# 2004 4T45-E transmission
# TRANSMISSION DIAGNOSTIC PARAMETERS

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| SENSED PARAMETER | FAULT CODE | ACCEPTABLE OPERATING RANGE AND RATIONALITY | PRIMARY MALF DETECTION PARAMETERS | SECONDARY MALF PARAMETERS & CONDITIONS | MONITORING TIME LENGTH & DTC TYPE |
|---|---|---|---|---|---|
| vOutput Speed Sensor Circuti: Low Voltage | P0502 | 0 – 6500 RPM<br><br>Low vehicle speed with large engine speed in Drive range | raw Output Speed < 150 RPM | No MAP, TPS (see below), P0503, P0716, P0717 DTCs<br>No Engine Torque default<br>Gear Selector ≠ Park/Neutral<br>TPS > 12.0%<br>1500 < Input Speed < 5000 RPM<br>85 < Engine Torque < 150 N-m | 2.6 sec<br><br>Type B |
| Output Speed Sensor Circuit: Intermittent | P0503 | 0 – 6500 RPM<br><br>Loss of vehicle speed with moving vehicle | ΔVSS > 600 RPM in Drive ranges<br><br>VSS > 300 RPM (34 kph) for > 3.0 sec | No P0716, P0717, P1843 DTCs<br>No Engine Torque default<br>500 < Engine RPM < 6500 for 5.0 sec, not in fuel cutoff<br>4WD Range Change time = 0<br>Positive ΔVSS, loop-to-loop, < 250 RPM for > 2.0 sec<br>100 < Engine Torque < 150 N-m<br>Positive ΔISS, loop-to-loop, < 500 RPM for > 2.0 sec | 3.0 sec for Drive ranges<br><br>Type B |
| System Voltage: LOW | P0562 | 0 – 24 V<br><br>LOW voltage with operating vehicle | Ignition Voltage < 8.0 V | Engine Speed > 1200 RPM | 20.0 sec<br><br>Type A |
| System Voltage: HIGH | P0563 | 0 – 24 V<br><br>HIGH voltage with operating vehicle | Ignition Voltage > 18.0 V | 500 < Engine RPM < 6500 for 5.0 sec, not in fuel cutoff | 10.0 sec<br><br>Type A |
| Transmission Control Module Read Only Memory | P0601 | EPROM/Flash memory corruption (Incorrect program/calibrations checksum) | (SoftwareChecksumBypass = FALSE)<br>  **OR** (CalModuleChecksumBypass = FALSE) | None | Immediate<br><br>Type A |
| Transmission Control Module Not Programmed | P0602 | Non-programmed ITCM (calibrations) | KbCOND_NoStartCal[FALSE] = TRUE | None | Immediate<br><br>Type A |

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|---|---|
| MAF DTCs | P0101-P0102-P0103 |
| MAP DTCs | P0105-P0106-P0107-P0108 |
| MAP Intermittent | P1106-P1107 |
| ECT DTCs | P0115-P0116-P0117-P0118-P0125-P0126-P0128 |
| TP DTCs | P0120-P0121-P0122-P0123-P0220-P0221-P0222-P0223-P0225-P0226-P0227-P0228-P1120-P1121-P1122-P1125 |
| | P1280-P1281-P1282-P1283-P1285-P1286-P1287-P1288 |
| System Voltage DTCs | P0560-P0562-P0563 |

Type A and Type B codes illuminate the "Service Engine Soon" lamp.               FA = Fault Active
Type C codes illuminate the "Service Vehicle Soon" or "Wrench" lamp.          FATKO = Fault Active This Key On

