort relay - circuit short to power	<ul style="list-style-type: none"> Comfort relay control circuit - short to power 	Refer to electrical circuit diagrams and check comfort relay control circuit for short to power
B1101-14	Comfort relay - circuit short to ground or open	<ul style="list-style-type: none"> Comfort relay control circuit - short to ground, open circuit 	Refer to electrical circuit diagrams and check comfort relay control circuit for short to ground, open circuit
B1108-77	Driver door central locking motor - commanded position not reachable	<ul style="list-style-type: none"> Incorrect feedback from DDM 	Check for Lost Communications DTCs and carry out associated pinpoint test using manufacturer approved diagnostic system. If no lost communication DTC, check central locking mechanism for mechanical failure
B1109-77	Passenger door central locking motor - commanded position not reachable	<ul style="list-style-type: none"> Incorrect feedback from PDM 	Check for Lost Communications DTCs and carry out associated pinpoint test using manufacturer approved diagnostic system. If no lost communication DTC, check central locking mechanism for mechanical failure
B110A-77	Rear door driver side central locking motor - commanded position not reachable	<ul style="list-style-type: none"> Incorrect feedback from rear door driver side 	Check DDM for Lost Communications DTCs and carry out associated pinpoint test using manufacturer approved diagnostic system. If no lost communication DTC, Carry out the pinpoint tests associated to this DTC using the manufacturer approved diagnostic system, check central locking mechanism for mechanical failure

DTC	Description	Possible Cause	Action
B110B-77	Rear door passenger side central locking motor - commanded position not reachable	<ul style="list-style-type: none"> Incorrect feedback from rear door passenger side 	Check PDM for Lost Communications DTCs and carry out associated pinpoint test using manufacturer approved diagnostic system. If no lost communication DTC, Carry out the pinpoint tests associated to this DTC using the manufacturer approved diagnostic system, check central locking mechanism for mechanical failure
B1115-11	High Mounted Stoplamp control - circuit short to ground	<ul style="list-style-type: none"> High mounted stoplamp control circuit - short to ground 	Refer to electrical circuit diagrams and check high mounted stoplamp control circuit for short to ground
B1115-13	High Mounted Stoplamp control - circuit open	<ul style="list-style-type: none"> High mounted stoplamp control circuit - open circuit 	Refer to electrical circuit diagrams and check high mounted stoplamp control circuit for open circuit
B112A-12	Ignition On Relay B - circuit short to power	<ul style="list-style-type: none"> RJB ignition On relay circuit - short to power 	Refer to electrical circuit diagrams and check RJB ignition On relay circuit for short to power
B112A-14	Ignition On Relay B - circuit short to ground or open	<ul style="list-style-type: none"> RJB ignition On relay circuit - short to ground, open circuit 	Refer to electrical circuit diagrams and check RJB ignition On relay circuit for short to ground, open circuit
B112B-07	Steering Wheel Module - Mechanical Failures	<ul style="list-style-type: none"> Any position or button on wiper stalk active for more than 60 seconds (180 seconds for speed control buttons) Switch internal failure 	Check for stuck wiper or speed control buttons. Install a new switch as required, refer to new module/component installation note at the top of the DTC Index
B112B-88	Steering Wheel Module - Bus off	<ul style="list-style-type: none"> Lost communications with steering wheel module 	Carry out diagnostic strategy associated with this DTC using manufacturer approved diagnostic system
B112C-88	Interior Motion Sensor - Bus off	<ul style="list-style-type: none"> Lost communications with interior motion sensor 	Carry out diagnostic strategy associated with this DTC using manufacturer approved diagnostic system
B1130-07	Light switch module - Mechanical Failures	<ul style="list-style-type: none"> Any buttons on the Light Switch Module active for more than 60 seconds or Exterior Light Switch in illegal combination Switch internal failure 	Check for stuck light switch buttons. Install a new light switch as required, refer to new module/component installation note at the top of the DTC Index
B1130-88	Light Switch Module - Bus off	<ul style="list-style-type: none"> Lost communications with lighting switch module 	Carry out diagnostic strategy associated with this DTC using manufacturer approved diagnostic system
B1131-88	Wiper Motor Module - Bus off	<ul style="list-style-type: none"> Lost communications with wiper motor module 	Carry out diagnostic strategy associated with this DTC using manufacturer approved diagnostic system
B113C-11	Hazard switch illumination - circuit short to ground	<ul style="list-style-type: none"> Hazard switch illumination circuit - short to ground 	Refer to electrical circuit diagrams and check hazard switch illumination circuit for short to ground
B113C-15	Hazard switch illumination - circuit short to power or open	<ul style="list-style-type: none"> Hazard switch illumination circuit - short to power, open circuit 	Refer to electrical circuit diagrams and check hazard switch illumination circuit for short to power, open circuit
B113D-12	Sunroof Global Open/Close Control - circuit short to power	<ul style="list-style-type: none"> Roof opening panel global open/close control circuit - short to power 	Refer to electrical circuit diagrams and check roof opening panel global open/close control circuit for short to power
B113D-14	Sunroof Global Open/Close Control - circuit short to ground or open	<ul style="list-style-type: none"> Roof opening panel global open/close control circuit - short to ground, open circuit 	Refer to electrical circuit diagrams and check roof opening panel global open/close control circuit for short to ground, open circuit
B1182-51	Tire Pressure Monitoring System (TPMS) - Not Programmed	<ul style="list-style-type: none"> TPMS module in Transport/Factory mode 	Enter TPMS module into customer mode using manufacturer approved diagnostic system
B11BC-11	Extended accessory relay - circuit short to ground	<ul style="list-style-type: none"> Extended accessory relay circuit - short to ground 	Refer to electrical circuit diagrams and check extended accessory relay circuit for short to ground
B11BC-15	Extended accessory relay - circuit short to power or open	<ul style="list-style-type: none"> Extended accessory relay circuit - short to power, open circuit 	Refer to electrical circuit diagrams and check extended accessory relay circuit for short to power, open circuit

DTC	Description	Possible Cause	Action
B1A79-11	Rear Fog Lamp - circuit short to ground	<ul style="list-style-type: none"> Rear fog lamp supply circuit - short to ground 	Refer to electrical circuit diagrams and check rear fog lamp supply circuit for short to ground
B1A79-13	Rear Fog Lamp - circuit open	<ul style="list-style-type: none"> Rear fog lamp supply circuit - open circuit 	Refer to electrical circuit diagrams and check rear fog lamp supply circuit for open circuit
B1A84-41	Car Configuration Data - general checksum failure	<ul style="list-style-type: none"> Checksum error 	Configure the CJB as a 'NEW' module using the manufacturer approved diagnostic system
B1A99-04	Power On Reset-System Internal failure	<ul style="list-style-type: none"> The DTC will be set if the reset counter reaches the maximum value (currently 5) 	Install a new CJB, refer to the new module/component installation note at the top of the DTC Index
B1C96-11	Alarm LED Circuit - circuit short to ground	<ul style="list-style-type: none"> Alarm LED circuit - short to ground 	Refer to electrical circuit diagrams and check alarm LED circuit for short to ground
B1C96-15	Alarm LED Circuit - circuit short to power or open	<ul style="list-style-type: none"> Alarm LED circuit - short to power, open circuit 	Refer to electrical circuit diagrams and check alarm LED circuit for short to power, open circuit
B1D00-11	Left-hand Low Beam Circuit - circuit short to ground	<ul style="list-style-type: none"> Left-hand low beam circuit - short to ground 	Refer to electrical circuit diagrams and check left-hand low beam circuit for short to ground
B1D00-13	Left-hand Low Beam Circuit - circuit open	<ul style="list-style-type: none"> Left-hand low beam circuit - open circuit 	Refer to electrical circuit diagrams and check left-hand low beam circuit for open circuit
B1D01-11	Right-hand Low Beam Circuit - circuit short to ground	<ul style="list-style-type: none"> Right-hand low beam circuit - short to ground 	Refer to electrical circuit diagrams and check right-hand low beam circuit for short to ground
B1D01-13	Right-hand Low Beam Circuit - circuit open	<ul style="list-style-type: none"> Right-hand low beam circuit - open circuit 	Refer to electrical circuit diagrams and check right-hand low beam circuit for open circuit
B1D06-11	Left Turn Indicator - circuit short to ground	<ul style="list-style-type: none"> Left turn indicator circuit - short to ground 	Refer to electrical circuit diagrams and check left turn indicator circuit for short to ground
B1D06-13	Left Turn Indicator - circuit open	<ul style="list-style-type: none"> Left turn indicator circuit - open circuit 	Refer to electrical circuit diagrams and check left turn indicator circuit for open circuit
B1D07-11	Right Turn Indicator - circuit short to ground	<ul style="list-style-type: none"> Right turn indicator circuit - short to ground 	Refer to electrical circuit diagrams and check right turn indicator circuit for short to ground
B1D07-13	Right Turn Indicator - circuit open	<ul style="list-style-type: none"> Right turn indicator circuit - open circuit 	Refer to electrical circuit diagrams and check right turn indicator circuit for open circuit
B1D17-00	Battery Backed Sounder - General Failure Information	<ul style="list-style-type: none"> Internal inclination sensor fault 	Carry out the pinpoint tests associated to this DTC using the manufacturer approved diagnostic system
B1D17-88	Battery Backed Sounder - bus off	<ul style="list-style-type: none"> Lost communications with battery backed sounder 	Carry out the network test associated with this DTC using the manufacturer approved diagnostic system
B1D17-96	Battery Backed Sounder - component internal failure	<ul style="list-style-type: none"> Battery backed sounder - internal failure 	Install a new battery backed sounder, refer to new module/component installation note at the top of the DTC Index
B1D18-96	Volumetric Sensor Circuit - component internal failure	<ul style="list-style-type: none"> Interior motion sensor - internal failure 	Install a new interior motion sensor, refer to new module/component installation note at the top of the DTC Index
B1D21-62	Remote Control Switch - Signal compare failure	<ul style="list-style-type: none"> A request from a programmed remote key was received and the rolling counter was incorrect 	Re-synchronise the remote key by using the key to start the vehicle
B1C55-12	Horn Relay Coil Circuit - circuit short to power	<ul style="list-style-type: none"> Horn relay control circuit - short to power 	Refer to electrical circuit diagrams and check horn relay control circuit for short to power
B1C55-14	Horn Relay Coil Circuit - circuit short to ground or open	<ul style="list-style-type: none"> Horn relay control circuit - short to ground, open circuit 	Refer to electrical circuit diagrams and check horn relay control circuit for short to ground, open circuit
B1C82-12	Headlamp Washer Relay Coil Circuit - circuit short to power	<ul style="list-style-type: none"> Headlamp washer relay control circuit - short to power 	Refer to electrical circuit diagrams and check headlamp washer relay control circuit for short to power

DTC	Description	Possible Cause	Action
B1C82-14	Headlamp Washer Relay Coil Circuit - circuit short to ground or open	<ul style="list-style-type: none"> Headlamp washer relay control circuit - short to ground, open circuit 	Refer to electrical circuit diagrams and check headlamp washer relay control circuit for short to ground, open circuit
B1C84-12	Heated Rear Window Relay Output Circuit - circuit short to power	<ul style="list-style-type: none"> Heated rear window relay control circuit - short to power 	Refer to electrical circuit diagrams and check heated rear window relay control circuit for short to power
B1C84-14	Heated Rear Window Relay Output Circuit - circuit short to ground or open	<ul style="list-style-type: none"> Heated rear window relay control circuit - short to ground, open circuit 	Refer to electrical circuit diagrams and check heated rear window relay control circuit for short to ground, open circuit
B1C90-12	Auxiliary Driving Lamps Relay Coil Circuit - circuit short to power	<ul style="list-style-type: none"> Auxiliary driving lamps relay control circuit - short to power 	Refer to electrical circuit diagrams and check auxiliary driving lamps relay control circuit for short to power
B1C90-14	Auxiliary Driving Lamps Relay Coil Circuit - circuit short to ground or open	<ul style="list-style-type: none"> Auxiliary driving lamps relay control circuit - short to ground, open circuit 	Refer to electrical circuit diagrams and check auxiliary driving lamps relay control circuit for short to ground, open circuit
B1D13-12	Interior Lights #1 Circuit - circuit short to power	<ul style="list-style-type: none"> Instrument panel interior lights circuit - short to power 	Refer to electrical circuit diagrams and check instrument panel interior lights circuit for short to power
B1D13-14	Interior Lights #1 Circuit - circuit short to ground or open	<ul style="list-style-type: none"> Instrument panel interior lights circuit - short to ground, open circuit 	Refer to electrical circuit diagrams and check instrument panel interior lights circuit for short to ground, open circuit
B1D1A-12	Interior Lights Circuit 'C' - circuit short to power	<ul style="list-style-type: none"> Roof console interior lights circuit - short to power 	Refer to electrical circuit diagrams and check roof panel interior lights circuit for short to power
B1D1A-14	Interior Lights Circuit 'C' - circuit short to ground or open	<ul style="list-style-type: none"> Roof console interior lights circuit - short to ground, open circuit 	Refer to electrical circuit diagrams and check roof panel interior lights circuit for short to ground, open circuit
B1D35-24	Hazard Switch - Signal stuck high	<ul style="list-style-type: none"> Hazard switch is active more than 60 seconds 	Carry out the pinpoint tests associated to this DTC using the manufacturer approved diagnostic system
C0023-11	Stop Lamp Control - circuit short to ground	<ul style="list-style-type: none"> Stop lamp control circuit - short to ground 	Refer to electrical circuit diagrams and check stop lamp control circuit for short to ground
C0023-13	Stop Lamp Control - circuit open	<ul style="list-style-type: none"> Stop lamp control circuit - open circuit 	Refer to electrical circuit diagrams and check stop lamp control circuit for open circuit
C1108-11	Pedal Sensor(s) Supply Voltage - circuit short to ground	<ul style="list-style-type: none"> Pedal sensor(s) supply voltage circuit - short to ground 	Refer to electrical circuit diagrams and check pedal sensor(s) supply voltage circuit for short to ground
C1108-15	Pedal Sensor(s) Supply Voltage - circuit short to power or open	<ul style="list-style-type: none"> Pedal sensor(s) supply voltage circuit - short to power, open circuit 	Refer to electrical circuit diagrams and check pedal sensor(s) supply voltage circuit for short to power, open circuit
C1A41-21	Clutch Pedal Sensor - signal amplitude < minimum	<ul style="list-style-type: none"> signal < 3% of supply(5V) 	Carry out the pinpoint tests associated to this DTC using the manufacturer approved diagnostic system
C1A41-22	Clutch Pedal Sensor - signal amplitude > maximum	<ul style="list-style-type: none"> signal >= 97% of supply(5V) 	Carry out the pinpoint tests associated to this DTC using the manufacturer approved diagnostic system
C1A56-16	Front Left Wheel Module - circuit voltage below threshold (low battery)	<ul style="list-style-type: none"> Siemens internal algorithm 	Carry out the pinpoint tests associated to this DTC using the manufacturer approved diagnostic system
C1A56-86	Front Left Wheel Module - signal invalid (out of range)	<ul style="list-style-type: none"> Siemens internal algorithm 	Carry out the pinpoint tests associated to this DTC using the manufacturer approved diagnostic system
C1A56-93	Front Left Wheel Module - no operation (lost sensor)	<ul style="list-style-type: none"> Siemens internal algorithm 	Carry out the pinpoint tests associated to this DTC using the manufacturer approved diagnostic system
C1A57-11	Left Front Initiator - short to ground	<ul style="list-style-type: none"> Left front initiator circuit - short to ground 	Refer to electrical circuit diagrams and check left front initiator circuit for short to ground

DTC	Description	Possible Cause	Action
C1A57-12	Left Front Initiator - short to power	<ul style="list-style-type: none"> Left front initiator circuit - short to power 	Refer to electrical circuit diagrams and check left front initiator circuit for short to power
C1A57-13	Left Front Initiator - open circuit	<ul style="list-style-type: none"> Left front initiator circuit - open circuit 	Refer to electrical circuit diagrams and check left front initiator circuit for open circuit
C1A58-16	Front Right Wheel Module - circuit voltage below threshold (low battery)	<ul style="list-style-type: none"> Siemens internal algorithm 	Carry out the pinpoint tests associated to this DTC using the manufacturer approved diagnostic system
C1A58-86	Front Right Wheel Module - signal invalid (out of range)	<ul style="list-style-type: none"> Siemens internal algorithm 	Carry out the pinpoint tests associated to this DTC using the manufacturer approved diagnostic system
C1A58-93	Front Right Wheel Module - no operation (lost sensor)	<ul style="list-style-type: none"> Siemens internal algorithm 	Carry out the pinpoint tests associated to this DTC using the manufacturer approved diagnostic system
C1A59-11	Right Front Initiator - short to ground	<ul style="list-style-type: none"> Right front initiator circuit - short to ground 	Refer to electrical circuit diagrams and check right front initiator circuit for short to ground
C1A59-12	Right Front Initiator - short to power	<ul style="list-style-type: none"> Right front initiator circuit - short to power 	Refer to electrical circuit diagrams and check right front initiator circuit for short to power
C1A59-13	Right Front Initiator - open circuit	<ul style="list-style-type: none"> Right front initiator circuit - open circuit 	Refer to electrical circuit diagrams and check right front initiator circuit for open circuit
C1A60-16	Rear Left Wheel Module - circuit voltage below threshold (low battery)	<ul style="list-style-type: none"> Siemens internal algorithm 	Carry out the pinpoint tests associated to this DTC using the manufacturer approved diagnostic system
C1A60-86	Rear Left Wheel Module - signal invalid (out of range)	<ul style="list-style-type: none"> Siemens internal algorithm 	Carry out the pinpoint tests associated to this DTC using the manufacturer approved diagnostic system
C1A60-93	Rear Left Wheel Module - no operation (lost sensor)	<ul style="list-style-type: none"> Siemens internal algorithm 	Carry out the pinpoint tests associated to this DTC using the manufacturer approved diagnostic system
C1A61-11	Left Rear Initiator - short to ground	<ul style="list-style-type: none"> Left rear initiator circuit - short to ground 	Refer to electrical circuit diagrams and check left rear initiator circuit for short to ground
C1A61-12	Left Rear Initiator - short to power	<ul style="list-style-type: none"> Left rear initiator circuit - short to power 	Refer to electrical circuit diagrams and check left rear initiator circuit for short to power
C1A61-13	Left Rear Initiator - open circuit	<ul style="list-style-type: none"> Left rear initiator circuit - open circuit 	Refer to electrical circuit diagrams and check left rear initiator circuit for open circuit
C1A62-16	Rear Right Wheel Module - circuit voltage below threshold (low battery)	<ul style="list-style-type: none"> Siemens internal algorithm 	Carry out the pinpoint tests associated to this DTC using the manufacturer approved diagnostic system
C1A62-86	Rear Right Wheel Module - signal invalid (out of range)	<ul style="list-style-type: none"> Siemens internal algorithm 	Carry out the pinpoint tests associated to this DTC using the manufacturer approved diagnostic system
C1A62-93	Rear Right Wheel Module - no operation (lost sensor)	<ul style="list-style-type: none"> Siemens internal algorithm 	Carry out the pinpoint tests associated to this DTC using the manufacturer approved diagnostic system
C1A63-11	Right Rear Initiator - short to ground	<ul style="list-style-type: none"> Right rear initiator circuit - short to ground 	Refer to electrical circuit diagrams and check right rear initiator circuit for short to ground
C1A63-12	Right Rear Initiator - short to battery	<ul style="list-style-type: none"> Right rear initiator circuit - short to power 	Refer to electrical circuit diagrams and check right rear initiator circuit for short to power
C1A63-13	Right Rear Initiator - open circuit	<ul style="list-style-type: none"> Right rear initiator circuit - open circuit 	Refer to electrical circuit diagrams and check right rear initiator circuit for open circuit
C1B14-12	Sensor supply #1 - circuit short to power	<ul style="list-style-type: none"> Sensor supply #1 circuit - short to power 	Refer to electrical circuit diagrams and check sensor supply #1 circuit for short to power
C1D18-00	Localisation failed	<ul style="list-style-type: none"> Tire pressure monitor localisation failed 	Check for additional related DTCs and refer to this DTC Index

DTC	Description	Possible Cause	Action
C1D21-05	Wheel module - general signal failure	<ul style="list-style-type: none"> Siemens internal algorithm 	Carry out the pinpoint tests associated to this DTC using the manufacturer approved diagnostic system
C1D22-49	Steering Wheel Switch Right Module - Internal failure	<ul style="list-style-type: none"> Steering wheel switch right module - internal failure 	Install a new wash/wipe switch, refer to new module/component installation note at the top of the DTC Index
C2003-07	Steering Wheel Switch Left Module - Mechanical Failures	<ul style="list-style-type: none"> Steering wheel switch left module - mechanical failure 	Install a new indicator switch, refer to new module/component installation note at the top of the DTC Index
C2003-49	Steering Wheel Switch Left Module - Internal failure	<ul style="list-style-type: none"> Steering wheel switch left module - internal failure 	Install a new indicator switch, refer to new module/component installation note at the top of the DTC Index
C2004-12	Headlamp washer relay B - circuit short to power	<ul style="list-style-type: none"> Headlamp washer relay B circuit - short to power 	Refer to electrical circuit diagrams and check headlamp washer relay B circuit for short to power
C2004-14	Headlamp washer relay B - circuit short to ground or open	<ul style="list-style-type: none"> Headlamp washer relay B circuit - short to ground, open circuit 	Refer to electrical circuit diagrams and check headlamp washer relay B circuit for short to ground, open circuit
P0460-15	Fuel Level Sensor A - short to battery or open circuit	<ul style="list-style-type: none"> Fuel tank unit circuit A short to power, open circuit 	<p>NOTE: Carry out pinpoint tests associated with this DTC using the manufacturer approved diagnostic system</p> <p>Refer to the electrical circuit diagrams and check the circuit between the central junction box and the fuel tank unit circuit (F/P sensor) for short to power, open circuit. Using the manufacturer approved diagnostic system check and install latest relevant level of software to the central junction box and the instrument panel cluster. If the level of software is correct carry out a battery reset</p>
P0462-00	Fuel Level Sensor A - no subtype information	<ul style="list-style-type: none"> Fuel tank unit circuit A short to ground or high resistance 	<p>NOTE: Carry out pinpoint tests associated with this DTC using the manufacturer approved diagnostic system</p> <p>Refer to the electrical circuit diagrams and check the circuit between the central junction box and the fuel tank unit circuit (F/P sensor) for short to ground. Using the manufacturer approved diagnostic system check and install latest relevant level of software to the central junction box and the instrument panel cluster. If the level of software is correct carry out a battery reset</p>
P0604-00	Internal Control Module Random Access Memory (RAM) Error	<ul style="list-style-type: none"> RAM Checksum not correct 	Install a new CJB, refer to the new module/component installation note at the top of the DTC Index
P0605-00	Internal Control Module Read Only Memory (ROM) Error	<ul style="list-style-type: none"> ROM Checksum not correct 	Install a new CJB, refer to the new module/component installation note at the top of the DTC Index
P062F-00	Internal Control Module Read Only Memory (ROM) Error	<ul style="list-style-type: none"> EEP read back value does not match written value 	Install a new CJB, refer to the new module/component installation note at the top of the DTC Index
P0801-11	Reverse inhibit control circuit - circuit short to ground	<ul style="list-style-type: none"> Reverse inhibit control circuit - short to ground 	Refer to electrical circuit diagrams and check reverse inhibit control circuit for short to ground
P1346-13	Fuel Level Sensor B - open circuit	<ul style="list-style-type: none"> Fuel tank unit circuit B short to power, open circuit 	<p>NOTE: Carry out pinpoint tests associated with this DTC using the manufacturer approved diagnostic system</p> <p>Refer to the electrical circuit diagrams and check the circuit between the central junction box and the fuel tank unit circuit (Fuel eject sensor) for short to power, open circuit. Using the manufacturer approved diagnostic system check and install latest relevant level of software to the central junction box and the instrument panel cluster. If the level of software is correct carry out a battery reset</p>
P1348-00	Fuel Level Sensor B - no subtype information	<ul style="list-style-type: none"> Fuel tank unit circuit B short to ground 	<p>NOTE: Carry out pinpoint tests associated with this DTC using the manufacturer approved diagnostic system</p> <p>Refer to the electrical circuit diagrams and check the circuit between the central junction box and the fuel tank unit circuit (Fuel eject sensor) for short to ground. Using the manufacturer approved diagnostic system check and install latest relevant level of software to the</p>

DTC	Description	Possible Cause	Action
			central junction box and the instrument panel cluster. If the level of software is correct carry out a battery reset
P1674-00	Control Module Software Corrupted	<ul style="list-style-type: none"> ● A software assertion failed within the module 	Load the latest relevant level of software using the manufacturer approved diagnostic system
U0001-00	High Speed CAN Communication Bus	<ul style="list-style-type: none"> ● Bus Off 	Carry out the associated network test for this DTC using the manufacturer approved diagnostic system
U0010-00	Medium Speed CAN Communication Bus	<ul style="list-style-type: none"> ● Bus Off 	Carry out the associated network test for this DTC using the manufacturer approved diagnostic system
U0100-00	Lost Communication With ECM/PCM 'A'	<ul style="list-style-type: none"> ● Lost communication with ECM 	Carry out the associated network test for this DTC using the manufacturer approved diagnostic system
U0101-00	Lost Communication with TCM	<ul style="list-style-type: none"> ● Lost communication with TCM 	Carry out the associated network test for this DTC using the manufacturer approved diagnostic system
U0104-00	Lost Communication With Speed Control Module	<ul style="list-style-type: none"> ● Lost communication with speed control module 	Carry out the associated network test for this DTC using the manufacturer approved diagnostic system
U0126-00	Lost Communication With Steering Angle Sensor Module	<ul style="list-style-type: none"> ● Lost communication with steering angle sensor 	Carry out the associated network test for this DTC using the manufacturer approved diagnostic system
U0129-00	Lost Communication With Brake System Control Module	<ul style="list-style-type: none"> ● Lost communication with ABS module 	Carry out the associated network test for this DTC using the manufacturer approved diagnostic system
U0135-00	Lost Communication With Differential Control Module - Front	<ul style="list-style-type: none"> ● Lost communication with differential control module 	Carry out the associated network test for this DTC using the manufacturer approved diagnostic system
U0155-00	Lost Communication With Instrument Panel Cluster (IPC) Control Module	<ul style="list-style-type: none"> ● Lost communication with instrument cluster 	Carry out the associated network test for this DTC using the manufacturer approved diagnostic system
U0156-00	Lost Communication With Information Center "A"	<ul style="list-style-type: none"> ● Lost communication with information center 	Carry out the associated network test for this DTC using the manufacturer approved diagnostic system
U0159-00	Lost Communication With Parking Assist Control Module "A"	<ul style="list-style-type: none"> ● Lost communication with parking aid module 	Carry out the associated network test for this DTC using the manufacturer approved diagnostic system
U0164-00	Lost Communication With HVAC Control Module	<ul style="list-style-type: none"> ● Lost communication with climate control module 	Carry out the associated network test for this DTC using the manufacturer approved diagnostic system
U0166-00	Lost Communication With Auxiliary Heater Control Module	<ul style="list-style-type: none"> ● Lost communication with auxiliary heater control module 	Carry out the associated network test for this DTC using the manufacturer approved diagnostic system
U0181-00	Lost Communication With Headlamp Levelling Control Module	<ul style="list-style-type: none"> ● Lost communication with headlamp Levelling control module 	Carry out the associated network test for this DTC using the manufacturer approved diagnostic system
U0199-00	Lost Communication With "Door Control Module A"	<ul style="list-style-type: none"> ● Lost communication with Driver Door Module (DDM) 	Carry out the associated network test for this DTC using the manufacturer approved diagnostic system
U0200-00	Lost Communication With "Door Control Module B"	<ul style="list-style-type: none"> ● Lost communication with Passenger Door Module (PDM) 	Carry out the associated network test for this DTC using the manufacturer approved diagnostic system
U0208-00	Lost Communication With "Seat Control Module A"	<ul style="list-style-type: none"> ● Lost communication with Passenger Seat Module (PSM) 	Carry out the associated network test for this DTC using the manufacturer approved diagnostic system
U0214-00	Lost Communication With Remote Function Actuation	<ul style="list-style-type: none"> ● Lost communication with Remote Keyless Entry module 	Carry out the associated network test for this DTC using the manufacturer approved diagnostic system
U0231-00	Lost Communication With Rain Sensing Module	<ul style="list-style-type: none"> ● Lost communication with rain sensing module 	Carry out the associated network test for this DTC using the manufacturer approved diagnostic system
U0236-00	Lost Communication With Column Lock Module	<ul style="list-style-type: none"> ● Lost communication with steering column lock module 	Carry out the associated network test for this DTC using the manufacturer approved diagnostic system

DTC	Description	Possible Cause	Action
U0252-00	Lost Communication With Lighting Control Module - Rear 'B'	<ul style="list-style-type: none"> Lost communication with trailer module 	Carry out the associated network test for this DTC using the manufacturer approved diagnostic system
U0301-00	Software Incompatibility with ECM/PCM	<ul style="list-style-type: none"> ECM disconnected Incorrect ECM installed 	Check electrical connections to ECM. Check correct ECM is installed
U0401-00	Invalid Data Received From ECM/PCM	<ul style="list-style-type: none"> Invalid data received from ECM 	Check ECM for DTCs and refer to DTC Index
U0405-00	Invalid Data Received From Cruise Control Module	<ul style="list-style-type: none"> Invalid data received from speed control module 	Check speed control module for DTCs and refer to DTC Index
U0515-00	Invalid data received from remote function actuation	<ul style="list-style-type: none"> Invalid data received from keyless entry module 	Check keyless entry module for DTCs and refer to DTC Index. Carry out the pinpoint tests associated to this DTC using the manufacturer approved diagnostic system
U2005-62	Vehicle Speed - Signal compare failure	<ul style="list-style-type: none"> Vehicle Speed - Signal compare failure 	Check ABS for DTCs and refer to DTC Index
U2010-11	Switch Illumination - circuit short to ground	<ul style="list-style-type: none"> Switch illumination circuit - short to ground 	Refer to electrical circuit diagrams and check switch illumination circuit for short to ground
U2010-15	Switch Illumination - circuit short to power or open	<ul style="list-style-type: none"> Switch illumination circuit - short to power, open circuit 	Refer to electrical circuit diagrams and check switch illumination circuit for short to power, open circuit
U2017-41	Control Module Software #2 - general checksum failure	<ul style="list-style-type: none"> Signal configuration checksum not correct 	Install latest relevant level of software using the manufacturer approved diagnostic system
U2018-41	Control Module Software #3 - general checksum failure	<ul style="list-style-type: none"> Local configuration checksum not correct 	Install latest relevant level of software using the manufacturer approved diagnostic system
U2101-00	Control Module Configuration Incompatible	<ul style="list-style-type: none"> Each function reports if a car configuration parameter has a value that is unknown 	Check and reload Car Configuration File
U3000-51	Control Module - not programmed	<ul style="list-style-type: none"> Car config or Local config or Signal config is not loaded 	Install latest relevant level of software using the manufacturer approved diagnostic system
U3003-16	Battery Voltage	<ul style="list-style-type: none"> Circuit voltage below threshold 	Carry out the pinpoint tests associated to this DTC using the manufacturer approved diagnostic system
U3003-17	Battery Voltage	<ul style="list-style-type: none"> Circuit voltage above threshold 	Carry out the pinpoint tests associated to this DTC using the manufacturer approved diagnostic system

Published: 27-Apr-2011

General Information - Diagnostic Trouble Code (DTC) Index DTC: Cellular Telephone Control Module (Bluetooth Telephone Module) (BPM)

Description and Operation

NOTE: If a control module or component 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 program is in operation, before the replacement of a component.

