| COMPONENT/ SYSTEM | FAULT CODE | MONITOR STRATEGY DESCRIPTION | MALFUNCTION CRITERIA | THRESHOLD VALUE | SECONDARY PARAMETERS | ENABLE CONDITIONS | TIME REQUIRED | MIL ILLUM. |
|---|---|---|---|---|---|---|---|---|
| Transmission Control Module (TCM) Read Only Memory (ROM) | P0601 | To detect that the value of check sum calculations(stored in ROM memory) executed after Ignition switch is in crank or run position | If there are a difference from the correct check sum value stored in flash ROM, the second calculation is made differences twice detection is criteria | 1 time | - | - | 1 failure | Type A |
| Transmission Control Module (TCM) Random Access Memory (RAM) | P0604 | To detect that the value of RAM memory executed after Ignition switch is in crank or run position | TCM cannot carry out all RAM from Step 1 to Step 4 in initialize routine. | -Step 1: TCM write 0x5A5A5A5A data in the RAM.<br>-Step 2: TCM read 0x5A5A5A5A data from the RAM.<br>-Step 3: TCM write 0xA5A5A5A5 data in the RAM.<br>-Step 4: TCM read 0xA5A5A5A5 data from the RAM. | - | - | 1 failure | Type B |
| Transmission Range Sensor Circuit Malfunction (No Signal) | P0705 | To detect no signal of transmission range sensor circuit. | All switches are OFF | > 2 seconds | A voltage condition<br>Engine Speed<br>Ignition switch is in crank or run position<br>Not in emergency mode(see the attachment#3)<br>Vehicle Speed<br>No active DTC | 10.2V < Battery voltage < 18.0V for 2sec<br>>400rpm<br>ON for 2sec<br>>= 30 km/h<br>TCM :<br>U0001 (High Speed CAN Communication Bus)<br>U0100 (Lost Communication with ECM)<br>P0974, P0973, P0977, P0976, P0788<br>P0787, P0963, P0962, P0601, P2533 | 28 seconds continuously | Type B |
| | | | | | A voltage condition<br>Engine Speed | 10.2V < Battery voltage < 18.0V for 2sec<br>>400rpm | 2 seconds continuously (per 1 failure)<br>5 failures | |

| COMPONENT/ SYSTEM | FAULT CODE | MONITOR STRATEGY DESCRIPTION | MALFUNCTION CRITERIA | THRESHOLD VALUE | SECONDARY PARAMETERS | ENABLE CONDITIONS | TIME REQUIRED | MIL ILLUM. |
|---|---|---|---|---|---|---|---|---|
| Transmission Range Sensor Circuit Malfunction (Short) | P0706 | To detect 2 or more signals of transmission range sensor circuit | more than or equal to 2 switches are ON | > 2 seconds | Ignition switch is in crank or run position<br>Not in emergency mode(see the attachment#3)<br>No active DTC | ON for 2sec<br>TCM :<br>U0001 (High Speed CAN Communication Bus)<br>U0100 (Lost Communication with ECM)<br>P0974, P0973, P0977, P0976, P0788<br>P0787, P0963, P0962, P0601, P2533 | | Type B |
| Transmission Fluid Temperature (TFT) Sensor Performance | | [Detection Case No.1]<br>To detect Transmission Fluid Temperature (TFT) Sensor circuit by Comparision of Sensor Voltage and Input A/D value. | Comparision of Sensor Voltage and Input A/D value | Refer to Flow chart of Attachment#1.1 | A voltage condition<br>Engine Speed<br>Ignition switch is in crank or run position<br>Not in emergency mode(see the attachment#3)<br>Input A/D value of TFT<br>No active DTC | 10.2V < Battery voltage < 18.0V for 2sec<br>>400rpm<br>ON for 2sec<br>10 (0.05V) <= Input A/D value <= 1010 (4.94V)<br>TCM :<br>U0001 (High Speed CAN Communication Bus)<br>U0100 (Lost Communication with ECM)<br>P0974, P0973, P0977, P0976, P0788<br>P0787, P0963, P0962, P0601, P2533<br>P0705, P0706 | 1 failure of Detection Case No.1 or No.2 (Refer to Flow chart of Attachments#1 or #2 For details) | |