# 2004 **4T45-E** transmission
# TRANSMISSION DIAGNOSTIC PARAMETERS

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| SENSED PARAMETER | FAULT CODE | ACCEPTABLE OPERATING RANGE AND RATIONALITY | PRIMARY MALF DETECTION PARAMETERS | SECONDARY MALF PARAMETERS & CONDITIONS | MONITORING TIME LENGTH & DTC TYPE |
|---|---|---|---|---|---|
| Transmission Control Module Long-Term Memory Reset | P0603 | Wrong copy of Non-volatile Memory to RAM | Non-volatile memory checksum failure | None | Immediate Type A |
| Transmission Control Module Random Access Memory | P0604 | RAM failure | RAM read/write failure (single word) | None | Immediate Type A |
| Transmission Fluid Temperature Sensor Performance | P0711 | 0.24 - 5.0 V  Fail Cases 1 & 2 Trans Temp remains constant when measurable change is expected  Fail Case 3 Unrealistic change in trans temperature | Fail Case 1 -40° C. < Startup Trans Temp < 21° C. ΔTrans Temp < 2.25° C.  Fail Case 2 129° C. < Startup Trans Temp < 145° C. ΔTrans Temp < 2.25° C.  Fail Case 3 ΔTrans Temp > 20° C. in 200 msec | No ECT (see below) P0502, P0503, P0716, P0717 DTCs Vehicle Speed > 8.0 kph for 900 sec cumulative -38° C. < Trans Temp < 149° C. TCC Slip > 120 RPM for > 409 sec cumulative ECT > 70° C. ΔECT > 55° C. since start-up | Fail Cases 1, 2 80 sec  Fail Case 3 Fail Counter > 14 within 7.0 sec  Type C |
| Transmission Fluid Temperature Sensor Circuit: LOW Voltage | P0712 | 0.24 - 5.0 V  Continuous Short-to-Ground in Trans Temperature Sensor or TTS circuit | Raw TTS > 150° C | 500 < Engine RPM < 6500 for 5.0 sec, not in fuel cutoff | 10.0 sec  Type C |
| Transmission Fluid Temperature Sensor Circuit: HIGH Voltage | P0713 | 0.24 - 5.0 V  Continuous Open in Trans Temperature Sensor or TTS circuit | Raw TTS < -35° C | No P0502, P0503, P0716, P0717 DTCs 500 < Engine RPM < 6500 for 5.0 sec, not in fuel cutoff TCC Slip > 120 RPM > 200 sec VSS > 50 RPM for 400 sec | 25.5 sec  Type C |

| | |
|---|---|
| MAF DTCs | P0101-P0102-P0103 |
| MAP DTCs | P0105-P0106-P0107-P0108 |
| MAP Intermittent | P1106-P1107 |
| ECT DTCs | P0115-P0116-P0117-P0118-P0125-P0126-P0128 |
| TP DTCs | P0120-P0121-P0122-P0123-P0220-P0221-P0222-P0223-P0225-P0226-P0227-P0228-P1120-P1121-P1122-P1125 |
| | P1280-P1281-P1282-P1283-P1285-P1286-P1287-P1288 |
| System Voltage DTCs | P0560-P0562-P0563 |

