| 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 8192 RPM<br>This DTC detects a low Vehicle Speed when the vehicle has a large input speed in a drive gear range. | Output Speed < 50 RPM | Engine running > 300 RPM > 7.0 sec<br>System Voltage is between 8.0 & 18.0<br>Gear Range is not Park/Neutral<br>No PSA DTC<br>No TPS DTC's<br>Throttle Position => 10%<br>Engine Torque > 80 and < 400 ft. lbs.<br>No Mass Air Flow DTC's<br>No change in 4WD Lo for => 2.0 sec<br>Input Speed > 1500 RPM<br>No ISS DTC's set<br>Engine Vacuum > 0 & < 105.47 kPA<br>No MAP DTC's | 4.0 seconds<br><br>Continuous | DTC Type B |
| Vehicle Speed Sensor - Intermittent | P0503 | This DTC detects an unrealistic large drop in vehicle speed. | Output Speed drop >1000 RPM | Engine running > 300 RPM > 7.0 sec<br>System Voltage is between 8.0 & 18.0<br>No Four Wheel Drive Low DTC<br>No PSA change for > 6.0 seconds<br>No PSA DTC<br>Not in Four Wheel Drive Low<br>Max VSS positive skike must be < 250 RPM for < 2.0 sec. (Loop to Loop reads)<br>4WD LO Switch state change must be > 2.0 seconds. | 4.0 seconds<br><br>Continuous | DTC Type B |
| Input Speed Sensor - Intermittent/Loss | P0716 | 0 RPM to 8192 RPM<br>The DTC detects an unrealistically large change in Input Speed | Input Speed loss > 1300 RPM | Engine running > 300 RPM > 7.0 sec<br>System Voltage is between 8.0 & 18.0<br>No ISS Low DTC<br>No TPS DTC's<br>No VSS DTC's<br>No SSA Sol. DTC's<br>TPS > 10%<br>VSS > 7.0 MPH<br>Test Passed ISS low | 4.9 seconds<br><br>Continuous | DTC Type B |

| 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 |
|---|---|---|---|---|---|---|
| Input Speed Sensor - Low Input | P0717 | 0 RPM to 8192 RPM<br>The DTC detects a Low Input Speed when the vehicle has large Vehicle and Engine Speeds | Input Speed < 100 RPM | Engine running > 300 RPM > 7.0 sec<br>System Voltage is between 8.0 & 18.0<br>No VSS DTC<br>No PSA Sensor DTC's<br>PSA indicating not in P/N<br>VSS > 7.0 MPH | 5.0 seconds<br><br>Continuous | DTC Type B |
| TCC System Stuck Off | P0741 | This DTC detects high torque converter slip when the TCC is commanded on. | TCC Slip is > 140 rpm. | Engine running > 300 RPM > 7.0 sec<br>System Voltage is between 8.0 & 18.0<br>No ISS DTC's<br>No PSA DTC<br>No TPS DTC's<br>No VSS DTC's<br>No TCC Stuck ON DTC<br>No TCC PWM Electrical DTC's<br>PSA = D4, D3, or D2<br>Ratio = 2nd, 3rd, or 4th gear<br>Trans Fluid Temp > +20C & < 150.75C<br>TPS => 10% and < 100%<br>TCC Locked On >0.75 seconds<br>No PSA Change > 6 seconds<br>TCC Capicity => 70% | 3.5 seconds<br><br>5th Occurrence<br><br>Continuous | DTC Type B |

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|---|---|---|---|---|---|---|
| TCC System Stuck ON | P0742 | This DTC detects low torque converter slip when the TCC is commanded off. | TCC Slip is between -10 rpm and +10 rpm. | Engine running > 300 RPM > 7.0 sec<br>System Voltage is between 8.0 & 18.0<br>No ISS DTC's<br>No PSA DTC<br>No VSS DTC's<br>No TCC Stuck OFF DTC<br>No TCC PWM Electrical DTC<br>No TPS DTC's<br>No MAP DTC's<br>Commanded Gear not = to 1st<br>PSA = D4<br>Engine Speed between 800 RPM & 4400 RPM<br>Speed Ratio between 0.94 & 1.75<br>TPS > 12 & < 100%<br>Engine Torque > 120 ft lbs and < 400 ft. lbs.<br>VSS > 7 & < 75 MPH<br>No PSA Change < 6.0 seconds<br>Engine Vacuum > 0 & < 105.47 kPA (Caled Out) | 3.5 seconds<br><br>5th Occurrence<br><br>Continuous | DTC Type B |

