

2000 4.3L (LF6, L35) S/T-truck, M/L-van, C/K-truck, G-van (includes Isuzu Hombre)

5.0L (L30) C/K-truck, G-van 5.7L (L31) C/K-truck, G-van

4L60-E TRANSMISSION DIAGNOSTIC PARAMETERS

2000trans12.doc

| SENSED PARAMETER | FAULT CODE | MONITOR STRATEGY DESCRIPTION | MALFUNCTION CRITERIA AND THRESHOLD VALUE(S) | SECONDARY PARAMETERS AND ENABLE CONDITIONS | TIME LENGTH AND FREQUENCY | MIL ILLUMINATION TYPE |
|--|--------------|--|--|---|--|-----------------------|
| Vehicle Speed Sensor - Low input | P0502 | 0 RPM to 6000 RPM This DTC detects a low vehicle speed when the vehicle has a large engine speed in a drive gear range. | Output Speed < 150 rpm | - Gear Range is not Park/Neutral - No TPS high or low DTC's set - No Map Sensor DTC's set - No PSA DTC set - Vacuum: 0 to 105 KPA - Engine Torque: 40 to 400 ft-lbs - Throttle Position > 20% - Engine Speed > 3000 RPM | 2.5 seconds Continuous | DTC Type B |
| Vehicle Speed Sensor - Intermittent | P0503 | 0 RPM to 6000 RPM This DTC detects an unrealistic large drop in vehicle speed. | In P/N : Output Speed drop > 8000 RPM Not P/N : Output Speed drop >1300 RPM | - Time since last Gear Range Change > 6 Seconds - Engine Speed > 450 rpm for 5 seconds and not in fuel cutoff - No Output Speed rise > 600 rpm within 6 seconds - No PSA DTC set | In park or neutral 409 seconds Not in park or neutral 3 seconds | DTC Type B |
| TCC Enable Solenoid Electrical | P0740 | 0V to 12V This DTC detects a continuous open or short to ground in the TCC circuit or the TCC solenoid | Fail Counter >43 Counts out of 50 Total Counts | - System Voltage: 10 to 16 volts - Engine Speed > 450 rpm for 5 seconds and not in fuel cutoff | Continuous | DTC Type B |
| TCC System Stuck ON | P0742 | This DTC detects low torque converter slip when the TCC is commanded off. | TCC Slip: -20 to +20 RPM Fail Counter >= 2 | - Engine Speed > 450 rpm for 5 seconds and not in fuel cutoff - No Range change within 5 sec. - No MAP low and high DTC set - No TP high or low sensor DTC's - No VSS DTC's - No TCC Enable Sol. DTC's - No TCC Control Sol. DTC's - No PSA DTC set - Eng Torque: 50 to 400 ft-lbs - Vacuum: 0 to 105 kPa - Commanded Gear is not 1st - Gear Range is D4 - Throttle Position: 17% to 45% - TCC is commanded off - Engine Speed: 1000 to 3000 rpm - Speed Ratio: 0.64 to 1.35 - Vehicle Speed: 15 to 50 mph | 5 seconds Continuous | DTC Type B |

2000 4.3L (LF6, L35) S/T-truck, M/L-van, C/K-truck, G-van (includes Isuzu Hombre)