| COMPONENT/ SYSTEM | FAULT CODE | MONITOR STRATEGY DESCRIPTION | MALFUNCTION CRITERIA | THRESHOLD VALUE | SECONDARY PARAMETERS | ENABLE CONDITIONS | TIME REQUIRED | MIL ILLUM. |
|---|---|---|---|---|---|---|---|---|
| | P0711 | [Detection Case No.2]<br>To detect Transmission Fluid Temperature (TFT) Sensor circuit by Comparision of Sensor Voltage and Estimation value. | Comparision of Sensor Voltage and Estimation value | Refer to Flow chart of Attachment#1.2 | A voltage condition<br>Engine Speed<br>Ignition switch is in crank or run position<br>Not in emergency mode(see the attachment#3)<br>Input A/D value of TFT<br>No active DTC | 10.2V < Battery voltage < 18.0V for 2sec<br>>400rpm<br>ON for 2sec<br>10 (0.05V) <= Input A/D value <= 1010 (4.94V)<br>TCM :<br>U0001 (High Speed CAN Communication Bus)<br>U0100 (Lost Communication with ECM)<br>P0974, P0973, P0977, P0976, P0788<br>P0787, P0963, P0962, P0601, P2533<br>P0717 | | Type B |
| Transmission Fluid Temperature (TFT) Sensor Circuit Low Voltage | P0712 | This DTC detects a short to ground in Transmission Fluid Temperature (TFT) Sensor circuit | Input A/D value of TFT | < 10 (0.05V) | A voltage condition<br>Engine Speed<br>Ignition switch is in crank or run position<br>Not in emergency mode(see the attachment#3)<br>No active DTC | 10.2V < Battery voltage < 18.0V for 2sec<br>>400rpm<br>ON for 2sec<br>TCM :<br>U0001 (High Speed CAN Communication Bus) | 10 seconds continuously (per 1 failure)<br>6 failures | Type B |

| COMPONENT/ SYSTEM | FAULT CODE | MONITOR STRATEGY DESCRIPTION | MALFUNCTION CRITERIA | THRESHOLD VALUE | SECONDARY PARAMETERS | ENABLE CONDITIONS | TIME REQUIRED | MIL ILLUM. |
|---|---|---|---|---|---|---|---|---|
| | | | | | | U0100 (Lost Communication with ECM)<br>P0974, P0973, P0977, P0976, P0788<br>P0787, P0963, P0962, P0601, P2533 | | |
| Transmission Fluid Temperature (TFT) Sensor Circuit High Voltage | P0713 | This DTC detects a short to high or open in Transmission Fluid Temperature (TFT) Sensor circuit | Input A/D value of TFT | > 1010 (4.94V) | A voltage condition<br>Engine Speed<br>Ignition switch is in crank or run position<br>Not in emergency mode(see the attachment#3)<br>Drive time (as the following 1 condition)<br>Transmission range sensor<br>No active DTCs | 10.2V < Battery voltage < 18.0V for 2sec<br>>400rpm<br>ON for 2sec<br>> 1 min<br>Except for P or N range for 10min<br>TCM :<br>P0705, P0706<br>U0001 (High Speed CAN Communication Bus)<br>U0100 (Lost Communication with ECM)<br>P0974, P0973, P0977, P0976, P0788<br>P0787, P0963, P0962, P0601, P2533 | 1 seconds continuously (per 1 failure)<br>12 failures | Type B |
| | | | | | A voltage condition<br>Engine Speed | 10.2V < Battery voltage < 18.0V for 2sec<br>>400rpm | 500 failures<br>(1 failure is no pulse of input shaft | |

