

General Information - Diagnostic Trouble Code (DTC) Index DTC: Transmission Control Switch (TCS)

Description and Operation

Transmission Control Switch (TCS)

CAUTIONS:



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



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

NOTES:



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



Generic scan tools may not read the codes listed, or may read only 5-digit codes. Match the 5 digits from the scan tool to the first 5 digits of the 7-digit code listed to identify the fault (the last 2 digits give extra information read by the manufacturer-approved diagnostic system).



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



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



Inspect connectors for signs of water ingress, and pins for damage and/or corrosion.



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.



Check DDW for open campaigns. Refer to the corresponding bulletins and SSMs which may be valid for the specific customer complaint and carry out the recommendations as required.

The table below lists all Diagnostic Trouble Codes (DTCs) that could be logged in the Transmission Control Switch (TCS). For additional diagnosis and testing information, refer to the relevant Diagnosis and Testing section in the workshop manual.

For additional information, refer to: [External Controls](#) (307-05A Automatic Transmission/Transaxle External Controls - TDV6 3.0L Diesel /V8 5.0L Petrol/V8 S/C 5.0L Petrol, Vehicles With: 6HP28 6-Speed Automatic Transmission, Diagnosis and Testing).

DTC	Description	Possible Causes	Action
B1087-08	LIN Bus "A" - Bus signal/message failures	<p>NOTE: Circuit reference LIN</p> <ul style="list-style-type: none"> Transmission control module power or ground circuit open circuit, high resistance LIN bus circuit short circuit to ground, short circuit to power, open circuit, high resistance Transmission system fault 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check the transmission control module power and ground circuits for open circuit, high resistance Refer to the electrical circuit diagrams and check the LIN bus circuit for short circuit to ground, short circuit to power, open circuit, high resistance Using the manufacturer approved diagnostic system, check the transmission control module for related DTCs and refer to the relevant DTC index
B1087-81	LIN Bus "A" - Invalid serial data received	<ul style="list-style-type: none"> Transmission system fault 	<ul style="list-style-type: none"> Using the manufacturer approved diagnostic system, check the transmission control module for related DTCs and refer to the relevant DTC index

B1087-82	LIN Bus "A" - Alive/sequence counter incorrect / not updated	<ul style="list-style-type: none"> Transmission system fault 	<ul style="list-style-type: none"> Using the manufacturer approved diagnostic system, check the transmission control module for related DTCs and refer to the relevant DTC index
B1087-83	LIN Bus "A" - Value of signal protection calculation incorrect	<ul style="list-style-type: none"> Transmission system fault 	<ul style="list-style-type: none"> Using the manufacturer approved diagnostic system, check the transmission control module for related DTCs and refer to the relevant DTC index
B1087-87	LIN Bus "A" - Missing message	 <p>NOTE: Circuit reference LIN</p> <ul style="list-style-type: none"> Transmission control module power or ground circuit open circuit, high resistance LIN bus circuit short circuit to ground, short circuit to power, open circuit, high resistance Transmission system fault 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check the transmission control module power and ground circuits for open circuit, high resistance Refer to the electrical circuit diagrams and check the LIN bus circuit for short circuit to ground, short circuit to power, open circuit, high resistance Using the manufacturer approved diagnostic system, check the transmission control module for related DTCs and refer to the relevant DTC index
B1142-62	Ignition Status 1 - Signal compare failure	 <p>NOTE: Circuit reference IGN</p> <ul style="list-style-type: none"> Ignition sense circuit short circuit to ground, short circuit to power, open circuit, high resistance - Power mode differs to that broadcast on high speed CAN 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check the ignition sense circuit for short circuit to ground, short circuit to power, open circuit, high resistance
B123C-01	Dynamic Stability Control Status Indicator - General electrical failure	<ul style="list-style-type: none"> Transmission control switch internal failure 	<ul style="list-style-type: none"> Using the manufacturer approved diagnostic system, clear the DTCs and retest. If the fault persists, install a new transmission control switch
B123D-64	Dynamic Stability Control Button - Signal plausibility failure	<ul style="list-style-type: none"> Transmission control switch internal failure 	<ul style="list-style-type: none"> Using the manufacturer approved diagnostic system, clear the DTCs and retest. If the fault persists, install a new transmission control switch
B123F-01	Adaptive Speed Limiter Mode Indicator - General electrical failure	<ul style="list-style-type: none"> Transmission control switch internal failure 	<ul style="list-style-type: none"> Using the manufacturer approved diagnostic system, clear the DTCs and retest. If the fault persists, install a new transmission control switch
B1241-64	Adaptive Speed Limiter Button - Signal plausibility failure	<ul style="list-style-type: none"> Transmission control switch internal failure 	<ul style="list-style-type: none"> Using the manufacturer approved diagnostic system, clear the DTCs and retest. If the fault persists, install a new transmission control switch
B1242-64	Winter Button - Signal plausibility failure	<ul style="list-style-type: none"> Transmission control switch internal failure 	<ul style="list-style-type: none"> Using the manufacturer approved diagnostic system, clear the DTCs and retest. If the fault persists, install a new transmission control switch
B1243-01	Winter Button Mode Indicator - General electrical failure	<ul style="list-style-type: none"> Transmission control switch internal failure 	<ul style="list-style-type: none"> Using the manufacturer approved diagnostic system, clear the DTCs and retest. If the fault persists, install a new transmission control switch
B1244-64	Dynamic / Sport Button - Signal plausibility failure	<ul style="list-style-type: none"> Transmission control switch internal failure 	<ul style="list-style-type: none"> Using the manufacturer approved diagnostic system, clear the DTCs and retest. If the fault persists, install a new transmission control switch
B1245-01	Dynamic / Sport Button Mode Indicator - General electrical failure	<ul style="list-style-type: none"> Transmission control switch internal failure 	<ul style="list-style-type: none"> Using the manufacturer approved diagnostic system, clear the DTCs and retest. If the fault persists, install a new transmission control switch
C113A-62	Wakeup Control - Signal compare	<ul style="list-style-type: none"> Transmission control switch internal failure 	<ul style="list-style-type: none"> Using the manufacturer approved diagnostic system, clear the DTCs and retest. If the fault

	failure		persists, install a new transmission control switch
P0603-44	Internal Control Module Keep Alive Memory (KAM) Error - Data memory failure	<ul style="list-style-type: none"> Transmission control switch internal failure 	<ul style="list-style-type: none"> Using the manufacturer approved diagnostic system, clear the DTCs and retest. If the fault persists, install a new transmission control switch
P0604-44	Internal Control Module Random Access Memory (RAM) Error - Data memory failure	<ul style="list-style-type: none"> Transmission control switch internal failure 	<ul style="list-style-type: none"> Using the manufacturer approved diagnostic system, clear the DTCs and retest. If the fault persists, install a new transmission control switch
P0605-45	Internal Control Module Read Only Memory (ROM) Error - Program memory failure	<ul style="list-style-type: none"> Transmission control switch internal failure 	<ul style="list-style-type: none"> Using the manufacturer approved diagnostic system, clear the DTCs and retest. If the fault persists, install a new transmission control switch
P0606-2F	ECM / PCM Processor - Signal erratic	<ul style="list-style-type: none"> Transmission control switch internal failure 	<ul style="list-style-type: none"> Using the manufacturer approved diagnostic system, clear the DTCs and retest. If the fault persists, install a new transmission control switch
P0606-47	ECM / PCM Processor - Watchdog/safety microcontroller failure	<ul style="list-style-type: none"> Transmission control switch internal failure 	<ul style="list-style-type: none"> Using the manufacturer approved diagnostic system, clear the DTCs and retest. If the fault persists, install a new transmission control switch
P0705-09	Transmission Range Sensor A Circuit (PRNDL Input) - Component failures	<ul style="list-style-type: none"> Transmission control switch internal failure 	<ul style="list-style-type: none"> Using the manufacturer approved diagnostic system, clear the DTCs and retest. If the fault persists, install a new transmission control switch
P0705-46	Transmission Range Sensor A Circuit (PRNDL Input) - Calibration/parameter memory failure	<ul style="list-style-type: none"> Transmission control switch internal failure 	<ul style="list-style-type: none"> Using the manufacturer approved diagnostic system, clear the DTCs and retest. If the fault persists, install a new transmission control switch
P0705-86	Transmission Range Sensor A Circuit (PRNDL Input) - Signal invalid	<ul style="list-style-type: none"> Transmission control switch internal failure 	<ul style="list-style-type: none"> Using the manufacturer approved diagnostic system, clear the DTCs and retest. If the fault persists, install a new transmission control switch
P0814-01	Transmission Range Display Circuit - General electrical failure	<ul style="list-style-type: none"> Transmission control switch internal failure 	<ul style="list-style-type: none"> Using the manufacturer approved diagnostic system, clear the DTCs and retest. If the fault persists, install a new transmission control switch
P081C-64	Park Input Circuit - Signal plausibility failure	<ul style="list-style-type: none"> Hardwired park and transmission control switch position display signals are not consistent 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check the park signal circuit for short circuit to ground, short circuit to power, open circuit, high resistance. Using the manufacturer approved diagnostic system, check the transmission control module for related DTCs and refer to the relevant DTC index
P084F-11	Park / Neutral Switch Output Circuit - Circuit short to ground	<ul style="list-style-type: none"> Park/neutral signal circuit short circuit to ground 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check the park/neutral signal circuit for short circuit to ground
P084F-15	Park / Neutral Switch Output Circuit - Circuit short to battery or open	<ul style="list-style-type: none"> Park/neutral signal circuit short circuit to power, open circuit, high resistance 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check the park/neutral signal circuit for short circuit to battery, open circuit, high resistance
P176A-01	Transmission Range Selector Up and Down Position Circuit - General electrical failure	<ul style="list-style-type: none"> Transmission control switch internal failure 	<ul style="list-style-type: none"> Using the manufacturer approved diagnostic system, clear the DTCs and retest. If the fault persists, install a new transmission control switch
P176A-13	Transmission Range Selector Up and Down Position Circuit - Circuit open	<ul style="list-style-type: none"> Transmission control switch internal failure 	<ul style="list-style-type: none"> Using the manufacturer approved diagnostic system, clear the DTCs and retest. If the fault persists, install a new transmission control switch
P176A-19	Transmission Range Selector Up and Down Position Circuit - Circuit current above threshold	<ul style="list-style-type: none"> Transmission control switch internal failure 	<ul style="list-style-type: none"> Using the manufacturer approved diagnostic system, clear the DTCs and retest. If the fault persists, install a new transmission control switch