NOTE: 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).

NOTE: When performing 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.

Description And Operation

For a detailed description of the cellular phone system, refer to the relevant Description and Operation section in the workshop manual.

For additional information, refer to: [Cellular Phone](#) (415-01 Information and Entertainment System, Description and Operation).

Bluetooth Module

DTC	Description	Possible Cause	Action
B1A5613	Bluetooth antenna	Bluetooth antenna circuit - open circuit	Refer to electrical circuit diagrams and check bluetooth antenna circuit for open circuit
B1D7984	Microphone input	Signal amplitude below minimum	Carry out MOST system checks using manufacturer approved diagnostic system
U1A0088	Private Bus circuit	BT chipset communications failure	Install a new bluetooth module. For additional information, refer to: Bluetooth Module (415-01 Information and Entertainment System, Removal and Installation).
U210000	Control module	Initial configuration incomplete	Re-configure the CJB using the manufacturer approved diagnostic system. If DTC remains carry out CAN Network integrity tests using the manufacturer approved diagnostic system
U210100	Control module	Configuration incompatible	Check/up-date Car Configuration File using manufacturer approved diagnostic system
U300044	Control module	Data memory failure	Install a new bluetooth module. For additional information, refer to: Bluetooth Module (415-01 Information and Entertainment System, Removal and Installation).
U300045	Control module	Program memory failure	Install a new bluetooth module. For additional information, refer to: Bluetooth Module (415-01 Information and Entertainment System, Removal and Installation).
U300055	Control module	Incorrect Car Configuration File data received	Check/up-date Car Configuration File using manufacturer approved diagnostic system
U300087	Control module	Missing message	Check CJB for DTCs and refer to DTC Index. For additional information, refer to: Communications Network (418-00 Module Communications Network, Diagnosis and Testing). Check information and entertainment module for Car Configuration File and MOST network DTCs and refer to relevant DTC Index. Carry out MOST/CAN network tests using the manufacturer approved diagnostic system
U300098	Control module	Over temperature	Check for additional DTCs and refer to DTC Index. Check/monitor system for re-occurrence
U300362	Battery voltage	Mis-match in battery voltage, of 2 volts or more, between bluetooth module and CJB	Carry out pinpoint tests associated with this DTC using the manufacturer approved diagnostic system

Published: 28-Apr-2011

General Information - Diagnostic Trouble Code (DTC) IndexDTC: Digital Audio Broadcast Module (DABM)

Description and Operation

NOTE: If a control module or component 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 program is in operation, before the replacement of a component.

NOTE: 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).

NOTE: When performing 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.

Description And Operation

For a detailed description of the digital audio broadcast system, refer to the relevant Description and Operation section in the workshop manual.

For additional information, refer to: [Audio System](#) (415-01 Information and Entertainment System, Description and Operation).

Digital Audio Broadcast Module (DAB)

DTC	Description	Possible Cause	Action
B11A4-11	L-Band antenna	DAB L-Band antenna circuit - short to ground	Refer to electrical circuit diagrams and check DAB L-Band antenna circuit for short to ground
B11A4-13	L-Band antenna	DAB L-Band antenna circuit - open circuit	Refer to electrical circuit diagrams and check DAB L-Band antenna circuit for open circuit
B11A5-11	Band 3 antenna	DAB Band 3 antenna circuit - short to ground	Refer to electrical circuit diagrams and check DAB Band 3 antenna circuit for short to ground
B11A5-13	Band 3 antenna	DAB Band 3 antenna circuit - open circuit	Refer to electrical circuit diagrams and check DAB Band 3 antenna circuit for open circuit
U3000-04	Control module	System internal failure	Install a new digital audio broadcast module. For additional information, refer to: Satellite Radio Tuner (415-01 Information and Entertainment System, Removal and Installation).
U3000-4A	Control module	Incorrect component installed	Install a new digital audio broadcast module or Re-configure the digital audio broadcast module using the manufacturer approved diagnostic system
U3000-55	Control module	Incorrect Car Configuration File data received	Check/up-date Car Configuration File using manufacturer approved diagnostic system
U3000-87	Control module	Missing message	Check CJB for DTCs and refer to DTC Index. For additional information, refer to: Communications Network (418-00 Module Communications Network, Diagnosis and Testing). Check information and entertainment module for Car Configuration File and MOST network DTCs and refer to relevant DTC Index. Carry out MOST/CAN network tests using the manufacturer approved diagnostic system
U3000-98	Control module	Component or system over temperature	Check for additional DTCs and refer to relevant DTC Index. Check/monitor system for re-occurrence
U3003-62	Battery voltage	Mis-match in battery voltage, of 2 volts or more, between digital broadcast module and CJB	Carry out pinpoint tests associated with this DTC using the manufacturer approved diagnostic system

General Information - Diagnostic Trouble Code (DTC) IndexDTC:

Driver/Passenger Door Module (DDM/PDM)

Description and Operation

NOTE: If a control module or component 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 program is in operation, before the replacement of a component.

NOTE: 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).

NOTE: When performing 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.

Description And Operation

For a detailed description of the driver passenger door system, refer to the relevant Description and Operation section in the workshop manual.

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

Driver/passenger door module

B108F-23	Cabin Lock/Unlock Switch	<ul style="list-style-type: none"> Signal stuck low 	Carry out the pinpoint test associated with this DTC using the manufacturer approved diagnostic system
B10ED-11	Rear door driver side double locking motor	<ul style="list-style-type: none"> 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
B10ED-15	Rear door driver side double locking motor	<ul style="list-style-type: none"> 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
B10EE-11	Rear door passenger side double locking motor	<ul style="list-style-type: none"> 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
B10EE-15	Rear door passenger side double locking motor	<ul style="list-style-type: none"> 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
B110A-11	Rear door driver side central locking motor	<ul style="list-style-type: none"> Circuit short to ground 	Refer to electrical circuit diagrams and check rear door driver side central locking motor control circuit for short to ground
B110A-15	Rear door driver side central locking motor	<ul style="list-style-type: none"> 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
B110B-11	Rear door passenger side central locking motor	<ul style="list-style-type: none"> Circuit short to ground 	Refer to electrical circuit diagrams and check rear door passenger side central locking motor control circuit for short to ground
B110B-15	Rear door passenger side central locking motor	<ul style="list-style-type: none"> 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
B117C-07	Rear Power Window up	<ul style="list-style-type: none"> Mechanical Failure 	Check for mechanical failure of rear window mechanism
B117C-72	Rear Power Window up	<ul style="list-style-type: none"> 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
B117C-73	Rear Power Window up	<ul style="list-style-type: none"> 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

B117C-92	Rear Power Window up	<ul style="list-style-type: none"> ● Performance or incorrect operation 	Refer to electrical circuit diagrams and check power and ground supplies to rear door module
B117D-72	Rear Power Window down	<ul style="list-style-type: none"> ● 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
B117D-73	Rear Power Window down	<ul style="list-style-type: none"> ● 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
B117E-07	Front Power Window up	<ul style="list-style-type: none"> ● Mechanical failure 	Check for mechanical failure of front window mechanism
B117E-72	Front Power Window up	<ul style="list-style-type: none"> ● 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
B117E-73	Front Power Window up	<ul style="list-style-type: none"> ● 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
B117F-72	Front Power Window down	<ul style="list-style-type: none"> ● 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
B117F-73	Front Power Window down	<ul style="list-style-type: none"> ● 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
B11D1-83	LIN Bus Circuit "C"	<ul style="list-style-type: none"> ● 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 new module/component installation note at the top of the DTC Index
B11D1-86	LIN Bus Circuit "C"	<ul style="list-style-type: none"> ● 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 new module/component installation note at the top of the DTC Index
B11D1-87	LIN Bus Circuit "C"	<ul style="list-style-type: none"> ● 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 new module/component installation note at the top of the DTC Index
B11F6-11	Driver Folding Mirror Motor	<ul style="list-style-type: none"> ● Short To Ground 	Refer to electrical circuit diagrams and check driver folding mirror motor for short to ground
B11F6-15	Driver Folding Mirror Motor	<ul style="list-style-type: none"> ● Short to power or open 	Refer to electrical circuit diagrams and check driver folding mirror motor for short to power, open circuit
B11F7-11	Passenger Folding Mirror Motor	<ul style="list-style-type: none"> ● Short To Ground 	Refer to electrical circuit diagrams and check passenger folding mirror motor for short to ground
B11F7-15	Passenger Folding Mirror Motor	<ul style="list-style-type: none"> ● Short to power or open 	Refer to electrical circuit diagrams and check passenger folding mirror motor for short to power, open circuit
B1A98-83	LIN Bus Circuit #1	<ul style="list-style-type: none"> ● 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 new module/component installation note at the top of the DTC Index
B1A98-86	LIN Bus Circuit #1	<ul style="list-style-type: none"> ● 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 new module/component installation note at the top of the DTC Index
B1A98-87	LIN Bus Circuit #1	<ul style="list-style-type: none"> ● 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 new module/component installation note at the top of the DTC Index
B1C39-29	Key Lock Switch	<ul style="list-style-type: none"> ● Signal invalid 	Carry out the associated pinpoint tests associated with this DTC using the manufacturer approved diagnostic system
C1B15-11	Sensor Supply #2	<ul style="list-style-type: none"> ● Short to ground 	Refer to the electrical circuit diagrams and test rear window sensor supply circuit for short to ground
C1B15-15	Sensor Supply #2	<ul style="list-style-type: none"> ● 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
U2004-24	Auxiliary Switch Pack	<ul style="list-style-type: none"> ● Signal stuck high 	Carry out the pinpoint tests associated with this DTC using the manufacturer approved diagnostic system

Driver/Passenger door module (DDM/PDM)

DTC	Description	Possible Cause	Action
B109C-15	Front Courtesy Light	<ul style="list-style-type: none"> ● 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
B109D-11	Front Courtesy Light	<ul style="list-style-type: none"> ● Short to ground 	Refer to the electrical circuit diagrams and test front courtesy light circuit for short ground
B10EB-11	Driver door double locking motor	<ul style="list-style-type: none"> ● Short to ground 	Refer to the electrical circuit diagrams and test driver door double locking motor circuit for short ground
B10EB-15	Driver door double locking motor	<ul style="list-style-type: none"> ● 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
B10EC-11	Passenger door double locking motor	<ul style="list-style-type: none"> ● Short to ground 	Refer to the electrical circuit diagrams and test passenger door double locking motor circuit for short ground
B10EC-15	Passenger door double locking motor	<ul style="list-style-type: none"> ● 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
B1108-11	Driver door central locking motor	<ul style="list-style-type: none"> ● Short to ground 	Refer to the electrical circuit diagrams and test driver door central locking motor circuit for short ground
B1108-15	Driver door central locking motor	<ul style="list-style-type: none"> ● 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
B1109-11	Passenger door central locking motor	<ul style="list-style-type: none"> ● Short to ground 	Carry out pinpoint tests associated with this DTC using the manufacturer approved diagnostic system
B1109-15	Passenger door central locking motor	<ul style="list-style-type: none"> ● Short to power or open circuit 	Carry out pinpoint tests associated with this DTC using the manufacturer approved diagnostic system
B1163-11	Left Mirror Heater Output short to ground	<ul style="list-style-type: none"> ● Short to ground 	Refer to the electrical circuit diagrams and test left mirror heater output circuit for short to ground
B1163-15	Left Mirror Heater Output short to power	<ul style="list-style-type: none"> ● 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
B1164-11	Right Mirror Heater Output short to ground	<ul style="list-style-type: none"> ● Short to ground 	Refer to the electrical circuit diagrams and test right mirror heater output circuit for short to ground
B1164-15	Right Mirror Heater Output short to power	<ul style="list-style-type: none"> ● 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
B1165-11	Left Front Puddle Lamp Output short to ground	<ul style="list-style-type: none"> ● Short to ground 	Refer to the electrical circuit diagrams and test left front puddle lamp output circuit for short to ground
B1165-15	Left Front Puddle Lamp Output open load or short to power	<ul style="list-style-type: none"> ● 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
B1166-11	Right Front Puddle Lamp Output short to ground	<ul style="list-style-type: none"> ● Short to ground 	Refer to the electrical circuit diagrams and test right front puddle lamp output circuit for short to ground
B1166-15	Right Front Puddle Lamp Output open load or short to battery	<ul style="list-style-type: none"> ● 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
B117E-72	Front Power Window up	<ul style="list-style-type: none"> ● Actuator stuck open 	Install a new DDM/PDM, refer to the new module installation note at the top of the DTC Index
B117E-73	Front Power Window up	<ul style="list-style-type: none"> ● Actuator stuck closed 	Install a new DDM/PDM, refer to the new module installation note at the top of the DTC Index
B117F-72	Front Power Window down	<ul style="list-style-type: none"> ● Actuator stuck open 	Install a new DDM/PDM, refer to the new module installation note at the top of the DTC Index
B117F-73	Front Power Window down	<ul style="list-style-type: none"> ● Actuator stuck closed 	Install a new DDM/PDM, refer to the new module installation note at the top of the DTC Index
B1189-29	Front Window Position Sensor	<ul style="list-style-type: none"> ● Signal invalid 	Carry out pinpoint tests associated with this DTC using the manufacturer approved diagnostic system
B118A-29	Rear Window Position Sensor	<ul style="list-style-type: none"> ● Signal invalid 	Carry out pinpoint tests associated with this DTC using the manufacturer approved diagnostic system
B1A94-11	Driver Mirror	<ul style="list-style-type: none"> ● Short to ground 	Refer to the electrical circuit diagrams and test driver mirror fold motor circuit for short to ground
B1A94-15	Driver Mirror	<ul style="list-style-type: none"> ● 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

DTC	Description	Possible Cause	Action
B1A95-11	Passenger Mirror	<ul style="list-style-type: none"> Short to ground 	Refer to the electrical circuit diagrams and test passenger mirror fold motor circuit for short to ground
B1A95-15	Passenger Mirror	<ul style="list-style-type: none"> 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
B1A98-83	LIN Bus Circuit #1	<ul style="list-style-type: none"> 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 new module/component installation note at the top of the DTC Index
B1A98-86	LIN Bus Circuit #1	<ul style="list-style-type: none"> 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 new module/component installation note at the top of the DTC Index
B1A98-87	LIN Bus Circuit #1	<ul style="list-style-type: none"> 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 new module/component installation note at the top of the DTC Index
B1C09-11	Driver Left/Right Mirror Motor Circuit	<ul style="list-style-type: none"> Short to ground 	Refer to the electrical circuit diagrams and test driver left/right mirror motor circuit for short to ground
B1C09-15	Driver Left/Right Mirror Motor Circuit	<ul style="list-style-type: none"> 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
B1C10-11	Driver Up/Down Mirror Motor Circuit	<ul style="list-style-type: none"> Short to ground 	Refer to the electrical circuit diagrams and test driver up/down mirror motor circuit for short to ground
B1C10-15	Driver Up/Down Mirror Motor Circuit	<ul style="list-style-type: none"> 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
B1C11-11	Passenger Left/Right Mirror Motor Circuit	<ul style="list-style-type: none"> Short to ground 	Carry out pinpoint tests associated with this DTC using the manufacturer approved diagnostic system
B1C11-15	Passenger Left/Right Mirror Motor Circuit	<ul style="list-style-type: none"> Short to power or open circuit 	Carry out pinpoint tests associated with this DTC using the manufacturer approved diagnostic system
B1C12-11	Passenger Up/Down Mirror Motor Circuit	<ul style="list-style-type: none"> Short to ground 	Carry out pinpoint tests associated with this DTC using the manufacturer approved diagnostic system
B1C12-15	Passenger Up/Down Mirror Motor Circuit	<ul style="list-style-type: none"> Short to power or open circuit 	Carry out pinpoint tests associated with this DTC using the manufacturer approved diagnostic system
B1C13-11	Driver Up/Down Mirror Motor Feedback Circuit	<ul style="list-style-type: none"> Short to ground 	Refer to the electrical circuit diagrams and test driver up/down mirror motor feedback circuit for short to ground
B1C13-15	Driver Up/Down Mirror Motor Feedback Circuit	<ul style="list-style-type: none"> 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
B1C14-11	Driver Left/Right Mirror Motor Feedback Circuit	<ul style="list-style-type: none"> Short to ground 	Refer to the electrical circuit diagrams and test driver left/right mirror motor feedback circuit for short to ground
B1C14-15	Driver Left/Right Mirror Motor Feedback Circuit	<ul style="list-style-type: none"> 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
B1C15-11	Passenger Up/Down Mirror Motor Feedback Circuit	<ul style="list-style-type: none"> Short to ground 	Refer to the electrical circuit diagrams and test passenger up/down mirror motor feedback circuit for short to ground
B1C15-15	Passenger Up/Down Mirror Motor Feedback Circuit	<ul style="list-style-type: none"> 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
B1C16-11	Passenger Left/Right Mirror Motor Feedback Circuit	<ul style="list-style-type: none"> Short to ground 	Refer to the electrical circuit diagrams and test passenger left/right mirror motor feedback circuit for short to ground
B1C16-15	Passenger Left/Right Mirror Motor Feedback Circuit	<ul style="list-style-type: none"> 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
C1B14-11	Sensor Supply #1	<ul style="list-style-type: none"> Short to ground 	Refer to the electrical circuit diagrams and test window sensor supply circuit for short to ground

DTC	Description	Possible Cause	Action
C1B14-15	Sensor Supply #1	<ul style="list-style-type: none"> Short to power or open circuit 	Refer to the electrical circuit diagrams and test window sensor supply circuit for short to power or open circuit
U0010-00	Medium speed CAN communication Bus	<ul style="list-style-type: none"> Medium speed CAN communication Bus 	Carry out pinpoint tests associated with this DTC using the manufacturer approved diagnostic system
U0140-00	Lost communication with CJB	<ul style="list-style-type: none"> Logged when subscribed CAN message missing from CJB 	Carry out pinpoint tests associated with this DTC using the manufacturer approved diagnostic system
U0208-00	Lost communication With Driver Seat Module (DSM)	<ul style="list-style-type: none"> Missing message 	Carry out pinpoint tests associated with this DTC using the manufacturer approved diagnostic system
U0300-00	Internal control module software incompatibility	<ul style="list-style-type: none"> 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
U2002-24	Switch	<ul style="list-style-type: none"> Signal stuck high 	Clear DTC and re-test. If DTC remains, install a new passenger side window switch
U2010-11	Switch illumination	<ul style="list-style-type: none"> Circuit short to ground 	Carry out CAN network tests using the manufacturer approved diagnostic system
U2010-12	Switch illumination	<ul style="list-style-type: none"> Circuit short to battery 	Carry out CAN network tests using the manufacturer approved diagnostic system
U2012-08	Car Configuration Parameter(s)	<ul style="list-style-type: none"> Bus signal/message failures 	Cycle the ignition status and re-test. If DTC remains, re-configure the RJB using the manufacturer approved diagnostic system
U2013-24	Switch Pack	<ul style="list-style-type: none"> Signal stuck high 	Clear DTC and re-test. If DTC remains, install a new driver side window switch pack, refer to new module/component installation note at the top of the DTC Index
U2014-44	Control module hardware	<ul style="list-style-type: none"> Data Memory Failure 	Install a new DDM/PDM, refer to the new module installation note at the top of the DTC Index
U2100-00	Initial configuration not complete	<ul style="list-style-type: none"> No sub type information 	Re-configure the DDM/PDM using the manufacturer approved diagnostic system
U3000-49	Control module	<ul style="list-style-type: none"> Internal electronic failure 	Install a new DDM/PDM, refer to the new module installation note at the top of the DTC Index
U3002-55	Vehicle Identification Number (VIN)	<ul style="list-style-type: none"> 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
U3002-81	Vehicle Identification Number (VIN)	<ul style="list-style-type: none"> 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
U3003-62	Battery voltage	<ul style="list-style-type: none"> Mis-match of battery 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

General Information - Diagnostic Trouble Code (DTC) IndexTD4 2.2L

Diesel, DTC: Engine Control Module (ECM)

Description and Operation

NOTE: If a control module or component 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 program is in operation, before the replacement of a component.

NOTE: 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).

NOTE: When performing 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.

For additional information on the description and operation of the system: For additional information, refer to: [Engine](#) (303-01B Engine - TD4 2.2L Diesel, Description and Operation).

Powertrain control module diesel (PCMD)

DTC	Description	Possible Cause	Action
B10A2-68	Crash Input - Event information	<ul style="list-style-type: none"> Air bag event detected 	<ul style="list-style-type: none"> Using the manufacturer approved diagnostic system, check restraints control module, for related DTCs and refer to the relevant DTC index
P0016-00	Crankshaft Position - Camshaft Position Correlation - Bank 1 Sensor A - No sub type information	<ul style="list-style-type: none"> Engine timing incorrect Timing chain installed incorrectly The relative positions of the crankshaft position sensor and cam timing plate teeth are not correct 	<ul style="list-style-type: none"> Check engine timing Check camshaft sensor timing plate is installed correctly Check valve timing Check timing chain installed correctly
P0030-12	HO2S Heater Control Circuit (Bank 1, Sensor 1) - Circuit short to battery	<p>NOTE: - Circuit O_T_SHT1 -</p> <ul style="list-style-type: none"> Front heated oxygen sensor heater control circuit short circuit to power Front heated oxygen sensor failure 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check front heated oxygen sensor heater control circuit for short circuit to power Check and install a new front heated oxygen sensor as required. 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
P0030-13	HO2S Heater Control Circuit (Bank 1, Sensor 1) - Circuit open	<p>NOTE: - Circuit O_T_SHT1 -</p> <ul style="list-style-type: none"> Front heated oxygen sensor heater control circuit high resistance, open circuit Front heated oxygen sensor failure 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check the front heated oxygen sensor heater control circuit for high resistance, open circuit Check and install a new front heated oxygen sensor as required. 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
P0031-11	HO2S Heater Control Circuit Low (Bank 1, Sensor 1) - Circuit short to ground	<p>NOTE: - Circuit O_T_SHT1 -</p> <ul style="list-style-type: none"> Front heated oxygen sensor heater control circuit short circuit to ground Front heated oxygen sensor failure 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check front heated oxygen sensor heater control circuit for short circuit to ground Check and install a new front heated oxygen sensor as required. Refer to the warranty policy and procedures manual, or determine if any prior approval programme is in operation, prior to the

DTC	Description	Possible Cause	Action
			installation of a new module/component
P0031-16	HO2S Heater Control Circuit Low (Bank 1, Sensor 1) - Circuit voltage below threshold	<p>NOTE: - Circuit O_T_SHT1 -</p> <ul style="list-style-type: none"> ● Front heated oxygen sensor heater control circuit short circuit to ground ● Front heated oxygen sensor failure 	<ul style="list-style-type: none"> ● Refer to the electrical circuit diagrams and check front heated oxygen sensor heater control circuit for short circuit to ground ● Check and install a new front heated oxygen sensor as required. 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
P0032-12	HO2S Heater Control Circuit High (Bank 1, Sensor 1) - Circuit short to battery	<p>NOTE: - Circuit O_T_SHT1 -</p> <ul style="list-style-type: none"> ● Front heated oxygen sensor heater control circuit short circuit to power ● Front heated oxygen sensor failure 	<ul style="list-style-type: none"> ● Refer to the electrical circuit diagrams and check front heated oxygen sensor heater control circuit for short circuit to power ● Check and install a new front heated oxygen sensor as required. 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
P0045-13	Turbo charger/Supercharger Boost Control A Circuit / Open - Circuit open	<p>NOTE: - Circuit O_T_BPANEG -</p> <ul style="list-style-type: none"> ● Variable geometry turbocharger actuator vane circuit open circuit 	<ul style="list-style-type: none"> ● Refer to the electrical circuit diagrams and check variable geometry turbocharger actuator vane circuit for open circuit ● Carry out the pinpoint tests associated with this DTC using the manufacturer approved diagnostic system
P0045-18	Turbo charger/Supercharger Boost Control A Circuit / Open - Circuit current below threshold	<ul style="list-style-type: none"> ● Power stage temperature dependant current limitation 	<ul style="list-style-type: none"> ● Refer to the electrical circuit diagrams and check connections are secure and wiring integrity ● Carry out the pinpoint tests associated with this DTC using the manufacturer approved diagnostic system
P0045-19	Turbo charger/Supercharger Boost Control A Circuit / Open - Circuit current above threshold	<p>NOTE: - Circuit O_T_BPAPOS -</p> <ul style="list-style-type: none"> ● Actuator-vane variable geometry turbocharger - Power stage output 1 (positive) short circuit to power ● Turbo charger actuator power stage output 1 circuit over current 	<p>NOTE: This DTC may be logged due to battery voltage. Check the body control module, information and entertainment module and navigation system module for related DTC's. If DTC's are logged suspect generator or battery supply voltage fault. Check and repair as required prior to diagnosing this DTC</p> <ul style="list-style-type: none"> ● Using the manufacturer approved diagnostic system perform the (Turbo, exhaust gas recirculation and air path dynamic test) routine ● Refer to the electrical circuit diagrams and check the actuator vane variable geometry turbocharger circuit - O_T_BPAPOS - For short circuit to power
P0046-19	Turbo charger/Supercharger Boost Control A Circuit Range/Performance - Circuit current above threshold	<ul style="list-style-type: none"> ● Power stage excess temperature ● Variable geometry turbocharger actuator vane circuit, short circuit to ground, short circuit to power ● Variable geometry turbocharger actuator vane failure 	<ul style="list-style-type: none"> ● Refer to the electrical circuit diagrams and check the variable geometry turbocharger actuator vane circuit, for short circuit to ground, short circuit to power ● Check and install a new variable geometry turbocharger actuator vane as required. 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 ● Carry out the pinpoint tests associated with this DTC using the manufacturer approved diagnostic system

DTC	Description	Possible Cause	Action
P0047-11	Turbo charger/Supercharger Boost Control A Circuit Low - Circuit short to ground	NOTE: - Circuit O_T_BPAPOS - <ul style="list-style-type: none"> Variable geometry turbocharger actuator vane circuit short circuit to ground 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check the variable geometry turbocharger actuator vane circuit, for short circuit to ground Carry out the pinpoint tests associated with this DTC using the manufacturer approved diagnostic system
P0047-14	Turbo charger/Supercharger Boost Control A Circuit Low - Circuit short to ground or open	NOTE: - Circuit O_T_BPANEG - <ul style="list-style-type: none"> Variable geometry turbocharger actuator vane circuit short circuit to ground, open circuit 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check the variable geometry turbocharger actuator vane circuit, for short circuit to ground, open circuit Carry out the pinpoint tests associated with this DTC using the manufacturer approved diagnostic system
P0047-18	Turbo charger/Supercharger Boost Control A Circuit Low - Circuit current below threshold	<ul style="list-style-type: none"> Power stage current limitation 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check connections are secure and wiring integrity Carry out the pinpoint tests associated with this DTC using the manufacturer approved diagnostic system
P0048-00	Turbo charger/Supercharger Boost Control A Circuit High - No sub type information	<ul style="list-style-type: none"> Actuator power stage error 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check connections are secure and wiring integrity Carry out the pinpoint tests associated with this DTC using the manufacturer approved diagnostic system
P0048-12	Turbo charger/Supercharger Boost Control A Circuit High - Circuit short to battery	NOTE: - Circuit O_T_BPAPOS - <ul style="list-style-type: none"> Variable geometry turbocharger actuator vane circuit short circuit to power 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check the variable geometry turbocharger actuator vane circuit, for short circuit to power Carry out the pinpoint tests associated with this DTC using the manufacturer approved diagnostic system
P0048-15	Turbo charger/Supercharger Boost Control A Circuit High - Circuit short to battery or open	NOTE: - Circuit O_T_BPANEG - <ul style="list-style-type: none"> Variable geometry turbocharger actuator vane circuit short circuit to power, open circuit 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check the variable geometry turbocharger actuator vane circuit, for short circuit to power, open circuit Carry out the pinpoint tests associated with this DTC using the manufacturer approved diagnostic system
P0053-16	HO2S Heater Resistance (Bank 1, Sensor 1) - Circuit voltage below threshold	<ul style="list-style-type: none"> Front heated oxygen sensor heater control circuit short circuit to ground Front heated oxygen sensor failure 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check front heated oxygen sensor heater control circuit for short circuit to ground Check and install a new front heated oxygen sensor as required. 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
P0053-17	HO2S Heater Resistance (Bank 1, Sensor 1) - Circuit voltage above threshold	<ul style="list-style-type: none"> Front heated oxygen sensor heater control circuit short circuit to power Front heated oxygen sensor failure 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check front heated oxygen sensor heater control circuit for short circuit to power Check and install a new front heated oxygen sensor as required. 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
P0053-1A	HO2S Heater Resistance (Bank 1, Sensor 1) - Circuit resistance below threshold	<ul style="list-style-type: none"> Front heated oxygen sensor heater control circuit short circuit to ground Front heated oxygen 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check front heated oxygen sensor heater control circuit for short circuit to ground Check and install a new front heated