Type A and Type B codes illuminate the "Service Engine Soon" lamp.　　　　　　　　　FA = Fault Active
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| SENSED PARAMETER | FAULT CODE | ACCEPTABLE OPERATING RANGE AND RATIONALITY | PRIMARY MALF DETECTION PARAMETERS | SECONDARY MALF PARAMETERS & CONDITIONS | MONITORING TIME LENGTH & DTC TYPE |
|---|---|---|---|---|---|
| Input Speed Sensor Circuit Performance | P0716 | 0 - 6500 RPM<br><br>Unrealistically large change in Input Speed in very short time | Input Speed change > 1300 RPM | No P0502, P0503, P0717, P0752, P1842, P1843, TPS DTCs<br>No Engine Torque default<br>500 < Engine RPM < 6500 for 5.0 sec, not in fuel cutoff<br>ΔISS < 500 RPM for 0.5 sec<br>ISS > 2000 for 6.0 sec<br>100 < Engine Torque < 150 N-m<br>TPS > 15.0%<br>Vehicle Speed > 8.0 kph | 0.8 sec<br><br>Type B |
| Input Speed Sensor Circuit LOW Voltage | P0717 | 0 - 6500 RPM<br><br>Low Input Speed with large vehicle speed | Input Speed < 100 RPM | No P0502, P0503 DTCs<br>No Engine Torque default<br>500 < Engine RPM < 6500 for 5.0 sec, not in fuel cutoff<br>100 < Engine Torque < 150 N-m<br>Vehicle Speed > 8.0 kph | 5.0 sec<br><br>Type B |
| Engine Speed: No Signal | P0727 | 0 - 6500 RPM<br><br>Detects no response from CAN Bus signal for engine speed | CAN Bus Engine Speed Incorrect flag = 1 | 8.0 < Ignition Voltage < 18.0 V<br>500 < Engine RPM < 6500 for 5.0 sec, not in fuel cutoff | 2.0 sec<br><br>Type A |
| Torque Converter Clutch System Stuck OFF | P0741 | High TCC Slip speed with TCC commanded ON | TCC Slip speed > 200 RPM<br><br>Count = 1 | No TPS (see below), P0502, P0503, P0716, P0717, P0742, P1860, P1887 DTCs<br>No Engine Torque Default<br>500 < Engine RPM < 6500 for 5.0 sec, not in fuel cutoff<br>8.0 < TPS < 100%<br>20° C. < Trans Temp < 130° C.<br>TCC commanded locked on<br>Commanded Gear > 1<br>Clutch Capacity > 60% for 3.0 sec<br>0.61 < Trans Ratio < 1.71<br>40 < Engine Torque < 250 N-m<br>Time since Range change > 6.0 sec | 6.0 sec<br><br>Type B |

| | |
|---|---|
| MAF DTCs | P0101-P0102-P0103 |
| MAP DTCs | P0105-P0106-P0107-P0108 |
| MAP Intermittent | P1106-P1107 |
| ECT DTCs | P0115-P0116-P0117-P0118-P0125-P0126-P0128 |
| TP DTCs | P0120-P0121-P0122-P0123-P0220-P0221-P0222-P0223-P0225-P0226-P0227-P0228-P1120-P1121-P1122-P1125<br>P1280-P1281-P1282-P1283-P1285-P1286-P1287-P1288 |
| System Voltage DTCs | P0560-P0562-P0563 |

Type A and Type B codes illuminate the "Service Engine Soon" lamp.  
Type C codes illuminate the "Service Vehicle Soon" or "Wrench" lamp.

FA = Fault Active  
FATKO = Fault Active This Key On

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|---|---|---|---|---|---|
| Torque Converter Clutch System Stuck ON | P0742 | Lack of Torque Converter release oil pressure (Switch is closed) with TCC commanded OFF | TCC Release Switch is closed<br><br>Count = 2 | No TPS (see below), P1860, P1887 DTCs<br>No Engine Torque Default<br>500 < Engine RPM < 6500 for 5.0 sec, not in fuel cutoff<br>TCC commanded OFF<br>15.0 < Vehicle Speed < 255 kph<br>12.0 < TPS < 100%<br>0.61 < Trans Ratio < 1.09<br>10° C. < Trans Temp < 130° C.<br>40 < Engine Torque < 250 N-m<br>Time since Range change > 6.0 sec | 6.0 sec<br><br>Type B |
| 1-2 Shift Solenoid Valve Performance: Stuck OFF | P0751 | 2-2-3-3 shift pattern | <u>Fail Case 1</u><br>Command Gear = 1<br>1.54 < Ratio < 1.71<br><br><u>Fail Case 2</u><br>Command Gear = 4<br>0.91 < Ratio < 1.07<br><br>Count = 2 | No TPS (see below), P0502, P0503, P0716, P0717, 1842, P1843, P1845, P1847 DTCs<br>No Engine Torque Default<br>500 < Engine RPM < 6500 for 5.0 sec, not in fuel cutoff<br>TPS > 8.0%<br>Vehicle Speed > 8.0 kph<br>20° C. < Trans Temp < 130° C.<br>30 < Engine Torque < 250 N-m | <u>Fail Case 1</u><br>2.0 sec<br><br><u>Fail Case 2</u><br>5.0 sec<br><br><br>Type B |
| 1-2 Shift Solenoid Valve Performance: Stuck ON | P0752 | 1-1-4-4 shift pattern | <u>Fail Case 3</u><br>Command Gear = 2<br>2.87 < Ratio < 3.13<br><br><u>Fail Case 4</u><br>Command Gear = 3<br>0.61 < Ratio < 0.71<br><br>Count = 2 | See P0751 | <u>Fail Case 3</u><br>3.0 sec<br><br><u>Fail Case 4</u><br>5.0 sec<br><br><br>Type B |