P176A-94	Transmission Range Selector Up and Down Position Circuit - Unexpected operation	<ul style="list-style-type: none"> Transmission control switch internal failure 	<ul style="list-style-type: none"> Using the manufacturer approved diagnostic system, clear the DTCs and retest. If the fault persists, install a new transmission control switch
P176B-71	Transmission Range Selector Up and Down Position Control Error - Actuator stuck	<ul style="list-style-type: none"> Transmission control switch internal failure - Raise/lower failure 	 <p>NOTE: This DTC may be set by resisting the raising/lowering of the transmission control switch</p> <ul style="list-style-type: none"> Using the manufacturer approved diagnostic system, clear the DTCs and retest. If the fault persists, install a new transmission control switch
P176C-07	Transmission Range Selector Lock Control Error - Mechanical failures	<ul style="list-style-type: none"> Transmission control switch internal failure - Rotation detected while locked 	 <p>NOTE: This DTC may be set by releasing the brake pedal whilst rotating the transmission control switch</p> <ul style="list-style-type: none"> Using the manufacturer approved diagnostic system, clear the DTCs and retest. If the fault persists, install a new transmission control switch
P176C-11	Transmission Range Selector Lock Control Error - Circuit short to ground	<ul style="list-style-type: none"> Transmission control switch internal failure - Lock solenoid circuit short circuit to ground 	<ul style="list-style-type: none"> Using the manufacturer approved diagnostic system, clear the DTCs and retest. If the fault persists, install a new transmission control switch
P176C-12	Transmission Range Selector Lock Control Error - Circuit short to battery	<ul style="list-style-type: none"> Transmission control switch internal failure - Lock solenoid circuit short circuit to power 	<ul style="list-style-type: none"> Using the manufacturer approved diagnostic system, clear the DTCs and retest. If the fault persists, install a new transmission control switch
P176C-73	Transmission Range Selector Lock Control Error - Actuator stuck closed	<ul style="list-style-type: none"> Transmission control switch internal failure - Lock solenoid circuit failure 	 <p>NOTE: This DTC may be set by attempting to rotate the transmission control switch as it unlocks</p> <ul style="list-style-type: none"> Using the manufacturer approved diagnostic system, clear the DTCs and retest. If the fault persists, install a new transmission control switch
U0001-88	High Speed CAN Communication Bus - Bus off	<ul style="list-style-type: none"> High speed CAN bus circuit short circuit to ground, short circuit to power, open circuit, high resistance 	<ul style="list-style-type: none"> Using the manufacturer approved diagnostic system, perform a CAN network integrity test. Refer to the electrical circuit diagrams and check the high speed CAN bus circuit for short circuit to ground, short circuit to power, open circuit, high resistance
U0100-00	Lost Communication With ECM/PCM "A" - No sub type information	<ul style="list-style-type: none"> Engine control module power or ground circuit open circuit, high resistance High speed CAN bus circuit short circuit to ground, short circuit to power, open circuit, high resistance Engine system fault 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check the engine control module power and ground circuits for open circuit, high resistance Using the manufacturer approved diagnostic system, perform a CAN network integrity test. Refer to the electrical circuit diagrams and check the high speed CAN bus circuit for short circuit to ground, short circuit to power, open circuit, high resistance Using the manufacturer approved diagnostic system, check the engine control module for related DTCs and refer to the relevant DTC index
U0100-87	Lost Communication With ECM/PCM "A" - Missing message	<ul style="list-style-type: none"> Missing/invalid data from the engine control module - Engine speed 	<ul style="list-style-type: none"> Using the manufacturer approved diagnostic system, check the engine control module for related DTCs and refer to the relevant DTC index
U0101-00	Lost Communication with TCM - No sub type information	<ul style="list-style-type: none"> Transmission control module power or ground circuit open circuit, high resistance High speed CAN bus circuit short circuit to ground, short circuit to power, open circuit, high resistance Transmission system fault 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check the transmission control module power and ground circuits for open circuit, high resistance Using the manufacturer approved diagnostic system, perform a CAN network integrity test. Refer to the electrical circuit diagrams and check the high speed CAN bus circuit for short circuit to ground, short circuit to power, open circuit, high resistance Using the manufacturer approved diagnostic system, check the transmission control module for related DTCs and refer to the relevant DTC index

U0101-87	Lost Communication with TCM - Missing message	<ul style="list-style-type: none"> Missing/invalid data from the transmission control module - TCM_PosDisp 	<ul style="list-style-type: none"> Using the manufacturer approved diagnostic system, check the transmission control module for related DTCs and refer to the relevant DTC index
U0121-00	Lost Communication With Anti-Lock Brake System (ABS) Control Module - No sub type information	<ul style="list-style-type: none"> Anti-lock brake system control module power or ground circuit open circuit, high resistance High speed CAN bus circuit short circuit to ground, short circuit to power, open circuit, high resistance Anti-lock brake system fault 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check the anti-lock brake system control module power and ground circuits for open circuit, high resistance Using the manufacturer approved diagnostic system, perform a CAN network integrity test. Refer to the electrical circuit diagrams and check the high speed CAN bus circuit for short circuit to ground, short circuit to power, open circuit, high resistance Using the manufacturer approved diagnostic system, check the anti-lock brake system control module for related DTCs and refer to the relevant DTC index
U0121-87	Lost Communication With Anti-Lock Brake System (ABS) Control Module - Missing message	<ul style="list-style-type: none"> Missing/invalid data from the anti-lock brake system control module - Steering angle 	<ul style="list-style-type: none"> Using the manufacturer approved diagnostic system, check the anti-lock brake system control module for related DTCs and refer to the relevant DTC index
U0140-00	Lost Communication With Body Control Module - No sub type information	<ul style="list-style-type: none"> Central junction box power or ground circuit open circuit, high resistance High speed CAN bus circuit short circuit to ground, short circuit to power, open circuit, high resistance Central junction box system fault 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check the central junction box power and ground circuits for open circuit, high resistance Using the manufacturer approved diagnostic system, perform a CAN network integrity test. Refer to the electrical circuit diagrams and check the high speed CAN bus circuit for short circuit to ground, short circuit to power, open circuit, high resistance Using the manufacturer approved diagnostic system, check the central junction box for related DTCs and refer to the relevant DTC index
U0155-00	Lost Communication With Instrument Panel Cluster (IPC) Control Module - Missing message	<ul style="list-style-type: none"> Instrument cluster power or ground circuit open circuit, high resistance High speed CAN bus circuit short circuit to ground, short circuit to power, open circuit, high resistance Instrument cluster system fault 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check the instrument cluster power and ground circuits for open circuit, high resistance Using the manufacturer approved diagnostic system, perform a CAN network integrity test. Refer to the electrical circuit diagrams and check the high speed CAN bus circuit for short circuit to ground, short circuit to power, open circuit, high resistance Using the manufacturer approved diagnostic system, check the instrument cluster for related DTCs and refer to the relevant DTC index
U0300-00	Internal Control Module Software Incompatibility - No sub type information	<ul style="list-style-type: none"> Invalid master configuration ID received 	<ul style="list-style-type: none"> Using the manufacturer approved diagnostic system, re-configure the central junction box with the latest level software. Clear the DTCs and retest. If the fault persists, install a new transmission control switch
U0401-92	Invalid Data Received From ECM/PCM - Performance or incorrect operation	<ul style="list-style-type: none"> Missing/invalid data from the engine control module 	<ul style="list-style-type: none"> Using the manufacturer approved diagnostic system, check the engine control module for related DTCs and refer to the relevant DTC index
U0402-64	Invalid Data Received from Transmission control module - Signal plausibility failure	<ul style="list-style-type: none"> Missing/invalid data from the transmission control module - Implausible lock request received 	<ul style="list-style-type: none"> Using the manufacturer approved diagnostic system, check the transmission control module for related DTCs and refer to the relevant DTC index
U0402-81	Invalid Data Received from Transmission control module - Invalid serial data received	<ul style="list-style-type: none"> Missing/invalid data from the transmission control module - TCM_PosDisp / TCM_LockReq 	<ul style="list-style-type: none"> Using the manufacturer approved diagnostic system, check the transmission control module for related DTCs and refer to the relevant DTC index
U0402-82	Invalid Data Received from Transmission control module - Alive/sequence counter incorrect / not updated	<ul style="list-style-type: none"> Missing/invalid data from the transmission control module - Alive counter 	<ul style="list-style-type: none"> Using the manufacturer approved diagnostic system, check the transmission control module for related DTCs and refer to the relevant DTC index

U0402-83	Invalid Data Received from Transmission control module - Value of signal protection calculation incorrect	Missing/invalid data from the transmission control module - Checksum	Using the manufacturer approved diagnostic system, check the transmission control module for related DTCs and refer to the relevant DTC index
U0402-92	Invalid Data Received from Transmission control module - Performance or incorrect operation	<ul style="list-style-type: none"> Missing/invalid data from the transmission control module 	<ul style="list-style-type: none"> Using the manufacturer approved diagnostic system, check the transmission control module for related DTCs and refer to the relevant DTC index
U0415-92	Invalid Data Received From Anti-Lock Brake System (ABS) Control Module - Performance or incorrect operation	<ul style="list-style-type: none"> Missing/invalid data from the anti-lock brake system control module 	<ul style="list-style-type: none"> Using the manufacturer approved diagnostic system, check the anti-lock brake system control module for related DTCs and refer to the relevant DTC index
U0422-08	Invalid Data Received From Body Control Module - Bus signal/message failures	<ul style="list-style-type: none"> Missing/invalid data from the central junction box 	<ul style="list-style-type: none"> Using the manufacturer approved diagnostic system, check the central junction box for related DTCs and refer to the relevant DTC index
U0422-81	Invalid Data Received From Body Control Module - Invalid serial data received	<ul style="list-style-type: none"> Missing/invalid data from the central junction box - Invalid power mode 	<ul style="list-style-type: none"> Using the manufacturer approved diagnostic system, check the central junction box for related DTCs and refer to the relevant DTC index
U0422-92	Invalid Data Received From Body Control Module - Performance or incorrect operation	<ul style="list-style-type: none"> Missing/invalid data from the central junction box 	<ul style="list-style-type: none"> Using the manufacturer approved diagnostic system, check the central junction box for related DTCs and refer to the relevant DTC index
U0423-92	Invalid Data Received From Instrument Panel Control Module - Performance or incorrect operation	<ul style="list-style-type: none"> Missing/invalid data from the instrument cluster 	<ul style="list-style-type: none"> Using the manufacturer approved diagnostic system, check the instrument cluster for related DTCs and refer to the relevant DTC index
U043A-92	Invalid Data Received From Suspension Control Module "B" - Performance or incorrect operation	<ul style="list-style-type: none"> Missing/invalid data from the adaptive damping control module 	<ul style="list-style-type: none"> Using the manufacturer approved diagnostic system, check the adaptive damping control module for related DTCs and refer to the relevant DTC index
U101A-86	Lost Communication With Transmission Control Module (Multiple Bus) - Signal invalid	<ul style="list-style-type: none"> CAN and LIN bus failure 	 NOTE: Ignore this DTC if no other CAN or LIN DTCs are set <ul style="list-style-type: none"> Using the manufacturer approved diagnostic system, check the transmission control module for related DTCs and refer to the relevant DTC index
U1A14-04	CAN Initialization Failure - System internal failures	<ul style="list-style-type: none"> Transmission control switch internal failure 	<ul style="list-style-type: none"> Using the manufacturer approved diagnostic system, clear the DTCs and retest. If the fault persists, install a new transmission control switch
U2012-4A	Car Configuration Parameter(s) - Incorrect component installed	<ul style="list-style-type: none"> Car configuration file mismatch with vehicle specification Incorrect transmission control switch installed 	<ul style="list-style-type: none"> Using the manufacturer approved diagnostic system, check and up-date the car configuration file as necessary Install a new transmission control switch as necessary
U2100-00	Initial Configuration Not Complete - No sub type information	<ul style="list-style-type: none"> Transmission control switch internal failure 	<ul style="list-style-type: none"> Using the manufacturer approved diagnostic system, clear the DTCs and retest. If the fault persists, install a new transmission control switch
U3003-16	Battery Voltage - Circuit voltage below threshold	<ul style="list-style-type: none"> Transmission control switch power or ground circuit open circuit, high resistance Battery/charging system fault 	<ul style="list-style-type: none"> Using the manufacturer approved diagnostic system, check datalogger signal - Main ECU Supply Voltage (0xDD02). Refer to the electrical circuit diagrams and check the transmission control switch power and ground circuits for open circuit, high resistance Refer to the relevant section of the workshop manual and test the battery and charging system
U3003-17	Battery Voltage - Circuit voltage above threshold	<ul style="list-style-type: none"> Battery/charging system fault 	<ul style="list-style-type: none"> Using the manufacturer approved diagnostic system, check datalogger signal - Main ECU Supply Voltage (0xDD02). Refer to the relevant section of the workshop manual and test the

			battery and charging system
U3003-62	Battery Voltage - Signal compare failure	<ul style="list-style-type: none"> • Mismatch between the voltage at the transmission control switch and the voltage value broadcast on the CAN bus 	<ul style="list-style-type: none"> • Using the manufacturer approved diagnostic system, check datalogger signal - Main ECU Supply Voltage (0xDD02) - and compare it to battery voltage. Refer to the electrical circuit diagrams and check the transmission control switch power and ground circuits for open circuit, high resistance

General Information - Diagnostic Trouble Code (DTC) Index DTC: Transmission Control Module (TCM)

Description and Operation

Transmission Control Module (TCM)

CAUTIONS:



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



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

NOTES:



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



Generic scan tools may not read the codes listed, or may read only 5-digit codes. Match the 5 digits from the scan tool to the first 5 digits of the 7-digit code listed to identify the fault (the last 2 digits give extra information read by the manufacturer-approved diagnostic system).