DTC	Description	Possible Cause	Action
		sensor failure	oxygen sensor as required. 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
P0053-1B	HO2S Heater Resistance (Bank 1, Sensor 1) - Circuit resistance above threshold	<ul style="list-style-type: none"> ● Front heated oxygen sensor heater control circuit short circuit to power ● Front heated oxygen sensor failure 	<ul style="list-style-type: none"> ● Refer to the electrical circuit diagrams and check front heated oxygen sensor heater control circuit for short circuit to power ● Check and install a new front heated oxygen sensor as required. 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
P0069-00	MAP - Barometric Pressure Correlation - No sub type information	<ul style="list-style-type: none"> ● Manifold absolute pressure/boost pressure sensor circuit short circuit to ground, short circuit to power, open circuit, high resistance ● Manifold absolute pressure/boost pressure sensor internal fault ● Barometric pressure sensor failure (internal engine control module fault) 	<ul style="list-style-type: none"> ● Using the manufacturer approved diagnostic system perform the (Turbo, exhaust gas recirculation and air path dynamic test) routine ● Refer to the electrical circuit diagrams and check the boost pressure sensor circuit - I_A_BPS - For short circuit to ground, short circuit to power, open circuit, high resistance
P0072-00	Ambient Air Temperature Sensor Circuit Low - No sub type information	<p>NOTE: - I_A_IATS -</p> <ul style="list-style-type: none"> ● Ambient air temperature sensor circuit short circuit to ground, open circuit 	<ul style="list-style-type: none"> ● Refer to the electrical circuit diagrams and check ambient air temperature sensor circuit - I_A_IATS - For short circuit to ground, open circuit ● Carry out the pinpoint tests associated with this DTC using the manufacturer approved diagnostic system
P0073-00	Ambient Air Temperature Sensor Circuit High - No sub type information	<p>NOTE: - I_A_IATS -</p> <ul style="list-style-type: none"> ● Ambient air temperature sensor circuit short circuit to power ● Ambient air temperature sensor fault 	<ul style="list-style-type: none"> ● Refer to the electrical circuit diagrams and check ambient air temperature sensor circuit - I_A_IATS - For short circuit to power
P0087-00	Fuel Rail/System Pressure - Too Low - No sub type information	<p>NOTE: - Circuit I_A_RALPS -</p> <ul style="list-style-type: none"> ● Fuel rail pressure sensor circuit short circuit to ground, short circuit to power, open circuit, high resistance ● Fuel starvation ● Fuel lines leaking ● Fuel lines restricted ● Blocked air filter 	<ul style="list-style-type: none"> ● Refer to the electrical circuit diagrams and check the fuel rail pressure sensor circuit for short circuit to ground, short circuit to power, open circuit, high resistance ● Check the fuel lines for any signs of leakage, replace as required ● Check the fuel lines for any signs of damage, crimping or restrictions, replace as required ● Check for blocked air filter, replace as required
P0087-21	Fuel Rail/System Pressure - Too Low - Signal amplitude < minimum	<p>NOTE: - Circuit I_A_RALPS -</p> <ul style="list-style-type: none"> ● Fuel rail pressure sensor circuit short circuit to ground, short circuit to power, open circuit, high resistance ● Fuel starvation ● Fuel lines leaking ● Fuel lines restricted ● Blocked air filter 	<ul style="list-style-type: none"> ● Refer to the electrical circuit diagrams and check the fuel rail pressure sensor circuit for short circuit to ground, short circuit to power, open circuit, high resistance ● Check the fuel lines for any signs of leakage, replace as required ● Check the fuel lines for any signs of damage, crimping or restrictions, replace as required ● Check for blocked air filter, replace as required

DTC	Description	Possible Cause	Action
P0087-22	Fuel Rail/System Pressure - Too Low - Signal amplitude > maximum	<p>NOTE: - Circuit I_A_RALPS -</p> <ul style="list-style-type: none"> Fuel rail pressure sensor circuit short circuit to ground, short circuit to power, open circuit, high resistance Fuel starvation Fuel lines leaking Fuel lines restricted Blocked air filter 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check the fuel rail pressure sensor circuit for short circuit to ground, short circuit to power, open circuit, high resistance Check the fuel lines for any signs of leakage, replace as required Check the fuel lines for any signs of damage, crimping or restrictions, replace as required Check for blocked air filter, replace as required
P0087-23	Fuel Rail/System Pressure - Too Low - Signal stuck low	<p>NOTE: - Circuit I_A_RALPS -</p> <ul style="list-style-type: none"> Fuel rail pressure sensor circuit short circuit to ground Fuel starvation Fuel lines leaking Fuel lines restricted Blocked air filter 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check the fuel rail pressure sensor circuit for short circuit to ground Check the fuel lines for any signs of leakage, replace as required Check the fuel lines for any signs of damage, crimping or restrictions, replace as required Check for blocked air filter, replace as required
P0088-00	Fuel Rail/System Pressure - Too High - No sub type information	<p>NOTE: - Circuit I_A_RALPS -</p> <ul style="list-style-type: none"> Fuel rail pressure sensor circuit short circuit to power Fuel starvation Fuel lines leaking Fuel lines restricted Blocked air filter 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check the fuel rail pressure sensor circuit for short circuit to power Check the fuel lines for any signs of leakage, replace as required Check the fuel lines for any signs of damage, crimping or restrictions, replace as required Check for blocked air filter, replace as required
P0088-21	Fuel Rail/System Pressure - Too High - Signal amplitude < minimum	<p>NOTE: - Circuit I_A_RALPS -</p> <ul style="list-style-type: none"> Fuel lines restricted Pressure control valve circuit short circuit to power Pressure control valve stuck closed 	<ul style="list-style-type: none"> Using the manufacturer approved diagnostic system, check engine control module, for related DTCs and refer to the relevant DTC index Check the fuel lines for any signs of damage, crimping or restrictions, replace as required
P0088-22	Fuel Rail/System Pressure - Too High	<p>NOTE: - Circuit I_A_RALPS -</p> <ul style="list-style-type: none"> Leaking fuel system Volume control valve circuit short circuit to ground, open circuit Volume control valve stuck open 	<ul style="list-style-type: none"> Check for fuel leaks Refer to the electrical circuit diagrams and check volume control valve circuit for short circuit to ground, open circuit Check and install a new high pressure fuel pump as required. 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
P0088-24	Fuel Rail/System Pressure - Too High - Signal stuck high	<ul style="list-style-type: none"> Leaking fuel system Pressure control valve stuck Pressure control valve circuit short circuit to ground, short circuit to power, open circuit 	<ul style="list-style-type: none"> Check for fuel leaks Refer to the electrical circuit diagrams and check pressure control valve circuit for short circuit to ground, short circuit to power, open circuit Check and install new pressure control valve as required. 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
P0088-27	Fuel Rail/System Pressure - Too High - Signal rate of change above threshold	<ul style="list-style-type: none"> Leak in high pressure section Injector nozzle stuck open/worn Worn high pressure pump, filter blocked 	<ul style="list-style-type: none"> Check for fuel leaks in high and low pressure systems Using the manufacturer approved diagnostic system, check for related DTCs and refer to the relevant DTC index

DTC	Description	Possible Cause	Action
		<ul style="list-style-type: none"> Leaking pressure control valve Low pressure section pressure low (leak in system, pump output low) 	
P0089-62	Fuel Pressure Regulator Performance - Signal compare failure	<ul style="list-style-type: none"> Fuel low pressure delivery system Fuel pressure control valve exceeded tolerance threshold 	<ul style="list-style-type: none"> Check fuel low pressure delivery system Check and install a new fuel pressure control valve as required. 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
P0089-64	Fuel Pressure Regulator Performance - Signal plausibility failure	<ul style="list-style-type: none"> Fuel low pressure delivery system Fuel pressure control valve exceeded tolerance threshold 	<ul style="list-style-type: none"> Check fuel low pressure delivery system Check and install a new fuel pressure control valve as required. 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
P0097-00	Intake Air Temperature Sensor 2 Circuit Low - No sub type information	<p>NOTE: - Circuit I_A_IATS -</p> <ul style="list-style-type: none"> Intake air temperature sensor short circuit to ground 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check intake air temperature sensor for short circuit to ground Carry out the pinpoint tests associated with this DTC using the manufacturer approved diagnostic system
P0098-00	Intake Air Temperature Sensor 2 Circuit High - No sub type information	<p>NOTE: - Circuit I_A_IATS -</p> <ul style="list-style-type: none"> Intake air temperature sensor short circuit to power 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check intake air temperature sensor for short circuit to power Carry out the pinpoint tests associated with this DTC using the manufacturer approved diagnostic system
P009B-00	Fuel Pressure Relief Control Circuit/Open - No sub type information	<p>NOTE: - Circuit O_T_PCV -</p> <ul style="list-style-type: none"> Pressure control valve control circuit open circuit 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check pressure control valve circuit for open circuit Carry out the pinpoint tests associated with this DTC using the manufacturer approved diagnostic system
P009C-00	Fuel Pressure Relief Control Circuit Low - No sub type information	<p>NOTE: - Circuit O_T_PCV -</p> <ul style="list-style-type: none"> Pressure control valve control circuit short circuit to ground 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check pressure control valve circuit for short circuit to ground Carry out the pinpoint tests associated with this DTC using the manufacturer approved diagnostic system
P009D-00	Fuel Pressure Relief Control Circuit High - No sub type information	<p>NOTE: - Circuit O_T_PCV -</p> <ul style="list-style-type: none"> Pressure control valve control circuit short circuit to power 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check pressure control valve circuit for short circuit to power Carry out the pinpoint tests associated with this DTC using the manufacturer approved diagnostic system
P009E-00	Fuel Pressure Relief Control Performance/Stuck Off - No sub type information	<p>NOTE: - Circuit O_T_PCV -</p> <ul style="list-style-type: none"> Pressure control valve power stage excess temperature Pressure control valve control circuit 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 pressure control valve circuit for short circuit to ground, short circuit to power, open circuit, high resistance
P00AF-75	Turbo charger/Supercharger Boost Control A Module Performance - Emergency position not reachable	<p>NOTE: - Circuit I_F_BPA -</p> <ul style="list-style-type: none"> Variable geometry turbocharger actuator vane circuit short circuit to 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check variable geometry turbocharger actuator vane circuit for short circuit to ground, short circuit to power, open circuit, high resistance

DTC	Description	Possible Cause	Action
		ground, short circuit to power, open circuit, high resistance ● Variable geometry turbocharger actuator vane failure	● Check and install new variable geometry turbocharger actuator vane as required. 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
P0100-00	Mass or Volume Air Flow A Circuit - No sub type information	● Mass air flow sensor signal circuit short circuit to ground, short circuit to power, open circuit, high resistance ● Mass air flow sensor internal failure	● Using the manufacturer approved diagnostic system perform the (Turbo, exhaust gas recirculation and air path dynamic test) routine ● Refer to the electrical circuit diagrams and check mass air flow sensor circuit - I_F_AMS2 - For short circuit to ground, short circuit to power, open circuit, high resistance
P0102-21	Mass or Volume Air Flow A Circuit Low - Signal amplitude < minimum	● Air flow pulse width modulated raw signal above upper limit	● Refer to the electrical circuit diagrams and check connections are secure and wiring integrity ● Carry out the pinpoint tests associated with this DTC using the manufacturer approved diagnostic system
P0102-26	Mass or Volume Air Flow A Circuit Low - Signal rate of change below threshold	● Air flow pulse width modulated corrected signal above upper limit	● Refer to the electrical circuit diagrams and check connections are secure and wiring integrity ● Carry out the pinpoint tests associated with this DTC using the manufacturer approved diagnostic system
P0103-22	Mass or Volume Air Flow A Circuit High - Signal amplitude > maximum	● Mass air flow / inlet air temperature sensor short circuit to power ● Mass air flow / inlet air temperature sensor internal failure	● Using the manufacturer approved diagnostic system perform the (Turbo, exhaust gas recirculation and air path dynamic test) routine ● Refer to the electrical circuit diagrams and check mass air flow / inlet air temperature sensor circuit - I_F_AMS2 - For short circuit to power
P0103-27	Mass or Volume Air Flow A Circuit High - Signal rate of change above threshold	● Air flow pulse width modulated corrected signal above upper limit	● Refer to the electrical circuit diagrams and check connections are secure and wiring integrity ● Carry out the pinpoint tests associated with this DTC using the manufacturer approved diagnostic system
P0112-00	Intake Air Temperature Sensor 1 Circuit Low - No sub type information	NOTE: - Circuit I_R_IATS3 - ● Mass air flow intake air temperature sensor circuit short circuit to ground	● Refer to the electrical circuit diagrams and check the mass air flow intake air temperature sensor circuit for short circuit to ground ● Carry out the pinpoint tests associated with this DTC using the manufacturer approved diagnostic system
P0113-00	Intake Air Temperature Sensor 1 Circuit High - No sub type information	NOTE: - Circuit I_R_IATS3 - ● Mass air flow intake air temperature sensor circuit short circuit to power	● Refer to the electrical circuit diagrams and check the mass air flow intake air temperature sensor circuit for short circuit to power
P0116-00	Engine Coolant Temperature Sensor 1 Circuit Range/Performance - No sub type information	● Minimum temperature or increase not achieved within time limit	● Check integrity of cooling system
P0117-00	Engine Coolant Temperature Sensor 1 Circuit Low - No sub type information	● Engine coolant temperature sensor circuit short circuit to ground, open circuit	● Refer to the electrical circuit diagrams and check the engine coolant temperature sensor circuit for short circuit to ground, open circuit ● Carry out the pinpoint tests associated with this DTC using the manufacturer approved diagnostic system

General Information - Diagnostic Trouble Code (DTC) Index DTC: Front Controls Display Interface Module (FCDIM) - Front Integrated Control Panel

Description and Operation

NOTE: If a control module or component 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 program is in operation, before the replacement of a component.

NOTE: 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).

NOTE: When performing 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.

Description And Operation

For a detailed description of the front display interface system, refer to the relevant Description and Operation section in the workshop manual.

For additional information, refer to: [Audio System](#) (415-01 Information and Entertainment System, Description and Operation).

Front Control Display Interface Module (FCDIM) (high level display front)

DTC	Description	Possible Cause	Action
U1A01-15	Communications link	Navigation module to High Level Display Front communications link circuit - short to power, open circuit	Refer to electrical circuit diagrams and check Navigation Module to High Level Display Front communications link circuit for short to power, open circuit
U1A4B-48	Control module microprocessor 'B'	Supervision software failure	Install a new HLDF. For additional information, refer to: Video Display (415-01 Information and Entertainment System, Removal and Installation).
U3000-48	Control module	Supervision software failure	Install a new HLDF. For additional information, refer to: Video Display (415-01 Information and Entertainment System, Removal and Installation).
U3000-4B	Control module	Over temperature	Check for additional DTCs and refer to DTC Index. Check/monitor system for re-occurrence
U3000-55	Control module	Incorrect Car Configuration File data received	Check/up-date Car Configuration File using manufacturer approved diagnostic system
U3000-87	Control module	Missing message	Check CJB for DTCs and refer to DTC Index. For additional information, refer to: Communications Network (418-00 Module Communications Network, Diagnosis and Testing). Check information and entertainment module for Car Configuration File and MOST network DTCs and refer to relevant DTC Index. Carry out MOST/CAN network tests using the manufacturer approved diagnostic system
U3000-98	Control module	Component or system over temperature	Check for additional DTCs and refer to DTC Index. Check/monitor system for re-occurrence
U3003-16	Battery voltage	Circuit voltage below threshold	Carry out pinpoint tests associated with this DTC using the manufacturer approved diagnostic system
U3003-17	Battery voltage	Circuit voltage above threshold	Carry out pinpoint tests associated with this DTC using the manufacturer approved diagnostic system

General Information - Diagnostic Trouble Code (DTC) Index DTC: Headlamp Control Module (HCM)

Description and Operation

NOTE: If a control module or component 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 program is in operation, before the replacement of a component.

NOTE: 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).

NOTE: When performing 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.

For additional information, refer to: [Exterior Lighting](#) (417-01 Exterior Lighting, Description and Operation).

Adaptive Front Lighting System (AFS) Control Module

DTC	Description	Possible Cause	Action
B1041-04	Leveling Control - System Internal Failures	<ul style="list-style-type: none"> Module internal failure 	Suspect Adaptive Front Lighting System (AFS) Control Module internal fault. Replace as required, refer to the new module/component installation note at the top of the DTC Index
B1041-54	Leveling Control - Missing Calibration	<p>NOTE: This DTC will normally be logged when a new module has been installed.</p> <ul style="list-style-type: none"> Leveling sensor calibration routine not carried out 	<p>NOTE: Sensor calibration routine must be carried out with the vehicle unladen.</p> <p>Calibrate the Headlamp Leveling sensors using the manufacturer approved diagnostic system, carry the out routine 'Headlamp Control Module System Calibration' from the 'Module programming and configuration - Setup and Configuration - Lighting'</p>
B1087-83	LIN Bus "A" - Value of signal protection calculation incorrect	<ul style="list-style-type: none"> LIN Bus circuit fault No communication on the LIN Bus LIN bus EMC interference 	<p>NOTE: This circuit uses shielded cable</p> <p>Refer to the electrical circuit diagrams and check the LIN Bus circuit for harness damage</p>
B1087-86	LIN Bus "A" - Signal Invalid	<ul style="list-style-type: none"> LIN Bus circuit fault No communication on the LIN Bus LIN bus EMC interference 	<p>NOTE: This circuit uses shielded cable</p> <p>Refer to the electrical circuit diagrams and check the LIN Bus circuit for harness damage</p>
B1087-88	LIN Bus "A" - Bus Off	<ul style="list-style-type: none"> LIN Bus circuit fault No communication on the LIN Bus 	<p>NOTE: This circuit uses shielded cable</p> <p>Refer to the electrical circuit diagrams and check the LIN Bus circuit for harness damage</p>
B10AE-11	Headlamp Leveling Motor - Circuit short to ground	<ul style="list-style-type: none"> Headlamp Leveling Motor control circuit short to ground 	Refer to the electrical circuit diagrams and check Headlamp Leveling Motor control circuit for short to ground
B10AE-12	Headlamp Leveling Motor - Circuit short to battery	<ul style="list-style-type: none"> Headlamp Leveling Motor control circuit short to power 	Refer to the electrical circuit diagrams and check Headlamp Leveling Motor control circuit for short to power
B10AE-64	Headlamp Leveling Motor - Signal plausibility failure	<ul style="list-style-type: none"> Signal plausibility failure (voltage out of range) 	Refer to the electrical circuit diagrams and check Headlamp Leveling Motor circuits for failure. Disconnect one headlamp connector, clear DTC and re-test. If DTC cleared, suspect Adaptive Front Lighting System (AFS) Control Module or circuits to the disconnected side of the failure. If DTC remains, reconnect first headlamp and disconnect second, clear DTC and re-test. If DTC cleared, suspect Adaptive Front Lighting System (AFS) Control Module or circuits to the disconnected side of the failure. If DTC remains, suspect common circuits of the failure. Refer to the electrical circuit diagrams and check as required

DTC	Description	Possible Cause	Action
B1A59-11	Sensor 5 Volt Supply - Circuit short to ground	<ul style="list-style-type: none"> Headlamp Leveling Sensor 5 volt supply circuit short to ground 	Refer to electrical circuit diagrams and check Headlamp Leveling Sensor 5 volt supply circuit for short to ground
B1A59-12	Sensor 5 Volt Supply - General Electrical Failure	<ul style="list-style-type: none"> Headlamp Leveling Sensor 5 volt supply circuit short to power 	Refer to electrical circuit diagrams and check Headlamp Leveling Sensor 5 volt supply circuit for short to power
B1D64-01	Left Headlamp Swivelling Motor - General Electrical Failure	<ul style="list-style-type: none"> Internal Headlamp Motor Fault Internal Headlamp Circuit Fault 	Using the manufacturer approved diagnostic system perform an On Demand Self Test, look for any errors in movement (compare with other headlamp) and visually inspect the lamp for internal damage or dislocation (ball joints out). Refer to the electrical circuit diagrams and check for circuit fault between the Adaptive Front Lighting System (AFS) Control Module and the Headlamp Swivelling Motor. If no mechanical or circuit faults are evident, suspect headlamp internal fault, replace as required. Refer to the new module/component installation note at the top of the DTC Index
B1D64-87	Left Headlamp Swivelling Motor - Missing message	<ul style="list-style-type: none"> Missing message 	Using the manufacturer approved diagnostic system perform an On Demand Self Test, look for any errors in movement (compare with other headlamp) and visually inspect the lamp for internal damage or dislocation (ball joints out). Refer to the electrical circuit diagrams and check for circuit fault between the Adaptive Front Lighting System (AFS) Control Module and the Headlamp Swivelling Motor. If no mechanical or circuit faults are evident, suspect headlamp internal fault, replace as required. Refer to the new module/component installation note at the top of the DTC Index
B1D65-01	Right Headlamp Swivelling Motor - General electrical failure	<ul style="list-style-type: none"> Internal Headlamp Motor Fault Internal Headlamp Circuit Fault 	Using the manufacturer approved diagnostic system perform an On Demand Self Test, look for any errors in movement (compare with other headlamp) and visually inspect the lamp for internal damage or dislocation (ball joints out). Refer to the electrical circuit diagrams and check for circuit fault between the Adaptive Front Lighting System (AFS) Control Module and the Headlamp Swivelling Motor. If no mechanical or circuit faults are evident, suspect headlamp internal fault, replace as required. Refer to the new module/component installation note at the top of the DTC Index
B1D65-87	Right Headlamp Swivelling Motor - Missing message	<ul style="list-style-type: none"> Missing message 	Using the manufacturer approved diagnostic system perform an On Demand Self Test, look for any errors in movement (compare with other headlamp) and visually inspect the lamp for internal damage or dislocation (ball joints out). Refer to the electrical circuit diagrams and check for circuit fault between the Adaptive Front Lighting System (AFS) Control Module and the Headlamp Swivelling Motor. If no mechanical or circuit faults are evident, suspect headlamp internal fault, replace as required. Refer to the new module/component installation note at the top of the DTC Index
B1D68-00	Left Headlamp Swivelling Feedback Sensor - No sub type information	<ul style="list-style-type: none"> Internal Headlamp Sensor Fault Internal Headlamp Circuit Fault 	Using the manufacturer approved diagnostic system perform an On Demand Self Test, look for any errors in movement (compare with other headlamp) and visually inspect the lamp for internal damage or dislocation (ball joints out). Refer to the electrical circuit diagrams and check for circuit fault between the Adaptive Front Lighting System (AFS) Control Module and the Headlamp Swivelling Feedback Sensor. If no mechanical or circuit faults are evident, suspect headlamp internal fault, replace as required. Refer to the new module/component installation note at the top of the DTC Index
B1D69-00	Right Headlamp Swivelling Feedback Sensor - No sub type information	<ul style="list-style-type: none"> Internal Headlamp Sensor Fault Internal Headlamp Circuit Fault 	Using the manufacturer approved diagnostic system perform an On Demand Self Test, look for any errors in movement (compare with other headlamp) and visually inspect the lamp for internal damage or dislocation (ball joints out). Refer to the electrical circuit diagrams and check for circuit fault between the Adaptive Front Lighting System (AFS) Control Module and the Headlamp Swivelling Feedback Sensor. If no mechanical or circuit faults are evident,

DTC	Description	Possible Cause	Action
			suspect headlamp internal fault, replace as required. Refer to the new module/component installation note at the top of the DTC Index
C1A03-12	Left Front Height Sensor - Circuit short to battery	<ul style="list-style-type: none"> Left Front Height Sensor circuit short to power 	Refer to the electrical circuit diagrams, and check Left Front Height Sensor circuit for short to power
C1A03-14	Left Front Height Sensor - Circuit short to ground or open	<ul style="list-style-type: none"> Left Front Height Sensor circuit short to ground or open circuit 	Refer to the electrical circuit diagrams, and check Left Front Height Sensor circuit for short to ground or open circuit
C1A05-12	Left Rear Height Sensor - Circuit short to battery	<ul style="list-style-type: none"> Left Rear Height Sensor circuit short to power 	Refer to the electrical circuit diagrams, and check Left Rear Height Sensor circuit for short to power
C1A05-14	Left Rear Height Sensor - Circuit short to ground or open	<ul style="list-style-type: none"> Left Rear Height Sensor circuit short to ground or open circuit 	Refer to the electrical circuit diagrams, and check Left Rear Height Sensor circuit for short to ground or open circuit
U0001-88	High Speed CAN Communication Bus - Bus off	<ul style="list-style-type: none"> CAN Bus Off CAN Bus Circuit fault 	Check other modules for related DTCs. Carry out the CAN Network Integrity test using the manufacturer approved diagnostic system
U0101-00	Lost communication with TCM - No sub type information	<ul style="list-style-type: none"> Lost communication with the Transmission Control Module CAN network fault 	Check the Transmission Control Module for stored DTCs. Using the manufacturer approved diagnostic system, complete the CAN Network Integrity test. Refer to the electrical circuit diagrams and check the CAN network between the Adaptive Front Lighting System (AFS) Control Module and the Transmission Control Module
U0121-00	Lost communication with Anti-lock Brake System (ABS) Control Module - No sub type information	<ul style="list-style-type: none"> Lost communication with the Anti-lock Brake System Module CAN network fault 	Check the Anti-lock Brake System Module for stored DTCs. Using the manufacturer approved diagnostic system, complete the CAN Network Integrity test. Refer to the electrical circuit diagrams and check the CAN network between the Adaptive Front Lighting System (AFS) Control Module and the Anti-lock Brake System Module
U0126-00	Lost communication with Steering Angle Sensor Module - No sub type information	<ul style="list-style-type: none"> Lost communication with the Steering Angle Sensor Module CAN network fault 	Check the Steering Angle Sensor Module for stored DTCs. Using the manufacturer approved diagnostic system, complete the CAN Network Integrity test. Refer to the electrical circuit diagrams and check the CAN network between the Adaptive Front Lighting System (AFS) Control Module and the Steering Angle Sensor Module
U0140-00	Lost communication with Body Control Module - No sub type information	<ul style="list-style-type: none"> Lost communication with the Central Junction Box CAN network fault 	Check the Central Junction Box for stored DTCs. Using the manufacturer approved diagnostic system, complete the CAN Network Integrity test. Refer to the electrical circuit diagrams and check the CAN network between the Adaptive Front Lighting System (AFS) Control Module and the Central Junction Box
U0300-00	Internal Control Module Software Incompatibility - No sub type information	<ul style="list-style-type: none"> Car Configuration File (CCF) information incompatible to the Adaptive Front Lighting System (AFS) Control Module 	<p>NOTE: The Car Configuration File (CCF) parameters required are (Vehicle type)(Headlamp type)(Gearbox type) and (Dayrunning light)</p> <p>Re-configure the Car Configuration File (CCF) as required using the manufacturer approved diagnostic system. Clear DTC and re-test. If the DTC remains suspect the Adaptive Front Lighting System (AFS) Control Module, refer to the new module installation note at the top of the DTC Index</p>
U0402-00	Invalid Data Received From Transmission Control Module - No sub type information	<ul style="list-style-type: none"> Invalid Data Received from the Transmission Control Module Transmission component fault 	Check the Transmission Control Module for stored DTCs. Using the manufacturer approved diagnostic system, complete the CAN Network Integrity test. Refer to the electrical circuit diagrams and check the CAN network between the Adaptive Front Lighting System (AFS) Control Module and the Transmission Control Module
U0415-00	Invalid Data Received From Anti-Lock Brake System (ABS) Control Module - No sub type information	<ul style="list-style-type: none"> Invalid data received from Anti-lock Brake System Module Anti-lock Brake System Module component fault 	Check the Anti-lock Brake System Module for stored DTCs. Using the manufacturer approved diagnostic system, complete the CAN Network Integrity test. Refer to the electrical circuit diagrams and check the CAN network between the Adaptive Front Lighting System (AFS) Control Module and the Anti-lock Brake System Module
U0422-00	Invalid data from Body Control Module - No sub type information	<ul style="list-style-type: none"> Invalid signal from the Central Junction Box Central Junction Box fault 	Check the Central Junction Box for stored DTCs. Using the manufacturer approved diagnostic system, complete the CAN Network Integrity test. Refer to the electrical circuit diagrams and check the CAN network between the Adaptive Front Lighting System (AFS) Control Module and the Central Junction Box

DTC	Description	Possible Cause	Action
U0428-00	Invalid Data Received From Steering Angle Sensor Module - No sub type information	<ul style="list-style-type: none"> Invalid Data Received from the Steering Angle Sensor Module Steering Angle Sensor Module fault 	Check the Steering Angle Sensor Module for stored DTCs. Using the manufacturer approved diagnostic system, complete the CAN Network Integrity test. Refer to the electrical circuit diagrams and check the CAN network between the Adaptive Front Lighting System (AFS) Control Module and the Steering Angle Sensor
U2100-00	Initial Configuration Not Complete - No sub type information	<ul style="list-style-type: none"> Car Configuration File (CCF) information not received completely 	<p>NOTE: The Car Configuration File (CCF) parameters required are (Vehicle type)(Headlamp type)(Gearbox type) and (Dayrunning light)</p> <p>Re-configure the Car Configuration File (CCF) as required using the manufacturer approved diagnostic system. Clear DTC and re-test. If the DTC remains suspect the Adaptive Front Lighting System (AFS) Control Module, refer to the new module installation note at the top of the DTC Index</p>
U2101-00	Control Module Configuration Incompatible - No sub type information	<ul style="list-style-type: none"> Car Configuration File (CCF) information incompatible to Adaptive Front Lighting System (AFS) Control Module 	Check the correct Adaptive Front Lighting System (AFS) Control Module is installed to vehicle specification. Refit original or replace the module as required. Refer to the new module/component installation note at the top of the DTC Index
U3003-16	Battery Voltage - Circuit voltage below threshold	<ul style="list-style-type: none"> The power supply to the Module has been below 9 Volts for more than 1000 milliseconds 	Suspect Battery or Charging fault. Check the battery condition and state of charge. Check the vehicle charging system. Refer to the relevant workshop manual section. Clear the DTC, cycle ignition state to off then on, if DTC returns refer to the electrical circuit diagrams and check power and ground circuit to the Adaptive Front Lighting System (AFS) Control Module
U3003-17	Battery Voltage - Circuit voltage above threshold	<ul style="list-style-type: none"> The power supply to the Module has been above 16 Volts for more than 1000 milliseconds 	Suspect Charging fault. Check the battery condition and state of charge. Check the vehicle charging system. Refer to the relevant workshop manual section
U3003-62	Battery Voltage - Signal compare failure	<ul style="list-style-type: none"> Difference in battery voltage, of 2 volts or more, between the central broadcast voltage (via CAN Bus) and Adaptive Front Lighting System (AFS) Control Module 	Check other modules for related stored DTCs. Refer to the electrical circuit diagrams and check power and ground voltages at the Adaptive Front Lighting System (AFS) Control Module

General Information - Diagnostic Trouble Code (DTC) Index DTC: Heating Ventilation and Air Conditioning Control Module (HVAC)

Description and Operation

NOTE: If a control module or component 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 program is in operation, before the replacement of a component.