| | |
|---|---|
| MAF DTCs | P0101-P0102-P0103 |
| MAP DTCs | P0105-P0106-P0107-P0108 |
| MAP Intermittent | P1106-P1107 |
| ECT DTCs | P0115-P0116-P0117-P0118-P0125-P0126-P0128 |
| TP DTCs | P0120-P0121-P0122-P0123-P0220-P0221-P0222-P0223-P0225-P0226-P0227-P0228-P1120-P1121-P1122-P1125 |
| | P1280-P1281-P1282-P1283-P1285-P1286-P1287-P1288 |
| System Voltage DTCs | P0560-P0562-P0563 |

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|---|---|---|---|---|---|
| 2-3 Shift Solenoid Valve Performance: Stuck ON | P0756 | 4-3-3-4 shift pattern | Fail Case 5<br>Command Gear = 1<br>0.61 < Ratio < 0.71<br><br>Fail Case 6<br>Command Gear = 2<br>0.91 < Ratio < 1.07<br><br><br>Count = 1 | See P0751 | Fail Case 5<br>2.0 sec<br><br>Fail Case 6<br>3.0 sec<br><br><br>Type A |
| 2-3 Shift Solenoid Valve Performance: Stuck OFF | P0757 | 1-2-2-1 shift pattern | Fail Case 7<br>30 < Engine Torque < 250 N-m<br>Command Gear = 3<br>1.54 < Ratio < 1.71<br><br>Fail Case 8<br>0 < Engine Torque < 250 N-m<br>Command Gear = 4<br>2.87 < Ratio < 3.13<br><br>Count = 1 | No TPS (see below), P0502, P0503, P0716, P0717, P1842, P1843, P1845, P1847 DTCs<br>No Engine Torque Default<br>500 < Engine RPM < 6500 for 5.0 sec, not in fuel cutoff<br>8.0 < TPS < 100.0%<br>20° C. < Trans Temp < 130° C.<br>Vehicle Speed > 8.0 kph | Fail Case 7<br>3.0 sec<br><br>Fail Case 8<br>2.0 sec<br><br><br>Type A |
| TCM Long-Term Memory Performance | P1621 | NVM write error at key-down | TCM Non-Volatile Memory Incorrect flag = 1 | 8.0 < Ignition Voltage < 18.0 V<br>Ignition ON | 2.0 sec<br><br>Type A |
| Engine Torque Signal | P1779 | CAN: Protocol for TCM to receive engine control inputs from Engine Control Module. CAN confirms messages are being received via BUS failure timer. CAN bits are checked for Pass/ Fail. | CAN Bus Engine Torque Incorrect flag = 1 | 8.0 < Ignition Voltage < 18.0 V<br>500 < Engine RPM < 6500 for 5.0 sec, not in fuel cutoff<br>CAN BUS ECU Failure ≠ 0 sec<br><br>**NOTE**: Fail time = 0, code has failed | 2.0 sec<br><br>Type A |

| | |
|---|---|
| MAF DTCs | P0101-P0102-P0103 |
| MAP DTCs | P0105-P0106-P0107-P0108 |
| MAP Intermittent | P1106-P1107 |
| ECT DTCs | P0115-P0116-P0117-P0118-P0125-P0126-P0128 |
| TP DTCs | P0120-P0121-P0122-P0123-P0220-P0221-P0222-P0223-P0225-P0226-P0227-P0228-P1120-P1121-P1122-P1125 |
| | P1280-P1281-P1282-P1283-P1285-P1286-P1287-P1288 |
| System Voltage DTCs | P0560-P0562-P0563 |