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



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



Inspect connectors for signs of water ingress, and pins for damage and/or corrosion.



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.



If a failure condition is reported indicating the need to renew the transmission assembly on a vehicle that remains under manufacturer warranty, an authorisation request must first go through the warranty prior approval programme before any work is begun.

The table below lists all diagnostic trouble codes (DTCs) that could be logged in the Transmission Control Module (TCM), for additional diagnosis and testing information refer to the relevant Diagnosis and Testing section For additional information, refer to: [Diagnostics - TDV6 3.0L Diesel - Vehicles With: 8HP70 8-Speed Automatic Transmission AWD](#) (307-01B Automatic Transmission/Transaxle - TDV6 3.0L Diesel , Vehicles With: 8HP70 8-Speed Automatic Transmission AWD, Diagnosis and Testing).

DTC	Description	Possible Causes	Action
B1087-41	LIN Bus "A" - General checksum failure	<ul style="list-style-type: none"> Local interconnect network circuit fault 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check local interconnect network circuit to transmission control switch. Clear the DTC and retest
B1087-63	LIN Bus "A" - Circuit / component protection time-out	<ul style="list-style-type: none"> Local interconnect network circuit fault 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check local interconnect network circuit to transmission control switch. Clear the DTC and retest
B1087-64	LIN Bus "A" - Signal plausibility failure	<ul style="list-style-type: none"> Signal plausibility failure 	<ul style="list-style-type: none"> Transmission control switch position fault. Vehicle issue - Check transmission control switch
B1087-82	LIN Bus "A" - Alive / sequence counter incorrect / not updated	<ul style="list-style-type: none"> Local interconnect network circuit fault 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check local interconnect network circuit to transmission control switch. Clear the DTC and retest
B1087-83	LIN Bus "A" - Signal plausibility	<ul style="list-style-type: none"> Value of signal protection 	<ul style="list-style-type: none"> Gear selector position fault. Vehicle issue - Check gear selector unit

	failure - value of signal protection calculation incorrect	calculation incorrect	
B1087-88	LIN Bus "A" - Bus off	<ul style="list-style-type: none"> Local interconnect network circuit fault 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check local interconnect network circuit to transmission control switch. Clear the DTC and retest
B108E-02	Display - General signal failure	<ul style="list-style-type: none"> General signal failure 	<ul style="list-style-type: none"> Clear DTCs. Test drive the car and watch the displayed position matches the engaged gear. If the problem persists, renew the module
C1A88-64	High Pressure Switching Valve #1 - Signal plausibility failure	<ul style="list-style-type: none"> Signal plausibility failure 	<ul style="list-style-type: none"> Check the transmission control module connector and the power/ground circuits to the transmission control module. Clear the DTC and retest. If the problem persists, renew the transmission control module
P0071-02	Ambient Air Temperature Sensor Circuit "A" Range/Performance - General signal failure	<ul style="list-style-type: none"> Ambient air temperature sensor range performance 	<ul style="list-style-type: none"> Check engine control module for related DTCs and refer to the relevant DTC index
P0121-86	Throttle/Pedal Position Sensor A Circuit Range/Performance - Signal invalid	<ul style="list-style-type: none"> Accelerator pedal position sensor sensing circuit signal invalid Accelerator pedal position sensor failure 	<ul style="list-style-type: none"> Check engine control module for related DTCs and refer to the relevant DTC index
P0219-64	Engine Overspeed Condition - Signal plausibility failure	<ul style="list-style-type: none"> Crankshaft position sensor circuit Camshaft position sensor circuit 	<ul style="list-style-type: none"> Check engine control module for related DTCs and refer to the relevant DTC index. Clear the DTC and retest
P0562-1C	System Voltage Low - Circuit voltage out of range	<ul style="list-style-type: none"> Power supply voltage is out of range when the engine is running 	<ul style="list-style-type: none"> Check the battery and charging system. Refer to the relevant workshop manual section. Clear the DTC and retest
P0562-21	System Voltage Low - Signal amplitude < minimum	<ul style="list-style-type: none"> Supply voltage to transmission control module very low 	<ul style="list-style-type: none"> Check the battery condition and state of charge. Check the transmission control module connector and power supply circuits
P0563-22	System Voltage High - Signal amplitude > maximum	<ul style="list-style-type: none"> Power supply voltage is too high if the engine is running and there has been no jump-start or transmission limp-home event 	<ul style="list-style-type: none"> Check the battery condition and state of charge. Check the transmission control module connector and power supply circuits. Check if the vehicle has been jump-started. Clear the DTC and retest
P0601-41	Internal Control Module Memory Check Sum Error-General checksum failure	<ul style="list-style-type: none"> Checksum error 	<ul style="list-style-type: none"> Check the transmission control module connector and the power/ground circuits to the transmission control module. Clear the DTC and retest. If the problem persists, install a new transmission control module as required
P0606-04	Control Module Processor - System internal failures	<ul style="list-style-type: none"> Internal failure 	<ul style="list-style-type: none"> Check the transmission control module connector and the power/ground circuits to the transmission control module. Clear the DTC and retest. If the problem persists, renew the transmission control module
P0606-11	Control Module Processor - Circuit short to ground	<ul style="list-style-type: none"> Internal failure 	<ul style="list-style-type: none"> Check the transmission control module connector and the power/ground circuits to the transmission control module. Clear the DTC and retest. If the problem persists, renew the transmission control module
P0606-	Control Module	<ul style="list-style-type: none"> Internal failure 	<ul style="list-style-type: none"> Check the transmission control module connector and the

62	Processor - Signal compare failure		power/ground circuits to the transmission control module. Clear the DTC and retest. If the problem persists, renew the transmission control module
P0606-64	Control Module Processor - Signal plausibility failure	<ul style="list-style-type: none"> Internal failure 	<ul style="list-style-type: none"> Check the transmission control module connector and the power/ground circuits to the transmission control module. Clear the DTC and retest. If the problem persists, renew the transmission control module
P0613-04	TCM Processor - System internal failures	<ul style="list-style-type: none"> Internal failure 	<ul style="list-style-type: none"> Check the transmission control module connector and the power/ground circuits to the transmission control module. Clear the DTC and retest. If the problem persists, renew the transmission control module
P0613-06	TCM Processor - Algorithm based failures	<ul style="list-style-type: none"> Internal processor watchdog error 	<ul style="list-style-type: none"> Check the transmission control module connector and the power/ground circuits to the transmission control module. Clear the DTC and retest. If the problem persists, install a new transmission control module as required
P0613-11	TCM Processor - Circuit short to ground	<ul style="list-style-type: none"> Internal circuit short to ground 	<ul style="list-style-type: none"> Check the transmission control module connector and the power/ground circuits to the transmission control module. Clear the DTC and retest. If the problem persists, renew the transmission control module
P0613-12	TCM Processor - Circuit short to battery	<ul style="list-style-type: none"> Internal circuit short to power 	<ul style="list-style-type: none"> Check the transmission control module connector and the power/ground circuits to the transmission control module. Clear the DTC and retest. If the problem persists, renew the transmission control module
P0613-13	TCM Processor - Circuit open	<ul style="list-style-type: none"> Internal circuit open circuit 	<ul style="list-style-type: none"> Check the transmission control module connector and the power/ground circuits to the transmission control module. Clear the DTC and retest. If the problem persists, renew the transmission control module
P0613-15	TCM Processor - Circuit short to battery or open	<ul style="list-style-type: none"> Internal circuit short to power or open circuit 	<ul style="list-style-type: none"> Check the transmission control module connector and the power/ground circuits to the transmission control module. Clear the DTC and retest. If the problem persists, renew the transmission control module
P0613-18	TCM Processor - Circuit current below threshold	<ul style="list-style-type: none"> Internal circuit short to ground or open circuit 	<ul style="list-style-type: none"> Check the transmission control module connector and the power/ground circuits to the transmission control module. Clear the DTC and retest. If the problem persists, renew the transmission control module
P061B-02	Internal Control Module Torque Calculation Performance - General signal failure	<ul style="list-style-type: none"> Internal failure 	<ul style="list-style-type: none"> Check the transmission control module connector and the power/ground circuits to the transmission control module. Clear the DTC and retest. If the problem persists, renew the transmission control module
P061B-64	Internal Control Module Torque Calculation Performance# - Signal plausibility failure	<ul style="list-style-type: none"> Signal plausibility failure 	<ul style="list-style-type: none"> Check the transmission control module connector and the power/ground circuits to the transmission control module. Clear the DTC and retest. If the problem persists, install a new transmission control module as required
P062F-04	Internal Control Module EEPROM Error - System internal failures	<ul style="list-style-type: none"> EEPROM error 	<ul style="list-style-type: none"> Check the transmission control module connector and the power/ground circuits to the transmission control module. Clear the DTC and retest. If the problem persists, install a new transmission control module as required
P0641-64	Sensor Reference Voltage A Circuit/Open - Signal plausibility failure	<ul style="list-style-type: none"> Internal failure 	<ul style="list-style-type: none"> Check the transmission control module connector and the power/ground circuits to the transmission control module. Clear the DTC and retest. If the problem persists, check and install a new transmission control module
P0642-21	Sensor Reference Voltage A Circuit Low - Signal amplitude < minimum	<ul style="list-style-type: none"> Reference voltage circuit signal amplitude below minimum 	<ul style="list-style-type: none"> Check the transmission control module connector and the power/ground circuits to the transmission control module. Clear the DTC and retest. If the problem persists, install a new transmission control module as required
P0643-22	Sensor Reference Voltage A Circuit High - Signal amplitude > maximum	<ul style="list-style-type: none"> Reference voltage circuit signal amplitude above maximum 	<ul style="list-style-type: none"> Check the transmission control module connector and the power/ground circuits to the transmission control module. Clear the DTC and retest. If the problem persists, install a new transmission control module as required
P0657-	Actuator Supply	<ul style="list-style-type: none"> Supply voltage 	<ul style="list-style-type: none"> Check for other related DTCs. Check the park lock