| COMPONENT/ SYSTEM | FAULT CODE | MONITOR STRATEGY DESCRIPTION | MALFUNCTION CRITERIA | THRESHOLD VALUE | SECONDARY PARAMETERS | ENABLE CONDITIONS | TIME REQUIRED | MIL ILLUM. |
|---|---|---|---|---|---|---|---|---|
| Input Speed Sensor | P0717 | To detect Input shaft speed sensor circuit | The pulse of Input shaft speed sensor (while TCM detect 4 pulses of output shaft speed sensor) | No pulse | Ignition switch is in crank or run position<br>Not in emergency mode(see the attachment#3)<br>No active DTC<br>Time of selection lever position change from P,R or N range to others<br>Vehicle Speed calculated by output Speed sensor >= 66km/h or TFT>=20deg.C<br>Output Shaft Speed | ON for 2sec<br>TCM :<br>U0001 (High Speed CAN Communication Bus)<br>U0100 (Lost Communication with ECM)<br>P0974, P0973, P0977, P0976, P0788<br>P0787, P0963, P0962, P0601, P2533<br>P0722<br>P0705, P0706<br>>=10sec<br>>=2.5sec<br>>= 600 rpm | speed sensor while TCM detect 4pulses of output shaft speed sensor.) | Type A |
| | | | | | A voltage condition<br>Engine Speed<br>Ignition switch is in crank or run position<br>Not in emergency mode(see the attachment#3)<br>No active DTC | 10.2V < Battery voltage < 18.0V for 2sec<br>>400rpm<br>ON for 2sec<br>TCM :<br>U0001 (High Speed CAN Communication Bus) | 500 failures (1 failure is no pulse of output shaft speed sensor while TCM detect 178pulses of input shaft speed sensor.) | |

| COMPONENT/ SYSTEM | FAULT CODE | MONITOR STRATEGY DESCRIPTION | MALFUNCTION CRITERIA | THRESHOLD VALUE | SECONDARY PARAMETERS | ENABLE CONDITIONS | TIME REQUIRED | MIL ILLUM. |
|---|---|---|---|---|---|---|---|---|
| Output Speed Sensor | P0722 | To detect Output shaft speed sensor circuit | The pulse of Output shaft speed sensor<br>(while TCM detect 178 pulses of input shaft speed sensor.) | No pulse | | U0100 (Lost Communication with ECM)<br>P0974, P0973, P0977, P0976, P0788<br>P0787, P0963, P0962, P0601, P2533<br>P0717<br>P0705, P0706 | | Type A |
| | | | | | Not in emergency mode(see the attachment#3)<br>Time of selection lever position change from P,R or N range to others<br>Vehicle Speed calculated by input Speed sensor<br>>= 66km/h or TFT>=20deg.C<br>Input revolution (rpm) / Gear ratio (For Gear ratio information, refer to Attachment#2.1) | >=10sec<br>>=2.5sec<br>>= 300 rpm | | |
| | | | | | Refer to CONDITON OF TCC SOLENOID STUCK OFF/ON of attachment#2.2<br>A voltage condition<br>Engine Speed<br>Ignition switch is in crank or run position<br>Not in emergency mode(see the attachment#3)<br>No active DTC | 10.2V < Battery voltage < 18.0V for 2sec<br>>400rpm<br>ON for 2sec<br>TCM :<br>U0001 (High Speed CAN Communication Bus)<br>U0100 (Lost Communication with ECM) | 1 failure<br>(Refer to CONDITON OF TCC SOLENOID STUCK OFF/ON of attachment#2.2) | |

| COMPONENT/ SYSTEM | FAULT CODE | MONITOR STRATEGY DESCRIPTION | MALFUNCTION CRITERIA | THRESHOLD VALUE | SECONDARY PARAMETERS | ENABLE CONDITIONS | TIME REQUIRED | MIL ILLUM. |
|---|---|---|---|---|---|---|---|---|
| Torque Converter Clutch (TCC) System –Stuck OFF | P0741 | Determines if the TCC System is stuck off within the normal operating range | Comparison of Shift Solenoid Voltage and Input/Ouput shaft speed calculation. | Refer to CONDITON OF TCC SOLENOID STUCK OFF/ON of attachment#2.2 | | P0974, P0973, P0977, P0976, P0788<br>P0787, P0963, P0962, P0601, P2533<br>P0717, P0722<br>P0705, P0706<br>P2769, P2770<br>P0711, P0712, P0713<br>ECM :<br>P0101, P0102, P0103, P16F3, P0106<br>P0107, P0108, P16F3, P0171, P0172<br>P0201, P0202, P0203, P0204, P0300<br>P00B7, P0116, P0117, P0118, P0128 | | Type B |
| | | | | | Time after selection lever position from P,R,N,2,L to D<br>Time after gear changed<br>TCC Solenoid<br>Time after TCC Solenoid frome Disabled to Enabled.<br>Engine Coolant Temperature<br>Transmission Oil Temperature<br>Accelerator Effective Position | 4.0sec<br>2.0 sec<br>Enabled<br>2.0 sec<br>>= 60 deg<br>>= 20 deg<br>>=10% | | |
| | | | | | Refer to CONDITON OF TCC SOLENOID STUCK OFF/ON of attachment#2.2<br>A voltage condition<br>Engine Speed<br>Ignition switch is in crank or run position | 10.2V < Battery voltage < 18.0V for 2sec<br>>400rpm<br>ON for 2sec | 1 failure<br>(Refer to CONDITON OF TCC SOLENOID STUCK OFF/ON of attachment#2.2) | |