NOTE: 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).

NOTE: When performing 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 DTC's 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.

For additional information, refer to: [Climate Control System](#) (412-00 Climate Control System - General Information, Diagnosis and Testing).

Heating ventilation and air conditioning control module (HVAC)

DTC	Description	Possible Cause	Action
B102E-09	Air quality sensor general failure information - Component failures	<ul style="list-style-type: none"> Internal sensor fault 	Install a new air quality sensor
B102E-11	Air quality sensor general electrical failures - Circuit short to ground	<ul style="list-style-type: none"> Air quality sensor circuit - short to ground Incorrect climate control module installed 	Refer to the electrical circuit diagrams and check air quality sensor circuit for short to ground. Install a new climate control module as required, refer to new module/component installation note at the top of the DTC Index
B102E-12	Air quality sensor general electrical failures - Circuit short to battery	<ul style="list-style-type: none"> Air quality sensor circuit - short to power Air quality sensor - Open circuit 	Refer to the electrical circuit diagrams and check air quality sensor circuit for short to power. Install a new air quality sensor as required
B1030-09	Left front seat heater general failure information - Component failures	<ul style="list-style-type: none"> Seat heater module internal failure 	Install a new seat heater module, refer to the new module/component installation note at the top of the DTC Index
B1030-4B	Left front seat heater system internal failures - Over temperature	<ul style="list-style-type: none"> Seat heater module internal failure Sensor incorrect/no feedback 	Clear DTC and re-test. If DTC remains install a new seat heater module, refer to the new module/component installation note at the top of the DTC Index. Install a new front seat heater mat
B1030-87	Left front seat heater bus signal/message failures - Missing message	<ul style="list-style-type: none"> LIN bus circuit or seat heater module power supply circuit fault 	Refer to the electrical circuit diagrams and check the front left seat heater module LIN Bus circuit, power and ground supply circuits for short circuit to ground, short circuit to power, open circuit, high resistance
B1032-09	Right front seat heater general failure information - Component failures	<ul style="list-style-type: none"> Seat heater module internal failure 	Install a new seat heater module, refer to the new module/component installation note at the top of the DTC Index
B1032-4B	Right front seat heater system internal failures - Over temperature	<ul style="list-style-type: none"> Seat heater module internal failure Sensor incorrect/no feedback 	Clear DTC and re-test. If DTC remains install a new seat heater module, refer to the new module/component installation note at the top of the DTC Index. Install a new front seat heater mat
B1032-87	Right front seat heater bus signal/message failures - Missing message	<ul style="list-style-type: none"> LIN Bus circuit or seat heater module power supply circuit fault 	Refer to the electrical circuit diagrams and check the front right seat heater module LIN Bus circuit, power and ground supply circuits for short circuit to ground, short circuit to power, open circuit, high resistance
B1034-01	Left front seat heater element general failure information - General electrical failure	<ul style="list-style-type: none"> Element damaged, open circuit 	Refer to the electrical circuit diagrams and check the left front seat heater element circuit for open circuit

DTC	Description	Possible Cause	Action
B1035-01	Left rear seat heater element general failure information - General electrical failure	<ul style="list-style-type: none"> ● Element damaged, open circuit 	This DTC will only log in validation mode. No help text required
B1036-01	Right front seat heater element general failure information - General electrical failure	<ul style="list-style-type: none"> ● Element damaged, open circuit 	Refer to the electrical circuit diagrams and check front right seat heater element circuit for open circuit
B1038-01	Left front seat heater sensor general failure information - General electrical failure	<ul style="list-style-type: none"> ● Sensor damaged, open circuit 	Refer to the electrical circuit diagrams and check front left seat heater sensor circuit for open circuit
B103A-01	Right front seat heater sensor general failure information - General electrical failure	<ul style="list-style-type: none"> ● Sensor damaged, open circuit 	Refer to the electrical circuit diagrams and check front right seat heater sensor circuit for open circuit
B105A-11	Cabin temperature sensor fan general electrical failures - Circuit short to ground	<ul style="list-style-type: none"> ● In-vehicle temperature sensor circuit - short to ground 	Refer to the electrical circuit diagrams and check In-vehicle temperature sensor circuit for short to ground
B105A-15	Cabin temperature sensor fan general electrical failures - Circuit short to battery or open	<ul style="list-style-type: none"> ● In-vehicle temperature sensor circuit - short to power or open circuit 	Refer to the electrical circuit diagrams and check In-vehicle temperature sensor for short to power or open circuit
B105A-71	Cabin temperature sensor fan general electrical failures - Actuator stuck	<ul style="list-style-type: none"> ● Fan jammed or broken 	Remove obstruction from fan. Install new sensor as required
B1081-09	Left temperature damper motor general failure information - Component failures	<ul style="list-style-type: none"> ● Internal failure 	Install a new actuator as required
B1081-77	Left temperature damper motor mechanical failures - Commanded position not reachable	<ul style="list-style-type: none"> ● Obstruction in flap movement ● Range greater than expected default 	Clear obstruction from flap. Using manufacturer approved diagnostic system check relevant datalogger signals to read motor range and compare defaults. Execute LIN calibration run using manufacturer approved diagnostic system
B1081-87	Left temperature damper motor bus signal/message failures - Missing message	<ul style="list-style-type: none"> ● LIN Bus fault ● Actuator fault 	Refer to the electrical circuit diagrams and check the left air temperature door motor LIN Bus circuit, power and ground supply circuits for short circuit to ground, short circuit to power, open circuit, high resistance. Install a new actuator as required
B1082-09	Right temperature damper motor general failure information - Component failures	<ul style="list-style-type: none"> ● Internal failure 	Install a new actuator as required
B1082-77	Right temperature damper motor mechanical failures - Commanded position not reachable	<ul style="list-style-type: none"> ● Obstruction in flap movement ● Range greater than expected default 	Clear obstruction from flap. Using manufacturer approved diagnostic system check relevant datalogger signals to read motor range and compare defaults. Execute LIN calibration run using manufacturer approved diagnostic system
B1082-87	Right temperature damper motor bus signal/message failures - Missing message	<ul style="list-style-type: none"> ● LIN Bus fault ● Actuator fault 	Refer to the electrical circuit diagrams and check the right air temperature door motor LIN Bus circuit, power and ground supply circuits for short circuit to ground, short circuit to power, open circuit, high resistance
B1083-09	Recirculation damper motor general failure Information - Component failures	<ul style="list-style-type: none"> ● Internal failure 	Install new actuator as required
B1083-77	Recirculation damper motor mechanical failures - Commanded position not reachable	<ul style="list-style-type: none"> ● Obstruction in flap movement ● Range greater than expected default 	Clear obstruction from flap. Using manufacturer approved diagnostic system check relevant datalogger signals to read motor range and compare defaults. Execute LIN calibration run using manufacturer approved diagnostic system
B1083-87	Recirculation damper motor bus signal/message failures - Missing message	<ul style="list-style-type: none"> ● LIN Bus fault ● Actuator fault 	Refer to the electrical circuit diagrams and check the air intake door motor LIN Bus circuit, power and ground supply circuits for short circuit to ground, short circuit to power, open circuit, high resistance

DTC	Description	Possible Cause	Action
B1085-09	Defroster damper motor general failure - Information component failures	<ul style="list-style-type: none"> Internal failure 	Install new actuator as required
B1085-77	Defroster damper motor mechanical failures - Commanded position not reachable	<ul style="list-style-type: none"> Obstruction in flap movement Range greater than expected default 	Clear obstruction from flap. Clear the DTC and retest. If the problem persists, remove the defrost vent/register blend door actuator and check the blend flap operation
B1085-87	Defroster damper motor bus signal/message failures - Missing message	<ul style="list-style-type: none"> LIN Bus fault Actuator fault 	Refer to the electrical circuit diagrams and check the screen air distribution door motor LIN Bus circuit, power and ground supply circuits for short circuit to ground, short circuit to power, open circuit, high resistance
B1086-09	Air distribution damper motor general failure - Information component failures	<ul style="list-style-type: none"> Internal failure 	Install a new actuator as required
B1086-77	Air distribution damper motor mechanical failures - Commanded position not reachable	<ul style="list-style-type: none"> Obstruction in flap movement Range greater than expected default 	Clear obstruction from flap. Clear the DTC and retest. If the problem persists, remove the defrost vent/register blend door actuator and check the blend flap operation
B1086-87	Air distribution damper motor bus signal/message failures - Missing message	<ul style="list-style-type: none"> LIN Bus fault Actuator fault 	Refer to the electrical circuit diagrams and check the face/feet air distribution door motor LIN Bus circuit, power and ground supply circuits for short circuit to ground, short circuit to power, open circuit, high resistance
B1087-4A	LIN bus A system internal failures - Incorrect component installed	<ul style="list-style-type: none"> Incorrect module installed Incorrect car configuration data being transmitted 	Ensure correct module is installed. Check and correct car configuration file using manufacturer approved diagnostic system
B1087-54	LIN bus A system programming failures - Missing calibration	<ul style="list-style-type: none"> LIN systems calibration routine failed 	Run LIN systems calibration routine and clear DTC using manufacturer approved diagnostic system
B1087-83	LIN bus A bus signal/message failures - Value of signal protection calculation incorrect	<ul style="list-style-type: none"> Possible fault with one or more LIN nodes 	Clear DTC and monitor for re-occurrence
B1087-86	LIN bus A bus signal/message failures - Signal invalid	<ul style="list-style-type: none"> Incorrect stepper motor/s installed 	Run LIN Arbitration routine using manufacturer approved diagnostic system. Carry out pinpoint tests associated with this DTC using the manufacturer approved diagnostic system
B1087-88	LIN bus A bus signal/message failures - Bus off	<ul style="list-style-type: none"> LIN Bus A circuit - short to ground, power 	Carry out pinpoint tests associated with this DTC using the manufacturer approved diagnostic system
B1088-4A	LIN bus B system internal failures - Incorrect component installed	<ul style="list-style-type: none"> Incorrect module installed Incorrect car configuration data being transmitted by central junction box 	Ensure correct module is installed. Check and correct car configuration file using manufacturer approved diagnostic system
B1088-83	LIN bus B bus signal/message failures - Value of signal protection calculation incorrect	<ul style="list-style-type: none"> Possible fault with one or more LIN Nodes 	Clear DTC and monitor for re-occurrence
B1088-86	LIN bus B bus signal/message failures - Signal invalid	<ul style="list-style-type: none"> Incorrect stepper motor/s installed 	Run LIN Arbitration routine using manufacturer approved diagnostic system. Carry out pinpoint tests associated with this DTC using the manufacturer approved diagnostic system
B1088-88	LIN bus B bus signal/message failures - Bus off	<ul style="list-style-type: none"> LIN Bus B circuit - short to ground, power 	Carry out pinpoint tests associated with this DTC using the manufacturer approved diagnostic system
B10B9-11	Blower control general electrical failures - Circuit short to ground	<ul style="list-style-type: none"> Blower Control circuit - short to ground 	Refer to electrical circuit diagrams and check Blower Control circuit for short to ground
B10B9-12	Blower control general electrical failures - Circuit short to battery	<ul style="list-style-type: none"> Blower Control circuit - short to power 	Refer to electrical circuit diagrams and check Blower Control circuit for short to power
B10B9-13	Blower control general electrical failures - Circuit open	<ul style="list-style-type: none"> Blower control circuit - open circuit 	This DTC will only log in validation mode. No help text required

DTC	Description	Possible Cause	Action
B1A61-11	Cabin temperature sensor general electrical failures - Circuit short to ground	<ul style="list-style-type: none"> In-vehicle temperature sensor circuit - short to ground 	Refer to electrical circuit diagrams and check In-vehicle temperature sensor circuit for short to ground
B1A61-15	Cabin temperature sensor general electrical failures - Circuit short to battery or open	<ul style="list-style-type: none"> In-vehicle temperature sensor circuit - short to power or open circuit 	Refer to electrical circuit diagrams and check In-vehicle temperature sensor circuit for short to power or open circuit
B1A69-09	Humidity sensor general failure information - Component failures	<ul style="list-style-type: none"> Internal sensor failure 	Install a new rear view mirror/humidity sensor
B1A69-87	Humidity sensor bus signal/message failures - Missing message	<ul style="list-style-type: none"> Senor disconnected, open circuit 	Refer to the electrical circuit diagrams and check humidity sensor circuit for short circuit to ground, short circuit to power, open circuit
B1B71-11	Evaporator temperature sensor general electrical failures - Circuit short to ground	<ul style="list-style-type: none"> Evaporator temperature sensor circuit - short to ground 	Refer to electrical circuit diagrams and check Evaporator temperature sensor circuit for short to ground
B1B71-15	Evaporator temperature sensor general electrical failures - Circuit short to battery or open	<ul style="list-style-type: none"> Evaporator temperature sensor circuit - short to power or open circuit 	Refer to electrical circuit diagrams and check Evaporator temperature sensor circuit for short to power or open circuit
U0010-00	Medium speed CAN communication bus - No sub type information	<ul style="list-style-type: none"> Medium speed CAN bus off 	Carry out pinpoint tests associated with this DTC using the manufacturer approved diagnostic system
U0140-00	Lost communication with central electronic module general failure information - No sub type information	<ul style="list-style-type: none"> Missing message 	Carry out pinpoint tests associated with this DTC using the manufacturer approved diagnostic system
U0156-00	Lost communication with infotainment control module general failure information - No sub type information	<ul style="list-style-type: none"> Missing message 	Carry out CAN network integrity tests using the manufacturer approved diagnostic system
U0300-00	Internal control module software incompatibility general failure information - No sub type information	<ul style="list-style-type: none"> Invalid configuration message is received 	Re-configure the central junction box using the manufacturer approved diagnostic system. Clear the DTC and retest. If the DTC is still logged suspect the climate control module, refer to the new module/component installation note at the top of the DTC Index
U2002-23	Switch general signal failures - Signal stuck low	<ul style="list-style-type: none"> Switch stuck 	Check finisher around module for correct installation
U2101-00	Control module configuration incompatible general failure information - No sub type information	<ul style="list-style-type: none"> Incorrect car configuration data being transmitted by central junction box 	Check and correct car configuration file using manufacturer approved diagnostic system
U3000-41	Control module system internal failures - General checksum error	<ul style="list-style-type: none"> Internal micro controller error Checksum error 	Install a new climate control module, refer to new module/component installation note at top of DTC Index
U3003-62	Battery voltage algorithm based failures - Signal compare failure	<ul style="list-style-type: none"> Mis-match in battery voltage, of 2 volts or more, between climate control module and central junction box 	Carry out pinpoint tests associated with this DTC using the manufacturer approved diagnostic system

General Information - Diagnostic Trouble Code (DTC) IndexDTC:

Infotainment Control Module (ICM) - High Line

Description and Operation

NOTE: If a control module or component 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 program is in operation, before the replacement of a component.

NOTE: 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).

NOTE: When performing 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.

Description And Operation

For a detailed description of the infotainment control system, refer to the relevant Description and Operation section in the workshop manual.

For additional information, refer to: [Audio System](#) (415-01 Information and Entertainment System, Description and Operation).

Infotainment Control Module (High Line) (ICM)

DTC	Description	Possible Cause	Action
B101C-11	Seek up switch	<ul style="list-style-type: none"> Seek up switch circuit - short to ground 	Refer to electrical circuit diagrams and check seek up switch circuit for short to ground
B101D-11	Seek down switch	<ul style="list-style-type: none"> Seek down switch circuit - short to ground 	Refer to electrical circuit diagrams and check seek down switch circuit for short to ground
B101F-11	Eject switch	<ul style="list-style-type: none"> Eject switch circuit - short to ground 	Refer to electrical circuit diagrams and check eject switch circuit for short to ground
B1022-11	Audio On/Off switch	<ul style="list-style-type: none"> Audio On/Off switch circuit - short to ground 	Refer to electrical circuit diagrams and check audio on/off switch circuit for short to ground
B104A-11	Button 1	<ul style="list-style-type: none"> Button 1 circuit - short to ground 	Refer to electrical circuit diagrams and check Button 1 circuit for short to ground
B104B-11	Button 2	<ul style="list-style-type: none"> Button 2 circuit - short to ground 	Refer to electrical circuit diagrams and check Button 2 circuit for short to ground
B104C-11	Button 3	<ul style="list-style-type: none"> Button 3 circuit - short to ground 	Refer to electrical circuit diagrams and check Button 3 circuit for short to ground
B104D-11	Button 4	<ul style="list-style-type: none"> Button 4 circuit - short to ground 	Refer to electrical circuit diagrams and check Button 4 circuit for short to ground
B104E-11	Button 5	<ul style="list-style-type: none"> Button 5 circuit - short to ground 	Refer to electrical circuit diagrams and check Button 5 circuit for short to ground
B11A6-11	FM button	<ul style="list-style-type: none"> FM button circuit - short to ground 	Refer to electrical circuit diagrams and check FM button circuit for short to ground
B11A7-11	AM button	<ul style="list-style-type: none"> AM button circuit - short to ground 	Refer to electrical circuit diagrams and check AM button circuit for short to ground
B11A8-11	CD button	<ul style="list-style-type: none"> CD button circuit - short to ground 	Refer to electrical circuit diagrams and check CD button circuit for short to ground
B11A9-11	Tone button	<ul style="list-style-type: none"> Tone button circuit - short to ground 	Refer to electrical circuit diagrams and check tone button circuit for short to ground
B11AA-11	Skip up button	<ul style="list-style-type: none"> Skip up button circuit - short to ground 	Refer to electrical circuit diagrams and check skip up button circuit for short to ground

DTC	Description	Possible Cause	Action
B11AB-11	Skip down button	<ul style="list-style-type: none"> ● Skip down button circuit - short to ground 	Refer to electrical circuit diagrams and check skip down button circuit for short to ground
B11AC-11	Enter button	<ul style="list-style-type: none"> ● Enter button circuit - short to ground 	Refer to electrical circuit diagrams and check enter button circuit for short to ground
B11AD-11	Exit button	<ul style="list-style-type: none"> ● Exit button circuit - short to ground 	Refer to electrical circuit diagrams and check exit button circuit for short to ground
B11AE-11	Menu button	<ul style="list-style-type: none"> ● Menu button circuit - short to ground 	Refer to electrical circuit diagrams and check menu button circuit for short to ground
B11AF-11	Phone button	<ul style="list-style-type: none"> ● Phone button circuit - short to ground 	Refer to electrical circuit diagrams and check phone button circuit for short to ground
B11B0-11	Scan button	<ul style="list-style-type: none"> ● Scan button circuit - short to ground 	Refer to electrical circuit diagrams and check scan button circuit for short to ground
B11B1-11	Auto button	<ul style="list-style-type: none"> ● Auto button circuit - short to ground 	Refer to electrical circuit diagrams and check auto button circuit for short to ground
B11B3-11	Button 6	<ul style="list-style-type: none"> ● Button 6 circuit - short to ground 	Refer to electrical circuit diagrams and check button 6 circuit for short to ground
B11B4-11	Button 7	<ul style="list-style-type: none"> ● Button 7 circuit - short to ground 	Refer to electrical circuit diagrams and check button 7 circuit for short to ground
B11B5-11	Button 8	<ul style="list-style-type: none"> ● Button 8 circuit - short to ground 	Refer to electrical circuit diagrams and check button 8 circuit for short to ground
B11B6-11	Button 9	<ul style="list-style-type: none"> ● Button 9 circuit - short to ground 	Refer to electrical circuit diagrams and check button 9 circuit for short to ground
B1A59-49	Sensor 5 volt supply	<ul style="list-style-type: none"> ● Internal electronic failure 	Install a new information and entertainment module, refer to the new module/component installation note at the top of the DTC Index
B1D21-15	Remote control switch	<ul style="list-style-type: none"> ● Remote control switch circuit - short to power, open circuit 	Refer to electrical circuit diagrams and check remote control switch circuit for short to power, open circuit
U0010-00	Medium speed CAN communication Bus	<ul style="list-style-type: none"> ● Bus Off 	Carry out pinpoint tests associated with this DTC using the manufacturer approved diagnostic system
U0127-00	Lost communications with tire pressure monitor system module	<ul style="list-style-type: none"> ● Lost communications 	Carry out CAN Network integrity tests using manufacturer approved diagnostic system. Check CJB for DTCs and refer to relevant DTC Index. For additional information, refer to: Communications Network (418-00 Module Communications Network, Diagnosis and Testing).
U0140-00	Lost communications with CJB	<ul style="list-style-type: none"> ● Lost communications 	Carry out CAN Network integrity tests using manufacturer approved diagnostic system. Check CJB for DTCs and refer to relevant DTC Index. For additional information, refer to: Communications Network (418-00 Module Communications Network, Diagnosis and Testing).
U0142-00	Lost communication with body control module 'B'	<ul style="list-style-type: none"> ● Lost communications 	Carry out CAN Network integrity tests using manufacturer approved diagnostic system. Check CJB for DTCs and refer to relevant DTC Index. For additional information, refer to: Communications Network (418-00 Module Communications Network, Diagnosis and Testing).
U0155-00	Lost communication with instrument cluster	<ul style="list-style-type: none"> ● Lost communications 	Carry out CAN Network integrity tests using manufacturer approved diagnostic system. Check instrument cluster for DTCs and refer to relevant DTC Index. For additional information, refer to: Instrument Cluster (413-01 Instrument Cluster, Diagnosis and Testing).
U0159-00	Lost communications with park assist control module 'A'	<ul style="list-style-type: none"> ● Lost communications 	Carry out CAN Network integrity tests using manufacturer approved diagnostic system. Check parking aid module for DTCs and refer to relevant DTC Index. For additional information, refer to: Parking Aid

DTC	Description	Possible Cause	Action
			(413-13 Parking Aid, Diagnosis and Testing).
U0164-00	Lost communication with climate control module	<ul style="list-style-type: none"> Lost communications 	Carry out CAN Network integrity tests using manufacturer approved diagnostic system. Check climate control module for DTCs and refer to relevant DTC Index. For additional information, refer to: Climate Control System (412-00 Climate Control System - General Information, Diagnosis and Testing).
U0184-00	Lost communication with radio	<ul style="list-style-type: none"> Lost communications 	Carry out pinpoint tests associated with this DTC using the manufacturer approved diagnostic system
U0186-00	Lost communications with audio amplifier 'A'	<ul style="list-style-type: none"> Lost communications 	Carry out pinpoint tests associated with this DTC using the manufacturer approved diagnostic system
U0193-00	Lost communications with digital audio control module 'A'	<ul style="list-style-type: none"> Lost communications 	Carry out pinpoint tests associated with this DTC using the manufacturer approved diagnostic system
U0197-00	Lost communications with telephone control module	<ul style="list-style-type: none"> Lost communications 	Carry out pinpoint tests associated with this DTC using the manufacturer approved diagnostic system
U0199-00	Lost communications with DDM	<ul style="list-style-type: none"> Lost communications 	Carry out MOST Network integrity tests using manufacturer approved diagnostic system. Check DDM for DTCs and refer to relevant DTC Index below
U0200-00	Lost communications with PDM	<ul style="list-style-type: none"> Lost communications 	Carry out MOST Network integrity tests using manufacturer approved diagnostic system. Check PDM for DTCs and refer to relevant DTC Index below
U0214-00	Lost communications with remote function actuation	<ul style="list-style-type: none"> Lost communications 	Carry out CAN Network integrity tests using manufacturer approved diagnostic system. Check remote keyless entry module for DTCs and refer to relevant DTC Index below
U0245-00	Lost communications with entertainment control module - front	<ul style="list-style-type: none"> Lost communications 	Carry out MOST Network integrity tests GO to Pinpoint Test ?? . Check for additional DTCs and refer to relevant DTC Index
U0256-00	Lost communications with front controls interface module	<ul style="list-style-type: none"> Lost communications 	Carry out MOST Network integrity tests GO to Pinpoint Test ?? . Check for additional DTCs and refer to relevant DTC Index
U0257-00	Lost communications with front controls/display interface module	<ul style="list-style-type: none"> Lost communications 	Carry out MOST Network integrity tests GO to Pinpoint Test ?? . Check for additional DTCs and refer to relevant DTC Index
U0300-00	Internal control module software incompatibility	<ul style="list-style-type: none"> Incorrect software 	Check software level is correct to hardware level
U0300-51	Internal control module software incompatibility	<ul style="list-style-type: none"> Not programmed 	Download the correct level of software using the manufacturer approved diagnostic system
U3000-55	Control module	<ul style="list-style-type: none"> Incorrect car configuration data received 	Check/up-date Car Configuration File using manufacturer approved diagnostic system
U3000-87	Control module	<ul style="list-style-type: none"> Missing message 	Check CJB for DTCs and refer to DTC Index. For additional information, refer to: Communications Network (418-00 Module Communications Network, Diagnosis and Testing). Check information and entertainment module for Car Configuration File and MOST network DTCs and refer to relevant DTC Index. Carry out MOST/CAN network tests using the manufacturer approved diagnostic system
U3002-81	Vehicle Identification Number	<ul style="list-style-type: none"> Incorrect VIN stored and locked (module previously installed to other vehicle) 	Ensure correct component is installed to vehicle
U3003-62	Battery voltage	<ul style="list-style-type: none"> Mis-match in battery voltage, of 2 volts or more, between information and entertainment control module and CJB 	Carry out pinpoint tests associated with this DTC using the manufacturer approved diagnostic system

General Information - Diagnostic Trouble Code (DTC) IndexDTC:

Infotainment Control Module (ICM) - Low Line

Description and Operation

NOTE: If a control module or component 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 program is in operation, before the replacement of a component.

NOTE: 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).

NOTE: When performing 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.

Description And Operation

For a detailed description of the infotainment control system, refer to the relevant Description and Operation section in the workshop manual.

For additional information, refer to: [Audio System](#) (415-01 Information and Entertainment System, Description and Operation).

Infotainment control module (low line) (ICM)

DTC	Description	Possible Cause	Action
B1A00-16	Control module	<ul style="list-style-type: none"> Supply voltage low 	Carry out pinpoint tests associated with this DTC using the manufacturer approved diagnostic system
B1A01-01	Speaker #1	<ul style="list-style-type: none"> Left front speaker circuit - short circuit 	Carry out pinpoint tests associated with this DTC using the manufacturer approved diagnostic system
B1A01-13	Speaker #1	<ul style="list-style-type: none"> Left front speaker circuit - open circuit 	Refer to the electrical circuit diagrams and check left front speaker circuit for open circuit
B1A02-01	Speaker #2	<ul style="list-style-type: none"> Right front speaker circuit - short circuit 	Carry out pinpoint tests associated with this DTC using the manufacturer approved diagnostic system
B1A02-13	Speaker #2	<ul style="list-style-type: none"> Right front speaker circuit - open circuit 	Refer to electrical circuit diagrams and check right front speaker circuit for open circuit
B1A03-01	Speaker #3	<ul style="list-style-type: none"> Left rear speaker circuit - short circuit 	Carry out pinpoint tests associated with this DTC using the manufacturer approved diagnostic system
B1A03-13	Speaker #3	<ul style="list-style-type: none"> Left rear speaker circuit - open circuit 	Refer to electrical circuit diagrams and check left rear speaker circuit for open circuit
B1A04-01	Speaker #4	<ul style="list-style-type: none"> Right rear speaker circuit - short circuit 	Carry out pinpoint tests associated with this DTC using the manufacturer approved diagnostic system
B1A04-13	Speaker #4	<ul style="list-style-type: none"> Right rear speaker circuit - open circuit 	Refer to electrical circuit diagrams and check right rear speaker circuit for open circuit
B1A56-14	Antenna	<ul style="list-style-type: none"> Antenna circuit - short to ground, open circuit 	Refer to electrical circuit diagrams and check antenna circuit for short ground, open circuit
B1D19-96	Compact disc unit	<ul style="list-style-type: none"> Component internal failure 	Install a new compact disc unit, refer to the new module/component installation note at the top of the DTC Index. For additional information, refer to: Audio Unit (415-01 Information and Entertainment System, Removal and Installation).
B1D19-98	Compact disc unit	<ul style="list-style-type: none"> Compact disc unit over temperature 	Check for additional DTCs and refer to DTC Index, check/monitor system for re-occurrence
B1D20-91	Head unit	<ul style="list-style-type: none"> Head unit below temperature 	Check for additional DTCs and refer to DTC Index, check/monitor system for re-occurrence

DTC	Description	Possible Cause	Action
B1D20-98	Head unit	<ul style="list-style-type: none"> Head unit over temperature 	Check for DTCs and refer to DTC Index, check/monitor system for re-occurrence
B1D21-11	Remote control switch	<ul style="list-style-type: none"> Remote control switch circuit - short to ground 	Refer to electrical circuit diagrams and check remote control switch circuit for short to ground
B1D21-13	Remote control switch	<ul style="list-style-type: none"> Remote control switch circuit - open circuit 	Refer to electrical circuit diagrams and check remote control switch circuit for open circuit
U0010-87	Medium speed CAN communications Bus	<ul style="list-style-type: none"> Missing message 	Carry out pinpoint tests associated with this DTC using the manufacturer approved diagnostic system
U0010-88	Medium Speed CAN Communication Bus	<ul style="list-style-type: none"> Bus Off 	Carry out CAN network integrity tests using the manufacturer approved diagnostic system
U0073-88	Control module communication Bus 'A' off	<ul style="list-style-type: none"> Bus Off 	Carry out pinpoint tests associated with this DTC using the manufacturer approved diagnostic system
U0300-55	Internal control module software incompatibility	<ul style="list-style-type: none"> Incorrect Car Configuration File Incorrect component installed 	Check/amend Car Configuration File using manufacturer approved diagnostic system. Install correct component
U1A03-87	Car Configuration Parameter	<ul style="list-style-type: none"> Missing message 	Check/amend the Car Configuration File using the manufacturer approved diagnostic system. Carry out CAN network integrity tests using the manufacturer approved diagnostic system

General Information - Diagnostic Trouble Code (DTC) IndexDTC:

Instrument Cluster (IPC)

Description and Operation

NOTE: If a control module or component 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 program is in operation, before the replacement of a component.

NOTE: 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).

NOTE: When performing 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.