13	Voltage A Circuit / Open - Circuit open	circuit open circuit	actuator, the actuator connector and wiring. Check the transmission control module connector and the power/ground circuits to the module. Clear the DTC and test the shift lever in all positions. If the problem persists, check and install a new transmission control module
P0657-64	Actuator Supply Voltage A Circuit / Open - Signal plausibility failure	<ul style="list-style-type: none"> Actuator supply (pressure control valves etc) voltage plausibility fault 	<ul style="list-style-type: none"> Check solenoid at lever, check wiring and connectors, clear DTCs. Test position lever in all positions and cycle ignition. If the problem persists, check and install a new transmission control module
P0658-11	Actuator Supply Voltage A Circuit Low - Circuit short to ground	<ul style="list-style-type: none"> Supply voltage circuit short circuit to ground 	<ul style="list-style-type: none"> Check the transmission control module connector and the power/ground circuits to the module. If the problem persists, check and install a new transmission control module
P0659-12	Actuator Supply Voltage A Circuit High - Circuit short to battery	<ul style="list-style-type: none"> Supply voltage circuit short circuit to power 	<ul style="list-style-type: none"> Check the transmission control module connector and the power/ground circuits to the module. If the problem persists, check and install a new transmission control module
P0666-64	Control Module Internal Temperature Sensor "A" Circuit - Signal plausibility failure	<ul style="list-style-type: none"> Internal temperature sensor 	<ul style="list-style-type: none"> Check for engine overheating and cooling system faults. Check the transmission control module connector and the power/ground circuits to the module. Allow the transmission control module to cool. Clear the DTC and retest. If the problem persists, renew the module. Consider environmental conditions before condemning the module
P0667-01	PCM / ECM / TCM Internal Temperature Sensor Range/Performance - General electrical failure	<ul style="list-style-type: none"> Module internal temperature sensor general failure 	<ul style="list-style-type: none"> Check for engine overheating and cooling system faults. Check the transmission control module connector and the power/ground circuits to the module. Allow the transmission control module to cool. Clear the DTC and retest. If the problem persists, renew the module. Consider environmental conditions before condemning the module
P0668-21	PCM / ECM / TCM Internal Temperature Sensor A Circuit Low - Signal amplitude < minimum	<ul style="list-style-type: none"> Module internal temperature too low Temperature sensor circuit high resistance Temperature sensor circuit short circuit to ground 	<ul style="list-style-type: none"> Check the transmission control module connector and the power/ground circuits to the module. Allow the transmission control module to cool. Clear the DTC and retest. If the problem persists, renew the module. Consider environmental conditions before condemning the module
P0669-22	ECM / ECM / TCM Internal Temperature Sensor A Circuit High - Signal amplitude > maximum	<ul style="list-style-type: none"> Module internal temperature too high Temperature sensor circuit short circuit to power 	<ul style="list-style-type: none"> Check for engine overheating and cooling system faults. Check the transmission control module connector and the power/ground circuits to the module. Allow the transmission control module to cool. Clear the DTC and retest. If the problem persists, renew the module. Consider environmental conditions before condemning the module
P06AC-01	PCM / ECM / TCM Internal Temperature Sensor B Range/Performance - General electrical failure	<ul style="list-style-type: none"> General electrical failure 	<ul style="list-style-type: none"> Check for engine overheating and cooling system faults. Check the transmission control module connector and the power/ground circuits to the module. Allow the transmission control module to cool. Clear the DTC and retest. If the problem persists, renew the module. Consider environmental conditions before condemning the module
P06AC-64	PCM / ECM / TCM Internal Temperature Sensor B Range/Performance - Signal plausibility failure	<ul style="list-style-type: none"> Signal plausibility failure 	<ul style="list-style-type: none"> Check for engine overheating and cooling system faults. Check the transmission control module connector and the power/ground circuits to the module. Allow the transmission control module to cool. Clear the DTC and retest. If the problem persists, renew the module. Consider environmental conditions before condemning the module
P06AD-22	PCM / ECM / TCM Internal Temperature Sensor B Circuit	<ul style="list-style-type: none"> Signal amplitude greater than maximum 	<ul style="list-style-type: none"> Check for engine overheating and cooling system faults. Check the transmission control module connector and the power/ground circuits to the module. Allow the transmission control module to cool. Clear the DTC and

	Low - Signal amplitude > maximum		retest. If the problem persists, renew the module. Consider environmental conditions before condemning the module
P06AE-21	PCM / ECM / TCM Internal Temperature Sensor B Circuit High - Signal amplitude < minimum	<ul style="list-style-type: none"> Signal amplitude greater than minimum 	<ul style="list-style-type: none"> Transmission control module chip temperature fault. Allow cooling time. If the problem persists, renew the transmission control module
P0700-02	Transmission Control System (MIL Request) - General signal failure	<ul style="list-style-type: none"> General signal failure 	<ul style="list-style-type: none"> Check for other DTCs and rectify those first. Clear the DTCs and road test the vehicle. If further DTCs are logged, investigate according to the individual faults logged
P0700-83	Transmission Control System (MIL Request) - Value of signal protection calculation incorrect	<ul style="list-style-type: none"> Value of signal protection calculation incorrect 	<ul style="list-style-type: none"> Check the transmission control module connector and the power/ground circuits to the transmission control module. Clear the DTC and retest. If the problem persists, renew the transmission control module
P0702-98	Transmission Control System Electrical - Component or system over temperature	<ul style="list-style-type: none"> Component or system over temperature 	<ul style="list-style-type: none"> Check transmission cooling circuit. Clear DTCs and test drive the vehicle. If the problem persists, renew the transmission control module
P0710-04	Transmission Fluid Temperature Sensor A Circuit - System internal failures	<ul style="list-style-type: none"> System internal failures 	<ul style="list-style-type: none"> Clear DTCs and test drive the vehicle. If the problem persists, renew the transmission control module
P0710-13	Transmission Fluid Temperature Sensor A Circuit - Circuit open	<ul style="list-style-type: none"> Transmission fluid temperature sensor circuit open circuit Temperature sensor fault 	<ul style="list-style-type: none"> Check the transmission control module connector and the power/ground circuits to the transmission control module. Clear the DTC and retest. If the problem persists, install a new transmission control module as required. Consider environmental conditions before condemning the module
P0710-27	Transmission Fluid Temperature Sensor A Circuit - Signal rate of change above threshold	<ul style="list-style-type: none"> Transmission fluid temperature sensor signal rate of change above threshold 	<ul style="list-style-type: none"> Allow the transmission to cool, clear the DTC and retest. Clear the DTC and retest. If the problem persists, renew the transmission control module
P0710-64	Transmission Fluid Temperature Sensor A Circuit - Signal plausibility failure	<ul style="list-style-type: none"> Transmission fluid temperature sensor signal plausibility failure 	<ul style="list-style-type: none"> Allow the transmission to cool, clear the DTC and retest. Clear the DTC and retest. If the problem persists, renew the transmission control module
P0712-11	Transmission Fluid Temperature Sensor A Circuit Low - Circuit short to ground	<ul style="list-style-type: none"> Sensor circuit short circuit to ground 	<ul style="list-style-type: none"> Check the transmission control module connector and the power/ground circuits to the transmission control module. Clear the DTC and retest. If the problem persists, install a new transmission control module as required
P0713-12	Transmission Fluid Temperature Sensor A Circuit High - Circuit short to battery	<ul style="list-style-type: none"> Transmission Fluid Temperature Sensor circuit short circuit to power 	<ul style="list-style-type: none"> Check the transmission control module connector and the power/ground circuits to the transmission control module. Clear the DTC and retest. If the problem persists, install a new transmission control module as required
P0715-12	Turbine/Input Shaft Speed Sensor A Circuit - Circuit short to battery	<ul style="list-style-type: none"> Turbine sensor circuit short to power 	<ul style="list-style-type: none"> Check the transmission control module connector and the power/ground circuits to the transmission control module. Clear the DTC and retest. If the problem persists, renew the transmission control module.
P0715-64	Turbine/Input Shaft Speed Sensor A Circuit - Signal plausibility failure	<ul style="list-style-type: none"> Turbine sensor signal plausibility failure 	<ul style="list-style-type: none"> Clear the DTC and test drive the vehicle. Check output speed and vehicle speed plausibility against turbine speed. If the problem persists renew the transmission control module.

P0716-14	Turbine/Input Shaft Speed Sensor A Circuit Range/Performance - Circuit short to ground or open	Sensor circuit short circuit to ground or open circuit	Check the transmission control module connector and the power/ground circuits to the transmission control module. Clear the DTC and retest. If the problem persists, install a new transmission control module as required
P0716-27	Turbine/Input Shaft Speed Sensor A Circuit Range/Performance - Signal rate of change above threshold	<ul style="list-style-type: none"> Turbine sensor signal rate of change above threshold 	<ul style="list-style-type: none"> Check the transmission control module connector and the power/ground circuits to the transmission control module. Clear the DTC and retest. If the problem persists, install a new transmission control module as required
P0720-12	Output Shaft Speed Sensor Circuit - Circuit short to battery	<ul style="list-style-type: none"> Sensor circuit short circuit to power 	<ul style="list-style-type: none"> Check the transmission control module connector and the power/ground circuits to the transmission control module. Clear the DTC and retest. If the problem persists, install a new transmission control module as required
P0720-14	Output Shaft Speed Sensor Circuit - Circuit short to ground or open	<ul style="list-style-type: none"> Sensor circuit short circuit to ground or open circuit 	<ul style="list-style-type: none"> Check the transmission control module connector and the power/ground circuits to the transmission control module. Clear the DTC and retest. If the problem persists, install a new transmission control module as required
P0721-02	Output Shaft Speed Sensor Circuit Range/Performance - General signal failure	<ul style="list-style-type: none"> Output shaft speed sensor general signal failure 	<ul style="list-style-type: none"> Check the transmission control module connector and the power/ground circuits to the transmission control module. Clear the DTC and retest. If the problem persists, install a new transmission control module as required
P0721-27	Output Shaft Speed Sensor Circuit Range/Performance - Signal rate of change above threshold	<ul style="list-style-type: none"> Signal rate of change above threshold 	<ul style="list-style-type: none"> Check for the possible wheel lock up due to anti-lock brake system issue. Check anti-lock brake system control module for related DTCs. Check the transmission control module connector and the power/ground circuits to the transmission control module. Clear the DTC and retest. If the problem persists, install a new transmission control module as required
P0721-62	Output Shaft Speed Sensor Circuit Range/Performance - Signal compare failure	<ul style="list-style-type: none"> Output shaft speed sensor circuit signal compare failure 	<ul style="list-style-type: none"> Check the transmission control module connector and the power/ground circuits to the transmission control module. Clear the DTC and retest. If the problem persists, install a new transmission control module as required
P0721-64	Output Shaft Speed Sensor Circuit Range/Performance - Signal plausibility failure	<ul style="list-style-type: none"> Engine speed signal plausibility failure 	<ul style="list-style-type: none"> Check the transmission control module connector and the power/ground circuits to the transmission control module. Clear the DTC and test drive the vehicle. Clear the DTC and retest. If the problem persists, install a new transmission control module as required
P0725-83	Engine Speed Input Circuit - Value of signal protection calculation incorrect	<ul style="list-style-type: none"> Engine speed input circuit failure 	<ul style="list-style-type: none"> Check engine control module for related DTCs and refer to the relevant DTC index
P0729-07	Gear 6 Incorrect Ratio - Mechanical failures	<ul style="list-style-type: none"> Mechanical failures 	<ul style="list-style-type: none"> Check the transmission oil level and quality, refer to the relevant section of the workshop manual. Clear the DTC and test drive the vehicle. Clear the DTC and retest. If the problem persists, renew the transmission
P0730-00	Incorrect Gear Ratio - No sub type information	<ul style="list-style-type: none"> Mechanical failures 	<ul style="list-style-type: none"> Check the transmission oil level and quality, refer to the relevant section of the workshop manual. Clear the DTC and test drive the vehicle. Clear the DTC and retest. If the problem persists, renew the transmission
P0731-07	Gear 1 Incorrect Ratio - Mechanical failures	<ul style="list-style-type: none"> Mechanical failures 	<ul style="list-style-type: none"> Check the transmission oil level and quality, refer to the relevant section of the workshop manual. Clear the DTC and test drive the vehicle. Clear the DTC and retest. If the problem persists, renew the transmission
P0732-07	Gear 2 Incorrect Ratio - Mechanical failures	<ul style="list-style-type: none"> Mechanical failures 	<ul style="list-style-type: none"> Check the transmission oil level and quality, refer to the relevant section of the workshop manual. Clear the DTC and test drive the vehicle. Clear the DTC and retest. If the problem persists, renew the transmission
P0733-07	Gear 3 Incorrect Ratio - Mechanical failures	<ul style="list-style-type: none"> Mechanical failures 	<ul style="list-style-type: none"> Check the transmission oil level and quality, refer to the relevant section of the workshop manual. Clear the DTC and test drive the vehicle. Clear the DTC and retest. If the problem persists, renew the transmission