| COMPONENT/ SYSTEM | FAULT CODE | MONITOR STRATEGY DESCRIPTION | MALFUNCTION CRITERIA | THRESHOLD VALUE | SECONDARY PARAMETERS | ENABLE CONDITIONS | TIME REQUIRED | MIL ILLUM. |
|---|---|---|---|---|---|---|---|---|
| Torque Converter Clutch (TCC) System –Stuck ON | P0742 | Determines if the TCC System is stuck on within the normal operating range | Comparison of Shift Solenoid Voltage and Input/Ouput shaft speed calculation. | Refer to CONDITON OF TCC SOLENOID STUCK OFF/ON of attachment#2.2 | Not in emergency mode(see the attachment#3)<br>No active DTC<br><br><br><br><br><br><br><br><br><br><br><br><br>Time after selection lever position from P,R,N,2,L to D<br>Time after gear changed<br>TCC Solenoid<br>Time after TCC Solenoid frome Enabled to Disabled.<br>Engine Coolant Temperature<br>Transmission Oil Temperature<br>Accelerator Effective Position | TCM :<br>U0001 (High Speed CAN Communication Bus)<br>U0100 (Lost Communication with ECM)<br>P0974, P0973, P0977, P0976, P0788<br>P0787, P0963, P0962, P0601, P2533<br>P0717, P0722<br>P0705, P0706<br>P2769, P2770<br>P0711, P0712, P0713<br>ECM :<br>P0101, P0102, P0103, P16F3, P0106<br>P0107, P0108, P16F3, P0171, P0172<br>P0201, P0202, P0203, P0204, P0300<br>P00B7, P0116, P0117, P0118, P0128<br>4.0sec<br>2.0 sec<br>Disabled<br>2.0 sec<br>>= 60 deg<br>>= 20 deg<br>>=10% | | Type B |

| COMPONENT/ SYSTEM | FAULT CODE | MONITOR STRATEGY DESCRIPTION | MALFUNCTION CRITERIA | THRESHOLD VALUE | SECONDARY PARAMETERS | ENABLE CONDITIONS | TIME REQUIRED | MIL ILLUM. |
|---|---|---|---|---|---|---|---|---|
| Shift Solenoid 1 Performance –Stuck OFF | P0751 | Determines if the Shift Solenoid 1 is stuck off within the normal operating range | Compare Shift Solenoid Output and Input/Output Speed Revolution calculation | Refer to CONDITION OF SHIFT SOLENOID MALFUNCTION of Attachment #2.1 | Refer to CONDITION OF SHIFT SOLENOID MALFUNCTION of attachment#2.1<br>A voltage condition<br>Engine Speed<br>Ignition switch is in crank or run position<br>Not in emergency mode(see the attachment#3)<br>No active DTC<br>Time after selection lever position from P,R,N,2,L to D<br>Time after gear changed<br>Vehicle Speed<br>Engine Coolant Temperature<br>Transmission Oil Temperature | <br>10.2V < Battery voltage < 18.0V for 2sec<br>>400rpm<br>ON for 2sec<br><br>TCM :<br>U0001 (High Speed CAN Communication Bus)<br>U0100 (Lost Communication with ECM)<br>P0974, P0973, P0977, P0976, P0788<br>P0787, P0963, P0962, P0601, P2533<br>P0717, P0722<br>P0705, P0706<br>P0711, P0712, P0713<br>ECM :<br>P00B7, P0116, P0117, P0118, P0128<br>>=5.0sec<br>>=2.0 sec<br>>= 20 km/h<br>>= 60 deg<br>>= 20 deg | 1 failure<br>(Refer to CONDITION OF SHIFT SOLENOID MALFUNCTION of attachment#2.1) | Type B |
| | | | | | Refer to CONDITION OF SHIFT SOLENOID MALFUNCTION of attachment#2.1 | | 1 failure | |