5.0L (L30) C/K-truck, G-van 5.7L (L31) C/K-truck, G-van

4L60-E TRANSMISSION DIAGNOSTIC PARAMETERS

2000trans12.doc

| SENSED PARAMETER | FAULT CODE | MONITOR STRATEGY DESCRIPTION | MALFUNCTION CRITERIA AND THRESHOLD VALUE(S) | SECONDARY PARAMETERS AND ENABLE CONDITIONS | TIME LENGTH AND FREQUENCY | MIL ILLUMINATION TYPE |
|------------------------------|------------|--|---|---|---------------------------|-----------------------|
| Shift Solenoid A Performance | P0751 | This DTC detects abnormal shift patterns: Stuck OFF: 2-2-3-3 pattern Stuck ON: 1-1-4-4 pattern | Fail Counter >=3 . The fail counter is incremented when the following fail cases are true: Stuck OFF: 1,2,3,& 4 Stuck ON: 1,2,3, & 5 | General -Engine Speed > 450 rpm for 5 seconds and not in fuel cutoff -Gear range is D4 -No TP high or low DTC's -No VSS low or intermittent DTC's -No Solenoid electrical DTC's -No DTC 742 -No PSA DTC set -Time since last shift is >0 sec -Vehicle speed >5 mph -Trans Temp.: 20 C to 130 C Fail Case 1 - Commanded 1-2 shift - TPS: 10% to 45% - TPS constant within +/- 7% - Vehicle Speed: 5 to 35 mph - After 2 seconds, engine speed in 2nd gear must be 80 rpm > last speed in 1st gear Fail Case 2 - Commanded 2-3 shift - TPS: 10% to 45% - TPS constant within +/- 7% - Vehicle Speed: 20 to 50 mph - After 2 sec, engine speed in 3rd gear must be 100 rpm < last speed in 2nd gear Fail Case 3 - Commanded 3-4 shift - TPS: 10% to 45% - TPS constant within +/- 7% - Vehicle speed: 30 to 65 mph - After 2 seconds, engine speed in 4th gear must be 10 rpm > last speed in 3rd gear Fail Case 4 - Commanded 4th gear - TCC commanded ON - TPS: 8% to 35% - Speed Ratio: 0.85 to 1.2 - TCC Slip: 200 to 1000 rpm for > 4 sec Fail Case 5 - Commanded 4th gear - TCC commanded ON - TPS: 8% to 35% - Speed Ratio: 0.60 to 0.80 - TCC Slip: -20 to +50 rpm for > 4 sec | Continuous | DTC Type A |
| Shift Solenoid A Electrical | P0753 | 0V to 12V This DTC detects a continuous open or short to ground in the SSA circuit or the SSA solenoid | Fail Counter >43 Counts out of 50 Total Counts <i>To set the fault:</i> | - System Voltage: 10 to 16 volts - Engine Speed > 450 rpm for 5 seconds and not in fuel cutoff | Continuous | DTC Type B |

2000 4.3L (LF6, L35) S/T-truck, M/L-van, C/K-truck, G-van (includes Isuzu Hombre)