P0734-07	Gear 4 Incorrect Ratio - Mechanical failures	<ul style="list-style-type: none"> Mechanical failures 	<ul style="list-style-type: none"> Check the transmission oil level and quality, refer to the relevant section of the workshop manual. Clear the DTC and test drive the vehicle. Clear the DTC and retest. If the problem persists, renew the transmission
P0735-07	Gear 5 Incorrect Ratio - Mechanical failures	<ul style="list-style-type: none"> Mechanical failures 	<ul style="list-style-type: none"> Check the transmission oil level and quality, refer to the relevant section of the workshop manual. Clear the DTC and test drive the vehicle. Clear the DTC and retest. If the problem persists, renew the transmission
P0736-07	Reverse Incorrect Ratio - Mechanical failures	<ul style="list-style-type: none"> Mechanical failures 	<ul style="list-style-type: none"> Check the transmission oil level and quality, refer to the relevant section of the workshop manual. Clear the DTC and test drive the vehicle. Clear the DTC and retest. If the problem persists, renew the transmission
P0736-64	Reverse Incorrect Ratio - Signal plausibility failure	<ul style="list-style-type: none"> Mechanical failures 	<ul style="list-style-type: none"> Check the transmission oil level and quality, refer to the relevant section of the workshop manual. Clear the DTC and test drive the vehicle using all gears in drive and reverse. Clear the DTC and retest. If the problem persists, or if any other gear ratio related DTCs are logged, renew the transmission
P0741-07	Torque Converter Clutch Solenoid Circuit Performance/Stuck Off - Mechanical failures	<ul style="list-style-type: none"> Mechanical failures 	<ul style="list-style-type: none"> Check the transmission oil level and quality, refer to the relevant section of the workshop manual. Clear the DTC and test drive the vehicle. If the problem persists, renew the torque convertor. If the problem still persists, renew the transmission
P0745-11	Pressure Control Solenoid A - Circuit short to ground	<ul style="list-style-type: none"> Pressure control solenoid A circuit short to ground 	<ul style="list-style-type: none"> Check the transmission control module connector and the power/ground circuits to the transmission control module. Clear the DTC and retest. If the problem persists, install a new transmission control module as required
P0745-12	Pressure Control Solenoid A - Circuit short to battery	<ul style="list-style-type: none"> Pressure control solenoid A circuit short to power 	<ul style="list-style-type: none"> Check the transmission control module connector and the power/ground circuits to the transmission control module. Clear the DTC and retest. If the problem persists, install a new transmission control module as required
P0745-13	Pressure Control Solenoid A - Circuit open	<ul style="list-style-type: none"> Pressure control solenoid A circuit, open circuit 	<ul style="list-style-type: none"> Check the transmission control module connector and the power/ground circuits to the transmission control module. Clear the DTC and retest. If the problem persists, install a new transmission control module as required
P0745-14	Pressure Control Solenoid A - Circuit short to ground or open	<ul style="list-style-type: none"> Pressure control solenoid A circuit short to ground, open circuit 	<ul style="list-style-type: none"> Check the transmission control module connector and the power/ground circuits to the transmission control module. Clear the DTC and retest. If the problem persists, install a new transmission control module as required
P0745-64	Pressure Control Solenoid A - Signal plausibility failure	<ul style="list-style-type: none"> Pressure control solenoid A circuit signal plausibility failure 	<ul style="list-style-type: none"> Check the transmission control module connector and the power/ground circuits to the transmission control module. Clear the DTC and retest. If the problem persists, install a new transmission control module as required
P0745-93	Pressure Control Solenoid A - No operation	<ul style="list-style-type: none"> Control solenoid not operating 	<ul style="list-style-type: none"> Check the transmission control module connector and the power/ground circuits to the transmission control module. Clear the DTC and retest. If the problem persists, install a new transmission control module as required
P0745-94	Pressure Control Solenoid A - Unexpected operation	<ul style="list-style-type: none"> Control solenoid unexpected operation 	<ul style="list-style-type: none"> Check the transmission control module connector and the power/ground circuits to the transmission control module. Clear the DTC and retest. If the problem persists, install a new transmission control module as required
P0748-11	Pressure Control Solenoid A Electrical - Circuit short to ground	<ul style="list-style-type: none"> Pressure control solenoid A circuit short to ground 	<ul style="list-style-type: none"> Check the transmission control module connector and the power/ground circuits to the transmission control module. Clear the DTC and retest. If the problem persists, install a new transmission control module as required
P0748-12	Pressure Control Solenoid A Electrical - Circuit short to battery	<ul style="list-style-type: none"> Pressure control solenoid A circuit short to power 	<ul style="list-style-type: none"> Check the transmission control module connector and the power/ground circuits to the transmission control module. Clear the DTC and retest. If the problem persists, install a new transmission control module as required

P0748-13	Pressure Control Solenoid A Electrical - Circuit open	<ul style="list-style-type: none"> Pressure control solenoid A circuit, open circuit 	<ul style="list-style-type: none"> Check the transmission control module connector and the power/ground circuits to the transmission control module. Clear the DTC and retest. If the problem persists, install a new transmission control module as required
P076F-07	Gear 7 Ratio Incorrect - Mechanical failures	<ul style="list-style-type: none"> Mechanical failures 	<ul style="list-style-type: none"> Check the transmission oil level and quality, refer to the relevant section of the workshop manual. Clear the DTC and test drive the vehicle. Clear the DTC and retest. If the problem persists, renew the transmission
P077E-02	Transmission Fluid Temperature Measurement System - Multiple Sensor Correlation - General signal failure	<ul style="list-style-type: none"> General signal failure 	<ul style="list-style-type: none"> Check the transmission control module connector and the power/ground circuits to the transmission control module. Clear the DTC and retest. If the problem persists, install a new transmission control module as required
P0780-62	Shift Malfunction - Signal compare failure	<ul style="list-style-type: none"> Signal compare failure 	<ul style="list-style-type: none"> Check the transmission control module connector and the power/ground circuits to the transmission control module. Clear the DTC and retest. If the problem persists, install a new transmission control module as required
P0780-93	Shift Malfunction - No operation	<ul style="list-style-type: none"> Internal failure 	<ul style="list-style-type: none"> Check the transmission control module connector and the power/ground circuits to the transmission control module. Clear the DTC and retest. If the problem persists, install a new transmission control module as required
P0780-94	Shift Malfunction - Unexpected operation	<ul style="list-style-type: none"> Internal failure 	<ul style="list-style-type: none"> Check the transmission control module connector and the power/ground circuits to the transmission control module. Clear the DTC and retest. If the problem persists, install a new transmission control module as required
P0795-04	Pressure Control Solenoid C - System internal failures	<ul style="list-style-type: none"> Internal failure 	<ul style="list-style-type: none"> Check the transmission control module connector and the power/ground circuits to the transmission control module. Clear the DTC and retest. If the problem persists, install a new transmission control module as required
P07AD-07	Transmission Friction Element "F" Stuck On - Mechanical failures	<ul style="list-style-type: none"> Mechanical failures 	<ul style="list-style-type: none"> Check the transmission control module connector and the power/ground circuits to the transmission control module. Clear the DTC and retest. If the problem persists, install a new transmission control module as required
P07D9-07	Gear 8 Incorrect Ratio - Mechanical failures	<ul style="list-style-type: none"> Mechanical failures 	<ul style="list-style-type: none"> Check the transmission oil level and quality, refer to the relevant section of the workshop manual. Clear the DTC and test drive the vehicle. Clear the DTC and retest. If the problem persists, renew the transmission
P07DC-07	Incorrect Shift from Gear 1 - Mechanical failures	<ul style="list-style-type: none"> Mechanical failures 	<ul style="list-style-type: none"> Check the transmission oil level and quality, refer to the relevant section of the workshop manual. Clear the DTC and test drive the vehicle. Clear the DTC and retest. If the problem persists, renew the transmission
P07DD-07	Incorrect Shift from Gear 2 - Mechanical failures	<ul style="list-style-type: none"> Mechanical failures 	<ul style="list-style-type: none"> Check the transmission oil level and quality, refer to the relevant section of the workshop manual. Clear the DTC and test drive the vehicle. Clear the DTC and retest. If the problem persists, renew the transmission
P07DE-07	Incorrect Shift from Gear 3 - Mechanical failures	<ul style="list-style-type: none"> Mechanical failures 	<ul style="list-style-type: none"> Check the transmission oil level and quality, refer to the relevant section of the workshop manual. Clear the DTC and test drive the vehicle. Clear the DTC and retest. If the problem persists, renew the transmission
P07DF-07	Incorrect Shift from Gear 4 - Mechanical failures	<ul style="list-style-type: none"> Mechanical failures 	<ul style="list-style-type: none"> Check the transmission oil level and quality, refer to the relevant section of the workshop manual. Clear the DTC and test drive the vehicle. Clear the DTC and retest. If the problem persists, renew the transmission
P07E0-07	Incorrect Shift from Gear 5 - Mechanical failures	<ul style="list-style-type: none"> Mechanical failures 	<ul style="list-style-type: none"> Check the transmission oil level and quality, refer to the relevant section of the workshop manual. Clear the DTC and test drive the vehicle. Clear the DTC and retest. If the problem persists, renew the transmission
P07E1-07	Incorrect Shift from Gear 6 - Mechanical failures	<ul style="list-style-type: none"> Mechanical failures 	<ul style="list-style-type: none"> Check the transmission oil level and quality, refer to the relevant section of the workshop manual. Clear the DTC and test drive the vehicle. Clear the DTC and retest. If the problem persists, renew the transmission
P07E2-07	Incorrect Shift from Gear 7 - Mechanical failures	<ul style="list-style-type: none"> Mechanical failures 	<ul style="list-style-type: none"> Check the transmission oil level and quality, refer to the relevant section of the workshop manual. Clear the DTC and test drive the vehicle. Clear the DTC and retest. If the