Description And Operation

For a detailed description of the instrument cluster system, refer to the relevant Description and Operation section in the workshop manual.

For additional information, refer to: [Instrument Cluster](#) (413-01 Instrument Cluster, Description and Operation).

Instrument cluster control module (IPC)

DTC	Description	Possible Cause	Action
B1184-62	Steering Column Lock Output	<ul style="list-style-type: none"> Signal compare failure 	Check steering lock power from CJB. Check CJB for DTCs and refer to relevant DTC Index. For additional information, refer to: Communications Network (418-00 Module Communications Network, Diagnosis and Testing).
B1A14-96	RCM Warning Lamp	<ul style="list-style-type: none"> Light Emitting Diode (LED) failure 	Install a new instrument cluster. For additional information, refer to: Instrument Cluster (413-01 Instrument Cluster, Removal and Installation). Refer to the new module/component installation note at the top of the DTC Index
B1A84-41	Car Configuration Data	<ul style="list-style-type: none"> Flash download checksum error 	Install latest available level of software using the manufacturer approved diagnostic system
B1A84-81	Car Configuration Data	<ul style="list-style-type: none"> Invalid Car Configuration data received 	Check/amend Car Configuration File using manufacturer approved diagnostic system
C2002-62	Odometer Tampered	<ul style="list-style-type: none"> DTC set when one or more stored odometer value does not match 	Clear DTC, cycle ignition and re-test
U0010-87	Medium Speed CAN Communication Bus	<ul style="list-style-type: none"> Multiple loss of CAN data to other systems 	Carry out pinpoint tests associated with this DTC using the manufacturer approved diagnostic system
U0010-88	Medium Speed CAN Communication Bus	<ul style="list-style-type: none"> Break in connection to bus 	Carry out pinpoint tests associated with this DTC using the manufacturer approved diagnostic system
U0140-08	Lost Communication With Body Control Module	<ul style="list-style-type: none"> No messages received from CJB for greater than timeout period 	Carry out pinpoint tests associated with this DTC using the manufacturer approved diagnostic system
U0208-08	Lost Communication With "Seat Control Module A"	<ul style="list-style-type: none"> No messages received from DSM for greater than timeout period 	Check DSM for DTCs and refer to relevant DTC Index. For additional information, refer to: Seats (501-10 Seating, Diagnosis and Testing). Carry out CAN Network integrity tests using the manufacturer approved diagnostic system
U0300-62	Internal Control Module Software Incompatibility	<ul style="list-style-type: none"> Configuration data received is different from the stored data 	Check correct instrument cluster is installed

DTC	Description	Possible Cause	Action
U3000-46	Control Module	<ul style="list-style-type: none"> EEPROM write error 	<p>Check power and ground circuits to the instrument cluster, clear DTC and re-test. If DTC remains, install a new instrument cluster.</p> <p>For additional information, refer to: Instrument Cluster (413-01 Instrument Cluster, Removal and Installation).</p> <p>Refer to the new module/component installation note at the top of the DTC Index</p>
U3000-48	Control Module	<ul style="list-style-type: none"> Internal application software error detected 	<p>Check power and ground circuits to the instrument cluster, clear DTC and re-test. If DTC remains, install a new instrument cluster.</p> <p>For additional information, refer to: Instrument Cluster (413-01 Instrument Cluster, Removal and Installation).</p> <p>Refer to the new module/component installation note at the top of the DTC Index</p>
U3000-4B	Control Module	<ul style="list-style-type: none"> Internal over temperature 	<p>Check for additional DTCs and refer to DTC Index, clear DTC and re-test/monitor condition for re-occurrence</p>
U3003-17	Battery Voltage	<ul style="list-style-type: none"> Circuit voltage above threshold 	<p>Carry out pinpoint tests associated with this DTC using the manufacturer approved diagnostic system</p>

General Information - Diagnostic Trouble Code (DTC) IndexDTC:

Navigation Control Module (NAV)

Description and Operation

NOTE: If a control module or component 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 program is in operation, before the replacement of a component.

NOTE: 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).

NOTE: When performing 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.

Description And Operation

For a detailed description of the navigation system, refer to the relevant Description and Operation section in the workshop manual.

For additional information, refer to: [Navigation System](#) (415-01 Information and Entertainment System, Description and Operation).

Navigation Control Module (NCV)

DTC	Description	Possible Cause	Action
B1A89-11	Satellite antenna	GPS antenna circuit - short to ground	Refer to electrical circuit diagrams and check GPS antenna circuit for short to ground
B1A89-13	Satellite antenna	GPS antenna circuit - open circuit	Refer to electrical circuit diagrams and check GPS antenna circuit for open circuit
B1A89-1B	GPS module	GPS receiver error	Install a new multimedia module. For additional information, refer to: Navigation System Digital Versatile Disc (DVD) Unit (415-01 Information and Entertainment System, Removal and Installation).
B1D55-14	Antenna #2 circuit	TMC/VICS antenna circuit - open circuit	NOTE: Ignore this DTC on vehicles with an E*, D* or C* suffix module part number If a fault is identified with the TMC system, refer to electrical circuit diagrams and check TMC/VICS antenna circuit for open circuit
B1D56-14	Antenna #3 circuit	VICS beacon antenna circuit - open circuit	Refer to electrical circuit diagrams and check VICS beacon antenna circuit for open circuit
U2005-31	Control module	Missing vehicle speed message	Check information and entertainment module for MOST network error DTCs and refer to relevant DTC Index. Carry out MOST network tests using manufacturer approved diagnostic system
U3000-49	Control module	Internal failure	Install a new multimedia module. For additional information, refer to: Navigation System Digital Versatile Disc (DVD) Unit (415-01 Information and Entertainment System, Removal and Installation).
U3000-55	Control module	Incorrect Car Configuration File data received	Check/up-date Car Configuration File using manufacturer approved diagnostic system
U3000-87	Control module	Missing message	Check CJB for DTCs and refer to DTC Index. For additional information, refer to: Communications Network (418-00 Module Communications Network, Diagnosis and Testing). Check information and entertainment module for Car Configuration File and MOST network DTCs and refer to relevant DTC Index. Carry out MOST/CAN network tests using the manufacturer approved diagnostic system
U3000-98	Control module	Component or system over temperature	Check for additional DTCs and refer to relevant DTC Index. Check/monitor system for re-occurrence
U3003-16	Battery voltage	Circuit voltage below threshold	Carry out pinpoint tests associated with this DTC using the manufacturer approved diagnostic system
U3003-17	Battery voltage	Circuit voltage above threshold	Carry out pinpoint tests associated with this DTC using the manufacturer approved diagnostic system

General Information - Diagnostic Trouble Code (DTC) Index DTC: Occupant Classification System (OCS)

Description and Operation



CAUTION: When probing connectors to take measurements in the course of the pinpoint tests, use the adaptor kit, part number 3548-1358-00.

NOTE: If a control module or component 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 program is in operation, before the replacement of a component.

NOTE: 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).

NOTE: When performing 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.

Description And Operation

For a detailed description of the occupant classification system, refer to the relevant Description and Operation section in the workshop manual. For additional information, refer to: [Air Bag and Safety Belt Pretensioner Supplemental Restraint System \(SRS\)](#) (501-20B Supplemental Restraint System, Description and Operation).

Occupant Classification System (OCS)

DTC	Description	Possible Cause	Action
B1193-53	Crash Event Storage Full and Locked - deactivated	<ul style="list-style-type: none"> Crash event occurred 	<ul style="list-style-type: none"> Clear diagnostic trouble code and re-test
B1A54-01	Occupant Belt Tension Sensor - General Electrical Failure	<ul style="list-style-type: none"> General electrical failure 	<ul style="list-style-type: none"> Clear diagnostic trouble code and re-test. If the problem persists, check and install a new safety belt tension sensor as required. 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
B1A54-02	Occupant Belt Tension Sensor - General signal failure	<ul style="list-style-type: none"> General signal failure 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check safety belt tension and mat pressure sensor circuits for short to each other
B1A54-11	Occupant Belt Tension Sensor - circuit short to ground	<ul style="list-style-type: none"> Safety belt tension sensor voltage reference or signal circuit - short to ground 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check safety belt tension sensor voltage reference and signal circuits for short to ground
B1A54-12	Occupant Belt Tension Sensor - circuit short to battery	<ul style="list-style-type: none"> Safety belt tension sensor voltage reference or signal circuit - short to power 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check safety belt tension sensor voltage reference and signal circuits for short to power
B1A54-13	Occupant Belt Tension Sensor - circuit open	<ul style="list-style-type: none"> Safety belt tension sensor voltage reference or signal circuit - open circuit 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check safety belt tension sensor voltage reference and signal circuits for open circuit
B1A62-02	Pressure Sensor - General signal failure	<ul style="list-style-type: none"> General signal failure 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check safety belt tension and mat pressure sensor circuits for short to each other
B1A62-11	Pressure Sensor - circuit short to ground	<ul style="list-style-type: none"> Mat pressure sensor voltage reference or signal circuits - short to ground 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check mat pressure sensor voltage reference and signal circuits for short to ground

General Information - Diagnostic Trouble Code (DTC) IndexDTC: Parking Aid Module (PAM)

Description and Operation

NOTE: If a control module or component 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 program is in operation, before the replacement of a component.

NOTE: 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).

NOTE: When performing 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.

Description And Operation

For a detailed description of the parking assist control system, refer to the relevant Description and Operation section in the workshop manual.

For additional information, refer to: [Parking Aid](#) (413-13 Parking Aid, Description and Operation).

Parking assist control module (PAM)

DTC	Description	Possible Cause	Action
B1B36-01	Front right outer sensor	<ul style="list-style-type: none"> Front right outer sensor signal circuit - short to ground, open circuit Front right outer sensor power supply circuit - open circuit 	Carry out pinpoint tests associated with this DTC using the manufacturer approved diagnostic system
B1B36-12	Front right outer sensor	<ul style="list-style-type: none"> Front right outer sensor signal circuit - short to power 	Refer to electrical circuit diagrams and check front right outer sensor signal circuit for short to power
B1B36-96	Front right outer sensor	<ul style="list-style-type: none"> Front right outer sensor ground circuit - open circuit Front right outer sensor internal failure 	Refer to electrical circuit diagrams and check front right outer sensor ground circuit for open circuit. Install new sensor as necessary. For additional information, refer to: Front Outer Parking Aid Sensor (413-13 Parking Aid, Removal and Installation).
B1B38-01	Front right inner sensor	<ul style="list-style-type: none"> Front right inner sensor signal circuit - short to ground, open circuit Front right inner sensor power supply circuit - open circuit 	Carry out pinpoint tests associated with this DTC using the manufacturer approved diagnostic system
B1B38-12	Front right inner sensor	<ul style="list-style-type: none"> Front right inner sensor signal circuit - short to power 	Refer to electrical circuit diagrams and check front right inner sensor signal circuit for short to power
B1B38-96	Front right inner sensor	<ul style="list-style-type: none"> Front right inner sensor ground circuit - open circuit Front right inner sensor internal failure 	Refer to electrical circuit diagrams and check front right inner sensor ground circuit for open circuit. Install new sensor as necessary. For additional information, refer to: Front Inner Parking Aid Sensor (413-13 Parking Aid, Removal and Installation).
B1B40-01	Front left outer sensor	<ul style="list-style-type: none"> Front left outer sensor signal circuit - short to ground, open circuit Front left outer sensor power supply circuit - open circuit 	Carry out pinpoint tests associated with this DTC using the manufacturer approved diagnostic system

DTC	Description	Possible Cause	Action
B1B40-12	Front left outer sensor	<ul style="list-style-type: none"> Front left outer sensor signal circuit - short to power 	Refer to electrical circuit diagrams and check front left outer sensor signal circuit for short to power
B1B40-96	Front left outer sensor	<ul style="list-style-type: none"> Front left outer sensor ground circuit - open circuit Front left outer sensor internal failure 	Refer to electrical circuit diagrams and check front left outer sensor ground circuit for open circuit. Install new sensor as necessary. For additional information, refer to: Front Outer Parking Aid Sensor (413-13 Parking Aid, Removal and Installation).
B1B42-01	Front left inner sensor	<ul style="list-style-type: none"> Front left inner sensor signal circuit - short to ground, open circuit Front left inner sensor power supply circuit - open circuit 	Carry out pinpoint tests associated with this DTC using the manufacturer approved diagnostic system
B1B42-12	Front left inner sensor	<ul style="list-style-type: none"> Front left inner sensor signal circuit - short to power 	Refer to electrical circuit diagrams and check front left inner sensor signal circuit for short to power
B1B42-96	Front left inner sensor	<ul style="list-style-type: none"> Front left inner sensor ground circuit - open circuit Front left inner sensor internal failure 	Refer to electrical circuit diagrams and check front left inner sensor ground circuit for open circuit. Install new sensor as necessary. For additional information, refer to: Front Inner Parking Aid Sensor (413-13 Parking Aid, Removal and Installation).
B1B44-01	Rear right outer sensor	<ul style="list-style-type: none"> Rear right outer sensor signal circuit - short to ground, open circuit Rear right outer sensor power supply circuit - open circuit 	Carry out pinpoint tests associated with this DTC using the manufacturer approved diagnostic system
B1B44-12	Rear right outer sensor	<ul style="list-style-type: none"> Rear right outer sensor signal circuit - short to power 	Refer to electrical circuit diagrams and check rear right outer sensor signal circuit for short to power
B1B44-96	Rear right outer sensor	<ul style="list-style-type: none"> Rear right outer sensor ground circuit - open circuit Rear right outer sensor internal failure 	Refer to electrical circuit diagrams and check rear right outer sensor ground circuit for open circuit. Install new sensor as necessary. For additional information, refer to: Rear Outer Parking Aid Sensor (413-13 Parking Aid, Removal and Installation).
B1B46-01	Rear right inner sensor	<ul style="list-style-type: none"> Rear right inner sensor signal circuit - short to ground, open circuit Rear right inner sensor power supply circuit - open circuit 	Carry out pinpoint tests associated with this DTC using the manufacturer approved diagnostic system
B1B46-12	Rear right inner sensor	<ul style="list-style-type: none"> Rear right inner sensor signal circuit - short to power 	Refer to electrical circuit diagrams and check rear right inner sensor signal circuit for short to power
B1B46-96	Rear right inner sensor	<ul style="list-style-type: none"> Rear right inner sensor ground circuit - open circuit Rear right inner sensor internal failure 	Refer to electrical circuit diagrams and check rear right inner sensor ground circuit for open circuit. Install new sensor as necessary. For additional information, refer to: Rear Inner Parking Aid Sensor (413-13 Parking Aid, Removal and Installation).
B1B48-01	Rear left outer sensor	<ul style="list-style-type: none"> Rear left outer sensor signal circuit - short to ground, open circuit Rear left outer sensor power supply circuit - open circuit 	Carry out pinpoint tests associated with this DTC using the manufacturer approved diagnostic system
B1B48-12	Rear left outer sensor	<ul style="list-style-type: none"> Rear left outer sensor signal circuit - short to power 	Refer to electrical circuit diagrams and check rear left outer sensor signal circuit for short to power
B1B48-96	Rear left outer sensor	<ul style="list-style-type: none"> Rear left outer sensor ground circuit - open circuit Rear left outer sensor internal failure 	Refer to electrical circuit diagrams and check rear left outer sensor ground circuit for open circuit. Install new sensor as necessary. For additional information, refer to: Rear Outer Parking Aid Sensor (413-13 Parking Aid, Removal and

DTC	Description	Possible Cause	Action
			Installation).
B1B50-01	Rear left inner sensor	<ul style="list-style-type: none"> ● Rear left inner sensor signal circuit - short to ground, open circuit ● Rear left inner sensor power supply circuit - open circuit 	Carry out pinpoint tests associated with this DTC using the manufacturer approved diagnostic system
B1B50-12	Rear left inner sensor	<ul style="list-style-type: none"> ● Rear left inner sensor signal circuit - short to power 	Refer to electrical circuit diagrams and check rear left inner sensor signal circuit for short to power
B1B50-96	Rear left inner sensor	<ul style="list-style-type: none"> ● Rear left inner sensor ground circuit - open circuit ● Rear left inner sensor internal failure 	Refer to electrical circuit diagrams and check rear left inner sensor ground circuit for open circuit. Install new sensor as necessary. For additional information, refer to: Rear Inner Parking Aid Sensor (413-13 Parking Aid, Removal and Installation).
B1B54-11	Parking aid status LED	<ul style="list-style-type: none"> ● Parking aid status LED - short to ground (detected if driven only) 	Refer to the electrical circuit diagrams and test status LED circuit for short to ground
B1B54-12	Parking aid status LED	<ul style="list-style-type: none"> ● Parking aid status LED - short to power (detected if not driven only) 	Refer to the electrical circuit diagrams and test status LED circuit for short to power
B1B57-11	Front sensors power supply circuit	<ul style="list-style-type: none"> ● Front sensors power supply circuit - short to ground 	Refer to the electrical circuit diagrams and test front sensor power supply circuit for short to ground
B1B58-11	Rear sensors power supply circuit	<ul style="list-style-type: none"> ● Rear sensors power supply circuit - short to ground 	Refer to the electrical circuit diagrams and test rear sensor power supply circuit for short to ground
B1C30-73	Disable switch	<ul style="list-style-type: none"> ● Disable switch stuck closed ● Disable switch circuit - short circuit 	Carry out pinpoint tests associated with this DTC using the manufacturer approved diagnostic system
U0010-00	Medium speed CAN communication Bus	<ul style="list-style-type: none"> ● Medium speed CAN communication Bus 	Carry out the associated pinpoint test using the manufacturer approved diagnostic system
U0073-00	Control module communication Bus "A" Off	<ul style="list-style-type: none"> ● Control module communication Bus "A" Off 	Carry out the associated pinpoint test using the manufacturer approved diagnostic system
U0140-00	Lost communication with CJB	<ul style="list-style-type: none"> ● Logged when subscribed CAN message missing from CJB 	Carry out the associated pinpoint test using the manufacturer approved diagnostic system
U0252-00	Lost communication with trailer module	<ul style="list-style-type: none"> ● Logged when subscribed message missing from trailer module 	Check trailer module for DTCs and refer to DTC Index
U0300-00	Internal control module software incompatibility	<ul style="list-style-type: none"> ● CJB car configuration data is not compatible with the parking aid module 	Re-configure the CJB using the manufacturer approved diagnostic system. Clear DTCs and re-test. If DTC still logged, install a new parking aid module. Refer to the new module installation note at the top of the DTC Index
U0422-00	Invalid data received from CJB	<ul style="list-style-type: none"> ● Logged when subscribed CAN message invalid from CJB 	Check CJB for DTCs and refer to DTC Index. For additional information, refer to: Communications Network (418-00 Module Communications Network, Diagnosis and Testing).
U2100-00	Initial configuration not complete	<ul style="list-style-type: none"> ● No configuration has been previously set 	Re-configure CJB using manufacturer approved diagnostic tool, clear DTC and re-test. If DTC remains check CAN network. For additional information, refer to: Communications Network (418-00 Module Communications Network, Diagnosis and Testing).
U2101-00	Control module configuration incompatible	<ul style="list-style-type: none"> ● Data sent from CJB is invalid 	Re-configure CJB using manufacturer approved diagnostic tool, clear DTC and re-test. If DTC remains check CJB for DTCs and refer to DTC Index. For additional information, refer to: Communications Network (418-00 Module Communications Network, Diagnosis and Testing).
U3000-49	Control module	<ul style="list-style-type: none"> ● Internal control module failure 	Install a new parking aid control module, refer to the new module installation note at the top of the DTC Index

DTC	Description	Possible Cause	Action
U3003-16	Battery voltage	<ul style="list-style-type: none">● Circuit voltage below threshold	Carry out the associated pinpoint test using the manufacturer approved diagnostic system
U3003-17	Battery voltage	<ul style="list-style-type: none">● Circuit voltage above threshold	Carry out the associated pinpoint test using the manufacturer approved diagnostic system
U3003-62	Battery voltage	<ul style="list-style-type: none">● Mis-match in battery voltage, of 2 volts or more, between parking aid module and CJB	Carry out the associated pinpoint test using the manufacturer approved diagnostic system

General Information - Diagnostic Trouble Code (DTC) Index DTC: Restraints Control Module (RCM)

Description and Operation

NOTE: If a control module or component 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 program is in operation, before the replacement of a component.

NOTE: 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).

NOTE: When performing 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.

Description And Operation

For a detailed description of the restraints control system, refer to the relevant Description and Operation section in the workshop manual. For additional information, refer to: (501-20B Supplemental Restraint System)

[Air Bag and Safety Belt Pretensioner Supplemental Restraint System \(SRS\)](#) (Description and Operation),

[Air Bag and Safety Belt Pretensioner Supplemental Restraint System \(SRS\)](#) (Description and Operation).

Restraints Control Module (RCM)

DTC	Description	Possible Cause	Action
B0001-11	Driver Frontal Stage 1 Deployment Control - Circuit short to ground	<ul style="list-style-type: none"> Driver's airbag ignitor stage 1 circuit short circuit to ground 	<ul style="list-style-type: none"> Refer to electrical circuit diagrams and check driver's airbag ignitor (stage 1) circuit for short circuit to ground
B0001-12	Driver Frontal Stage 1 Deployment Control - Circuit short to battery	<ul style="list-style-type: none"> Driver's airbag ignitor stage 1 circuit short circuit to power 	<ul style="list-style-type: none"> Refer to electrical circuit diagrams and check driver's airbag ignitor (stage 1) circuit for short circuit to power
B0001-13	Driver Frontal Stage 1 Deployment Control - Circuit open	<ul style="list-style-type: none"> Driver's airbag ignitor stage 1 circuit open circuit 	<ul style="list-style-type: none"> Refer to electrical circuit diagrams and check driver's airbag ignitor (stage 1) circuit for open circuit
B0001-19	Driver Frontal Stage 1 Deployment Control - Circuit current above threshold	<ul style="list-style-type: none"> Driver's airbag ignitor stage 1 circuit current above threshold 	<ul style="list-style-type: none"> Refer to electrical circuit diagrams and check driver's airbag ignitor (stage 1) circuit for swapped pins or cross coupling between two firing lines
B0001-1A	Driver Frontal Stage 1 Deployment Control - Circuit resistance below threshold	<ul style="list-style-type: none"> Driver's airbag ignitor stage 1 circuit resistance below threshold 	<ul style="list-style-type: none"> Refer to electrical circuit diagrams and check driver's airbag ignitor (stage 1) circuit for short circuit between both lines to ignitor
B0001-95	Driver Frontal Stage 1 Deployment Control - Incorrect assembly	<ul style="list-style-type: none"> Driver's airbag ignitor (stage 1) incorrect assembly 	<ul style="list-style-type: none"> Check driver's airbag ignitor (stage 1) installed correctly Using the manufacturer approved diagnostic system check and up-date the car configuration file as required
B0002-11	Driver Frontal Stage 2 Deployment Control - Circuit short to ground	<ul style="list-style-type: none"> Driver's airbag ignitor (stage 2) circuit short circuit to ground 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check driver's airbag ignitor (stage 2) circuit for short circuit to ground
B0002-12	Driver Frontal Stage 2 Deployment Control - Circuit short to battery	<ul style="list-style-type: none"> Driver's airbag ignitor (stage 2) circuit short circuit to power 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check driver's airbag ignitor (stage 2) circuit for short circuit to power
B0002-13	Driver Frontal Stage 2 Deployment Control - Circuit open	<ul style="list-style-type: none"> Driver's airbag ignitor stage 2 circuit open circuit 	<ul style="list-style-type: none"> Refer to electrical circuit diagrams and check driver's airbag ignitor (stage 2) circuit for open circuit

DTC	Description	Possible Cause	Action
B0002-19	Driver Frontal Stage 2 Deployment Control - Circuit current above threshold	<ul style="list-style-type: none"> Driver's airbag ignitor stage 2 circuit current above threshold 	<ul style="list-style-type: none"> Refer to electrical circuit diagrams and check driver's airbag ignitor (stage 2) circuit for swapped pins or cross coupling between two firing lines
B0002-1A	Driver Frontal Stage 2 Deployment Control - Circuit resistance below threshold	<ul style="list-style-type: none"> Driver's airbag ignitor stage 2 circuit resistance below threshold 	<ul style="list-style-type: none"> Refer to electrical circuit diagrams and check driver's airbag ignitor (stage 2) circuit for short circuit between both lines to ignitor
B0002-95	Driver Frontal Stage 2 Deployment Control - Incorrect assembly	<ul style="list-style-type: none"> Driver's airbag ignitor (stage 2) incorrect assembly 	<ul style="list-style-type: none"> Check driver's airbag ignitor (stage 2) installed correctly Using the manufacturer approved diagnostic system check and up-date the car configuration file as required
B0004-11	Driver Knee Bolster Deployment Control - Circuit short to ground	<ul style="list-style-type: none"> Driver's knee bolster ignitor circuit short circuit to ground 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check driver's knee bolster ignitor circuit for short circuit to ground
B0004-12	Driver Knee Bolster Deployment Control - Circuit short to battery	<ul style="list-style-type: none"> Driver's knee bolster ignitor circuit short circuit to power 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check driver's knee bolster ignitor circuit for short circuit to power
B0004-13	Driver Knee Bolster Deployment Control - Circuit open	<ul style="list-style-type: none"> Driver's knee bolster ignitor circuit open circuit 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check driver's knee bolster ignitor circuit for open circuit
B0004-19	Driver Knee Bolster Deployment Control - Circuit current above threshold	<ul style="list-style-type: none"> Driver's knee bolster ignitor circuit current above threshold 	<ul style="list-style-type: none"> Refer to electrical circuit diagrams and check driver's knee bolster ignitor circuit for swapped pins or cross coupling between two firing lines
B0004-1A	Driver Knee Bolster Deployment Control - Circuit resistance below threshold	<ul style="list-style-type: none"> Driver's knee bolster ignitor circuit resistance below threshold 	<ul style="list-style-type: none"> Refer to electrical circuit diagrams and check driver's knee bolster ignitor circuit for short circuit between both lines to ignitor
B0004-95	Driver Knee Bolster Deployment Control - Incorrect assembly	<ul style="list-style-type: none"> Driver's knee bolster ignitor incorrect assembly 	<ul style="list-style-type: none"> Check driver's knee bolster ignitor installed correctly Using the manufacturer approved diagnostic system check and up-date the car configuration file as required
B0005-11	Collapsible Steering Column Deployment Control - Circuit short to ground	<ul style="list-style-type: none"> Collapsible steering column circuit short circuit to ground 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check collapsible steering column circuit for short circuit to ground
B0005-12	Collapsible Steering Column Deployment Control - Circuit short to battery	<ul style="list-style-type: none"> Collapsible steering column circuit short circuit to power 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check collapsible steering column circuit for short circuit to power
B0005-13	Collapsible Steering Column Deployment Control - Circuit open	<ul style="list-style-type: none"> Collapsible steering column circuit open circuit 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check collapsible steering column circuit for open circuit
B0005-19	Collapsible Steering Column Deployment Control - Circuit current above threshold	<ul style="list-style-type: none"> Collapsible steering column circuit current above threshold 	<ul style="list-style-type: none"> Refer to electrical circuit diagrams and check collapsible steering column circuit for swapped pins or cross coupling between two firing lines
B0005-1A	Collapsible Steering Column Deployment Control - Circuit resistance below threshold	<ul style="list-style-type: none"> Collapsible steering column circuit resistance below threshold 	<ul style="list-style-type: none"> Refer to electrical circuit diagrams and check collapsible steering column circuit for short circuit between both lines to deployable device
B0005-95	Collapsible Steering Column Deployment Control - Incorrect assembly	<ul style="list-style-type: none"> Collapsible steering column incorrect assembly 	<ul style="list-style-type: none"> Check collapsible steering column installed correctly Using the manufacturer approved diagnostic system check and up-date the car configuration file as required

DTC	Description	Possible Cause	Action
B0010-11	Passenger Frontal Stage 1 Deployment Control - Circuit short to ground	<ul style="list-style-type: none"> Front passenger's airbag ignitor (stage 1) circuit short circuit to ground 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check front passenger's airbag ignitor (stage 1) circuit for short circuit to ground
B0010-12	Passenger Frontal Stage 1 Deployment Control - Circuit short to battery	<ul style="list-style-type: none"> Front passenger's airbag ignitor (stage 1) circuit short circuit to power 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check front passenger's airbag ignitor (stage 1) circuit for short circuit to power
B0010-13	Passenger Frontal Stage 1 Deployment Control - Circuit open	<ul style="list-style-type: none"> Front passenger's airbag ignitor (stage 1) circuit open circuit 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check front passenger's airbag ignitor (stage 1) circuit for open circuit
B0010-19	Passenger Frontal Stage 1 Deployment Control - Circuit current above threshold	<ul style="list-style-type: none"> Front passenger's airbag ignitor (stage 1) circuit current above threshold 	<ul style="list-style-type: none"> Refer to electrical circuit diagrams and check front passenger's airbag ignitor (stage 1) circuit for swapped pins or cross coupling between two firing lines
B0010-1A	Passenger Frontal Stage 1 Deployment Control - Circuit resistance below threshold	<ul style="list-style-type: none"> Front passenger's airbag ignitor (stage 1) circuit resistance below threshold 	<ul style="list-style-type: none"> Refer to electrical circuit diagrams and check front passenger's airbag ignitor (stage 1) circuit for short circuit between both lines to ignitor
B0010-95	Passenger Frontal Stage 1 Deployment Control - Incorrect assembly	<ul style="list-style-type: none"> Front passenger's airbag ignitor (stage 1) incorrect assembly 	<ul style="list-style-type: none"> Check front passenger's airbag ignitor (stage 1) installed correctly Using the manufacturer approved diagnostic system check and up-date the car configuration file as required
B0011-11	Passenger Frontal Stage 2 Deployment Control - Circuit short to ground	<ul style="list-style-type: none"> Front passenger's airbag ignitor (stage 2) circuit short circuit to ground 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check front passenger's airbag ignitor (stage 2) circuit for short circuit to ground
B0011-12	Passenger Frontal Stage 2 Deployment Control - Circuit short to battery	<ul style="list-style-type: none"> Front passenger's airbag ignitor (stage 2) circuit short circuit to power 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check front passenger's airbag ignitor (stage 2) circuit for short circuit to power
B0011-13	Passenger Frontal Stage 2 Deployment Control - Circuit open	<ul style="list-style-type: none"> Front passenger's airbag ignitor (stage 2) circuit open circuit 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check front passenger's airbag ignitor (stage 2) circuit for open circuit
B0011-19	Passenger Frontal Stage 2 Deployment Control - Circuit current above threshold	<ul style="list-style-type: none"> Front passenger's airbag ignitor (stage 2) circuit current above threshold 	<ul style="list-style-type: none"> Refer to electrical circuit diagrams and check front passenger's airbag ignitor (stage 2) circuit for swapped pins or cross coupling between two firing lines
B0011-1A	Passenger Frontal Stage 2 Deployment Control - Circuit resistance below threshold	<ul style="list-style-type: none"> Front passenger's airbag ignitor (stage 2) circuit resistance below threshold 	<ul style="list-style-type: none"> Refer to electrical circuit diagrams and check front passenger's airbag ignitor (stage 2) circuit for short circuit between both lines to ignitor
B0011-95	Passenger Frontal Stage 2 Deployment Control - Incorrect assembly	<ul style="list-style-type: none"> Front passenger's airbag ignitor (stage 2) incorrect assembly 	<ul style="list-style-type: none"> Check front passenger's airbag ignitor (stage 2) installed correctly Using the manufacturer approved diagnostic system check and up-date the car configuration file as required
B0050-11	Driver Seatbelt Sensor - Circuit short to ground	<ul style="list-style-type: none"> Driver's seatbelt switch circuit short circuit to ground 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check driver's seatbelt switch circuit for short circuit to ground
B0050-12	Driver Seatbelt Sensor - Circuit short to battery	<ul style="list-style-type: none"> Driver's seatbelt switch circuit short circuit to power 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check driver's seatbelt switch circuit for short circuit to power
B0050-13	Driver Seatbelt Sensor - Circuit open	<ul style="list-style-type: none"> Driver's seatbelt switch circuit open circuit 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check driver's seatbelt switch circuit for open circuit
B0050-19	Driver Seatbelt Sensor - Circuit current above threshold	<ul style="list-style-type: none"> Driver's seatbelt switch circuit current above threshold 	<ul style="list-style-type: none"> Refer to electrical circuit diagrams and check driver's seatbelt switch circuit for swapped pins or cross coupling between two firing lines

