2005 **4T45E** *when used with: 2.2L (L61) in these vehicles: Malibu*

4T80E *when used with: 4.6L (LD8, L37) in these vehicles: Deville/Hearse/Limo, Bonneville*

4L60E *when used with: 2.8L (LK5), 3.5L (L52) in these vehicles: Colorado, Canyon*

TRANSMISSION DIAGNOSTIC PARAMETERS

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SENSED PARAMETER	FAULT CODE	ACCEPTABLE OPERATING RANGE and RATIONALITY	PRIMARY MALFUNCTION DETECTION PARAMETERS	SECONDARY MALFUNCTION PARAMETERS and CONDITIONS	MONITORING TIME LENGTH and DTC TYPE A (MIL), B (MIL NIC), C (No MIL)	DEFAULT ACTIONS
Vehicle Speed Sensor: Low Input	**P0502**	Detects no vehicle speed when vehicle has large turbine speed in a [Drive] range.	Raw OSS ≤ 90 RPM NOTE: Raw OSS = OSS/FDR	No TOSS, TISS, or TransTPS DTC s No Engine Torque default TransCommonEnblCritMet TransEngSpdEnblCritMet TCC Slip >/= -5 rpm TransTemp >/= 0 ºC TOS </= 90 rpm for 3 Seconds 450 ≤ Engine RPM ≤ 7500 for 5.0 sec. 1000 ≤ ISS ≤ 5000 RPM TPS ≥ 12.0% 60.0 N-m ≤ Engine Torque ≤ 395.0 N-m 8.0 ≤ System Voltage ≤ 18.0	≥ 3.0 sec. Continuous Type B	Turn on MIL (2nd trip) Offset PCA Pressure Action Inhibit Torque Management Freeze Adapts Inhibit Pressure Actuator Action Apply TCC in 3rd when in Hot Mode (unless TCC inhibit) Default VSS from filtered ISS & commanded gear. If shift occurs, freeze OS for 2 sec {Q} at last OS before shift Above overridden by high RPM (redline) upshift. Do not use actual OS for upshift or downshift (prevents 1st & 4th) FATKO

2005 **4T45E** *when used with: 2.2L (L61) in these vehicles: Malibu*

4T80E *when used with: 4.6L (LD8, L37) in these vehicles: Deville/Hearse/Limo, Bonneville*

4L60E *when used with: 2.8L (LK5), 3.5L (L52) in these vehicles: Colorado, Canyon*

TRANSMISSION DIAGNOSTIC PARAMETERS

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SENSED PARAMETER	FAULT CODE	ACCEPTABLE OPERATING RANGE and RATIONALITY	PRIMARY MALFUNCTION DETECTION PARAMETERS	SECONDARY MALFUNCTION PARAMETERS and CONDITIONS	MONITORING TIME LENGTH and DTC TYPE A (MIL), B (MIL NIC), C (No MIL)	DEFAULT ACTIONS
Vehicle Speed Sensor Circuit Intermittent/Erratic	**P0503**	Detects unrealistically large ΔVSS with no gear range change.	Drop in raw OSS ≥ 350 RPM loop-to-loop	No TOSS, TISS, or TransTPS DTC s No Engine Torque default 450 ≤ Engine RPM ≤ 7500 for 5.0 sec Last manual range change ≥ 6.0 sec Raw OSS > 400 ≥ 2.0 sec +ΔOSS ≤ 500 ≥ 2.0 sec ΔISS, loop-to-loop, ≤ 500 for ≥ 4.8 sec	≥ 1.0 sec Continuous Type B	Turn on MIL (2nd trip) Maximum Line Pressure (640 kPa)Offset PCA Pressure Action Inhibit Torque Management Inhibit Pressure Actuator Action Freeze Adapts Default VSS from filtered ISS & commanded gear. If shift occurs, freeze OS for 2 sec at last OS before shift Above overridden by high RPM (redline) upshift. Do not use actual OS for upshift or downshift (prevents 1st & 4th) FATKO