			problem persists, renew the transmission
P07E3-07	Incorrect Shift from Gear 8 - Mechanical failures	<ul style="list-style-type: none"> Mechanical failures 	<ul style="list-style-type: none"> Check the transmission oil level and quality, refer to the relevant section of the workshop manual. Clear the DTC and test drive the vehicle. Clear the DTC and retest. If the problem persists, renew the transmission
P0801-94	Reverse Inhibit Control Circuit - Unexpected operation	<ul style="list-style-type: none"> Reverse inhibit control circuit unexpected operation 	<ul style="list-style-type: none"> Check the transmission control module connector and the power/ground circuits to the transmission control module. Clear the DTC and retest. If the problem persists, install a new transmission control module as required
P0810-04	Clutch Position Control Error - System internal failures	<ul style="list-style-type: none"> Internal failure 	<ul style="list-style-type: none"> Clear DTCs and test drive the vehicle. Ensure the displayed position matches the engaged gear Check and install a new transmission control module as required
P0826-01	Up and Down Switch Circuit - General electrical failure	<ul style="list-style-type: none"> Tip switch electrical fault or harness fault 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check the circuit between the command shift switch and the transmission control module. Check the switch operation of the Transmission Shift Selector
P0826-2A	Up and Down Switch Circuit - Signal stuck in range	<ul style="list-style-type: none"> Tip switch electrical fault or harness fault 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check the circuit between the command shift switch and the transmission control module. Check the switch operation of the transmission control switch
P0826-64	Up and Down Switch Circuit - Signal plausibility failure	<ul style="list-style-type: none"> Tip switch electrical fault or harness fault 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check the circuit between the command shift switch and the transmission control module. Check the switch operation of the transmission control switch
P084F-11	Park / Neutral Switch Output Circuit - Circuit short to ground	<ul style="list-style-type: none"> Park / neutral switch circuit short to ground 	<ul style="list-style-type: none"> Check the transmission control module connector and the power/ground circuits to the transmission control module. Clear the DTC and retest. If the problem persists, install a new transmission control module as required
P084F-12	Park / Neutral Switch Output Circuit - Circuit short to battery	<ul style="list-style-type: none"> Park / neutral switch circuit short to power 	<ul style="list-style-type: none"> Check the transmission control module connector and the power/ground circuits to the transmission control module. Clear the DTC and retest. If the problem persists, install a new transmission control module as required
P084F-13	Park / Neutral Switch Output Circuit - Circuit open	<ul style="list-style-type: none"> Park / neutral switch circuit open circuit 	<ul style="list-style-type: none"> Check the transmission control module connector and the power/ground circuits to the transmission control module. Clear the DTC and retest. If the problem persists, install a new transmission control module as required
P084F-14	Park / Neutral Switch Output Circuit - Circuit short to ground or open	<ul style="list-style-type: none"> Park / neutral switch circuit short to ground, open circuit 	<ul style="list-style-type: none"> Check the transmission control module connector and the power/ground circuits to the transmission control module. Clear the DTC and retest. If the problem persists, install a new transmission control module as required
P084F-29	Park / Neutral Switch Output Circuit - Signal invalid	<ul style="list-style-type: none"> Park / neutral switch output circuit signal invalid 	<ul style="list-style-type: none"> Check for correct output signal at transmission control module pin 1 to transmission plug (check in all positions). If the signal appears normal, then check wiring and connectors to the module. If no signal present, install a new transmission control module as required
P0850-02	Park / Neutral Switch Output Circuit - General signal failure	<ul style="list-style-type: none"> Park / neutral switch output circuit failure 	<ul style="list-style-type: none"> Clear DTC and retest. Test drive the vehicle and check parklock mechanism by engaging and disengaging the parking lock several times. If fault persists, check parklock components and renew as required. If fault persists, check and install a new transmission control module as required
P0850-29	Park / Neutral Switch Input Circuit - Signal invalid	<ul style="list-style-type: none"> Starter inhibit signal invalid 	<ul style="list-style-type: none"> Clear DTC and retest. Test drive the vehicle and check parklock mechanism by engaging and disengaging the parking lock several times. If fault persists, check parklock components and renew as required. If fault persists, check and install a new transmission control module as required
P0851-01	Park / Neutral Switch Input Circuit Low - General electrical failure	<ul style="list-style-type: none"> Switch input circuit general signal failure 	<ul style="list-style-type: none"> Clear DTC and retest. Test drive the vehicle and check parklock mechanism by engaging and disengaging the parking lock several times. If fault persists, check parklock components and renew as required. If fault persists, check and install a new transmission control module as required
P0852-01	Park / Neutral Switch Input Circuit High - General electrical	<ul style="list-style-type: none"> Switch input circuit general signal failure 	<ul style="list-style-type: none"> Clear DTC and retest. Test drive the vehicle and check parklock mechanism by engaging and disengaging the parking lock several times. If fault persists, check parklock components and renew as required. If fault persists, check

	failure		and install a new transmission control module as required
P0942-07	Hydraulic Pressure Unit - Mechanical failures	 <p>NOTE: This DTC is only active with vehicles fitted with stop/start functionality</p> <ul style="list-style-type: none"> Mechanical failures 	<ul style="list-style-type: none"> Check the transmission oil level and quality, refer to the relevant section of the workshop manual. Clear the DTC and test drive the vehicle. Clear the DTC and retest. If the problem persists, renew the transmission
P0942-62	Hydraulic Pressure Unit - Signal compare failure	 <p>NOTE: This DTC is only active with vehicles fitted with stop/start functionality</p> <ul style="list-style-type: none"> Hydraulic pressure unit signal compare failure 	<ul style="list-style-type: none"> Clear the DTC and retest. If the problem persists, install a new transmission control module as required
P0965-64	Pressure Control Solenoid B Control Circuit Range/Performance - Signal plausibility failure	<ul style="list-style-type: none"> Control circuit signal plausibility failure 	<ul style="list-style-type: none"> Check the transmission control module connector and the power/ground circuits to the transmission control module. Clear the DTC and retest. If the problem persists, install a new transmission control module as required
P0965-93	Pressure Control Solenoid B Control Circuit Range/Performance - No operation	<ul style="list-style-type: none"> Control circuit no operation 	<ul style="list-style-type: none"> Check the transmission control module connector and the power/ground circuits to the transmission control module. Clear the DTC and retest. If the problem persists, install a new transmission control module as required
P0965-94	Pressure Control Solenoid B Control Circuit Range/Performance - Unexpected operation	<ul style="list-style-type: none"> Control circuit unexpected operation 	<ul style="list-style-type: none"> Check the transmission control module connector and the power/ground circuits to the transmission control module. Clear the DTC and retest. If the problem persists, install a new transmission control module as required
P0966-11	Pressure Control Solenoid B Control Circuit Low - Circuit short to ground	<ul style="list-style-type: none"> Control circuit short circuit to ground 	<ul style="list-style-type: none"> Check the transmission control module connector and the power/ground circuits to the transmission control module. Clear the DTC and retest. If the problem persists, install a new transmission control module as required
P0966-12	Pressure Control Solenoid B Control Circuit Low - Circuit short to battery	<ul style="list-style-type: none"> Control circuit short to power 	<ul style="list-style-type: none"> Check the transmission control module connector and the power/ground circuits to the transmission control module. Clear the DTC and retest. If the problem persists, install a new transmission control module as required
P0966-14	Pressure Control Solenoid B Control Circuit Low - Circuit short to ground or open	<ul style="list-style-type: none"> Control circuit short circuit to ground or open circuit 	<ul style="list-style-type: none"> Check the transmission control module connector and the power/ground circuits to the transmission control module. Clear the DTC and retest. If the problem persists, install a new transmission control module as required
P0972-13	Shift Solenoid A Control Circuit Range/Performance - Circuit open	<ul style="list-style-type: none"> Control circuit open circuit 	<ul style="list-style-type: none"> Check the transmission control module connector and the power/ground circuits to the transmission control module. Clear the DTC and retest. If the problem persists, install a new transmission control module as required
P0972-64	Shift Solenoid A Control Circuit Range/Performance - Signal plausibility failure	<ul style="list-style-type: none"> Control circuit signal plausibility failure 	<ul style="list-style-type: none"> Check the transmission control module connector and the power/ground circuits to the transmission control module. Clear the DTC and retest. If the problem persists, install a new transmission control module as required
P0972-93	Shift Solenoid A Control Circuit Range/Performance - No operation	<ul style="list-style-type: none"> Control circuit no operation 	<ul style="list-style-type: none"> Check the transmission control module connector and the power/ground circuits to the transmission control module. Clear the DTC and retest. If the problem persists, install a new transmission control module as required
P0972-94	Shift Solenoid A Control Circuit Range/Performance - Unexpected operation	<ul style="list-style-type: none"> Control circuit unexpected operation 	<ul style="list-style-type: none"> Check the transmission control module connector and the power/ground circuits to the transmission control module. Clear the DTC and retest. If the problem persists, install a new transmission control module as required
P0973-11	Shift Solenoid A Control Circuit Low - Circuit short to	<ul style="list-style-type: none"> Shift solenoid circuit short to ground 	<ul style="list-style-type: none"> Check the transmission control module connector and the power/ground circuits to the transmission control module. Clear the DTC and retest. If the problem persists, install a

	ground or open	open	new transmission control module as required
P0985-18	Shift Solenoid E Control Circuit Low - Circuit current below threshold	<ul style="list-style-type: none"> Control circuit current below threshold 	<ul style="list-style-type: none"> Check the transmission control module connector and the power/ground circuits to the transmission control module. Clear the DTC and retest. If the problem persists, install a new transmission control module as required
P0986-12	Shift Solenoid E Control Circuit High - Circuit short to battery	<ul style="list-style-type: none"> Control circuit short to power 	<ul style="list-style-type: none"> Check the transmission control module connector and the power/ground circuits to the transmission control module. Clear the DTC and retest. If the problem persists, install a new transmission control module as required
P0986-19	Shift Solenoid E Control Circuit High - Circuit current above threshold	<ul style="list-style-type: none"> Control circuit current above threshold 	<ul style="list-style-type: none"> Check the transmission control module connector and the power/ground circuits to the transmission control module. Clear the DTC and retest. If the problem persists, install a new transmission control module as required
P164C-62	Internal Control Module Start-Stop Performance - Signal compare failure	 <p>NOTE: This DTC is only active with vehicles fitted with stop/start functionality</p> <ul style="list-style-type: none"> Signal compare failure 	<ul style="list-style-type: none"> Clear the DTC and retest. If the problem persists, install a new transmission control module as required
P1706-94	High Vehicle Speed Observed in Park - Unexpected operation	<ul style="list-style-type: none"> Unexpected operation 	<ul style="list-style-type: none"> Check the transmission control module connector and the power/ground circuits to the transmission control module. Clear the DTC and retest. If the problem persists, install a new transmission control module as required
P1707-72	Transfer Case Neutral or Park/Neutral Indication Circuit - Actuator stuck open	<ul style="list-style-type: none"> Actuator stuck open 	<ul style="list-style-type: none"> Ensure that emergency park release has not been pulled and is not sticking Clear DTC. Test drive the vehicle, engaging and disengaging the parking lock several times. If the fault persists renew the park pawl as required
P1707-77	Transfer Case Neutral or Park/Neutral Indication Circuit - Commanded position not reachable	<ul style="list-style-type: none"> Commanded position not reachable 	<ul style="list-style-type: none"> Ensure that emergency park release has not been pulled and is not sticking Clear DTC. Test drive the vehicle, engaging and disengaging the parking lock several times. If the fault persists renew the park pawl as required
P177A-07	Transmission Friction Element A or B - Mechanical failures	<ul style="list-style-type: none"> Mechanical failures 	<ul style="list-style-type: none"> Check the transmission oil level and quality, refer to the relevant section of the workshop manual. Clear the DTC and test drive the vehicle. If the problem persists, renew the transmission as required
P177B-07	Transmission Friction Element A or C - Mechanical failures	<ul style="list-style-type: none"> Mechanical failures 	<ul style="list-style-type: none"> Check the transmission oil level and quality, refer to the relevant section of the workshop manual. Clear the DTC and test drive the vehicle. If the problem persists, renew the transmission as required
P177C-07	Transmission Friction Element A or D - Mechanical failures	<ul style="list-style-type: none"> Mechanical failures 	<ul style="list-style-type: none"> Check the transmission oil level and quality, refer to the relevant section of the workshop manual. Clear the DTC and test drive the vehicle. If the problem persists, renew the transmission as required
P177D-07	Transmission Friction Element A or E - Mechanical failures	<ul style="list-style-type: none"> Mechanical failures 	<ul style="list-style-type: none"> Check the transmission oil level and quality, refer to the relevant section of the workshop manual. Clear the DTC and test drive the vehicle. If the problem persists, renew the transmission as required
P177E-07	Transmission Friction Element B or C - Mechanical failures	<ul style="list-style-type: none"> Mechanical failures 	<ul style="list-style-type: none"> Check the transmission oil level and quality, refer to the relevant section of the workshop manual. Clear the DTC and test drive the vehicle. If the problem persists, renew the transmission as required
P177F-07	Transmission Friction Element B or D - Mechanical failures	<ul style="list-style-type: none"> Mechanical failures 	<ul style="list-style-type: none"> Check the transmission oil level and quality, refer to the relevant section of the workshop manual. Clear the DTC and test drive the vehicle. If the problem persists, renew the transmission as required
P178A-07	Transmission Friction Element B or E - Mechanical failures	<ul style="list-style-type: none"> Mechanical failures 	<ul style="list-style-type: none"> Check the transmission oil level and quality, refer to the relevant section of the workshop manual. Clear the DTC and test drive the vehicle. If the problem persists, renew the transmission as required