| COMPONENT/ SYSTEM | FAULT CODE | MONITOR STRATEGY DESCRIPTION | MALFUNCTION CRITERIA | THRESHOLD VALUE | SECONDARY PARAMETERS | ENABLE CONDITIONS | TIME REQUIRED | MIL ILLUM. |
|---|---|---|---|---|---|---|---|---|
| Shift Solenoid 1 Performance –Stuck ON | P0752 | Determines if the Shift Solenoid 1 is stuck on within the normal operating range | Compare Shift Solenoid Output and Input/Output Speed Revolution calculation | Refer to CONDITION OF SHIFT SOLENOID MALFUNCTION of Attachment #2.1 | A voltage condition<br>Engine Speed<br>Ignition switch is in crank or run position<br>Not in emergency mode(see the attachment#3)<br>No active DTC<br><br><br><br><br><br><br><br>Time after selection lever position from P,R,N,2,L to D<br>Time after gear changed<br>Vehicle Speed<br>Engine Coolant Temperature<br>Transmission Oil Temperature | 10.2V < Battery voltage < 18.0V for 2sec<br>>400rpm<br>ON for 2sec<br><br>TCM :<br>U0001 (High Speed CAN Communication Bus)<br>U0100 (Lost Communication with ECM)<br>P0974, P0973, P0977, P0976, P0788<br>P0787, P0963, P0962, P0601, P2533<br>P0717, P0722<br>P0705, P0706<br>P0711, P0712, P0713<br>ECM :<br>P00B7, P0116, P0117, P0118, P0128<br>>= 5.0sec<br>>= 2.0 sec<br>>= 20 km/h<br>>= 60 deg<br>>= 20 deg | (Refer to CONDITION OF SHIFT SOLENOID MALFUNCTION of attachment#2.1) | Type B |
| | | | | | Refer to CONDITION OF SHIFT SOLENOID MALFUNCTION of attachment#2.1 | | 1 failure | |

| COMPONENT/ SYSTEM | FAULT CODE | MONITOR STRATEGY DESCRIPTION | MALFUNCTION CRITERIA | THRESHOLD VALUE | SECONDARY PARAMETERS | ENABLE CONDITIONS | TIME REQUIRED | MIL ILLUM. |
|---|---|---|---|---|---|---|---|---|
| Shift Solenoid 2 Performance –Stuck OFF | P0756 | Determines if the Shift Solenoid 2 is stuck off within the normal operating range | Shift Solenoid stuck OFF | Refer to CONDITION OF SHIFT SOLENOID MALFUNCTION of attachment#2.1 | A voltage condition<br>Engine Speed<br>Ignition switch is in crank or run position<br>Not in emergency mode(see the attachment#3)<br>No active DTC<br>Time after selection lever position from P,R,N,2,L to D<br>Time after gear changed<br>Vehicle Speed<br>Engine Coolant Temperature<br>Transmission Oil Temperature | 10.2V < Battery voltage < 18.0V for 2sec<br>>400rpm<br>ON for 2sec<br>TCM :<br>U0001 (High Speed CAN Communication Bus)<br>U0100 (Lost Communication with ECM)<br>P0974, P0973, P0977, P0976, P0788<br>P0787, P0963, P0962, P0601, P2533<br>P0717, P0722<br>P0705, P0706<br>P0711, P0712, P0713<br>ECM :<br>P00B7, P0116, P0117, P0118, P0128<br>5.0sec<br>2.0 sec<br>>= 20 km/h<br>>= 60 deg<br>>= 20 deg | (Refer to CONDITION OF SHIFT SOLENOID MALFUNCTION of attachment#2.1) | Type B |
| Shift Solenoid 2 Performance –Stuck ON | | | | | Refer to CONDITION OF SHIFT SOLENOID MALFUNCTION of attachment#2.1<br>A voltage condition | 10.2V < Battery voltage < 18.0V for 2sec | 1 failure<br>(Refer to CONDITION OF SHIFT | |