5.0L (L30) C/K-truck, G-van 5.7L (L31) C/K-truck, G-van

4L60-E TRANSMISSION DIAGNOSTIC PARAMETERS

2000trans12.doc

| SENSED PARAMETER | FAULT CODE | MONITOR STRATEGY DESCRIPTION | MALFUNCTION CRITERIA AND THRESHOLD VALUE(S) | SECONDARY PARAMETERS AND ENABLE CONDITIONS | TIME LENGTH AND FREQUENCY | MIL ILLUMINATION TYPE |
|-----------------------------------|--------------|--|---|---|---------------------------|-----------------------|
| Shift Solenoid B Performance | P0756 | This DTC detects abnormal shift patterns: Stuck OFF: 4-3-3-4 pattern Stuck ON: 1-2-2-1 pattern | Fail Counter >=3 . The fail counter is incremented when the following fail cases are true: Stuck OFF: 1 and 3, or 2 and 3 Stuck ON: 3 and 4 | - Engine Speed > 450 rpm for 5 seconds and not in fuel cutoff - Gear Range is D4 - No TPS DTC's - No VSS DTC's - No solenoid electrical DTC's - No TCC Stuck On DTC. - No PSA DTC set - No Trans Temp DTC's set. - Vacuum: 0 to 105 kpa - Engine Torque: 5 to 450 ft lbs - Trans Temp: 20 C to 130 C - Vehicle Speed > 5 MPH Fail Case 1 - 1st gear commanded > 2.0 sec. - Output Speed: 400 to 1500 rpm - Speed Ratio: 0.5 to 3.0 - Throttle Position > 15% - TCC Slip: -3000 to -100 rpm for > 1.0 seconds Fail Case 2 - 2nd gear command > 409.5 sec - Engine Torque: 40 to 400 ft lbs - Vacuum: 0 to 105 kpa - TCC Slip: 8191 to 8191 rpm - Output speed: 8191 to 8191 rpm - Speed Ratio: 8 to 8 - Throttle Position > 99.9% - Fail Timer > 409.5 sec Fail Case 3 - Time with 3rd gear commanded: 2.0 to 5 seconds - TPS: 13% to 50% - TPS constant within +/- 7% - Speed Ratio in Third gear does not drop more than 0.3 from the last Speed Ratio in Second gear - TCC Slip in Third gear remains > 300 rpm higher than the last TCC Slip in Second gear - Fail Timer > 1.5 sec Fail Case 4 - 4th Gear commanded for > 1 sec - Output Speed: 1400 to 2500 rpm - Speed Ratio: 2.05 to 8.0 - Throttle Position > 13% - TCC Slip: 1000 to 4000 rpm for > 1 seconds. | Continuous | DTC Type A |
| Shift Solenoid B Electrical | P0758 | 0V to 12V This DTC detects a continuous open or short to ground in the SSB circuit or the SSB solenoid | Fail Counter >43 Counts out of 50 Total Counts | - System Voltage: 10 to 16 volts - Engine Speed > 450 rpm for 5 seconds and not in fuel cutoff | Continuous | DTC Type A |
| 3-2 Downshift Solenoid Electrical | P0785 | 0V to 12V This DTC detects a continuous open or short to ground in the SSB circuit or the SSB solenoid | Fail Counter >43 Counts out of 50 Total Counts | - System Voltage: 10 to 16 volts - Engine Speed > 450 rpm for 5 seconds and not in fuel cutoff | Continuous | DTC Type A |

2000 4.3L (LF6, L35) S/T-truck, M/L-van, C/K-truck, G-van (includes Isuzu Hombre)

5.0L (L30) C/K-truck, G-van 5.7L (L31) C/K-truck, G-van

4L60-E TRANSMISSION DIAGNOSTIC PARAMETERS

2000trans12.doc

| SENSED PARAMETER | FAULT CODE | MONITOR STRATEGY DESCRIPTION | MALFUNCTION CRITERIA AND THRESHOLD VALUE(S) | SECONDARY PARAMETERS AND ENABLE CONDITIONS | TIME LENGTH AND FREQUENCY | MIL ILLUMINATION TYPE |
|---------------------------------|--------------|--|--|---|---|-----------------------|
| PSA Circuit Malfunction | P1810 | 0V to 12V This DTC detects an invalid state of the PSA sensor or the PSA circuit by deciphering the PSA inputs. | Fail Case 1 Illegal Trans Pressure Switch State (111) or (101) Fail Case 2 Gear range is D2, D4, or Reverse during engine startup. Fail Case 3 Gear range is Park or Neutral when operating in D4. | Fail Case 1 - Engine Speed > 450 rpm for 5 seconds and not in fuel cutoff - System Voltage: 10 to 16 volts Fail Case 2 - System Voltage: 10 to 16 volts - No VSS DTC's - Vehicle Speed <2 mph 1. Engine Speed < 80 rpm for > 0.1 seconds, then, 2. Engine Speed: 80 to 550 rpm for > 0.1 seconds, then, 3. Engine Speed > 550 rpm Fail Case 3 - Engine Speed > 450 rpm for 5 seconds and not in fuel cutoff - System Voltage: 10 to 16 volts - 4th gear commanded - Engine Torque: 40 to 400 ft-lbs - Vacuum: 0 to 105 kPa - TCC Locked On - No VSS DTC's - Speed Ratio: 0.60 to 0.75 - TPS: 10% to 50% | Fail Case 1 60 seconds Fail Case 2 5 Seconds Fail Case 3 10 seconds Continuous | DTC Type B |
| TCC PWM Solenoid Electrical | P1860 | 0V to 12V This DTC detects a continuous open or short to ground in the TCC PWM circuit or the TCC PWM sensor | Fail Counter >43 Counts out of 50 Total Counts | - System Voltage: 10 to 16 volts - Engine Speed > 450 rpm for 5 seconds and not in fuel cutoff - Commanded Gear is 1st - TCC Duty Cycle < 10% or > 90% | Continuous | DTC Type B |
| Transmission Component Slipping | P1870 | This DTC detects excessive TCC slip when the torque converter clutch should be engaged. | If TCC slip is: 130 to 800 rpm for 7 seconds, then increment the Trans Slip Counter by one. When the counter reaches 3, set the code. | - Engine Speed > 450 rpm for 5 seconds and not in fuel cutoff - Gear is not 1st - Gear Range is D4 - No PSA DTC's set - No Trans Temp DTC's set - No TPS High or Low DTC's - No VSS DTC's - No solenoid electrical DTC's - Shift Solenoid Performance Diagnostic counters are all zero - TPS: 9.0% to 35% - Trans temp.: 20 C to 130C - Engine Torque: 50 to 400 ft-lbs - Vac: 0 to 105 kpa - Speed ratio: 0.69 to 0.88 - Engine Speed: 1500 to 3000 rpm - Vehicle Speed: 30 to 70 mph Fail Case 1 - TCC commanded on for > 5 sec and at max duty cycle (95%). | Continuous | DTC Type B |