2005 **4T45E** *when used with: 2.2L (L61) in these vehicles: Malibu*

4T80E *when used with: 4.6L (LD8, L37) in these vehicles: Deville/Hearse/Limo, Bonneville*

4L60E *when used with: 2.8L (LK5), 3.5L (L52) in these vehicles: Colorado, Canyon*

TRANSMISSION DIAGNOSTIC PARAMETERS

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SENSED PARAMETER	FAULT CODE	ACCEPTABLE OPERATING RANGE and RATIONALITY	PRIMARY MALFUNCTION DETECTION PARAMETERS	SECONDARY MALFUNCTION PARAMETERS and CONDITIONS	MONITORING TIME LENGTH and DTC TYPE A (MIL), B (MIL NIC), C (No MIL)	DEFAULT ACTIONS
Transmission Temperature Sensor (TTS) Circuit: Range/ Performance	**P0711**	Detects an unrealistically large change in TTS or value which remains constant for a period of time in which a measurable change is expected.	Fail Cases 1 & 2 TTS has changed ≤ 2.0° C (absolute value) since start. Fail Case 3 TTS changes ≥ 20.0° C loop-to-loop (absolute value)	Fail Cases 1 & 2 No ECT, TOSS, or TISS DTCs P0711 ≠ PASS this ignition cycle 8.0 {A} ≤ System Voltage ≤ 18.0 450 ≤ Engine Speed ≤ 7500 RPM ≥ 5.0 sec -38° C. ≤ TTS ≤ 143° C. Fail Case 1 Coolant Temp ≥ 70° C. ≥ 5.0 sec start-up delay TCC Slip ≥ 120 RPM cumul. for ≥ 900 sec. ΔCoolant Temp ≥ 50° C. since start -38° C. ≤ TTS at start ≤ 21° C. Veh Spd ≥ 8.0 kph cumul. ≥ 900 sec. ≥ 1 this ign cycle Fail Case 2 Coolant Temp ≥ 70° C. ΔCoolant Temp ≥ 50° C. since start ≥ 5.0 sec start-up delay TCC Slip ≥ 120 RPM cumul. for ≥ 900 sec. 129° C. ≤ TTS at start ≤ 143° C. Veh Spd ≥ 8.0 kph cumul. ≥ 900 sec. Fail Case 3 8.0 ≤ System Voltage ≤ 18.0 450 ≤ Engine Speed ≤ 7500 RPM ≥ 5.0 sec.	Fail Case 1 100.0 sec. Fail Case 2 100.0 sec. continuous Fail Case 3 in 200 msec & occurs ≥ 14 times in 7 sec. Type C	Calculate default Transmission Temperature (see p. 9) Freeze Adapts FA

2005 **4T45E** *when used with: 2.2L (L61) in these vehicles: Malibu*

4T80E *when used with: 4.6L (LD8, L37) in these vehicles: Deville/Hearse/Limo, Bonneville*

4L60E *when used with: 2.8L (LK5), 3.5L (L52) in these vehicles: Colorado, Canyon*