| COMPONENT/ SYSTEM | FAULT CODE | MONITOR STRATEGY DESCRIPTION | MALFUNCTION CRITERIA | THRESHOLD VALUE | SECONDARY PARAMETERS | ENABLE CONDITIONS | TIME REQUIRED | MIL ILLUM. |
|---|---|---|---|---|---|---|---|---|
| | P0757 | Determines if the Shift Solenoid 2 is stuck on within the normal operating range | Shift Solenoid stuck ON | Refer to CONDITION OF SHIFT SOLENOID MALFUNCTION of attachment#2.1 | Engine Speed<br>Ignition switch is in crank or run position<br>Not in emergency mode(see the attachment#3)<br>No active DTC<br>Time after selection lever position from P,R,N,2,L to D<br>Time after gear changed<br>Vehicle Speed<br>Engine Coolant Temperature<br>Transmission Oil Temperature | >400rpm<br>ON for 2sec<br>TCM :<br>U0001 (High Speed CAN Communication Bus)<br>U0100 (Lost Communication with ECM)<br>P0974, P0973, P0977, P0976, P0788<br>P0787, P0963, P0962, P0601, P2533<br>P0717, P0722<br>P0705, P0706<br>P0711, P0712, P0713<br>ECM :<br>P00B7, P0116, P0117, P0118, P0128<br>5.0sec<br>2.0 sec<br>>= 20 km/h<br>>= 60 deg<br>>= 20 deg | SOLENOID MALFUNCTION of attachment#2.1) | Type B |
| Timing Solenoid (ST) Electrical (GND short) | | | | | A voltage condition<br>Ignition switch is in crank or run position | 10.2V < Battery voltage < 18.0V for 2sec<br>ON for 2sec | 3 failures<br>500ms continuously (per 1 failure) | |

| COMPONENT/ SYSTEM | FAULT CODE | MONITOR STRATEGY DESCRIPTION | MALFUNCTION CRITERIA | THRESHOLD VALUE | SECONDARY PARAMETERS | ENABLE CONDITIONS | TIME REQUIRED | MIL ILLUM. |
|---|---|---|---|---|---|---|---|---|
| | P0787 | This DTC detects a short to ground in the Timing Solenoid circuit. | Timing Solenoid Voltage (when TCM command “ON” signal (12V) to timing solenoid.) | =0V (“OFF” signal) | Not in emergency mode(see the attachment#3)<br>No active DTC<br><br><br><br>Time after Shift solenoid output changed | <br>TCM :<br>P0974, P0973, P0977, P0976, P0788<br>P0787, P0963, P0962, P0601, P2533<br>25ms | | Type A |
| Timing Solenoid (ST) Electrical (open, IG short) | P0788 | This DTC detects a short to high or open in the Timing Solenoid circuit. | Timing Solenoid Voltage (when TCM command “OFF” signal (0V) to timing solenoid.) | =12V (“ON” signal) | A voltage condition<br><br>Ignition switch is in crank or run position<br><br>Not in emergency mode(see the attachment#3)<br>No active DTC<br><br><br><br>Time after Shift solenoid output changed | 10.2V < Battery voltage < 18.0V for 2sec<br><br>ON for 2sec<br><br><br>TCM :<br>P0974, P0973, P0977, P0976, P0788<br>P0787, P0963, P0962, P0601, P2533<br>25ms | 3 failures<br><br>500ms continuously (per 1 failure) | Type A |
| Pressure Control (PC) Solenoid Control Circuit Low Voltage | P0962 | This DTC detects a short to ground or open in the Pressure Control Solenoid circuit. | Input A/D value of Pressure Control Solenoid | < 68(0.018V) | A voltage condition<br><br>Ignition switch is in crank or run position<br><br>Not in emergency mode(see the attachment#3)<br>No active DTC | 10.2V < Battery voltage < 18.0V for 2sec<br><br>ON for 2sec<br><br><br>TCM :<br>P0974, P0973, P0977, P0976, P0788<br>P0787, P0963, P0962, P0601, P2533 | 25 failures<br><br>500ms continuously (per 1 failure) | Type A |