P178B-07	Transmission Friction Element C or D - Mechanical failures	<ul style="list-style-type: none"> Mechanical failures 	<ul style="list-style-type: none"> Check the transmission oil level and quality, refer to the relevant section of the workshop manual. Clear the DTC and test drive the vehicle. If the problem persists, renew the transmission as required
P178C-07	Transmission Friction Element C or E - Mechanical failures	<ul style="list-style-type: none"> Mechanical failures 	<ul style="list-style-type: none"> Check the transmission oil level and quality, refer to the relevant section of the workshop manual. Clear the DTC and test drive the vehicle. If the problem persists, renew the transmission as required
P178D-07	Transmission Friction Element D or E - Mechanical failures	<ul style="list-style-type: none"> Mechanical failures 	<ul style="list-style-type: none"> Check the transmission oil level and quality, refer to the relevant section of the workshop manual. Clear the DTC and test drive the vehicle. If the problem persists, renew the transmission as required
P2159-02	Vehicle Speed Sensor B Range/Performance - General signal failure	<ul style="list-style-type: none"> General signal failure 	<ul style="list-style-type: none"> Check for related anti-lock brake system DTCs and refer to the relevant DTC index
P215B-62	Vehicle Speed / Output Shaft Speed Correlation - Signal compare failure	<ul style="list-style-type: none"> Signal compare failure 	<ul style="list-style-type: none"> Check anti-lock brake system DTCs and refer to the relevant DTC index
P258F-02	Torque Management Request Output Signal - General signal failure	<ul style="list-style-type: none"> General signal failure 	<ul style="list-style-type: none"> Clear DTC and retest. If fault persists, check and install a new transmission control module as required
P2700-07	Transmission Friction Element A Apply Time Range/Performance - Mechanical failures	<ul style="list-style-type: none"> Mechanical failures 	<ul style="list-style-type: none"> Check the transmission oil level and quality, refer to the relevant section of the workshop manual. Clear the DTC and test drive the vehicle. If the problem persists, renew the transmission as required
P2701-07	Transmission Friction Element B Apply Time Range/Performance - Mechanical failures	<ul style="list-style-type: none"> Mechanical failures 	<ul style="list-style-type: none"> Check the transmission oil level and quality, refer to the relevant section of the workshop manual. Clear the DTC and test drive the vehicle. If the problem persists, renew the transmission as required
P2702-07	Transmission Friction Element C Apply Time Range/Performance - Mechanical failures	<ul style="list-style-type: none"> Mechanical failures 	<ul style="list-style-type: none"> Check the transmission oil level and quality, refer to the relevant section of the workshop manual. Clear the DTC and test drive the vehicle. If the problem persists, renew the transmission as required
P2703-07	Transmission Friction Element D Apply Time Range/Performance - Mechanical failures	<ul style="list-style-type: none"> Mechanical failures 	<ul style="list-style-type: none"> Check the transmission oil level and quality, refer to the relevant section of the workshop manual. Clear the DTC and test drive the vehicle. If the problem persists, renew the transmission as required
P2704-07	Transmission Friction Element E Apply Time Range/Performance - Mechanical failures	<ul style="list-style-type: none"> Mechanical failures 	<ul style="list-style-type: none"> Check the transmission oil level and quality, refer to the relevant section of the workshop manual. Clear the DTC and test drive the vehicle. If the problem persists, renew the transmission as required
P2711-94	Unexpected Mechanical Gear Disengagement - Unexpected operation	<ul style="list-style-type: none"> Gear disengagement unexpected operation 	<ul style="list-style-type: none"> Check the transmission control module connector and the power/ground circuits to the transmission control module. Clear the DTC and retest. If the problem persists, install a new transmission control module as required
P2713-04	Pressure Control Solenoid D - System internal failures	<ul style="list-style-type: none"> System internal failures 	<ul style="list-style-type: none"> Check the transmission control module connector and the power/ground circuits to the transmission control module. Clear the DTC and retest. If the problem persists, install a new transmission control module as required
P2722-04	Pressure Control Solenoid E - System internal failures	<ul style="list-style-type: none"> System internal failures 	<ul style="list-style-type: none"> Check the transmission control module connector and the power/ground circuits to the transmission control module. Clear the DTC and retest. If the problem persists, install a new transmission control module as required
P2757-93	Torque Converter Clutch Pressure Control Solenoid Control Circuit Perf	<ul style="list-style-type: none"> Control solenoid control circuit no operation 	<ul style="list-style-type: none"> Check the transmission control module connector and the power/ground circuits to the transmission control module. Clear the DTC and retest. If the problem persists, install a new transmission control module as required

	or Stuck Off - No operation		
P2757-94	Torque Converter Clutch Pressure Control Solenoid Control Circuit Perf or Stuck Off - Unexpected operation	<ul style="list-style-type: none"> Control circuit unexpected operation 	<ul style="list-style-type: none"> Check the transmission control module connector and the power/ground circuits to the transmission control module. Clear the DTC and retest. If the problem persists, install a new transmission control module as required
P2759-11	Torque Converter Clutch Pressure Control Solenoid Electrical - Circuit short to ground	<ul style="list-style-type: none"> Control solenoid circuit short to ground 	<ul style="list-style-type: none"> Check the transmission control module connector and the power/ground circuits to the transmission control module. Clear the DTC and retest. If the problem persists, install a new transmission control module as required
P2759-12	Torque Converter Clutch Pressure Control Solenoid Electrical - Circuit short to battery	<ul style="list-style-type: none"> Control solenoid circuit short to power 	<ul style="list-style-type: none"> Check the transmission control module connector and the power/ground circuits to the transmission control module. Clear the DTC and retest. If the problem persists, install a new transmission control module as required
P2761-13	Torque Converter Clutch Pressure Control Solenoid Control Circuit / Open - Circuit open	<ul style="list-style-type: none"> Control solenoid circuit open 	<ul style="list-style-type: none"> Check the transmission control module connector and the power/ground circuits to the transmission control module. Clear the DTC and retest. If the problem persists, install a new transmission control module as required
P2762-64	Torque Converter Clutch Pressure Control Solenoid Control Circuit Range / Perf - Signal plausibility failure	<ul style="list-style-type: none"> Control circuit signal plausibility failure 	<ul style="list-style-type: none"> Check the transmission control module connector and the power/ground circuits to the transmission control module. Clear the DTC and retest. If the problem persists, install a new transmission control module as required
P2784-02	Input / Turbine Speed Sensor A / B Correlation - General signal failure	<ul style="list-style-type: none"> Sensor general signal failure, multiple input speed signal faults 	<ul style="list-style-type: none"> Check engine control module for related DTCs and refer to the relevant DTC index Check anti-lock brake system DTCs and refer to the relevant DTC index
P2787-4B	Clutch Temperature Too High - Over temperature	<ul style="list-style-type: none"> Clutch over temperature 	<ul style="list-style-type: none"> Allow the transmission to cool, clear the DTC and retest. Check transmission oil level and check for excessive gear changes during normal driving. Check shift paddles for intermittent operation and renew as required
P2787-98	Clutch Temperature Too High - Component or system over temperature	<ul style="list-style-type: none"> Component or system over temperature 	<ul style="list-style-type: none"> Allow the transmission to cool, clear the DTC and retest. Clear the DTC and retest. Check transmission oil level and check for excessive gear changes during normal driving. Check shift paddles for intermittent operation. Refer to the relevant section of the workshop manual and check the transmission oil level and quality. Clear the DTC and test drive the vehicle using all gears in drive and reverse. Clear the DTC and retest. If the problem persists, or if any other gear ratio related DTCs are logged, renew the transmission
P2793-92	Gear Shift Direction Circuit - Performance or incorrect operation	<ul style="list-style-type: none"> Gear shift direction circuit performance or incorrect operation 	<ul style="list-style-type: none"> Check the transmission control module connector and the power/ground circuits to the transmission control module. Clear the DTC and retest. If the problem persists, install a new transmission control module as required
P2793-94	Gear Shift Direction Circuit - Unexpected operation	<ul style="list-style-type: none"> Gear shift direction circuit unexpected operation 	<ul style="list-style-type: none"> Check the transmission control module connector and the power/ground circuits to the transmission control module. Clear the DTC and retest. If the problem persists, install a new transmission control module as required
P279D-02	Four Wheel Drive (4WD) Range Signal Circuit - General signal failure	<ul style="list-style-type: none"> General signal failure 	<ul style="list-style-type: none"> Check transfer case control module DTCs and refer to the relevant DTC index
P279D-64	Four Wheel Drive (4WD) Range Signal Circuit - Signal plausibility failure	<ul style="list-style-type: none"> Signal plausibility failure 	<ul style="list-style-type: none"> Check transfer case control module DTCs and refer to the relevant DTC index
U0001-88	High Speed CAN Communication CAN Bus - Bus off	<ul style="list-style-type: none"> CAN bus off 	<ul style="list-style-type: none"> Check the powertrain control module and anti-lock brake system control module for other CAN bus off DTCs and refer to the relevant DTC index. Refer to the electrical