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|---|---|---|---|---|---|
| Throttle/Pedal Position Signal | P1791 | CAN: Protocol for TCM to receive engine control inputs from Engine Control Module. CAN confirms messages are being received via BUS failure timer. CAN bits are checked for Pass/ Fail. | Throttle Position Invalid Flag = 1 | 8.0 < Ignition Voltage < 18.0 V<br>500 < Engine RPM < 6500 for 5.0 sec, not in fuel cutoff<br>CAN BUS ECU Failure ≠ 0 sec<br><br>**NOTE**: Fail time = 0, DTC has failed | 2.0 sec<br><br>Type A |
| TAC System Signal | P1795 | CAN: Protocol for TCM to receive engine control inputs from Engine Control Module. CAN confirms messages are being received via BUS failure timer. CAN bits are checked for Pass/ Fail. | TAC System Incorrect flag in CAN Bus = 1 | 8.0 < Ignition Voltage < 18.0 V<br>500 < Engine RPM < 6500 for 5.0 sec, not in fuel cutoff<br>CAN BUS ECU Failure ≠ 0 sec<br><br>**NOTE**: Fail time = 0, DTC has failed | 2.0 sec<br><br>Type A |
| Transmission Pressure Switch Assembly - Illegal Range | P1810 | 0 – 12 V<br><br>Invalid PSA state or PSA circuit | Range = ILLEGAL | 500 < Engine RPM < 6500 for 5.0 sec, not at fuel cutoff | 60 sec<br><br>Type B |
| Transmission Pressure Switch Assembly: Start in Wrong Range | P1815 | 0 – 12 V<br><br>Invalid PSA state or PSA circuit malfunction | PSA ≠ Park/Neutral after Start-up | No P0502, P0503 DTCs<br>**Run once per ignition cycle**<br>Vehicle Speed < 42 RPM<br>Engine Speed < 100 RPM for 0.025 sec, **THEN** 100 < Engine Speed < 500 RPM for 0.2 sec; after Engine Speed > 500 RPM, PSA state is reported | 3.0 sec<br><br>Only at Engine Start-up<br><br>Type B |
| Transmission Pressure Switch Assembly: Park/Neutral with Drive Ratio | P1816 | 0 – 12 V<br><br>Invalid PSA state or PSA circuit malfunction | PSA indicates P/N when Ratio indicates 4th Gear < 0.72 | No TPS (see below), P0502, P0503, P0716, P0717, P0751, P0752, P0756, P0757, P1810, P1815, P1842, P1843, P1845, P1847 DTCs<br>8.0 < Ignition Voltage < 18.0 V<br>500 < Engine RPM < 6500 for 5.0 sec, not in fuel cutoff<br>Output Speed ≥ 42 RPM<br>TPS ≥ 10.0 %<br>35 < Engine Torque < 250 N-m | 5.0 sec<br><br>Type B |

| | |
|---|---|
| MAF DTCs | P0101-P0102-P0103 |
| MAP DTCs | P0105-P0106-P0107-P0108 |
| MAP Intermittent | P1106-P1107 |
| ECT DTCs | P0115-P0116-P0117-P0118-P0125-P0126-P0128 |
| TP DTCs | P0120-P0121-P0122-P0123-P0220-P0221-P0222-P0223-P0225-P0226-P0227-P0228-P1120-P1121-P1122-P1125 |
| | P1280-P1281-P1282-P1283-P1285-P1286-P1287-P1288 |
| System Voltage DTCs | P0560-P0562-P0563 |