# 2000 4.8L (LR4), 5.3L (LM7), 6.0L (LQ4)
# C/K-truck
# 4L80-E TRANSMISSION DIAGNOSTIC PARAMETERS

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| 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 Stuck Off (2-2-3-3 shift pattern) or Stuck On (1-1-4-4 shift pattern) | **Stuck OFF**<br>Commanded Gear = 1 and Ratio = 2nd > 2.0 sec<br>AND<br>Commanded Gear = 4/ with TCC Locked Ratio = 3rd > 3.5 seconds<br><br>**Stuck ON**<br>Commanded Gear = 2 Ratio = 1st > 2.75 seconds. | Engine running > 300 RPM > 7.0 sec<br>System Voltage is between 8.0 & 18.0<br>No ISS DTC's<br>No PSA DTC<br>No VSS DTC's<br>No TCC Stuck OFF DTC<br>No TCC PWM Electrical DTC<br>No TPS DTC's<br>No MAP DTC's<br>Commanded Gear not = to 1st<br>PSA = D4<br>TPS > 10.0 & < 100%<br>Engine Torque > 80 ft lbs and < 400 ft. lbs.<br>VSS > 1.5 MPH<br>TFT => 20.25 Deg C<br>No PSA Change < 6.0 seconds<br>Engine Vacuum > 0 & < 105.47 kPA (Caled Out) | **Stuck Off:**<br>2nd Occurrence<br><br>**Stuck On:**<br>5th Occurrences<br><br>Continuous | DTC Type B |
| Shift Solenoid A Electrical | P0753 | 0V to 12V<br>This DTC detects a continuous open, short to ground, or short to battery voltage in the SSA circuit or the SSA sensor | Fail Counter > 43 Counts out of 50 Total Counts.<br>(1 count = 100ms) | Engine running > 300 RPM > 7.0 sec<br>System Voltage is between 8.0 & 18.0 | Continuous | DTC Type B |

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|---|---|---|---|---|---|---|
| Shift Solenoid B Performance | P0756 | This DTC detects Stuck On (4-3-3-4 shift pattern) or Stuck Off (1-2-2-1 shift pattern) | **Stuck ON**<br>Commanded Gear = First and measured Ratio = 3rd > 3.0 seconds.<br>AND<br>Commanded Gear = Second with measured Ratio = Third > 3.5 seconds.<br><br>**Stuck OFF**<br>Commanded Gear = Third with measured Ratio = Second > 4.0 seconds. | Engine running > 300 RPM > 7.0 sec<br>System Voltage is between 8.0 & 18.0<br>No PSA DTC<br>No TPS DTC<br>No VSS DTC's<br>Not in Four Wheel Drive Low<br>No Four Wheel Drive DTC<br>No Shift Solenoid Electrical DTC<br>No ISS DTC<br>No MAP DTC's<br>No MAF DTC's<br>Vehicle Speed > 2.0MPH<br>TPS > 10.0%<br>Trans Fluid Temp => +20.25 C<br>Engine Torque > 80 < 400 ft. lbs.<br>Engine Vacuum > 0 & < 105.47 kPA (Caled Out) | **Stuck On:**<br>2 Occurrences<br><br>**Stuck Off:**<br>7 Occurrences<br><br>Continuous | DTC Type A |
| Shift Solenoid B Electrical | P0758 | 0V to 12V<br>This DTC detects a continuous open, short to ground, or short to battery voltage in the SSB circuit or the SSB sensor | Fail Counter > 43 Counts out of 50 Total Counts.<br>(1 count = 100ms) | Engine running > 300 RPM > 7.0 sec<br>System Voltage is between 8.0 & 18.0 | Continuous | DTC Type A |