DTC	Description	Possible Cause	Action
B0050-1E	Driver Seatbelt Sensor - Circuit resistance out of range	<ul style="list-style-type: none"> Driver's seatbelt switch circuit resistance out of range 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check driver's seatbelt sensor for resistance out of range
B0050-95	Driver Seatbelt Sensor - Incorrect assembly	<ul style="list-style-type: none"> Driver's seatbelt sensor incorrect assembly 	<ul style="list-style-type: none"> Check front driver's seatbelt sensor installed correctly Using the manufacturer approved diagnostic system check and up-date the car configuration file as required
B0052-11	Passenger Seatbelt Sensor - Circuit short to ground	<ul style="list-style-type: none"> Passenger's seatbelt switch circuit short circuit to ground 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check passenger's seatbelt switch circuit for short circuit to ground
B0052-12	Passenger Seatbelt Sensor - Circuit short to battery	<ul style="list-style-type: none"> Passenger's seatbelt switch circuit short circuit to power 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check passenger's seatbelt switch circuit for short circuit to power
B0052-13	Passenger Seatbelt Sensor - Circuit open	<ul style="list-style-type: none"> Passenger's seatbelt switch circuit open circuit 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check passenger's seatbelt switch circuit for open circuit
B0052-19	Passenger Seatbelt Sensor - Circuit current above threshold	<ul style="list-style-type: none"> Passenger's seatbelt switch circuit current above threshold 	<ul style="list-style-type: none"> Refer to electrical circuit diagrams and check passenger's seatbelt switch circuit for swapped pins or cross coupling between two firing lines
B0052-1E	Passenger Seatbelt Sensor - Circuit resistance out of range	<ul style="list-style-type: none"> Passenger's seatbelt switch circuit resistance out of range 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check passenger's seatbelt sensor for resistance out of range
B0052-95	Passenger Seatbelt Sensor - Incorrect assembly	<ul style="list-style-type: none"> Passenger's seatbelt sensor incorrect assembly 	<ul style="list-style-type: none"> Check front passenger's seatbelt sensor installed correctly Using the manufacturer approved diagnostic system check and up-date the car configuration file as required
B0070-11	Driver Seatbelt Pretensioner Deployment Control - Circuit short to ground	<ul style="list-style-type: none"> Driver's seatbelt pretensioner ignitor circuit short circuit to ground 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check driver's seatbelt pretensioner ignitor circuit for short circuit to ground
B0070-12	Driver Seatbelt Pretensioner Deployment Control - Circuit short to battery	<ul style="list-style-type: none"> Driver's seatbelt pretensioner ignitor circuit short circuit to power 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check driver's seatbelt pretensioner ignitor circuit for short circuit to power
B0070-13	Driver Seatbelt Pretensioner Deployment Control - Circuit open	<ul style="list-style-type: none"> Driver's seatbelt pretensioner ignitor circuit open circuit 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check driver's seatbelt pretensioner ignitor circuit for open circuit
B0070-19	Driver Seatbelt Pretensioner Deployment Control - Circuit current above threshold	<ul style="list-style-type: none"> Driver's seatbelt pretensioner ignitor circuit current above threshold 	<ul style="list-style-type: none"> Refer to electrical circuit diagrams and check driver's seatbelt pretensioner ignitor circuit for swapped pins or cross coupling between two firing lines
B0070-1A	Driver Seatbelt Pretensioner Deployment Control - Circuit resistance below threshold	<ul style="list-style-type: none"> Driver's seatbelt pretensioner ignitor circuit resistance below threshold 	<ul style="list-style-type: none"> Refer to electrical circuit diagrams and check driver's seatbelt pretensioner ignitor circuit for short circuit between both lines to ignitor
B0070-95	Driver Seatbelt Pretensioner Deployment Control - Incorrect assembly	<ul style="list-style-type: none"> Driver's seatbelt pretensioner ignitor incorrect assembly 	<ul style="list-style-type: none"> Check front driver's seatbelt pretensioner ignitor installed correctly Using the manufacturer approved diagnostic system check and up-date the car configuration file as required
B0072-11	Passenger Seatbelt Pretensioner Deployment Control - Circuit short to ground	<ul style="list-style-type: none"> Passenger's seatbelt pretensioner ignitor circuit short circuit to ground 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check passenger's seatbelt pretensioner ignitor circuit for short circuit to ground
B0072-12	Passenger Seatbelt Pretensioner Deployment Control - Circuit short to battery	<ul style="list-style-type: none"> Passenger's seatbelt pretensioner ignitor circuit short circuit to power 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check passenger's seatbelt pretensioner ignitor circuit for short circuit to power

DTC	Description	Possible Cause	Action
B0072-13	Passenger Seatbelt Pretensioner Deployment Control - Circuit open	<ul style="list-style-type: none"> Passenger's seatbelt pretensioner ignitor circuit open circuit 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check passenger's seatbelt pretensioner ignitor circuit for open circuit
B0072-19	Passenger Seatbelt Pretensioner Deployment Control - Circuit current above threshold	<ul style="list-style-type: none"> Passenger's seatbelt pretensioner ignitor circuit current above threshold 	<ul style="list-style-type: none"> Refer to electrical circuit diagrams and check passenger's seatbelt pretensioner ignitor circuit for swapped pins or cross coupling between two firing lines
B0072-1A	Passenger Seatbelt Pretensioner Deployment Control - Circuit resistance below threshold	<ul style="list-style-type: none"> Passenger's seatbelt pretensioner ignitor circuit resistance below threshold 	<ul style="list-style-type: none"> Refer to electrical circuit diagrams and check passenger's seatbelt pretensioner ignitor circuit for short circuit between both lines to ignitor
B0072-95	Passenger Seatbelt Pretensioner Deployment Control - Incorrect assembly	<ul style="list-style-type: none"> Passenger's seatbelt pretensioner ignitor incorrect assembly 	<ul style="list-style-type: none"> Check front passenger's seatbelt pretensioner ignitor installed correctly Using the manufacturer approved diagnostic system check and up-date the car configuration file as required
B0080-11	Driver Seatbelt Load Limiter Deployment Control - Circuit short to ground	<ul style="list-style-type: none"> Driver's safety belt retractor circuit short circuit to ground 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check driver's safety belt retractor circuit for short circuit to ground
B0080-12	Driver Seatbelt Load Limiter Deployment Control - Circuit short to battery	<ul style="list-style-type: none"> Driver's safety belt retractor circuit short circuit to power 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check driver's safety belt retractor circuit for short circuit to power
B0080-13	Driver Seatbelt Load Limiter Deployment Control - Circuit open	<ul style="list-style-type: none"> Driver's safety belt retractor circuit open circuit 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check driver's safety belt retractor circuit for open circuit
B0080-19	Driver Seatbelt Load Limiter Deployment Control - Circuit current above threshold	<ul style="list-style-type: none"> Driver's safety belt retractor circuit current above threshold 	<ul style="list-style-type: none"> Refer to electrical circuit diagrams and check driver's safety belt retractor circuit for swapped pins or cross coupling between two firing lines
B0080-1A	Driver Seatbelt Load Limiter Deployment Control - Circuit resistance below threshold	<ul style="list-style-type: none"> Driver's safety belt retractor circuit resistance below threshold 	<ul style="list-style-type: none"> Refer to electrical circuit diagrams and check driver's safety belt retractor circuit for short circuit between both lines to ignitor
B0080-95	Driver Seatbelt Load Limiter Deployment Control - Incorrect assembly	<ul style="list-style-type: none"> Driver's safety belt retractor incorrect assembly 	<ul style="list-style-type: none"> Check driver's safety belt retractor installed correctly Using the manufacturer approved diagnostic system check and up-date the car configuration file as required
B0082-11	Passenger Seatbelt Load Limiter Deployment Control - Circuit short to ground	<ul style="list-style-type: none"> Passenger's safety belt retractor circuit short circuit to ground 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check passenger's safety belt retractor circuit for short circuit to ground
B0082-12	Passenger Seatbelt Load Limiter Deployment Control - Circuit short to battery	<ul style="list-style-type: none"> Passenger's safety belt retractor circuit short circuit to power 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check passenger's safety belt retractor circuit for short circuit to power
B0082-13	Passenger Seatbelt Load Limiter Deployment Control - Circuit open	<ul style="list-style-type: none"> Passenger's safety belt retractor circuit open circuit 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check passenger's safety belt retractor circuit for open circuit
B0082-19	Passenger Seatbelt Load Limiter Deployment Control - Circuit current above threshold	<ul style="list-style-type: none"> Passenger's safety belt retractor circuit current above threshold 	<ul style="list-style-type: none"> Refer to electrical circuit diagrams and check passenger's safety belt retractor circuit for swapped pins or cross coupling between two firing lines
B0082-1A	Passenger Seatbelt Load Limiter Deployment Control - Circuit resistance below threshold	<ul style="list-style-type: none"> Passenger's safety belt retractor circuit resistance below threshold 	<ul style="list-style-type: none"> Refer to electrical circuit diagrams and check passenger's safety belt retractor circuit for short circuit between both lines to ignitor
B0082-95	Passenger Seatbelt Load Limiter Deployment Control - Incorrect assembly	<ul style="list-style-type: none"> Passenger's safety belt retractor incorrect assembly 	<ul style="list-style-type: none"> Check passenger's safety belt retractor installed correctly Using the manufacturer approved diagnostic system check and up-date the

DTC	Description	Possible Cause	Action
			car configuration file as required
B00B5-11	Driver Seat Track Position Restraints Sensor - Circuit short to ground	<ul style="list-style-type: none"> Driver's seat position sensor circuit short circuit to ground 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check driver's seat position sensor circuit for short circuit to ground
B00B5-12	Driver Seat Track Position Restraints Sensor - Circuit short to battery	<ul style="list-style-type: none"> Driver's seat position sensor circuit short circuit to power 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check driver's seat position sensor circuit for short circuit to power
B00B5-13	Driver Seat Track Position Restraints Sensor - Circuit open	<ul style="list-style-type: none"> Driver's seat position sensor circuit open circuit 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check driver's seat position sensor circuit for open circuit
B00B5-19	Driver Seat Track Position Restraints Sensor - Circuit current above threshold	<ul style="list-style-type: none"> Driver's seat position sensor circuit current above threshold 	<ul style="list-style-type: none"> Refer to electrical circuit diagrams and check driver's seat position sensor circuit for swapped pins or cross coupling between two firing lines
B00B5-1E	Driver Seat Track Position Restraints Sensor - Circuit resistance out of range	<ul style="list-style-type: none"> Driver's seat position sensor circuit resistance out of range 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check driver's seat position sensor for resistance out of range
B00B5-95	Driver Seat Track Position Restraints Sensor - Incorrect assembly	<ul style="list-style-type: none"> Driver's seat position sensor incorrect assembly 	<ul style="list-style-type: none"> Check driver's seat position sensor installed correctly Using the manufacturer approved diagnostic system check and up-date the car configuration file as required
B00D2-68	Restraint System Malfunction Indicator 1 - Event Information	<ul style="list-style-type: none"> Restraint system events information 	<ul style="list-style-type: none"> Refer to electrical circuit diagrams and check for instrument cluster internal fault 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
B00D2-95	Restraint System Malfunction Indicator 1 - Incorrect assembly	<ul style="list-style-type: none"> Restraint system incorrect assembly 	<ul style="list-style-type: none"> Using the manufacturer approved diagnostic system check and install latest relevant level of software to the restraints control module Using the manufacturer approved diagnostic system check and up-date the car configuration file as required
B00D5-12	Restraint System Passenger Disable Indicator - Circuit short to battery	<ul style="list-style-type: none"> Passenger's airbag disable lamp circuit short circuit to power 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check passenger's airbag disable lamp circuit for short circuit to power
B00D5-14	Restraint System Passenger Disable Indicator - Circuit short to ground or open	<ul style="list-style-type: none"> Passenger's airbag disable lamp circuit short circuit to ground, open circuit, high resistance 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check passenger's airbag disable lamp circuit for short circuit to ground, open circuit, high resistance
B00D5-95	Restraint System Passenger Disable Indicator - Incorrect assembly	<ul style="list-style-type: none"> Passenger's airbag disable lamp incorrect assembly 	<ul style="list-style-type: none"> Check passenger's airbag disable lamp installed correctly Using the manufacturer approved diagnostic system check and up-date the car configuration file as required
B00DF-24	Passenger Restraints Disable Switch - Signal stuck high	<ul style="list-style-type: none"> Passenger's restraints disable switch stuck or internal failure 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check passenger's restraints disable switch
B00DF-55	Passenger Restraints Disable Switch - Not configured	<ul style="list-style-type: none"> Passenger's restraints disable switch not configured 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check passenger's restraints disable switch
B00DF-64	Passenger Restraints Disable Switch - Signal plausibility failure	<ul style="list-style-type: none"> Passenger's restraints disable switch configuration error 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check passenger's restraints disable switch

DTC	Description	Possible Cause	Action
B10FD-11	Drivers Side Peripheral Acceleration Sensor - Circuit short to ground	<ul style="list-style-type: none"> Driver's front side impact sensor circuit short circuit to ground 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check driver's front side impact sensor circuit for short circuit to ground
B10FD-12	Drivers Side Peripheral Acceleration Sensor - Circuit short to battery	<ul style="list-style-type: none"> Driver's front side impact sensor circuit short circuit to power 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check driver's front side impact sensor circuit for short circuit to power
B10FD-19	Drivers Side Peripheral Acceleration Sensor - Circuit current above threshold	<ul style="list-style-type: none"> Driver's front side impact sensor circuit current above threshold 	<ul style="list-style-type: none"> Refer to electrical circuit diagrams and check driver's front side impact sensor circuit for swapped pins or cross coupling between two firing lines
B10FD-4A	Drivers Side Peripheral Acceleration Sensor - Incorrect component installed	<ul style="list-style-type: none"> Driver's front side impact sensor incorrect component installed 	<ul style="list-style-type: none"> Restraints control module detected a miss-match between the hardware fitted and what is expected Check correct driver's front side impact sensor installed
B10FD-87	Drivers Side Peripheral Acceleration Sensor - Missing message	<ul style="list-style-type: none"> Driver's front side impact sensor circuit open circuit Driver's front side impact sensor internal fault 	<ul style="list-style-type: none"> Refer to electrical circuit diagrams and check driver's front side impact sensor circuit for communication fault
B10FD-95	Drivers Side Peripheral Acceleration Sensor - Incorrect assembly	<ul style="list-style-type: none"> Driver's front side impact sensor incorrect assembly 	<ul style="list-style-type: none"> Check driver's front side impact sensor installed correctly Using the manufacturer approved diagnostic system check and up-date the car configuration file as required
B10FD-96	Drivers Side Peripheral Acceleration Sensor - Component internal failure	<ul style="list-style-type: none"> Driver's front side impact sensor internal fault 	<ul style="list-style-type: none"> Refer to electrical circuit diagrams and check driver's front side impact sensor
B10FE-11	Passenger Side Peripheral Acceleration Sensor - Circuit short to ground	<ul style="list-style-type: none"> Passenger's front side impact sensor circuit short circuit to ground 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check passenger's front side impact sensor circuit for short circuit to ground
B10FE-12	Passenger Side Peripheral Acceleration Sensor - Circuit short to battery	<ul style="list-style-type: none"> Passenger's front side impact sensor circuit short circuit to power 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check passenger's front side impact sensor circuit for short circuit to power
B10FE-19	Passenger Side Peripheral Acceleration Sensor - Circuit current above threshold	<ul style="list-style-type: none"> Passenger's front side impact sensor circuit current above threshold 	<ul style="list-style-type: none"> Refer to electrical circuit diagrams and check passenger's front side impact sensor circuit for swapped pins or cross coupling between two firing lines
B10FE-4A	Passenger Side Peripheral Acceleration Sensor - Incorrect component installed	<ul style="list-style-type: none"> Passenger's front side impact sensor incorrect component installed 	<ul style="list-style-type: none"> Restraints control module detected a miss-match between the hardware fitted and what is expected Check correct passenger's front side impact sensor installed
B10FE-87	Passenger Side Peripheral Acceleration Sensor - Missing message	<ul style="list-style-type: none"> Passenger's front side impact sensor circuit open circuit Passenger's front side impact sensor internal fault 	<ul style="list-style-type: none"> Refer to electrical circuit diagrams and check passenger's front side impact sensor circuit for communication fault
B10FE-95	Passenger Side Peripheral Acceleration Sensor - Incorrect assembly	<ul style="list-style-type: none"> Passenger's front side impact sensor incorrect assembly 	<ul style="list-style-type: none"> Check passenger's front side impact sensor installed correctly Using the manufacturer approved diagnostic system check and up-date the car configuration file as required
B10FE-96	Passenger Side Peripheral Acceleration Sensor - Component internal failure	<ul style="list-style-type: none"> Passenger's front side impact sensor internal fault 	<ul style="list-style-type: none"> Refer to electrical circuit diagrams and check passenger's front side impact sensor
B1126-11	Drivers Side-Side Airbag Deployment Control - Circuit short to ground	<ul style="list-style-type: none"> Driver's side air bag circuit short circuit to ground 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check driver's side air bag circuit for short circuit to ground

DTC	Description	Possible Cause	Action
B1126-12	Drivers Side-Side Airbag Deployment Control - Circuit short to battery	<ul style="list-style-type: none"> Driver's side air bag circuit short circuit to power 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check driver's side air bag circuit for short circuit to power
B1126-13	Drivers Side-Side Airbag Deployment Control - Circuit open	<ul style="list-style-type: none"> Driver's side air bag circuit open circuit 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check driver's side air bag circuit for open circuit
B1126-19	Drivers Side-Side Airbag Deployment Control - Circuit current above threshold	<ul style="list-style-type: none"> Driver's side air bag circuit current above threshold 	<ul style="list-style-type: none"> Refer to electrical circuit diagrams and check driver's side air bag circuit for swapped pins or cross coupling between two firing lines
B1126-1A	Drivers Side-Side Airbag Deployment Control - Circuit resistance below threshold	<ul style="list-style-type: none"> Driver's side air bag circuit resistance below threshold 	<ul style="list-style-type: none"> Refer to electrical circuit diagrams and driver's side air bag circuit for short circuit between both lines to air bag
B1126-95	Drivers Side-Side Airbag Deployment Control - Incorrect assembly	<ul style="list-style-type: none"> Driver's side air bag incorrect assembly 	<ul style="list-style-type: none"> Check driver's side air bag installed correctly Using the manufacturer approved diagnostic system check and up-date the car configuration file as required
B1127-11	Passengers Side-Side Airbag Deployment Control - Circuit short to ground	<ul style="list-style-type: none"> Passenger's side air bag circuit short circuit to ground 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check passenger's side air bag circuit for short circuit to ground
B1127-12	Passengers Side-Side Airbag Deployment Control - Circuit short to battery	<ul style="list-style-type: none"> Passenger's side air bag circuit short circuit to power 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check passenger's side air bag circuit for short circuit to power
B1127-13	Passengers Side-Side Airbag Deployment Control - Circuit open	<ul style="list-style-type: none"> Passenger's side air bag circuit open circuit 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check passenger's side air bag circuit for open circuit
B1127-19	Passengers Side-Side Airbag Deployment Control - Circuit current above threshold	<ul style="list-style-type: none"> Passenger's side air bag circuit current above threshold 	<ul style="list-style-type: none"> Refer to electrical circuit diagrams and check passenger's side air bag circuit for swapped pins or cross coupling between two firing lines
B1127-1A	Passengers Side-Side Airbag Deployment Control - Circuit resistance below threshold	<ul style="list-style-type: none"> Passenger's side air bag circuit resistance below threshold 	<ul style="list-style-type: none"> Refer to electrical circuit diagrams and passenger's side air bag circuit for short circuit between both lines to side air bag
B1127-95	Passengers Side-Side Airbag Deployment Control - Incorrect assembly	<ul style="list-style-type: none"> Passenger's side air bag incorrect assembly 	<ul style="list-style-type: none"> Check passenger's side air bag installed correctly Using the manufacturer approved diagnostic system check and up-date the car configuration file as required
B1128-11	Drivers Side-Side Inflatable Curtain Deployment Control - Circuit short to ground	<ul style="list-style-type: none"> Driver's side curtain air bag circuit short circuit to ground 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check driver's side curtain air bag circuit for short circuit to ground
B1128-12	Drivers Side-Side Inflatable Curtain Deployment Control - Circuit short to battery	<ul style="list-style-type: none"> Driver's side curtain air bag circuit short circuit to power 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check driver's side curtain air bag circuit for short circuit to power
B1128-13	Drivers Side-Side Inflatable Curtain Deployment Control - Circuit open	<ul style="list-style-type: none"> Driver's side curtain air bag circuit open circuit 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check driver's side curtain air bag circuit for open circuit
B1128-19	Drivers Side-Side Inflatable Curtain Deployment Control - Circuit current above threshold	<ul style="list-style-type: none"> Driver's side curtain air bag circuit current above threshold 	<ul style="list-style-type: none"> Refer to electrical circuit diagrams and driver's side curtain air bag circuit for swapped pins or cross coupling between two firing lines
B1128-1A	Drivers Side-Side Inflatable Curtain Deployment Control - Circuit resistance below threshold	<ul style="list-style-type: none"> Driver's side curtain air bag circuit resistance below threshold 	<ul style="list-style-type: none"> Refer to electrical circuit diagrams and driver's side curtain air bag circuit for short circuit between both lines to side curtain air bag

DTC	Description	Possible Cause	Action
B1128-95	Drivers Side-Side Inflatable Curtain Deployment Control - Incorrect assembly	<ul style="list-style-type: none"> Driver's side curtain air bag incorrect assembly 	<ul style="list-style-type: none"> Check driver's side curtain air bag installed correctly Using the manufacturer approved diagnostic system check and up-date the car configuration file as required
B1129-11	Passengers Side-Side Inflatable Curtain Deployment Control - Circuit short to ground	<ul style="list-style-type: none"> Passenger's side curtain air bag circuit short circuit to ground 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check passenger's side curtain air bag circuit for short circuit to ground
B1129-12	Passengers Side-Side Inflatable Curtain Deployment Control - Circuit short to battery	<ul style="list-style-type: none"> Passenger's side curtain air bag circuit short circuit to power 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check passenger's side curtain air bag circuit for short circuit to power
B1129-13	Passengers Side-Side Inflatable Curtain Deployment Control - Circuit open	<ul style="list-style-type: none"> Passenger's side curtain air bag circuit open circuit 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check passenger's side curtain air bag circuit for open circuit
B1129-19	Passengers Side-Side Inflatable Curtain Deployment Control - Circuit current above threshold	<ul style="list-style-type: none"> Passenger's side curtain air bag circuit current above threshold 	<ul style="list-style-type: none"> Refer to electrical circuit diagrams and check passenger's side curtain air bag circuit for swapped pins or cross coupling between two firing lines
B1129-1A	Passengers Side-Side Inflatable Curtain Deployment Control - Circuit resistance below threshold	<ul style="list-style-type: none"> Passenger's side curtain air bag circuit resistance below threshold 	<ul style="list-style-type: none"> Refer to electrical circuit diagrams and passenger's side curtain air bag circuit for short circuit between both lines to side curtain air bag
B1129-95	Passengers Side-Side Inflatable Curtain Deployment Control - Incorrect assembly	<ul style="list-style-type: none"> Passenger's side curtain air bag incorrect assembly 	<ul style="list-style-type: none"> Check passenger's side curtain air bag installed correctly Using the manufacturer approved diagnostic system check and up-date the car configuration file as required
B1193-68	Crash Event Storage Full and Locked - Event information	<ul style="list-style-type: none"> Restraints control module crash event storage area full and locked 	<ul style="list-style-type: none"> Read out the event data recorder and then 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
B1194-11	Driver Side Frontal Acceleration Sensor - Circuit short to ground	<ul style="list-style-type: none"> Driver's side front impact sensor circuit short circuit to ground 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check driver's side front impact sensor circuit for short circuit to ground
B1194-12	Driver Side Frontal Acceleration Sensor - Circuit short to battery	<ul style="list-style-type: none"> Driver's side front impact sensor circuit short circuit to power 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check driver's side front impact sensor circuit for short circuit to power
B1194-19	Driver Side Frontal Acceleration Sensor - Circuit current above threshold	<ul style="list-style-type: none"> Driver's side front impact sensor circuit current above threshold 	<ul style="list-style-type: none"> Refer to electrical circuit diagrams and driver's side front impact sensor circuit for swapped pins or cross coupling between two firing lines
B1194-4A	Driver Side Frontal Acceleration Sensor - Incorrect component installed	<ul style="list-style-type: none"> Driver's side front impact sensor incorrect component installed 	<ul style="list-style-type: none"> Restraints control module detected a miss-match between the hardware fitted and what is expected Check correct driver's side front impact sensor installed
B1194-87	Driver Side Frontal Acceleration Sensor - Missing message	<ul style="list-style-type: none"> Driver's side front impact sensor circuit open circuit Driver's side front impact sensor internal fault 	<ul style="list-style-type: none"> Refer to electrical circuit diagrams and driver's side front impact sensor for communication fault
B1194-95	Driver Side Frontal Acceleration Sensor - Incorrect assembly	<ul style="list-style-type: none"> Driver's side front impact sensor incorrect assembly 	<ul style="list-style-type: none"> Check driver's side front impact sensor installed correctly Using the manufacturer approved diagnostic system check and up-date the car configuration file as required
B1194-96	Driver Side Frontal Acceleration Sensor - Component internal failure	<ul style="list-style-type: none"> Driver's side front impact sensor internal fault 	<ul style="list-style-type: none"> Refer to electrical circuit diagrams and check driver's side front impact sensor

DTC	Description	Possible Cause	Action
B1195-11	Passenger Side Frontal Acceleration Sensor - Circuit short to ground	<ul style="list-style-type: none"> Passenger's side front impact sensor circuit short circuit to ground 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check passenger's side front impact sensor circuit for short circuit to ground
B1195-12	Passenger Side Frontal Acceleration Sensor - Circuit short to battery	<ul style="list-style-type: none"> Passenger's side front impact sensor circuit short circuit to power 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check passenger's side front impact sensor circuit for short circuit to power
B1195-19	Passenger Side Frontal Acceleration Sensor - Circuit current above threshold	<ul style="list-style-type: none"> Passenger's side front impact sensor circuit current above threshold 	<ul style="list-style-type: none"> Refer to electrical circuit diagrams and passenger's side front impact sensor circuit for swapped pins or cross coupling between two firing lines
B1195-4A	Passenger Side Frontal Acceleration Sensor - Incorrect component installed	<ul style="list-style-type: none"> Passenger's side front impact sensor incorrect component installed 	<ul style="list-style-type: none"> Restraints control module detected a miss-match between the hardware fitted and what is expected Check correct passenger's side front impact sensor installed
B1195-87	Passenger Side Frontal Acceleration Sensor - Missing message	<ul style="list-style-type: none"> Passenger's side front impact sensor circuit open circuit Passenger's side front impact sensor internal fault 	<ul style="list-style-type: none"> Refer to electrical circuit diagrams and passenger's side front impact sensor for communication fault
B1195-95	Passenger Side Frontal Acceleration Sensor - Incorrect assembly	<ul style="list-style-type: none"> Passenger's side front impact sensor incorrect assembly 	<ul style="list-style-type: none"> Check passenger's side front impact sensor installed correctly Using the manufacturer approved diagnostic system check and up-date the car configuration file as required
B1195-96	Passenger Side Frontal Acceleration Sensor - Component internal failure	<ul style="list-style-type: none"> Passenger's side front impact sensor internal fault 	<ul style="list-style-type: none"> Refer to electrical circuit diagrams and check passenger's side front impact sensor
B1196-11	Driver Side Second Row Peripheral Acceleration Sensor - Circuit short to ground	<ul style="list-style-type: none"> Driver's side rear side impact sensor circuit short circuit to ground 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check driver's side rear side impact sensor circuit for short circuit to ground
B1196-12	Driver Side Second Row Peripheral Acceleration Sensor - Circuit short to battery	<ul style="list-style-type: none"> Driver's side rear side impact sensor circuit short circuit to power 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check driver's side rear side impact sensor circuit for short circuit to power
B1196-19	Driver Side Second Row Peripheral Acceleration Sensor - Circuit current above threshold	<ul style="list-style-type: none"> Driver's side rear side impact sensor circuit current above threshold 	<ul style="list-style-type: none"> Refer to electrical circuit diagrams and check driver's side rear side impact sensor circuit for swapped pins or cross coupling between two firing lines
B1196-4A	Driver Side Second Row Peripheral Acceleration Sensor - Incorrect component installed	<ul style="list-style-type: none"> Driver's side rear side impact sensor incorrect component installed 	<ul style="list-style-type: none"> Restraints control module detected a miss-match between the hardware fitted and what is expected Check correct driver's side rear side impact sensor installed
B1196-87	Driver Side Second Row Peripheral Acceleration Sensor - Missing message	<ul style="list-style-type: none"> Driver's side rear side impact sensor circuit open circuit Driver's side rear side impact sensor internal fault 	<ul style="list-style-type: none"> Refer to electrical circuit diagrams and check driver's side rear side impact sensor for communication fault
B1196-95	Driver Side Second Row Peripheral Acceleration Sensor - Incorrect assembly	<ul style="list-style-type: none"> Driver's side rear side impact sensor incorrect assembly 	<ul style="list-style-type: none"> Check driver's side rear side impact sensor installed correctly Using the manufacturer approved diagnostic system check and up-date the car configuration file as required
B1196-96	Driver Side Second Row Peripheral Acceleration Sensor - Component internal failure	<ul style="list-style-type: none"> Driver's side rear side impact sensor internal fault 	<ul style="list-style-type: none"> Refer to electrical circuit diagrams and check driver's side rear side impact sensor