2000 4.3L (LF6, L35) S/T-truck, M/L-van, C/K-truck, G-van (includes Isuzu Hombre)

5.0L (L30) C/K-truck, G-van 5.7L (L31) C/K-truck, G-van

4L60-E TRANSMISSION DIAGNOSTIC PARAMETERS

2000trans12.doc

| SENSED PARAMETER | FAULT CODE | MONITOR STRATEGY DESCRIPTION | MALFUNCTION CRITERIA AND THRESHOLD VALUE(S) | SECONDARY PARAMETERS AND ENABLE CONDITIONS | TIME LENGTH AND FREQUENCY | MIL ILLUMINATION TYPE |
|--|------------|--|---|---|---|-----------------------|
| Four Wheel Drive Low Circuit Performance | P1875 | 0V to 12V This DTC detects a continuous open or short to ground in the Four Wheel Drive low Circuit | <p>Stuck On Engine Spd Divided by Transfer Case Output Spd Ratio: .8 to 1.2</p> <p>Stuck Off Engine Spd Divided by Transfer Case Output Spd Ratio: 2.5 to 2.9</p> | <ul style="list-style-type: none"> - Engine Speed > 450 rpm for 5 seconds and not at fuel cut off - No TPS DTC's set - No PSA DTC's set - Gear Range is D4 - Shift Solenoid Performance Counters are zero - No VSS Low DTC's set - No TCC Enable Sol. DTC's set - No TCC Control Sol. DTC's set - No SSA Sol. DTC's set - No SSB Sol. DTC's set - No TCC DTC's set - Eng Torque: 50 to 400 ftlbs - VAC: 0 to 105 kpa - Trans Temp: 20C to 130C - Vehicle Speed > 7 MPH - TPS: 17% to 50% <p>Stuck ON</p> <ul style="list-style-type: none"> - 4wd Low switch in 4wd Low - Transfer case not in 4wd Low - TCC Slip: -3000 to -50 rpm <p>Stuck OFF</p> <ul style="list-style-type: none"> - 4wd Low switch not in 4wd Low - Transfer case is in 4wd Low - TCC ON - TCC Slip: 100 to 3000 rpm | <p>Stuck ON: 5 Seconds</p> <p>Stuck OFF: 10 Seconds 1 Occurance</p> <p>Continuous</p> | DTC Type B |