| COMPONENT/ SYSTEM | FAULT CODE | MONITOR STRATEGY DESCRIPTION | MALFUNCTION CRITERIA | THRESHOLD VALUE | SECONDARY PARAMETERS | ENABLE CONDITIONS | TIME REQUIRED | MIL ILLUM. |
|---|---|---|---|---|---|---|---|---|
| Pressure Control (PC) Solenoid Control Circuit High Voltage | P0963 | This DTC detects a short to high in thePressure Control Solenoid circuit. | Input A/D value of Pressure Control Solenoid | >= 1000(0.257V) | A voltage condition<br>Ignition switch is in crank or run position<br>Not in emergency mode(see the attachment#3)<br>No active DTC | 10.2V < Battery voltage < 18.0V for 2sec<br>ON for 2sec<br>TCM :<br>P0974, P0973, P0977, P0976, P0788<br>P0787, P0963, P0962, P0601, P2533 | 1 failure<br>500ms continuously (per 1 failure) | Type A |
| Shift Solenoid 1 Control Circuit Low Voltage | P0973 | This DTC detects a short to ground in the Shift Solenoid 1 circuit. | Shift Solenoid 1 Voltage (when TCM command “ON” signal (12V) to shift solenoid 1.) | =0V (“OFF” signal) | A voltage condition<br>Ignition switch is in crank or run position<br>Not in emergency mode(see the attachment#3)<br>No active DTC<br>Time after Shift solenoid output changed | 10.2V < Battery voltage < 18.0V for 2sec<br>ON for 2sec<br>TCM :<br>P0974, P0973, P0977, P0976, P0788<br>P0787, P0963, P0962, P0601, P2533<br>25ms | 1 failure<br>500ms continuously (per 1 failure) | Type A |
| Shift Solenoid 1 Control Circuit High Voltage | P0974 | This DTC detects a short to high or open in the Shift Solenoid 1 circuit. | Shift Solenoid 1 Voltage (when TCM command “OFF” signal (0V) to shift solenoid 1.) | =12V (“ON” signal) | A voltage condition<br>Ignition switch is in crank or run position<br>Not in emergency mode(see the attachment#3)<br>No active DTC | 10.2V < Battery voltage < 18.0V for 2sec<br>ON for 2sec<br>TCM : | 1 failure<br>500ms continuously (per 1 failure) | Type A |

| COMPONENT/ SYSTEM | FAULT CODE | MONITOR STRATEGY DESCRIPTION | MALFUNCTION CRITERIA | THRESHOLD VALUE | SECONDARY PARAMETERS | ENABLE CONDITIONS | TIME REQUIRED | MIL ILLUM. |
|---|---|---|---|---|---|---|---|---|
| | | | | | | P0974, P0973, P0977, P0976, P0788<br>P0787, P0963, P0962, P0601, P2533 | | |
| | | | | | Time after Shift solenoid output changed | 25ms | | |
| Shift Solenoid 2 Control Circuit Low Voltage | P0976 | This DTC detects a short to ground in the Shift Solenoid 2 circuit. | Shift Solenoid 2 Voltage (when TCM command “ON” signal (12V) to shift solenoid 2.) | =0V (“OFF” signal) | A voltage condition<br>Ignition switch is in crank or run position<br>Not in emergency mode(see the attachment#3)<br>No active DTC<br>Time after Shift solenoid output changed | 10.2V < Battery voltage < 18.0V for 2sec<br>ON for 2sec<br>TCM :<br>P0974, P0973, P0977, P0976, P0788<br>P0787, P0963, P0962, P0601, P2533<br>25ms | 1 failure<br>500ms continuously (per 1 failure) | Type A |
| Shift Solenoid 2 Control Circuit High Voltage | P0977 | This DTC detects a short to high or open in the Shift Solenoid 2 circuit. | Shift Solenoid 2 Voltage (when TCM command “OFF” signal (0V) to shift solenoid 2.) | =12V (“ON” signal) | A voltage condition<br>Ignition switch is in crank or run position<br>Not in emergency mode(see the attachment#3)<br>No active DTC<br>Time after Shift solenoid output changed | 10.2V < Battery voltage < 18.0V for 2sec<br>ON for 2sec<br>TCM :<br>P0974, P0973, P0977, P0976, P0788<br>P0787, P0963, P0962, P0601, P2533<br>25ms | 1 failure<br>500ms continuously (per 1 failure) | Type A |