DTC	Description	Possible Cause	Action
B1197-11	Passenger Side Second Row Peripheral Acceleration Sensor - Circuit short to ground	<ul style="list-style-type: none"> Passenger's side rear side impact sensor circuit short circuit to ground 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check passenger's side rear side impact sensor circuit for short circuit to ground
B1197-12	Passenger Side Second Row Peripheral Acceleration Sensor - Circuit short to battery	<ul style="list-style-type: none"> Passenger's side rear side impact sensor circuit short circuit to power 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check passenger's side rear side impact sensor circuit for short circuit to power
B1197-19	Passenger Side Second Row Peripheral Acceleration Sensor - Circuit current above threshold	<ul style="list-style-type: none"> Passenger's side rear side impact sensor circuit current above threshold 	<ul style="list-style-type: none"> Refer to electrical circuit diagrams and check passenger's side rear side impact sensor circuit for swapped pins or cross coupling between two firing lines
B1197-4A	Passenger Side Second Row Peripheral Acceleration Sensor - Incorrect component installed	<ul style="list-style-type: none"> Passenger's side rear side impact sensor incorrect component installed 	<ul style="list-style-type: none"> Restraints control module detected a miss-match between the hardware fitted and what is expected Check correct passenger's side rear side impact sensor installed
B1197-87	Passenger Side Second Row Peripheral acceleration Sensor - Missing message	<ul style="list-style-type: none"> Passenger's side rear side impact sensor circuit open circuit Passenger's side rear side impact sensor internal fault 	<ul style="list-style-type: none"> Refer to electrical circuit diagrams and check passenger's side rear side impact sensor for communication fault
B1197-95	Passenger Side Second Row Peripheral Acceleration Sensor - Incorrect assembly	<ul style="list-style-type: none"> Passenger's side rear side impact sensor incorrect assembly 	<ul style="list-style-type: none"> Check passenger's side rear side impact sensor installed correctly Using the manufacturer approved diagnostic system check and up-date the car configuration file as required
B1197-96	Passenger Side Second Row Peripheral Acceleration Sensor - Component internal failure	<ul style="list-style-type: none"> Passenger's side rear side impact sensor internal fault 	<ul style="list-style-type: none"> Refer to electrical circuit diagrams and check passenger's side rear side impact sensor
B1A55-11	Crash Record Output - Circuit short to ground	<ul style="list-style-type: none"> Event signal circuit short circuit to ground 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check event signal circuit for short circuit to ground
B1A55-12	Crash Record Output - Circuit short to battery	<ul style="list-style-type: none"> Event signal circuit short circuit to power 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check event signal circuit for short circuit to power
B1D74-11	Passenger Airbag Cutoff Enable Switch - Circuit short to ground	<ul style="list-style-type: none"> Passenger's air bag deactivation switch circuit short circuit to ground 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check passenger's air bag deactivation switch circuit for short circuit to ground
B1D74-12	Passenger Airbag Cutoff Enable Switch - Circuit short to battery	<ul style="list-style-type: none"> Passenger's air bag deactivation switch circuit short circuit to power 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check passenger's air bag deactivation switch circuit for short circuit to power
B1D74-13	Passenger Airbag Cutoff Enable Switch - Circuit open	<ul style="list-style-type: none"> Passenger's air bag deactivation switch circuit open circuit 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check passenger's air bag deactivation switch circuit for open circuit
B1D74-19	Passenger Airbag Cutoff Enable Switch - Circuit current above threshold	<ul style="list-style-type: none"> Passenger's air bag deactivation switch circuit current above threshold 	<ul style="list-style-type: none"> Refer to electrical circuit diagrams and check passenger's air bag deactivation switch circuit for swapped pins or cross coupling between two firing lines
B1D74-1E	Passenger Airbag Cutoff Enable Switch - Circuit resistance out of range	<ul style="list-style-type: none"> Passenger's air bag deactivation switch circuit resistance out of range 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check passenger's air bag deactivation switch for resistance out of range
B1D74-95	Passenger Airbag Cutoff Enable Switch - Incorrect assembly	<ul style="list-style-type: none"> Passenger's air bag deactivation switch incorrect assembly 	<ul style="list-style-type: none"> Check passenger's air bag deactivation switch installed correctly Using the manufacturer approved diagnostic system check and up-date the car configuration file as required

DTC	Description	Possible Cause	Action
B1D75-11	Passenger Airbag Cutoff Disable Switch - Circuit short to ground	<ul style="list-style-type: none"> Passenger's air bag deactivation switch circuit short circuit to ground 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check passenger's air bag deactivation switch circuit for short circuit to ground
B1D75-12	Passenger Airbag Cutoff Disable Switch - Circuit short to battery	<ul style="list-style-type: none"> Passenger's air bag deactivation switch circuit short circuit to power 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check passenger's air bag deactivation switch circuit for short circuit to power
B1D75-13	Passenger Airbag Cutoff Disable Switch - Circuit open	<ul style="list-style-type: none"> Passenger's air bag deactivation switch circuit open circuit 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check passenger's air bag deactivation switch circuit for open circuit
B1D75-19	Passenger Airbag Cutoff Disable Switch - Circuit current above threshold	<ul style="list-style-type: none"> Passenger's air bag deactivation switch circuit current above threshold 	<ul style="list-style-type: none"> Refer to electrical circuit diagrams and check passenger's air bag deactivation switch circuit for swapped pins or cross coupling between two firing lines
B1D75-1E	Passenger Airbag Cutoff Disable Switch - Circuit resistance out of range	<ul style="list-style-type: none"> Passenger's air bag deactivation switch circuit resistance out of range 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check passenger's air bag deactivation switch for resistance out of range
B1D75-95	Passenger Airbag Cutoff Disable Switch - Incorrect assembly	<ul style="list-style-type: none"> Passenger's air bag deactivation switch incorrect assembly 	<ul style="list-style-type: none"> Check passenger's air bag deactivation switch installed correctly Using the manufacturer approved diagnostic system check and up-date the car configuration file as required
U0001-88	High Speed CAN Communication Bus - Bus off	<ul style="list-style-type: none"> High speed CAN bus circuit fault 	<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
U0140-00	Lost Communication With Body Control Module - No sub type information	<ul style="list-style-type: none"> Lost communication with body control 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 restraints control module and body control module
U0154-00	Lost Communication With Restraints Occupant Classification System Module - No sub type information	<ul style="list-style-type: none"> Lost communication with restraints occupant classification system 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 restraints control module and restraints occupant classification system module
U0300-00	Internal Control Module Software Incompatibility - No sub type information	<ul style="list-style-type: none"> Restraints control module is not configured correctly 	<ul style="list-style-type: none"> Using the manufacturer approved diagnostic system check and install latest relevant level of software to the restraints control module
U0455-64	Invalid Data Received From Restraints Occupant Classification System Module - Signal plausibility failure	<ul style="list-style-type: none"> Restraints occupant classification system module configuration error 	<ul style="list-style-type: none"> Using the manufacturer approved diagnostic system check and install latest relevant level of software to the restraints occupant classification module
U0455-92	Invalid Data Received From Restraints Occupant Classification System Module - Performance or incorrect operation	<ul style="list-style-type: none"> Restraints occupant classification system module internal failure 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check for restraints occupant classification system module internal fault and check for stored DTCs

DTC	Description	Possible Cause	Action
U0455-94	Invalid Data Received From Restraints Occupant Classification System Module - Unexpected operation	<ul style="list-style-type: none"> ● Restraints occupant classification system module unexpected operation 	<ul style="list-style-type: none"> ● Using the manufacturer approved diagnostic system check and install latest relevant level of software to the restraints occupant classification module
U2100-00	Initial Configuration Not Complete - No sub type information	<ul style="list-style-type: none"> ● Restraints control module is not configured correctly 	<ul style="list-style-type: none"> ● Using the manufacturer approved diagnostic system check and install latest relevant level of software to the restraints occupant classification module
U2101-00	Control Module Configuration Incompatible - No sub type information	<ul style="list-style-type: none"> ● Restraints control module is not configured correctly 	<ul style="list-style-type: none"> ● Using the manufacturer approved diagnostic system check and install latest relevant level of software to the restraints control module ● Using the manufacturer approved diagnostic system check and up-date the car configuration file as required. Clear the DTC and re-test
U3000-49	Control Module - Internal electronic failure	<ul style="list-style-type: none"> ● Restraints control module internal electronic failure 	<ul style="list-style-type: none"> ● Restraints control module internal fault ● 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
U3003-62	Battery Voltage - Signal compare failure	<ul style="list-style-type: none"> ● Restraints control module measured voltage is 2.5v lower than battery voltage 	<ul style="list-style-type: none"> ● Refer to the electrical circuit diagrams and check input voltage to the restraints control module compared to battery voltage
U3006-17	Control Module Input Power 'A' - Circuit voltage above threshold	<ul style="list-style-type: none"> ● Restraints control module circuit supply voltage above threshold 	<ul style="list-style-type: none"> ● Refer to the electrical circuit diagrams and check for high input voltage to the restraints control module
U3006-68	Control Module Input Power 'A' - Event information	<ul style="list-style-type: none"> ● Restraints control module circuit supply voltage below threshold 	<ul style="list-style-type: none"> ● Refer to the electrical circuit diagrams and check for low input voltage to the restraints control module
U3008-13	Control Module Ground 'A' - Circuit open	<ul style="list-style-type: none"> ● Restraints control module ground supply open circuit 	<ul style="list-style-type: none"> ● Refer to the electrical circuit diagrams and check the ground supply for open circuit to the restraints control module

General Information - Diagnostic Trouble Code (DTC) Index DTC: Rear Differential Control Module (RDCM)

Description and Operation

NOTE: If a control module or component 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 program is in operation, before the replacement of a component.

NOTE: 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).

NOTE: When performing 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.

Description And Operation

For a detailed description of the rear differential system, refer to the relevant Description and Operation section in the workshop manual.

For additional information, refer to: [Rear Drive Axle and Differential](#) (205-02 Rear Drive Axle/Differential, Description and Operation).

DTC	Description	Possible Cause	Action
P0560-17	System Voltage - Circuit voltage above threshold	<ul style="list-style-type: none"> Boost starting or battery charging Power or ground supply circuit fault Battery or charging system fault 	<p>NOTE: This DTC may be logged due to boost starting or battery charging</p> <ul style="list-style-type: none"> Check other modules for related DTC's Clear the DTCs and retest Check vehicle battery and charging system and repair as required Refer to the electrical circuit diagrams and check the power and ground supply circuits to the Differential Electronic Module (DEM) Clear the DTC's and retest If the DTC returns
			<p>NOTE: GEN 3 = Plastic motor housing</p> <ul style="list-style-type: none"> Check and install a new (GEN 3) Differential Electronic Module (DEM) kit as required. <p>For additional information, refer to: Active On-Demand Coupling Module (205-02 Rear Drive Axle/Differential, Removal and Installation).</p> <p>Refer to the Warranty Policy and Procedures manual, or determine if any prior approval program is in operation, prior to the installation of a new module/component</p>
			<p>NOTE: GEN 4 = Metal motor housing</p> <ul style="list-style-type: none"> Check and install a new (GEN 4) Differential Electronic Module (DEM) kit as required. <p>For additional information, refer to: Active On-Demand Coupling Module (205-02 Rear Drive Axle/Differential, Removal and Installation).</p> <p>Refer to the Warranty Policy and Procedures manual, or determine if any prior approval program is in operation, prior to the installation of a new module/component</p>

General Information - Diagnostic Trouble Code (DTC) IndexDTC: Steering Angle Sensor Module (SASM)

Description and Operation

NOTE: If a control module or component 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 program is in operation, before the replacement of a component.

NOTE: 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).

NOTE: When performing 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.

Description And Operation

For a detailed description of the anti lock control stability system, refer to the relevant Description and Operation section in the workshop manual.

For additional information, refer to: [Anti-Lock Control - Stability Assist](#) (206-09C Anti-Lock Control - Stability Assist, Description and Operation).

Steering Angle Sensor Module

DTC	Description	Possible Cause	Action
U0001-00	High Speed CAN Communication Bus General Failure Information No sub type information	<ul style="list-style-type: none"> Bus Off 	Carry out the pinpoint tests associated to this DTC using the manufacturer approved diagnostic system
U0140-00	Lost Communication With Central electronic module General Failure Information No sub type information	<ul style="list-style-type: none"> Lost communication with CJB 	Carry out the pinpoint tests associated to this DTC using the manufacturer approved diagnostic system
U0300-00	Internal Control Module Software Incompatibility General Failure Information No sub type information	<ul style="list-style-type: none"> CAN Bus fault Loss of power to module Incorrect component installed Module internal failure 	Carry out CAN network and power feed tests using manufacturer approved diagnostic system. Check correct steering wheel rotation sensor is installed. Install a new steering wheel rotation sensor as required, refer to new module/component installation note at the top of the DTC Index.
U3000-04	Control Module General Failure Information System Internal Failures	<ul style="list-style-type: none"> CAN Bus fault Loss of power to module Incorrect component installed Module internal failure 	Carry out CAN network and power feed tests using manufacturer approved diagnostic system. Check correct steering wheel rotation sensor is installed. Install a new steering wheel rotation sensor as required, refer to new module/component installation note at the top of the DTC Index.
U3000-14	Control Module General Electrical Failures Circuit short to ground or open	<ul style="list-style-type: none"> Loss of power to module Module internal failure 	Carry out power feed tests using manufacturer approved diagnostic system. Install a new steering wheel rotation sensor as required, refer to new module/component installation note at the top of the DTC Index.
U3000-1D	Control Module General Electrical Failures Circuit current out of range	<ul style="list-style-type: none"> Loss of power to module Module internal failure 	Carry out power feed tests using manufacturer approved diagnostic system. Install a new steering wheel rotation sensor as required, refer to new module/component installation note at the top of the DTC Index.
U3000-44	Control Module System Internal Failures Data memory failure	<ul style="list-style-type: none"> Module internal failure 	Install a new steering wheel rotation sensor as required, refer to new module/component installation note at the top of the DTC Index.
U3000-48	Control Module System Internal Failures Supervision software failure	<ul style="list-style-type: none"> Module internal failure 	Install a new steering wheel rotation sensor as required, refer to new module/component installation note at the top of the DTC Index.

DTC	Description	Possible Cause	Action
U3000-49	Control Module System Internal Failures Internal electronic failure	<ul style="list-style-type: none"> ● Loss of power to module ● Module internal failure 	Carry out power feed tests using manufacturer approved diagnostic system. Install a new steering wheel rotation sensor as required, refer to new module/component installation note at the top of the DTC Index.
U3000-61	Control Module Algorithm Based Failures Signal calculation failure	<ul style="list-style-type: none"> ● Steering wheel rotation sensor mis-aligned ● Module internal failure 	Check for correct installation of sensor. Install a new steering wheel rotation sensor as required, refer to new module/component installation note at the top of the DTC Index.
U3000-62	Control Module Algorithm Based Failures Signal compare failure	<ul style="list-style-type: none"> ● Steering wheel rotation sensor mis-aligned ● Module internal failure 	Check for correct installation of sensor. Install a new steering wheel rotation sensor as required, refer to new module/component installation note at the top of the DTC Index.
U3000-64	Control Module Algorithm Based Failures Signal plausibility failure	<ul style="list-style-type: none"> ● Steering wheel rotation sensor mis-aligned ● Module internal failure 	Check for correct installation of sensor. Install a new steering wheel rotation sensor as required, refer to new module/component installation note at the top of the DTC Index.
U3000-81	Control Module Bus Signal / Message Failures Invalid serial data received	<ul style="list-style-type: none"> ● Loss of power to module ● CAN Bus fault ● Module internal failure 	Carry out CAN network and power feed tests using manufacturer approved diagnostic system. Install a new steering wheel rotation sensor as required, refer to new module/component installation note at the top of the DTC Index.
U3000-87	Control Module Bus Signal / Message Failures Missing message	<ul style="list-style-type: none"> ● Loss of power to module ● CAN Bus fault ● Missing module 	Carry out CAN network and power feed tests using manufacturer approved diagnostic system. Check for missing modules on CAN network
U3000-92	Control Module Component Failures Performance or incorrect operation	<ul style="list-style-type: none"> ● Steering wheel rotation sensor mis-aligned ● Module internal failure 	Check for correct installation of sensor. Install a new steering wheel rotation sensor as required, refer to new module/component installation note at the top of the DTC Index.
U3003-62	Battery Voltage Algorithm Based Failures Signal compare failure	<ul style="list-style-type: none"> ● Mis-match in battery voltage, of 2 volts or more, between CJB and steering wheel rotation sensor module 	Carry out the pinpoint tests associated to this DTC using the manufacturer approved diagnostic system

Published: 28-Apr-2011

General Information - Diagnostic Trouble Code (DTC) IndexDTC: Satellite Digital Audio Radio System Module (SARM)

Description and Operation

NOTE: If a control module or component 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 program is in operation, before the replacement of a component.

NOTE: 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).

NOTE: When performing 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.

Description And Operation

For a detailed description of the satellite radio system, refer to the relevant Description and Operation section in the workshop manual.

For additional information, refer to: [Audio System](#) (415-01 Information and Entertainment System, Description and Operation).

Satellite Radio Module (SRM)

DTC	Description	Possible Cause	Action
B1A89-11	Satellite antenna	SDARS antenna circuit - short to ground	Refer to electrical circuit diagrams and check SDARS antenna circuit for short to ground
B1A89-12	Satellite antenna	SDARS antenna circuit - short to power	Refer to electrical circuit diagrams and check SDARS antenna circuit for short to power
B1A89-13	Satellite antenna	SDARS antenna circuit - open circuit	Refer to electrical circuit diagrams and check SDARS antenna circuit for open circuit
U3000-04	Control module	System internal failure	Install a new satellite radio module. For additional information, refer to: Satellite Radio Tuner (415-01 Information and Entertainment System, Removal and Installation).
U3000-4A	Control module	Incorrect component installed	Install a new satellite radio module. For additional information, refer to: Satellite Radio Tuner (415-01 Information and Entertainment System, Removal and Installation). or Re-configure the satellite radio module using the manufacturer approved diagnostic system
U3000-55	Control module	Incorrect Car Configuration File data received	Check/up-date Car Configuration File using manufacturer approved diagnostic system
U3000-87	Control module	Missing message	Check CJB for DTCs and refer to DTC Index. For additional information, refer to: Communications Network (418-00 Module Communications Network, Diagnosis and Testing). Check information and entertainment module for Car Configuration File and MOST network DTCs and refer to relevant DTC Index. Carry out MOST/CAN network tests using the manufacturer approved diagnostic system
U3000-98	Control module	Component or system over temperature	Check for additional DTCs and refer to relevant DTC Index. Check/monitor system for re-occurrence
U3003-62	Battery voltage	Mis-match in battery voltage, of 2 volts or more, between satellite radio module and CJB	Carry out pinpoint tests associated with this DTC using the manufacturer approved diagnostic system

General Information - Diagnostic Trouble Code (DTC) IndexDTC:

Transmission Control Module (TCM)

Description and Operation

NOTE: If a control module or component 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 program is in operation, before the replacement of a component.

NOTE: 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).

NOTE: When performing 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.

Description And Operation

For a detailed description of the transmission control system, refer to the relevant Description and Operation section in the workshop manual. For additional information, refer to: [Transmission Description](#) (307-01 Automatic Transmission/Transaxle, Description and Operation).

Transmission control module (TCM)

DTC	Description	Possible Cause	Action
P0218-68	Transmission fluid overtemperature condition	<ul style="list-style-type: none"> Transmission fluid level low Transmission fluid cooler/hoses are obstructed/damaged /blocked. Mechanical fault in the transmission 	Check the transmission fluid level and condition. Check the transmission fluid cooler /hoses for signs of obstruction/damage/blockage. Rectify as necessary. Refer to the warranty policy and procedures manual if the transmission is suspect.
P0500-00	Vehicle speed sensor A (output shaft speed sensor)	<ul style="list-style-type: none"> Vehicle speed sensor A circuit: short circuit to ground Vehicle speed sensor A circuit: open circuit Vehicle speed sensor A fault 	Check the vehicle speed sensor A and circuits. Refer to the electrical guides. Rectify as necessary.
P056-100	System voltage unstable	<ul style="list-style-type: none"> Battery fault Charging system fault 	Check the battery and charging systems. Refer to the electrical guides. Rectify as necessary.
P0562-00	System voltage low	<ul style="list-style-type: none"> Battery fault Charging system fault 	
P0601-00	Internal control module memory checksum error	<ul style="list-style-type: none"> Internal transmission control module (TCM) fault 	Reconfigure the module using the approved diagnostic system.
P0603-00	Internal control module keep alive memory (KAM) error	<ul style="list-style-type: none"> Internal transmission control module (TCM) fault 	Refer to the warranty policy and procedures manual if the TCM is suspect.
P0604-00	Internal control module random access memory (RAM) error	<ul style="list-style-type: none"> Internal transmission control module (TCM) fault 	
P0605-00	Internal control module read only memory (ROM) error	<ul style="list-style-type: none"> Internal transmission control module (TCM) fault 	
P0614-00	Engine control module (ECM)/transmission control module (TCM) incompatible	<ul style="list-style-type: none"> Incorrect software in TCM 	Reconfigure the module using the approved diagnostic system.
P062F-00	Internal control module electrically erasable programmable read only memory (EEPROM) error	<ul style="list-style-type: none"> Internal transmission control module (TCM) fault 	Refer to the warranty policy and procedures manual if the TCM is suspect.

DTC	Description	Possible Cause	Action
P0705-00	Transmission range sensor A circuit (PRNDL input)	<ul style="list-style-type: none"> ● Incorrect adjustment of the gear selector lever cable ● Incorrect adjustment of the gear position sensor ● Internal transmission control module (TCM) fault 	Check the adjustment of the gear selector lever cable and sensor. For additional information, refer to: Selector Lever Cable Adjustment (307-05 Automatic Transmission/Transaxle External Controls, General Procedures). Refer to the warranty policy and procedures manual if the TCM is suspect.
P0706-00	Transmission range sensor A circuit range/performance	<ul style="list-style-type: none"> ● Incorrect adjustment of the gear selector lever cable ● Incorrect adjustment of the gear position sensor ● Internal transmission control module (TCM) fault 	Check the adjustment of the gear selector lever cable. For additional information, refer to: Selector Lever Cable Adjustment (307-05 Automatic Transmission/Transaxle External Controls, General Procedures). Calibrate the gear position sensor using the approved diagnostic system. Refer to the warranty policy and procedures manual if the TCM is suspect.
P0709-00	Transmission range sensor A circuit intermittent	<ul style="list-style-type: none"> ● Incorrect adjustment of the gear selector lever cable ● Incorrect adjustment of the gear position sensor ● Internal transmission control module (TCM) fault 	
P0711-00	Transmission fluid temperature sensor A circuit range/performance	<ul style="list-style-type: none"> ● Transmission fluid temperature sensor circuit: high resistance in terminals ● Transmission fluid temperature sensor fault 	Check the transmission fluid temperature sensor and circuits. Refer to the electrical guides. Rectify as necessary.
P0712-00	Transmission fluid temperature sensor A circuit low	<ul style="list-style-type: none"> ● Transmission fluid temperature sensor circuit: short circuit to ground ● Transmission fluid temperature sensor circuit: open circuit 	
P0713-00	Transmission fluid temperature sensor A circuit high	<ul style="list-style-type: none"> ● Transmission fluid temperature sensor circuit: short circuit to power 	
P0715-00	Turbine/Input shaft speed (ISS) sensor A circuit	<ul style="list-style-type: none"> ● Transmission ISS circuit: short circuit to power 	Check the transmission ISS sensor and circuits. Refer to the electrical guides. Install a new ISS sensor as necessary. For additional information, refer to: (307-01 Automatic Transmission/Transaxle)
P0716-00	Turbine/Input shaft speed (ISS) sensor A circuit range/performance	<ul style="list-style-type: none"> ● Transmission ISS sensor circuit: high resistance in terminals ● Transmission ISS sensor fault 	Input Shaft Speed (ISS) Sensor - I6 3.2L Petrol (Removal and Installation), Input Shaft Speed (ISS) Sensor - TD4 2.2L Diesel (Removal and Installation).
P0718-00	Turbine/input shaft speed (ISS) sensor A circuit intermittent	<ul style="list-style-type: none"> ● Transmission ISS sensor circuit: intermittent high resistance in terminals ● Transmission ISS sensor fault 	
P0720-00	Output shaft speed (OSS) sensor circuit (vehicle speed sensor A circuit)	<ul style="list-style-type: none"> ● OSS sensor circuit: short circuit to power 	Check the transmission OSS sensor and circuits. Refer to the electrical guides. Rectify as necessary.
P0721-00	Output shaft speed (OSS) sensor circuit (vehicle speed sensor A circuit) range/performance	<ul style="list-style-type: none"> ● The wheel radius does not agree with the wheel radius programmed in the car configuration file ● OSS sensor not installed correctly ● OSS sensor circuit: high resistance in terminals ● OSS sensor fault 	Check that the correct wheels and tires are installed. Check the transmission OSS sensor for correct installation. Check the OSS sensor and circuits. Refer to the electrical guides. Rectify as necessary.
P0722-00	Output shaft speed (OSS) sensor circuit (vehicle speed sensor A circuit) no signal	<ul style="list-style-type: none"> ● OSS sensor circuit: high resistance in terminals ● OSS sensor circuit: open circuit ● OSS sensor circuit: short circuit to ground 	Check the transmission OSS sensor and circuits. Refer to the electrical guides. Rectify as necessary. Refer to the warranty policy and procedures manual if the TCM is suspect.