# 2000 4.8L (LR4), 5.3L (LM7), 6.0L (LQ4)
# C/K-truck
# 4L80-E TRANSMISSION DIAGNOSTIC PARAMETERS

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| 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<br>This DTC detects an invalid state of the PSA sensor or the PSA circuit by deciphering the PSA inputs. | **Fail Case 1**<br>Illegal Trans Pressure Switch State<br>**Fail Case 2**<br>Gear range is D2 after engine startup<br>**Fail Case 3**<br>**(A)** PSA State reads P/N with drive ratio > 1.05<br>**OR**<br>**(B)** PSA State reads Reverse & Ratio is not measured Reverse<br>**OR**<br>**(C)** PSA State reads Drive range with Ratio indicating Reverse | **Fail Case 1**<br>Engine running > 300 RPM > 7.0 sec<br>System Voltage is between 8.0 & 18.0<br>**Fail Case 2**<br>No VSS DTC's<br>System Voltage > 8.0 and < 18.0 Volts<br>Vehicle Speed < 5.0 MPH<br>Engine Speed Transition:<br>Below 50 RPM for > 0.3 sec. Then, between 50 and 450 RPM > 0.025sec., then > 450 RPM.<br>**Fail Case 3**<br>Engine running > 300 RPM > 7.0 sec<br>System Voltage is between 8.0 & 18.0<br>No TPS DTC's<br>No VSS DTC's<br>No ISS DTC's<br>No PSA DTC<br>No MAP DTC's<br>No Shift Solenoid Electrical or Performance<br>DTC's<br>Vehicle > 5 MPH<br>TPS > 10 %<br>Engine Torque: 80 to 400 ft. lbs.<br>Engine Vacuum > 0 & < 105.47 kPA (Caled Out)<br>(Reverse Ratio = between 2.05 & 2.11) | **Fail Case 1**<br>60 seconds<br>**Fail Case 2**<br>7 seconds<br>**Fail Case 3**<br>3A > 15 sec.<br>3B > 15 sec.<br>3C > 7 sec.<br>Continuous | DTC Type B |
| TCC PWM Solenoid Electrical | P1860 | 0V to 12V<br>This DTC detects a continuous open, short to ground, or short to battery in the TCC PWM circuit or the TCC PWM sensor | Fail Counter > 43 Counts out of 50 Total Counts<br>(1 count = 100 ms) | Engine running > 300 RPM > 7.0 sec<br>System Voltage is between 8.0 & 18.0 | Continuous | DTC Type B |

# 2000 4.8L (LR4), 5.3L (LM7), 6.0L (LQ4)
# C/K-truck
# 4L80-E TRANSMISSION DIAGNOSTIC PARAMETERS

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| 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 |
|---|---|---|---|---|---|---|
| Transmission Component Slipping | P1870 | This DTC detects excessive TCC slip when the torque converter clutch should be engaged. | **Fail Case 1**<br>If TCC slip is > 120 rpm and < 550 rpm for 10 seconds, then increment the Trans Slip Counter by one. When the counter equals 3 or greater the diagnostic DTC is set.<br>or<br>**Fail Case 2**<br>Fail Case 1 counter => 1<br>2A) If TCC slip is > 110 rpm and < 550 rpm for 10 seconds, then line pressure is commanded to maxim, then<br>2B) If TCC slip is > 110 rpm and < 550 rpm for 12.5 seconds, then TCC PWM is commanded Off for 2.0 seconds,<br>3B) If TCC slip is > 110 rpm and < 550 rpm for 15.0 seconds<br>If the sequence occurs, the diagnostic DTC is set. | **Fail Case 1 and 2**<br>Engine running > 300 RPM > 7.0 sec<br>System Voltage is between 8.0 & 18.0<br>No ISS DTC's<br>No VSS DTC's<br>No TPS DTC's<br>No PSA DTC<br>No TCC Stuck On, Off or Electrical DTC's<br>No Shift Solenoid Electrical or Performance DTC's<br>Shift Sol Perf counters are clear.<br>No MAP DTC's<br>No MAF DTC's<br>PRNDL = D4<br>Commanded Gear = 4th<br>TPS > 10.0% & < 100%<br>TCC Commanded on > 4.0 sec.<br>TCC at Full Locked Time > 2.5 sec.<br>Trans Fluid Temp > +20 C < +130 C.<br>Engine Torque between 80 & 400 ft. lbs.<br>Engine Speed between 1250 & 5000 RPM<br>Speed Ratio between 1.90 and 0.70<br>Vehicle Speed between 35 & 110 MPH<br>Engine Vacuum > 0 & < 105.47 kPA (Caled out) | **Fail Case 1**<br>10 seconds<br>3rd Occurrence<br><br>OR<br>**Fail Case 2**<br>2A) 10 seconds<br>2B) 12.5 seconds<br>2C) 15 seconds<br><br>Continuous | DTC Type B |