| COMPONENT/ SYSTEM | FAULT CODE | MONITOR STRATEGY DESCRIPTION | MALFUNCTION CRITERIA | THRESHOLD VALUE | SECONDARY PARAMETERS | ENABLE CONDITIONS | TIME REQUIRED | MIL ILLUM. |
|---|---|---|---|---|---|---|---|---|
| IG Voltage | P2533 | This DTC checks the Ignition Voltage circuit for electrical integrity. | Ignition Circuit Voltage | =0V | Not in emergency mode(see the attachment#3)<br>No active DTCs<br>Engine Speed<br>Battery voltage | TCM :<br>U0001 , U0100<br>P0974, P0973, P0977, P0976, P0788<br>P0787, P0963, P0962, P0601, P2533<br>> 400 rpm.<br>> 9 V | 20 failures<br>1000 ms continuously (per 1 failure) | Type A |
| Ignition Accessory Switch Circuit | P2536 | This DTC checks the Ignition Accessory Voltage circuit for electrical integrity. | Ignition Accessory Switch Circuit Voltage | =0V | A voltage condition<br>Engine Speed<br>Ignition switch is in crank or run position<br>No active DTCs | 10.2V < Battery voltage < 18.0V for 2sec<br>>400rpm<br>ON for 2sec<br>TCM :<br>U0001 , U0100 | 20 failures<br>1000 ms continuously (per 1 failure) | Type C |
| Torque Converter Clutch (TCC) Enable Solenoid Control Circuit Low Voltage | P2769 | This DTC detects a short to ground in the TCC Enable Solenoid Control circuit. | TCC Enable Solenoid Voltage (when TCM command “ON” signal (12V) to TCC Enable Solenoid.) | =0V (“OFF” signal) | A voltage condition<br>Ignition switch is in crank or run position<br>Not in emergency mode(see the attachment#3)<br>No active DTC<br>Time after TCC Enable solenoid output changed | 10.2V < Battery voltage < 18.0V for 2sec<br>ON for 2sec<br>TCM :<br>P0974, P0973, P0977, P0976, P0788<br>P0787, P0963, P0962, P0601, P2533<br>25ms | 1 failure<br>500ms continuously (per 1 failure) | Type B |

| COMPONENT/ SYSTEM | FAULT CODE | MONITOR STRATEGY DESCRIPTION | MALFUNCTION CRITERIA | THRESHOLD VALUE | SECONDARY PARAMETERS | ENABLE CONDITIONS | TIME REQUIRED | MIL ILLUM. |
|---|---|---|---|---|---|---|---|---|
| Torque Converter Clutch (TCC) Enable Solenoid Control Circuit High Voltage | P2770 | This DTC detects a short to high or open in the TCC Enable Solenoid Control circuit. | TCC Enable Solenoid Voltage (when TCM command “OFF” signal (0V) to TCC Enable Solenoid.) | =12V (“ON” signal) | A voltage condition<br>Ignition switch is in crank or run position<br>Not in emergency mode(see the attachment#3)<br>No active DTC<br>Time after TCC Enable solenoid output changed | 10.2V < Battery voltage < 18.0V for 2sec<br>ON for 2sec<br>TCM :<br>P0974, P0973, P0977, P0976, P0788<br>P0787, P0963, P0962, P0601, P2533<br>25ms | 1 failure<br>500ms continuously (per 1 failure) | Type B |
| High Speed CAN Communication Bus | U0001 | This DTC monitors for BUS OFF condition | BUS ON/OFF state from CAN Controller | =“BUS OFF” | A voltage condition | 10.2V < Battery voltage < 18.0V for 2sec | 7 failures<br>(Bus OFF from CAN Controller.) | Type A |
| Lost Communication with ECM | U0100 | This DTC monitors for a loss of communication with ECM | Message(ID 0x0C9 or 0x191 or 0x1A1 or 0x4C1 ) is not received from ECM for this many seconds | 200ms continuously | A voltage condition<br>No active DTC | 10.2V < Battery voltage < 18.0V for 2sec<br>TCM :<br>U0001 | 10 failures<br>200ms continuously (per 1 failure) | Type A |
| Lost Communication with Body Control Module ( IPC ) | U0140 | This DTC monitors for a loss of communication with IPC | Message(ID 0x0F1, 0x1F1, 0x1F3) is not received from IPC for this many seconds | 200ms continuously | A voltage condition<br>No active DTC | 10.2V < Battery voltage < 18.0V for 2sec<br>TCM :<br>U0001 | 10 failures<br>200ms continuously (per 1 failure) | Type C |