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|---|---|---|---|---|---|
| Transmission Pressure Switch Assembly: Drive without Drive Ratio | P1818 | 0 – 12 V<br><br>Invalid PSA state or PSA circuit malfunction | PSA = D4, D3, D2, or D1 when Ratio indicates Reverse | No TPS (see below), P0502, P0503, P0716, P0717, P0751, P0752, P0756, P0757, P1810, P1815, P1816, P1817, P1842, P1843, P1845, P1847 DTCs<br>8.0 < Ignition Voltage < 18.0 V<br>500 < Engine RPM < 6500 for 5.0 sec, not in fuel cutoff<br>Output Speed ≥ 42 RPM<br>TPS ≥ 10.0 %<br>35 < Engine Torque < 250 N-m | 5.0 sec<br><br>Type B |
| Shift Lock Solenoid Control Circuit: Low Voltage | P1831 | 0 – 12 V<br><br>Continuous Open, Short-to-Ground in High Side Driver 1 circuit | High Side Driver 1 feedback circuit state ≠ PCM commanded state | 500 < Engine RPM < 6500 for 5.0 sec, not in fuel cutoff<br>High Side Driver 1 commanded ON | Fail cnt = 43/50<br><br>(Total time ≈ 4.3 sec)<br><br>Type A |
| Shift Solenoid Control Circuit: Low Voltage | P1833 | 0 – 12 V<br><br>Continuous Open, Short-to-Ground in High Side Driver 2 circuit | High Side Driver 2 feedback circuit state ≠ PCM commanded state | 500 < Engine RPM < 6500 for 5.0 sec, not in fuel cutoff<br>High Side Driver 2 commanded ON | Fail cnt = 43/50<br><br>(Total time ≈ 4.3 sec)<br><br>Type A |
| 1-2 Shift Solenoid Control Circuit: LOW Voltage (Shift Solenoid A) | P1842 | 0 – 12 V<br><br>Continuous Open, Short-to-Ground in SSA circuit (ODM) or SSA solenoid | Short to Ground bit = 1<br>**OR**<br>Shift Solenoid 1-2 Commanded ON & Open bit = 1 | 500 < Engine RPM < 6500 for 5.0 sec, not in fuel cutoff<br>High Side Driver 1 ON | Fail cnt = 43/50<br><br>(Total time ≈ 4.3 sec)<br><br>Type A |
| 1-2 Shift Solenoid Control Circuit: HIGH Voltage (Shift Solenoid A) | P1843 | 0 – 12 V<br><br>Short-to-Power in SSA circuit (ODM) or SSA solenoid | SS 1-2 feedback circuit state ≠ PCM commanded state | 500 < Engine RPM < 6500 for 5.0 sec, not in fuel cutoff<br>Shift Solenoid 1-2 commanded ON<br>High Side Driver 1 ON | Fail cnt = 43/50<br><br>(Total time ≈ 4.3 sec)<br><br>Type A |

| | |
|---|---|
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| MAP DTCs | P0105-P0106-P0107-P0108 |
| MAP Intermittent | P1106-P1107 |
| ECT DTCs | P0115-P0116-P0117-P0118-P0125-P0126-P0128 |
| TP DTCs | P0120-P0121-P0122-P0123-P0220-P0221-P0222-P0223-P0225-P0226-P0227-P0228-P1120-P1121-P1122-P1125<br>P1280-P1281-P1282-P1283-P1285-P1286-P1287-P1288 |
| System Voltage DTCs | P0560-P0562-P0563 |