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|---|---|---|---|---|---|---|
| Four Wheel Drive Low Circuit Performance | P1875 | 0V to 12V<br>This DTC detects a continuous open or short to ground in the Four Wheel Drive Circuit | **Stuck On**<br>Any one gear state.<br>0.96 < (Input Speed Divided by Transfer Case Output Spd) < 1.04<br><br>**Stuck Off**<br>Two different commanded gears with 2.68 < (Input Speed Divided by Transfer Case Output Spd) < 2.76 | Engine running > 300 RPM > 7.0 sec<br>System Voltage is between 8.0 & 18.0<br>No TPS DTC's<br>No Shift Solenoid Performance DTC's<br>SSA & SSB Perf Counters are Clear.<br>No PSA DTC<br>No Shift Solenoid Electrical DTC's<br>No TCC PWM Electrical DTC<br>No ISS DTC's<br>No VSS DTC's<br>No MAP DTC's<br>No MAF DTC's<br>PSA = D4<br>TPS > 10% and < 100%<br>Trans Fluid Temp > +20.25C and < +130C<br>Vehicle Speed > 1.5 MPH<br>Engine Torque > 55 and < 400 ft. lbs.<br>MAP > 0 kpa & < 106 kpa (Caled Out) | **Stuck On**<br>2.0 seconds<br>4th occurrence in any one gear<br><br>**Stuck Off**<br>1.0 second<br>4th occurrence in 2 different gears | DTC Type B |

# 2000 4.8L (LR4), 5.3L (LM7), 6.0L (LQ4)
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# 4L80-E TRANSMISSION DIAGNOSTIC PARAMETERS

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| 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 |
|---|---|---|---|---|---|---|
| Transmission Fluid Overtemperature | P0218 | This DTC detects a high transmission temperature for a long period of time | TFT > 130 C | No Trans Temp Sensor DTC's set | > 600.00 seconds<br><br>Continuous | DTC Type<br>Federal D<br>California D |
| Trans Fluid Temp Sensor Circuit Range/ Performance<br><br>(Contains 2 tests) | P0711 | The DTC detects two failure modes of the TFT:<br><br>1) A sensor that remains at a value. (Stuck Sensor)<br><br>2) an unrealistically large change in Transmission Temperature. | 1) Stuck sensor:<br>TFT has not changed > 2.25 deg C<br><br>2) Unrealistic change:<br>TFT changes > 20 deg C | System Voltage > 8.0 and < 18.0 Volts<br>No Engine Coolant DTC<br>No VSS DTC's<br>No Input Speed DTC's<br>No Transmission Component Slipping DTC<br>Engine run > 300 RPM for > 35.0 sec.<br>TFT => 10 AD counts and <= 251 AD counts<br>TFT between -40 deg C and +21 C at startup<br>Engine Coolant => +84.75 deg C<br>Engine Coolant has changed => +54.75 deg C since startup<br>Vehicle Speed since startup => 5.0 MPH => 900 seconds (cumulitive timer)<br>TCC Slip => 60 RPM => 500 sec. (cumulitive timer) | 1) Stuck sensor:<br>> 80 seconds<br><br>**OR**<br><br>2) Unrealistic change:<br>14 times in 7 seconds<br><br>Continuous | DTC Type<br><br>Federal C<br><br>California C |
| Trans Fluid Temp Sensor Circuit - Low Input (High Temperature indicated) | P0712 | .0V to 5.0V<br>The DTC detects a continuous short to ground in the TFT signal circuit or the TFT sensor | Raw TFT < .13671875 Volts<br><br>( < 7 A/D counts) | None | 15.0 seconds<br><br>Continuous | DTC Type<br><br>Federal C<br><br>California C |
| Trans Fluid Temp. Sensor Circuit - High Input (Low Temperature) | P0713 | .0V to 5.0V<br>The DTC detects a continuous open or short to voltage in the TFT signal circuit or the TFT sensor | Raw TFT > 4.94140625 Volts<br><br>( > 253 A/D counts) | None | 400seconds<br><br>Continuous | DTC Type<br><br>Federal C<br><br>California C |