			<p>circuit diagrams and check the module connector and power/ground circuits. Refer to network communication section of the workshop manual. Using the manufacturers approved diagnostic system, complete a CAN integrity test. Check fuses, examine fuse-box for water ingress, moisture or loose plugs. Refer to the electrical circuit diagrams and connect an Ohm meter between the pins for CAN high and CAN low. If the resistance is 0 Ohm with a short circuit at CAN bus, renew the transmission control module. If the resistance is infinite with open circuit at CAN bus, renew the transmission control module. A correct resistance should be approximately 40kOhm</p>
U0100-63	<p>Lost Communication With ECM/PCM "A" - Circuit / component protection time-out</p>	<ul style="list-style-type: none"> • Circuit / component protection time-out • CAN signal error from engine control module • CAN bus fault 	<ul style="list-style-type: none"> • Check for other CAN bus codes. Refer to the electrical circuit diagrams and check the module connector and power/ground circuits. Refer to network communication section of the workshop manual. Using the manufacturers approved diagnostic system, complete a CAN integrity test
U0102-63	<p>Lost Communication with Transfer Case Control Module - Circuit / component protection time-out</p>	<ul style="list-style-type: none"> • Circuit / component protection time-out • CAN signal error from transfer case control module • CAN bus fault 	<ul style="list-style-type: none"> • Check for other CAN bus codes. Refer to the electrical circuit diagrams and check the module connector and power/ground circuits. Refer to network communication section of the workshop manual. Using the manufacturers approved diagnostic system, complete a CAN integrity test
U0103-63	<p>Lost Communication With Gear Shift Control Module A - Circuit / component protection time-out</p>	<ul style="list-style-type: none"> • Circuit / component protection time-out • LIN signal error from transmission control switch 	<ul style="list-style-type: none"> • Refer to the electrical circuit diagrams and check module connectors / LIN harness between transmission control module and transmission control switch
U0121-63	<p>Lost Communication With Anti-Lock Brake System (ABS) Control Module - Circuit / component protection time-out</p>	<ul style="list-style-type: none"> • Circuit / component protection time-out • CAN signal error from anti-lock brake system control module • CAN bus fault 	<ul style="list-style-type: none"> • Check for other CAN bus codes. Refer to the electrical circuit diagrams and check the module connector and power/ground circuits. Refer to network communication section of the workshop manual. Using the manufacturers approved diagnostic system, complete a CAN integrity test
U0126-63	<p>Lost Communication With Steering Angle Sensor Module - Circuit / component protection time-out</p>	<ul style="list-style-type: none"> • Circuit / component protection time-out • CAN signal error from steering angle sensor module • CAN bus fault 	<ul style="list-style-type: none"> • Check for other CAN bus codes. Refer to the electrical circuit diagrams and check the module connector and power/ground circuits. Refer to network communication section of the workshop manual. Using the manufacturers approved diagnostic system, complete a CAN integrity test
U0128-63	<p>Lost Communication With Park Brake Control Module - Circuit / component protection time-out</p>	<ul style="list-style-type: none"> • Circuit / component protection time-out • CAN signal error from electric park brake control module • CAN bus fault 	<ul style="list-style-type: none"> • Check for other CAN bus codes. Refer to the electrical circuit diagrams and check the module connector and power/ground circuits. Refer to network communication section of the workshop manual. Using the manufacturers approved diagnostic system, complete a CAN integrity test
U0138-63	<p>Lost Communication with All Terrain Control Module - Circuit / component protection time-out</p>	<ul style="list-style-type: none"> • Circuit / component protection time-out • CAN signal error from centre console 	<ul style="list-style-type: none"> • Check for other CAN bus codes. Refer to the electrical circuit diagrams and check the module connector and power/ground circuits. Refer to network communication section of the workshop manual. Using the manufacturers approved diagnostic system, complete a CAN integrity test

		<ul style="list-style-type: none"> switch pack CAN bus fault 	
U0140-63	Lost Communication With Body Control Module - Circuit / component protection time-out	<ul style="list-style-type: none"> Circuit / component protection time-out CAN signal error from central junction box CAN bus fault 	<ul style="list-style-type: none"> Check for other CAN bus codes. Refer to the electrical circuit diagrams and check the module connector and power/ground circuits. Refer to network communication section of the workshop manual. Using the manufacturers approved diagnostic system, complete a CAN integrity test
U0300-57	Internal Control Module Software Incompatibility - Invalid / incomplete software component	<ul style="list-style-type: none"> Invalid / incomplete software component 	<ul style="list-style-type: none"> Check that the vehicle configuration is correctly set in the car configuration file using the manufacturer's approved diagnostic software. Check and update the transmission control module software version if necessary
U0401-02	Invalid Data Received from ECM/PCM A - General signal failure	<ul style="list-style-type: none"> General signal failure 	<ul style="list-style-type: none"> Check engine control module for related DTCs. Refer to the relevant section in the workshop manual
U0401-29	Invalid Data Received from ECM/PCM A - Signal invalid	<ul style="list-style-type: none"> Signal invalid CAN signal error from engine control module CAN bus fault 	<ul style="list-style-type: none"> Check for other CAN bus codes. Refer to the electrical circuit diagrams and check the module connector and power/ground circuits. Refer to network communication section of the workshop manual. Using the manufacturers approved diagnostic system, complete a CAN integrity test
U0401-41	Invalid Data Received from ECM/PCM A - General checksum failure	<ul style="list-style-type: none"> General checksum failure CAN signal error from engine control module CAN bus fault 	<ul style="list-style-type: none"> Check for other CAN bus codes. Refer to the electrical circuit diagrams and check the module connector and power/ground circuits. Refer to network communication section of the workshop manual. Using the manufacturers approved diagnostic system, complete a CAN integrity test
U0401-64	Invalid Data Received from ECM/PCM A - Signal plausibility failure	<ul style="list-style-type: none"> Signal plausibility failure 	<ul style="list-style-type: none"> Check for other module related DTCs. Refer to the relevant section in the workshop manual. Check the control module for correct software version using the manufacturers approved diagnostic system
U0401-82	Invalid Data Received from ECM/PCM A - Alive / sequence counter incorrect / not updated	<ul style="list-style-type: none"> Alive / sequence counter incorrect / not updated CAN signal error from engine control module CAN bus fault 	<ul style="list-style-type: none"> Check for other CAN bus codes. Refer to the electrical circuit diagrams and check the module connector and power/ground circuits. Refer to network communication section of the workshop manual. Using the manufacturers approved diagnostic system, complete a CAN integrity test
U0401-83	Invalid Data Received from ECM/PCM A - Value of signal protection calculation incorrect	<ul style="list-style-type: none"> Value of signal protection calculation incorrect CAN signal error from engine control module 	<ul style="list-style-type: none"> Check engine control module for other codes. Carry out repair actions. Refer to the electrical circuit diagrams and check the module connector and power/ground circuits
U0404-41	Invalid Data Received from Gear Shift Control Module A - General checksum failure	<ul style="list-style-type: none"> General checksum failure 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check module connectors / CAN harness between transmission control module and transmission control switch
U0404-64	Invalid Data Received from Gear Shift Control Module A - Signal plausibility failure	<ul style="list-style-type: none"> Signal plausibility failure 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check module connectors / CAN harness between transmission control module and transmission control switch. Check transmission control switch for failure
U0404-82	Invalid Data Received from Gear Shift Control Module A - Alive /	<ul style="list-style-type: none"> Alive / sequence counter incorrect / not 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check module connectors / CAN harness between transmission control module and transmission control switch

	sequence counter incorrect / not updated	updated	
U0404-83	Invalid Data Received From Gear Shift Control Module A - Value of signal protection calculation incorrect	<ul style="list-style-type: none"> Value of signal protection calculation incorrect 	<ul style="list-style-type: none"> Refer to the electrical circuit diagrams and check module connectors / CAN harness between transmission control module and transmission control switch. Check transmission control switch for failure
U0415-29	Invalid Data Received From Anti-Lock Brake System (ABS) Control Module - Signal invalid	<ul style="list-style-type: none"> Signal invalid CAN signal error from anti-lock brake system control module CAN bus fault 	<ul style="list-style-type: none"> Check for other CAN bus codes. Refer to the electrical circuit diagrams and check the module connector and power/ground circuits. Refer to network communication section of the workshop manual. Using the manufacturers approved diagnostic system, complete a CAN integrity test
U0415-41	Invalid Data Received From Anti-Lock Brake System (ABS) Control Module - General checksum failure	<ul style="list-style-type: none"> General checksum failure CAN signal error from anti-lock brake system control module CAN bus fault 	<ul style="list-style-type: none"> Check for other CAN bus codes. Refer to the electrical circuit diagrams and check the module connector and power/ground circuits. Refer to network communication section of the workshop manual. Using the manufacturers approved diagnostic system, complete a CAN integrity test
U0415-82	Invalid Data Received From Anti-Lock Brake System (ABS) Control Module - Alive / sequence counter incorrect / not updated	<ul style="list-style-type: none"> Alive / sequence counter incorrect / not updated CAN signal error from anti-lock brake system control module CAN bus fault 	<ul style="list-style-type: none"> Check for other CAN bus codes. Refer to the electrical circuit diagrams and check the module connector and power/ground circuits. Refer to network communication section of the workshop manual. Using the manufacturers approved diagnostic system, complete a CAN integrity test
U0416-98	Invalid Data Received From Vehicle Dynamics Control Module - Component or system over temperature	<ul style="list-style-type: none"> Component or system over temperature 	<ul style="list-style-type: none"> Check anti-lock brake system for other codes. Carry out repair actions. Refer to the electrical circuit diagrams and check the module connector and power/ground circuits
U0422-41	Invalid Data Received From Body Control Module - General checksum failure	<ul style="list-style-type: none"> General checksum failure CAN signal error from central junction box CAN bus fault 	<ul style="list-style-type: none"> Check for other CAN bus codes. Refer to the electrical circuit diagrams and check the module connector and power/ground circuits. Refer to network communication section of the workshop manual. Using the manufacturers approved diagnostic system, complete a CAN integrity test
U0422-82	Invalid Data Received From Body Control Module - Alive / sequence counter incorrect / not updated	<ul style="list-style-type: none"> Alive / sequence counter incorrect / not updated 	<ul style="list-style-type: none"> Check for other CAN bus codes. Refer to the electrical circuit diagrams and check the module connector and power/ground circuits. Refer to network communication section of the workshop manual. Using the manufacturers approved diagnostic system, complete a CAN integrity test
U0422-83	Invalid Data Received From Body Control Module - Value of signal protection calculation incorrect	<ul style="list-style-type: none"> Value of signal protection calculation incorrect PowerMode CAN signal error from passenger compartment fuse box 	<ul style="list-style-type: none"> Check for other CAN bus codes. Refer to the electrical circuit diagrams and check the module connector and power/ground circuits. Refer to network communication section of the workshop manual. Using the manufacturers approved diagnostic system, complete a CAN integrity test
U0424-08	Invalid Data Received From HVAC Control Module - Bus signal / message failures	<ul style="list-style-type: none"> Bus signal / message failures 	<ul style="list-style-type: none"> Check integrated climate control module and switch pack for other codes. Carry out repair actions. Refer to the electrical circuit diagrams and check the module connector and power/ground circuits

U101B-87	Lost Communication With GSM - Multiple Bus - Missing message	<ul style="list-style-type: none"> • Missing message 	<ul style="list-style-type: none"> • Check for other CAN bus and LIN related DTC codes. Refer to the electrical circuit diagrams and check the module connector and power/ground circuits. Refer to network communication section of the workshop manual. Using the manufacturers approved diagnostic system, complete a CAN/LIN integrity test
U2101-56	Control Module Configuration Incompatible - Invalid / incomplete configuration	<ul style="list-style-type: none"> • Invalid / incomplete configuration 	<ul style="list-style-type: none"> • Check that the vehicle configuration is correctly set in the car configuration file using the manufacturer's approved diagnostic software. Check and update the transmission control module software version if necessary
U3000-56	Control Module - Invalid / incomplete configuration	<ul style="list-style-type: none"> • Invalid / incomplete configuration 	<ul style="list-style-type: none"> • Clear the DTC and retest. If the problem persists, contact Dealer Technical Support
U3001-94	Control Module Improper Shutdown - Unexpected operation	<ul style="list-style-type: none"> • Unexpected operation • Charging circuit short to ground, power, open circuit • Quiescent current high • Battery failure/worn out • Generator failure 	<ul style="list-style-type: none"> • Refer to the electrical circuit diagrams and check charging circuit for short to ground, power, open circuit. Clear DTC and repeat automated diagnostic procedure using the manufacturer approved diagnostic system. If DTC remains check battery is in fully charged and serviceable condition using the Midtronics battery tester and battery care manual. If OK suspect the generator