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|---|---|---|---|---|---|
| 2-3 Shift Solenoid Control Circuit: LOW Voltage (Shift Solenoid B) | P1845 | 0 – 12 V<br><br>Continuous Open, Short-to-Ground in SSB circuit (ODM) or solenoid | Short to GND bit = 1<br>**OR**<br>Shift Solenoid 2-3 Commanded ON & Open bit = 1 | 500 < Engine RPM < 6500 for 5.0 sec, not in fuel cutoff<br>High Side Driver 2 ON | Fail count = 43 out of 50 total<br><br>(Total time ≈ 4.3 sec)<br><br>Type A |
| 2-3 Shift Solenoid Control Circuit: HIGH Voltage (Shift Solenoid B) | P1847 | 0 - 12 V<br><br>Short-to-Power in SSB circuit (ODM) or solenoid | SS 2-3 feedback circuit state ≠ PCM commanded state | 500 < Engine RPM < 6500 for 5.0 sec, not in fuel cutoff<br>Shift Solenoid 2-3 commanded ON<br>High Side Driver 2 ON | Fail count = 43 out of 50 total<br><br>(Total time ≈ 4.3 sec)<br><br>Type A |
| Torque Converter Clutch Pulse Width Modulated Solenoid Control Circuit | P1860 | Continuous Open or Short-to-Ground in TCC PWM circuit or TCC PWM solenoid | Every 100 msec, fail counter incremented if open or short detected | No P0741, P0742 DTCs<br>500 < Engine RPM < 6500 for 5.0 sec, not in fuel cutoff<br>TCC Duty Cycle < 10% or > 80% | Fail count = 43 out of 50 total<br><br>(Total time ≈ 4.3 sec)<br><br>Type A |
| Torque Converter Clutch Release Switch Circuit | P1887 | OPEN Release Switch (TCC not applied) when PCM & TCC slip speed indicate TCC is locked | Count = 1 | No P0716, P0717, P0741, P0742, P1860 DTCs<br>500 < Engine RPM < 6500 for 5.0 sec, not in fuel cutoff<br>TCC commanded ON<br>20° C. < Trans Temp < 130° C.<br>-20 < TCC Slip < 60 RPM<br>40 < Engine Torque < 130 N-m<br>103 < TCC Pressure < 827 kPa | 6.0 sec<br><br>Type B |
| CAN Bus Reset Counter Overrun | *U2104* | CAN: Protocol for TCM to receive engine control inputs from Engine Control Module. CAN confirms messages are being received via BUS failure timer. CAN bits are checked for Pass/ Fail. | CAN Bus Reset Counter flag = 1 | 8.0 < Ignition Voltage < 18.0 V<br>Ignition ON | 2.0 sec<br><br>Type A |

| | |
|---|---|
| MAF DTCs | P0101-P0102-P0103 |
| MAP DTCs | P0105-P0106-P0107-P0108 |
| MAP Intermittent | P1106-P1107 |
| ECT DTCs | P0115-P0116-P0117-P0118-P0125-P0126-P0128 |
| TP DTCs | P0120-P0121-P0122-P0123-P0220-P0221-P0222-P0223-P0225-P0226-P0227-P0228-P1120-P1121-P1122-P1125 |
| | P1280-P1281-P1282-P1283-P1285-P1286-P1287-P1288 |
| System Voltage DTCs | P0560-P0562-P0563 |

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## TRANSMISSION DIAGNOSTIC PARAMETERS

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| SENSED PARAMETER | FAULT CODE | ACCEPTABLE OPERATING RANGE AND RATIONALITY | PRIMARY MALF DETECTION PARAMETERS | SECONDARY MALF PARAMETERS & CONDITIONS | MONITORING TIME LENGTH & DTC TYPE |
|---|---|---|---|---|---|
| CAN Bus Error ECM | *U2105* | Communication between TCM & Engine Control Unit (ECU) | CAN Bus ECU Error flag = 1 | 8.0 < Ignition Voltage < 18.0 V   Ignition ON | 2.0 sec   Type A |
| CAN Bus Error BCM | *U2107* | Communication between TCM & Body Control Module (BCM) | CAN Bus BCM Error flag = 1 | 8.0 < Ignition Voltage < 18.0 V   Ignition ON | 2.0 sec   Type A |

| | |
|---|---|
| MAF DTCs | P0101-P0102-P0103 |
| MAP DTCs | P0105-P0106-P0107-P0108 |
| MAP Intermittent | P1106-P1107 |
| ECT DTCs | P0115-P0116-P0117-P0118-P0125-P0126-P0128 |
| TP DTCs | P0120-P0121-P0122-P0123-P0220-P0221-P0222-P0223-P0225-P0226-P0227-P0228-P1120-P1121-P1122-P1125 |
| | P1280-P1281-P1282-P1283-P1285-P1286-P1287-P1288 |
| System Voltage DTCs | P0560-P0562-P0563 |

Type A and Type B codes illuminate the "Service Engine Soon" lamp.          FA = Fault Active
Type C codes illuminate the "Service Vehicle Soon" or "Wrench" lamp.          FATKO = Fault Active This Key On