DTC	Description	Possible Cause	Action
		<ul style="list-style-type: none"> ● OSS sensor fault ● Internal transmission control module (TCM) fault 	
P0723-00	Output shaft speed (OSS) sensor circuit (vehicle speed sensor A circuit) intermittent	<ul style="list-style-type: none"> ● OSS sensor not installed correctly ● OSS sensor circuit: intermittent high resistance in terminals ● OSS sensor fault ● Internal transmission control module (TCM) fault 	Check the transmission OSS sensor for correct installation. Check the OSS sensor and circuits. Refer to the electrical guides. Rectify as necessary. Refer to the warranty policy and procedures manual if the TCM is suspect.
P0725-00	Engine speed input circuit	<ul style="list-style-type: none"> ● Controller area network (CAN) circuit: open circuit ● CAN circuit: short circuit to ground ● CAN module fault 	Carry out a complete vehicle read for CAN related DTCs. Rectify as necessary.
P0729-00	Gear 6 incorrect ratio	<ul style="list-style-type: none"> ● Contact resistance in the terminals ● Solenoid regulating incorrectly ● Mechanical fault in transmission - transmission components worn and causing slip or system pressure too low 	Carry out a complete read for related engine torque DTCs. Check transmission fluid level and condition. Refer to the warranty policy and procedures manual if the transmission is suspect.
P0730-00	Incorrect gear ratio	<ul style="list-style-type: none"> ● Internal malfunction of the transmission 	Refer to the warranty policy and procedures manual if the transmission is suspect.
P0730-95	Incorrect gear ratio - incorrect assembly	<ul style="list-style-type: none"> ● Incorrect final gear installed 	Check transmission units part numbers. Refer to the warranty policy and procedures manual if the transmission is suspect.
P0731-00	Gear 1 incorrect ratio	<ul style="list-style-type: none"> ● Contact resistance in the terminals ● Solenoid regulating incorrectly ● Mechanical fault in transmission - transmission components worn and causing slip or system pressure too low 	Carry out a complete read for related engine torque DTCs. Check transmission fluid level and condition. Refer to the warranty policy and procedures manual if the transmission is suspect.
P0732-00	Gear 2 incorrect ratio	<ul style="list-style-type: none"> ● Contact resistance in the terminals ● Solenoid regulating incorrectly ● Mechanical fault in transmission - transmission components worn and causing slip or system pressure too low 	
P0733-00	Gear 3 incorrect ratio	<ul style="list-style-type: none"> ● Contact resistance in the terminals ● Solenoid regulating incorrectly ● Mechanical fault in transmission - transmission components worn and causing slip or system pressure too low 	
P0734-00	Gear 4 incorrect ratio	<ul style="list-style-type: none"> ● Contact resistance in the terminals ● Solenoid regulating incorrectly ● Mechanical fault in transmission - transmission components worn and causing slip or system 	

DTC	Description	Possible Cause	Action
		pressure too low	
P0735-00	Gear 5 incorrect ratio	<ul style="list-style-type: none"> ● Contact resistance in the terminals ● Solenoid regulating incorrectly ● Mechanical fault in transmission - transmission components worn and causing slip or system pressure too low 	
P0736-00	Reverse gear incorrect ratio	<ul style="list-style-type: none"> ● Internal malfunction in the transmission control system ● Mechanical fault in transmission. Transmission components worn and causing slip or system pressure too low ● Fluid level low/condition poor 	
P073D-00	Unable to engage neutral	<ul style="list-style-type: none"> ● Contact resistance in the terminals ● Solenoids stuck in the on/off position. ● Mechanical fault in the transmission 	Check transmission fluid level and condition. Refer to the warranty policy and procedures manual if the transmission is suspect.
P073E-64	Unable to engage reverse	<ul style="list-style-type: none"> ● Contact resistance in the terminals ● Solenoids stuck in the on/off position. ● Mechanical fault in the transmission 	
P073F-00	Unable to engage gear 1	<ul style="list-style-type: none"> ● Contact resistance in the terminals ● Solenoids stuck in the on/off position. ● Mechanical fault in the transmission 	
P0741-00	Torque converter clutch solenoid circuit performance/stuck off	<ul style="list-style-type: none"> ● Contact resistance in the terminals ● Torque converter clutch lock up control solenoid (SLU) circuit: short circuit to ground ● Torque converter clutch lock up control solenoid (SLU) circuit: short circuit to power ● Torque converter clutch lock up control solenoid (SLU) circuit: open circuit ● Torque converter clutch lock up solenoid (SLU) stuck in off position ● Internal transmission control module (TCM) fault 	
P0742-00	Torque converter clutch solenoid circuit stuck on	<ul style="list-style-type: none"> ● Contact resistance in the terminals ● Torque converter clutch lock up control solenoid (SLU) circuit: short circuit to ground ● Torque converter clutch lock up control solenoid (SLU) circuit: short circuit to power ● Torque converter clutch lock up control solenoid (SLU) circuit: open circuit 	

DTC	Description	Possible Cause	Action
		<ul style="list-style-type: none"> ● Torque converter clutch lock up solenoid (SLU) stuck in on position ● Internal transmission control module (TCM) fault 	
P0744-68	Torque converter clutch solenoid circuit intermittent	<ul style="list-style-type: none"> ● Engine stalled ● Mechanical fault in engine 	Carry out a complete read for related engine DTCs. Rectify as necessary.
P074A-00	Unable to engage gear 2	<ul style="list-style-type: none"> ● Contact resistance in the terminals ● Solenoids stuck in the on/off position ● Mechanical fault in the transmission 	Check transmission fluid level and condition. Refer to the warranty policy and procedures manual if the transmission is suspect.
P074B-00	Unable to engage gear 3	<ul style="list-style-type: none"> ● Contact resistance in the terminals ● Solenoids stuck in the on/off position ● Mechanical fault in the transmission 	
P074C-00	Unable to engage gear 4	<ul style="list-style-type: none"> ● Contact resistance in the terminals ● Solenoids stuck in the on/off position ● Mechanical fault in the transmission 	
P074D-00	Unable to engage gear 5	<ul style="list-style-type: none"> ● Contact resistance in the terminals ● Solenoids stuck in the on/off position ● Mechanical fault in the transmission 	
P074E-00	Unable to engage gear 6	<ul style="list-style-type: none"> ● Contact resistance in the terminals ● Solenoids stuck in the on/off position ● Mechanical fault in the transmission 	
P0777-00	Pressure control solenoid B stuck on	<ul style="list-style-type: none"> ● Shift solenoid No. 2 stuck in the on position 	Refer to the warranty policy and procedures manual if the transmission is suspect.
P0814-42	Transmission range display circuit - general memory failure	<ul style="list-style-type: none"> ● Internal transmission control module (TCM) fault ● Internal gear selector module (GSM) fault 	Refer to the warranty policy and procedures manual if a module is suspect.
P0814-49	Transmission range display circuit - internal electronic failure	<ul style="list-style-type: none"> ● Internal transmission control module (TCM) fault ● Internal gear selector module (GSM) fault 	
P081711	Starter disable circuit open	<ul style="list-style-type: none"> ● Start lock output control circuit: short circuit to ground ● Start lock output control circuit: open circuit 	Check the starter disable circuits. Refer to the electrical guides. Rectify as necessary.
P0817-12	Starter disable circuit open	<ul style="list-style-type: none"> ● Start lock output control circuit: short circuit to power 	
P081C-49	Park input circuit - internal electronic failure	<ul style="list-style-type: none"> ● Internal transmission control module (TCM) fault ● Internal gear selector module (GSM) fault 	Refer to the warranty policy and procedures manual if a module is suspect.

DTC	Description	Possible Cause	Action
P0826-01	Up and down switch circuit	<ul style="list-style-type: none"> ● Internal transmission control module (TCM) fault ● Internal gear selector module (GSM) fault 	Refer to the warranty policy and procedures manual if a module is suspect.
P085A-00	Gear shift module B communication circuit	<ul style="list-style-type: none"> ● Local interconnect network (LIN) circuit fault between the gear selector module (GSM) and transmission control module (TCM) 	Check the local interconnect network (LIN) circuits. Refer to the electrical guides. Rectify as necessary.
P0860-11	Gear shift module A communication circuit	<ul style="list-style-type: none"> ● Local interconnect network (LIN) circuit fault between the gear selector module (GSM) and transmission control module (TCM) 	Check the local interconnect network (LIN) circuits. Refer to the electrical guides. Rectify as necessary.
P0860-12	Gear shift module A communication circuit	<ul style="list-style-type: none"> ● Local interconnect network (LIN) circuit fault between the gear selector module (GSM) and transmission control module (TCM) 	
P0860-13	Gear shift module A communication circuit	<ul style="list-style-type: none"> ● Local interconnect network (LIN) circuit fault between the gear selector module (GSM) and transmission control module (TCM) 	
P0860-87	Gear shift module A communication circuit - missing message	<ul style="list-style-type: none"> ● Local interconnect network (LIN) circuit fault between the gear selector module (GSM) and transmission control module (TCM) 	
P088513	Transmission control module (TCM) power relay control circuit open	<ul style="list-style-type: none"> ● TCM power relay control circuit: open circuit ● TCM power relay fault 	Check the TCM relay and circuits. Refer to the electrical guides. Rectify as necessary.
P0886-11	Transmission control module (TCM) power relay control circuit low	<ul style="list-style-type: none"> ● TCM power relay control circuit: short circuit to ground ● TCM power relay fault 	
P0894-68	Transmission component slipping	<ul style="list-style-type: none"> ● Transmission fluid level low ● Mechanical fault in the transmission 	Carry out a complete read for related DTCs. Rectify as necessary. Check the transmission fluid level and condition. Rectify as necessary. Refer to the warranty policy and procedures manual if the transmission is suspect.
P0895-00	Shift time too short	<ul style="list-style-type: none"> ● Internal transmission control fault (TCM) ● Hydraulic fault in the transmission 	Refer to the warranty policy and procedures manual if the transmission or a module is suspect.
P0896-00	Shift time too long	<ul style="list-style-type: none"> ● Internal transmission control fault (TCM) ● Hydraulic fault in the transmission 	
P0897-09	Transmission fluid deteriorated	<ul style="list-style-type: none"> ● Transmission fluid no longer serviceable 	Drain and refill the transmission with fresh fluid. For additional information, refer to: (307-01 Automatic Transmission/Transaxle) Transmission Fluid Drain and Refill - I6 3.2L Petrol (General Procedures), Transmission Fluid Drain and Refill - TD4 2.2L Diesel (General Procedures).
P0928-13	Gear shift lock solenoid circuit open	<ul style="list-style-type: none"> ● Gear shift lock solenoid circuit: open circuit ● Gear shift lock solenoid fault 	Check the gear shift lock solenoid and circuits. Refer to the electrical guides. Rectify as necessary.

DTC	Description	Possible Cause	Action
P0930-11	Gear shift lock solenoid circuit low	<ul style="list-style-type: none"> ● Gear shift lock solenoid circuit: short circuit to ground ● Gear shift lock solenoid fault 	
P0931-12	Gear shift lock solenoid circuit high	<ul style="list-style-type: none"> ● Gear shift lock solenoid circuit: short circuit to power ● Gear shift lock solenoid fault 	
P0960-00	Pressure control solenoid A control circuit open	<ul style="list-style-type: none"> ● Line pressure control solenoid (SLT) circuit: short circuit to ground ● Line pressure control solenoid (SLT) circuit: open circuit ● Line pressure control solenoid (SLT) fault 	Refer to the warranty policy and procedures manual if the transmission is suspect.
P0961-00	Pressure control solenoid A control circuit range/performance	<ul style="list-style-type: none"> ● Line pressure control solenoid (SLT) circuit: short circuit to ground ● Line pressure control solenoid (SLT) circuit: open circuit ● Line pressure control solenoid (SLT) circuit: short circuit to power ● Line pressure control solenoid (SLT) fault 	
P0963-00	Pressure control solenoid A control circuit high	<ul style="list-style-type: none"> ● Line pressure control solenoid (SLT) circuit: short circuit to power ● Line pressure control solenoid (SLT) fault 	
P0964-00	Pressure control solenoid B control circuit open	<ul style="list-style-type: none"> ● Torque converter clutch lock up control solenoid (SLU)circuit: short circuit to ground ● Torque converter clutch lock up control solenoid (SLU) circuit: open circuit ● Torque converter clutch lock up control solenoid (SLU) fault 	
P0965-00	Pressure control solenoid B control circuit range/performance	<ul style="list-style-type: none"> ● Torque converter clutch lock up control solenoid (SLU)circuit: short circuit to ground ● Torque converter clutch lock up control solenoid (SLU) circuit: open circuit ● Torque converter clutch lock up control solenoid (SLU) circuit: short circuit to power ● Torque converter clutch lock up control solenoid (SLU) fault 	Refer to the warranty policy and procedures manual if the transmission is suspect.
P0967-00	Pressure control solenoid B control circuit high	<ul style="list-style-type: none"> ● Torque converter clutch lock up control solenoid (SLU) circuit: short circuit to power ● Torque converter clutch lock up control solenoid (SLU) fault 	
P0969-00	Pressure control solenoid C control circuit range/performance	<ul style="list-style-type: none"> ● C2 Pressure control solenoid (SLC2) circuit: short circuit to ground ● C2 Pressure control solenoid (SLC2) circuit: open circuit 	Refer to the warranty policy and procedures manual if the transmission is suspect.

DTC	Description	Possible Cause	Action
		<ul style="list-style-type: none"> ● C2 Pressure control solenoid (SLC2) circuit: short circuit to power ● C2 Pressure control solenoid (SLC2) fault 	
P0970-00	Pressure control solenoid C control circuit low	<ul style="list-style-type: none"> ● C2 Pressure control solenoid (SLC2) circuit: short circuit to ground ● C2 Pressure control solenoid (SLC2) circuit: open circuit ● C2 Pressure control solenoid (SLC2) fault 	
P0971-00	Pressure control solenoid C control circuit high	<ul style="list-style-type: none"> ● C2 Pressure control solenoid (SLC2) circuit: short circuit to power ● C2 Pressure control solenoid (SLC2) fault 	
P0973-00	Shift solenoid A control circuit low	<ul style="list-style-type: none"> ● Shift solenoid No. 1 circuit: short circuit to ground ● Shift solenoid No. 1 circuit: open circuit ● Shift solenoid No. 1 fault 	Refer to the warranty policy and procedures manual if the transmission is suspect.
P0974-00	Shift solenoid A control circuit high	<ul style="list-style-type: none"> ● Shift solenoid No. 1 circuit: short circuit to power ● Shift solenoid No. 1 fault 	
P0976-00	Shift solenoid B control circuit low	<ul style="list-style-type: none"> ● Shift solenoid No. 2 circuit: short circuit to ground ● Shift solenoid No. 2 circuit: open circuit ● Shift solenoid No. 2 fault 	Refer to the warranty policy and procedures manual if the transmission is suspect.
P0977-00	Shift solenoid B control circuit high	<ul style="list-style-type: none"> ● Shift solenoid No. 2 circuit: short circuit to power ● Shift solenoid No. 2 fault 	
P1783-68	Transmission overtemperature condition	<ul style="list-style-type: none"> ● Transmission fluid level low ● Transmission fluid cooler/hoses are obstructed/damaged /blocked. ● Mechanical fault in the transmission ● The transmission has been exposed to high load and high ambient temperature. 	Check the transmission fluid level and condition. Check the transmission fluid cooler /hoses for signs of obstruction/damage/blockage. Rectify as necessary. Refer to the warranty policy and procedures manual if the transmission is suspect.
P1799-00	Controller area network (CAN) transmission control module (TCM)/anti-lock brake system (ABS) circuit malfunction	<ul style="list-style-type: none"> ● CAN circuit fault (between ABS module (brake control module(BCM)) and TCM ● ABS (BCM) module fault 	Check the CAN circuits. Refer to the electrical guides. Rectify as necessary. Refer to the warranty policy and procedures manual if the ABS module (BCM) is suspect.
P2158-00	Vehicle Speed Sensor B (input shaft speed sensor (ISS))	<ul style="list-style-type: none"> ● ISS sensor circuit: short circuit to ground ● ISS sensor circuit: short circuit to power ● ISS sensor circuit: open circuit ● ISS sensor fault 	Check the ISS sensor and circuits. Refer to the electrical guides. Install a new ISS sensor as necessary. For additional information, refer to: Input Shaft Speed (ISS) Sensor - I6 3.2L Petrol (307-01 Automatic Transmission/Transaxle, Removal and Installation) / Input Shaft Speed (ISS) Sensor - TD4 2.2L Diesel (307-01 Automatic Transmission/Transaxle, Removal and Installation).
P2719-00	Pressure control solenoid D control circuit range/performance	<ul style="list-style-type: none"> ● Pressure control solenoid (SLC3) circuit: short circuit to ground ● Pressure control solenoid (SLC3) circuit: open circuit ● Pressure control solenoid 	Refer to the warranty policy and procedures manual if the transmission is suspect.

DTC	Description	Possible Cause	Action
		(SLC3) circuit: short circuit to power ● Pressure control solenoid (SLC3) fault	
P2720-00	Pressure control solenoid D control circuit low	● Pressure control solenoid (SLC3) circuit: short circuit to ground ● Pressure control solenoid (SLC3) circuit: open circuit ● Pressure control solenoid (SLC3) fault	
P2721-00	Pressure control solenoid D control circuit high	● Pressure control solenoid (SLC3) circuit: short circuit to power ● Pressure control solenoid (SLC3) fault	
P2728-00	Pressure control solenoid E control circuit range/performance	● Pressure control solenoid (SLB1) circuit: short circuit to ground ● Pressure control solenoid (SLB1) circuit: open circuit ● Pressure control solenoid (SLB1) circuit: short circuit to power ● Pressure control solenoid (SLB1) fault	Refer to the warranty policy and procedures manual if the transmission is suspect.
P2729-00	Pressure control solenoid E control circuit low	● Pressure control solenoid (SLB1) circuit: short circuit to ground ● Pressure control solenoid (SLB1) circuit: open circuit ● Pressure control solenoid (SLB1) fault	
P2730-00	Pressure control solenoid E control circuit high	● Pressure control solenoid (SLB1) circuit: short circuit to power ● Pressure control solenoid (SLB1) fault	
P2733-00	Pressure control solenoid F stuck on	● SLC1 solenoid has jammed ● Mechanical faults in transmission	Refer to the warranty policy and procedures manual if the transmission is suspect.
P2737-00	Pressure control solenoid F control circuit range/performance	● Pressure control solenoid (SLC1) circuit: short circuit to ground ● Pressure control solenoid (SLC1) circuit: open circuit ● Pressure control solenoid (SLC1) circuit: short circuit to power ● Pressure control solenoid (SLC1) fault	
P2738-00	Pressure control solenoid F control circuit low	● Pressure control solenoid (SLC1) circuit: short circuit to ground ● Pressure control solenoid (SLC1) circuit: open circuit ● Pressure control solenoid (SLC1) fault	
P2739-00	Pressure control solenoid F control circuit high	● Pressure control solenoid (SLC1) circuit: short circuit to power ● Pressure control solenoid (SLC1) fault	

DTC	Description	Possible Cause	Action
P2783-68	Torque converter temperature too high	<ul style="list-style-type: none"> ● Transmission fluid level low ● Transmission fluid cooler/hoses are obstructed/damaged /blocked. ● Mechanical fault in the transmission ● The transmission has been exposed to extreme load and high ambient temperature 	Check the transmission fluid level and condition. Check the transmission fluid cooler /hoses for signs of obstruction/damage/blockage. Rectify as necessary. Refer to the warranty policy and procedures manual if the transmission is suspect.
P2787-68	Clutch temperature too high	<ul style="list-style-type: none"> ● Transmission fluid level low ● Transmission fluid cooler/hoses are obstructed/damaged /blocked. ● Mechanical fault in the transmission ● The transmission has been exposed to extreme load and high ambient temperature 	Check the transmission fluid level and condition. Check the transmission fluid cooler /hoses for signs of obstruction/damage/blockage. Rectify as necessary. Refer to the warranty policy and procedures manual if the transmission is suspect.
P2800-00	Transmission range sensor B circuit (PRNDL input)	<ul style="list-style-type: none"> ● Incorrect adjustment of the gear selector lever cable ● Internal transmission control module (TCM) fault 	Check that the gear selector lever cable is correctly adjusted. For additional information, refer to: Selector Lever Cable Adjustment (307-05 Automatic Transmission/Transaxle External Controls, General Procedures). Refer to the warranty policy and procedures manual if the TCM is suspect
P2801-00	Transmission range sensor B circuit range/performance	<ul style="list-style-type: none"> ● Incorrect adjustment of the gear selector lever cable ● Internal transmission control module (TCM) fault 	
P2805-00	Transmission range sensor A/B correlation	<ul style="list-style-type: none"> ● Incorrect adjustment of the gear selector lever cable ● Internal transmission control module (TCM) fault 	
U0001-00	High speed controller area network (CAN) communication bus	<ul style="list-style-type: none"> ● CAN circuit: open circuit ● CAN circuit: short circuit to each other ● CAN circuit: short circuit to power ● CAN control module failure 	Carry out a complete vehicle read for DTCs indicating a CAN or module fault. Rectify as necessary. Refer to the warranty policy and procedures manual if a module is suspect.
U0100-00	Lost communication with ECM "A"	<ul style="list-style-type: none"> ● CAN circuit: open circuit ● CAN circuit: short circuit to each other ● CAN circuit: short circuit to power ● CAN control module failure 	Carry out a complete vehicle read for DTCs indicating a CAN or module fault. Rectify as necessary. Refer to the warranty policy and procedures manual if a module is suspect.
U0121-00	Controller area network (CAN) transmission control module (TCM)/anti-lock brake system (ABS) circuit malfunction no communication	<ul style="list-style-type: none"> ● CAN circuit: open circuit ● CAN circuit: short circuit to each other ● CAN circuit: short circuit to power ● CAN control module failure 	Carry out a complete vehicle read for DTCs indicating a CAN or module fault. Rectify as necessary. Refer to the warranty policy and procedures manual if a module is suspect.
U0300-00	Internal control module software incompatibility	<ul style="list-style-type: none"> ● Incorrect controller area network (CAN) configuration ID ● incorrect hardware/software level 	Check that the modules are correct for the vehicle and that the correct level of software is installed. Reconfigure the CAN system using the approved diagnostic system.
U0401-00	Invalid data received from engine control module (ECM)	<ul style="list-style-type: none"> ● Incorrect signal from the ECM 	Carry out a complete vehicle read for DTCs indicating a controller area network (CAN) or ECM fault. Rectify as necessary. Refer to the warranty policy and procedures manual if the ECM is suspect.
U0415-00	Invalid data received from the anti-lock brake system (ABS) control module	<ul style="list-style-type: none"> ● The engine control module (ECM) has the wrong code for the immobilizer ● The ABS module (brake 	Reprogramme the modules as necessary. Refer to the warranty policy and procedures manual if a module is suspect.

DTC	Description	Possible Cause	Action
		control module (BCM)) has the wrong code for the immobilizer <ul style="list-style-type: none"> ● Transmission control module (TCM) fault 	
U2100-00	Initial configuration not complete	<ul style="list-style-type: none"> ● Controller area network (CAN) circuit fault ● Initial central configuration has never been sent 	Check for other controller area network (CAN) DTCs or apparently unrelated customer complaints. Carry out a complete vehicle DTC read. Check the CAN circuits. Refer to the electrical guides. Rectify as necessary. Clear the DTCs and test for normal operation. Check correct central car configuration software is installed. Reprogramme the module as necessary.
U2101-00	Control module configuration incompatible	<ul style="list-style-type: none"> ● Central car configuration parameter missing or corrupted 	Check correct central car configuration software is installed. Reprogramme the module as necessary.
U2023-00	Engine torque signal	<ul style="list-style-type: none"> ● Controller area network (CAN) circuit (between engine control module (ECM) and transmission control module (TCM)): open circuit ● CAN circuit (between ECM and TCM): short circuit ● CAN module fault 	Carry out a complete read for related DTCs. Rectify as necessary. Check the CAN circuits. Refer to the electrical guides. Rectify as necessary.
U2105-11	Switch pack signal "A"	<ul style="list-style-type: none"> ● Shift lock solenoid circuit fault: short circuit to ground ● Gear selector module (GSM) fault 	Check the GSM and circuits. Refer to the electrical guides. Rectify as necessary. Refer to the warranty policy and procedures manual if the GSM is suspect.
U2105-12	Switch pack signal "A"	<ul style="list-style-type: none"> ● Shift lock solenoid circuit fault: short circuit to power ● Gear selector module (GSM) fault 	
U3003-62	Battery voltage	<ul style="list-style-type: none"> ● Mis-match in voltage between battery and the transmission control module (TCM) ● difference greater than 2 volts 	Check the power supply circuit to the TCM. Refer to the electrical guides. Rectify as necessary.

General Information - Diagnostic Trouble Code (DTC) IndexDTC: Trailer Module (TRM)

Description and Operation

NOTE: If a control module or component 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 program is in operation, before the replacement of a component.

NOTE: 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).

NOTE: When performing 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.

Description And Operation

For a detailed description of the trailer module system, refer to the relevant Description and Operation section in the workshop manual. For additional information, refer to: [Exterior Lighting](#) (417-01 Exterior Lighting, Description and Operation).

Trailer module (TRM)

DTC	Description	Possible Cause	Action
C111A-11	Right Stop Lamp General Electrical Failures Circuit short to ground	<ul style="list-style-type: none"> Right stop lamp circuit - short to ground 	Refer to electrical circuit diagrams and check right stop lamp circuit for short to ground
C111A-12	Right Stop Lamp General Electrical Failures Circuit short to battery	<ul style="list-style-type: none"> Right stop lamp circuit - short to power 	Refer to electrical circuit diagrams and check right stop lamp circuit for short to power
C111B-11	Left Stop Lamp General Electrical Failures Circuit short to ground	<ul style="list-style-type: none"> Left stop lamp circuit - short to ground 	Refer to electrical circuit diagrams and check left stop lamp circuit for short to ground
C111B-12	Left Stop Lamp General Electrical Failures Circuit short to battery	<ul style="list-style-type: none"> Left stop lamp circuit - short to power 	Refer to electrical circuit diagrams and check left stop lamp circuit for short to power
C1120-11	Reversing lamp General Electrical Failures Circuit short to ground	<ul style="list-style-type: none"> Reverse lamp circuit - short to ground 	Refer to electrical circuit diagrams and check reverse lamp circuit for short to ground
C1120-12	Reversing lamp General Electrical Failures Circuit short to battery	<ul style="list-style-type: none"> Reverse lamp circuit - short to power 	Refer to electrical circuit diagrams and check reverse lamp circuit for short to power
C1126-11	Position Lamps General Electrical Failures Circuit short to ground	<ul style="list-style-type: none"> Position lamp circuit - short to ground 	Refer to electrical circuit diagrams and check position lamp circuit for short to ground
C1126-12	Position Lamps General Electrical Failures Circuit short to battery	<ul style="list-style-type: none"> Position lamp circuit - short to power 	Refer to electrical circuit diagrams and check position lamp circuit for short to power
B1102-62	Trailer stop lamp Algorithm Based Failures Signal compare failure	<ul style="list-style-type: none"> Input signal stop lamp from wire is inconsistent with CAN message 	Check CJB for additional related DTCs and refer to relevant DTC Index. Carry out CAN network integrity tests using the manufacturer approved diagnostic system
B1A79-11	Rear Fog Lamp Circuit General Electrical Failures Circuit short to ground	<ul style="list-style-type: none"> Rear fog lamp circuit - short to ground 	Refer to electrical circuit diagrams and check rear fog lamp circuit for short to ground
B1A79-12	Rear Fog Lamp Circuit General Electrical Failures Circuit short to battery	<ul style="list-style-type: none"> Rear fog lamp circuit - short to power 	Refer to electrical circuit diagrams and check rear fog lamp circuit for short to power
B1D06-11	Left Turn Indicator General Electrical Failures Circuit short to ground	<ul style="list-style-type: none"> Left turn indicator lamp circuit - short to ground 	Refer to electrical circuit diagrams and check left turn indicator lamp circuit for short to ground

DTC	Description	Possible Cause	Action
B1D06-12	Left Turn Indicator General Electrical Failures Circuit short to battery	<ul style="list-style-type: none"> Left turn indicator lamp circuit - short to power 	Refer to electrical circuit diagrams and check left turn indicator lamp circuit for short to power
B1D07-11	Right Turn Indicator General Electrical Failures Circuit short to ground	<ul style="list-style-type: none"> Right turn indicator lamp circuit - short to ground 	Refer to electrical circuit diagrams and check right turn indicator lamp circuit for short to ground
B1D07-12	Right Turn Indicator General Electrical Failures Circuit short to battery	<ul style="list-style-type: none"> Right turn indicator lamp circuit - short to power 	Refer to electrical circuit diagrams and check right turn indicator lamp circuit for short to power
U0010-88	Medium Speed CAN Communication Bus Signal / Message Failures Bus off	<ul style="list-style-type: none"> Bus Off 	Carry out CAN network integrity tests using the manufacturer approved diagnostic system
U0140-87	Lost Communication With Central electronic module Bus Signal / Message Failures Missing message	<ul style="list-style-type: none"> Missing message 	Check CJB for DTCs and refer to the relevant DTC Index.
U0300-00	Internal Control Module Software Incompatibility General Failure Information No sub type information	<ul style="list-style-type: none"> 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 trailer module, refer to the new module installation note at the top of the DTC Index
U0422-68	Invalid Data Received From Central electronic module Algorithm Based Failures	<ul style="list-style-type: none"> Event information 	Check for additional related DTCs and refer to the relevant DTC Index
U1A03-81	Car Config Parameter Bus Signal / Message Failures	<ul style="list-style-type: none"> Invalid serial data received 	Check/amend Car Configuration File (CCF) as required using the manufacturer approved diagnostic system. Carry out CAN network integrity tests using the manufacturer approved diagnostic system
U2100-51	Control Module Not Configured System Programming Failures	<ul style="list-style-type: none"> Not programmed 	Install latest available level of software using the manufacturer approved diagnostic system. Check/amend Car Configuration File (CCF) as required using the manufacturer approved diagnostic system
U3000-42	Control Module System Internal Failures General memory failure	<ul style="list-style-type: none"> RAM or EEPROM memory test failed 	Install a new module, refer to the new module/component installation note at the top of the DTC Index
U3000-51	Control Module System Programming Failures	<ul style="list-style-type: none"> Not programmed 	Install latest available level of software using the manufacturer approved diagnostic system. Check/amend Car Configuration File (CCF) as required using the manufacturer approved diagnostic system
U3003-62	Battery Voltage Algorithm Based Failures Signal compare failure	<ul style="list-style-type: none"> Difference in battery voltage, of 2 volts more, between trailer module and CJB 	Carry out pinpoint tests associated with this DTC using the manufacturer approved diagnostic system

General Information - Diagnostic Trouble Code (DTC) Index DTC: High

Definition Radio Module (HDR)

Description and Operation

NOTE: If a control module or component 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 program is in operation, before the replacement of a component.

NOTE: 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).

NOTE: When performing 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.

Description And Operation

For a detailed description of the cellular phone system, refer to the relevant Description and Operation section in the workshop manual. For additional information, refer to: [Audio System](#) (415-01 Information and Entertainment System, Description and Operation).

Digital Audio Control Module C (DACMC)

DTC	Description	Possible Cause	Action
B1A56-02	Antenna - general signal failure	<ul style="list-style-type: none"> Antenna general signal failure 	Refer to the electrical guides and check the IBOC radio module circuit and the antenna for short to power, open circuit, high resistance. Clear the diagnostic trouble code and retest. If the diagnostic trouble code persists, check and install a new IBOC radio module, as required. 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
B1A56-11	Antenna - circuit short to ground	<ul style="list-style-type: none"> IBOC radio module or antenna circuit short to ground 	Refer to the electrical guides and check the IBOC radio module circuit and the antenna for short circuit to ground
B1A56-12	Antenna - circuit short to battery	<ul style="list-style-type: none"> IBOC radio module or antenna circuit short to power 	Refer to the electrical guides and check the IBOC radio module circuit and the antenna for short circuit to power
B1A56-13	Antenna - circuit open	<ul style="list-style-type: none"> IBOC radio module or antenna circuit open circuit 	Refer to the electrical guides and check the IBOC radio module circuit and the antenna for open circuit
U200D-14	Control Module Output Power A - circuit short to ground or open	<ul style="list-style-type: none"> IBOC radio module power supply circuit short to ground or open circuit 	Refer to the electrical guides and check the IBOC radio module diversity power circuit for short to ground, open circuit
U3000-04	Control Module - system internal failures	<ul style="list-style-type: none"> IBOC radio module internal failure 	Renew the IBOC radio module
U3000-4A	Control Module - incorrect component installed	<ul style="list-style-type: none"> IBOC radio module internal incorrect component installed - The module has been installed to a vehicle not configured to accept it 	Using the manufacturer approved diagnostic system select the vehicle configuration main menu, select configure existing modules menu and program the module
U3000-55	Control Module - not configured	<ul style="list-style-type: none"> IBOC radio module not configured correctly 	Using the manufacturer approved diagnostic system select the vehicle configuration main menu, select configure existing modules menu and program the module
U3000-87	Control Module - missing message	<ul style="list-style-type: none"> Missing message 	Using the manufacturer approved diagnostic system select the vehicle configuration main menu, select configure existing modules menu and program the module

DTC	Description	Possible Cause	Action
U3000-98	Control Module - component or system over temperature	<ul style="list-style-type: none">● IBOC radio module component or system over temperature	Consider moving the IBOC radio module to prevent unit overheating. Cool the vehicle interior down by ensuring it is in the shade and have the A/C on cool. When cool, clear the diagnostic trouble code and retest
U3003-62	Battery Voltage - signal compare failure	<ul style="list-style-type: none">● Mismatch in battery voltage of 2 volts or more for longer than 1 minute, between the measured battery voltage at the IBOC radio module and the battery voltage signal sent from the rear junction box	Refer to the electrical guides and check that power supply voltage at IBOC radio module and rear junction box is not different by more than 2 volts. Rectify as required

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