TRANSMISSION DIAGNOSTIC PARAMETERS

SENSED PARAMETER	FAULT CODE	ACCEPTABLE OPERATING RANGE and RATIONALITY	PRIMARY MALFUNCTION DETECTION PARAMETERS	SECONDARY MALFUNCTION PARAMETERS and CONDITIONS	MONITORING TIME LENGTH and DTC TYPE A (MIL), B (MIL NIC), C (No MIL)	DEFAULT ACTIONS
Transmission Temperature Sensor Circuit: Low Input	**P0712**	Detects continuous short to GND in TTS signal ckt/sensor	TTS ≥ 149° C.	No TransTemp DTCs 8.0 ≤ System Voltage ≤ 18.0 450 ≤ Engine RPM ≤ 7500 ≥ 5.0 sec.	≥ 10.0 sec Continuous Type C	Calculate default Trans. Temp. (see p. 9) Freeze Adapts Transmission Temperature Fluid Fault Action FA
Transmission Temperature Sensor Circuit: High Input	**P0713**	Detects continuous open/short to high in TTS signal ckt/sensor	TTS ≤ -39.5° C.	No TOSS, TISS, or TranTemp DTCs 8.0 ≤ System Voltage ≤ 18.0 450 ≤ Engine RPM ≤ 7500 ≥ 5.0 sec. OSS ≥ 200 RPM ≥ 300 sec. , cumulative TCC slip ≥ 50 RPM ≥ 400 sec. , cumulative	≥ 6.0 sec Continuous Type C	Calculate default Trans. Temp. (see p. 9) FA
Input/Turbine Speed Sensor Circuit Range/ Performance	**P0716**	Detects large ΔISS	Raw ISS drops ≥ 1000 RPM , loop-to-loop	No TOSS, No SSP (Shift Solenoid Perf.), No SSE (Shift Solenoid Elect.), No TISS, No TransTPS DTCs 450 ≤ Engine RPM ≤ 7500 ≥ 5.0 sec. TPS ≥ 12.0% Vehicle speed ≥ 16.0 kph Raw ISS > 1050 RPM {F} ≥ 2.0 sec. Raw +ΔISS ≤ 500 ≥ 2.0 sec. 8.0 ≤ System Voltage ≤ 18.0	≥ 1.0 sec Continuous Type B	Turn on MIL (2nd trip) Offset PCA Pressure Actuator Action Inhibit Pressure Actuator Action Input Speed Fault Action Calculate ISS from OSS & commanded gear ratio FATKO

2005 **4T45E** *when used with: 2.2L (L61) in these vehicles: Malibu*

4T80E *when used with: 4.6L (LD8, L37) in these vehicles: Deville/Hearse/Limo, Bonneville*

4L60E *when used with: 2.8L (LK5), 3.5L (L52) in these vehicles: Colorado, Canyon*

TRANSMISSION DIAGNOSTIC PARAMETERS

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SENSED PARAMETER	FAULT CODE	ACCEPTABLE OPERATING RANGE and RATIONALITY	PRIMARY MALFUNCTION DETECTION PARAMETERS	SECONDARY MALFUNCTION PARAMETERS and CONDITIONS	MONITORING TIME LENGTH and DTC TYPE A (MIL), B (MIL NIC), C (No MIL)	DEFAULT ACTIONS
Inpu/Turbinet Speed Sensor Circuit: No Signal	**P0717**	Detects low ISS for large Vehicle Speed	Raw ISS ≤ 50 RPM	No TOSS, DTCs 450 ≤ Engine RPM ≤ 7500 ≥ 5.0 sec Vehicle Speed ≥ 16.0 kph 8 .0 ≤ System Voltage ≤ 18.0	≥ 6.0 sec. Continuous Type B	Turn on MIL (2nd trip) Offset PCA Pressure Action Inhibit Pressure Actuator Action Input Speed Fault Action Calculate ISS from OSS & commanded gear ratio FATKO
Torque Converter Clutch Stuck OFF	**P0741**	Detects high torque converter slip when TCC commanded on.	TCC Slip ≥ KtTCCD_n_StuckOffFailLimit table RPM	No VSS, No TOSS, No TCC Elec, No SSP (Shift Solenoid Perf) No SSE (Shift Solenoid Elect), No TISS, No TransTPS DTCs 2nd, 3rd or 4th gear ratio observed Transmission Range = D4, D3, or D2 TCC Mode = ON or LOCKED 450 ≤ Engine RPM ≤ 7500 ≥ 5.0 sec. 10.0% ≤ TPS ≤ 50.0% TCC capacity ≥ 0 ≥ 5.0 sec. TCC pressure ≥ 450 kPa ≥ 5.0 sec. 20.0° C. ≤ TTS ≤ 133.0° C. Last manual range change ≥ 6.0 sec. 43.0 N-m ≤ Engine Torque ≤ 215 N-m	≥ 5.0 sec. Fail test counter = 1 Type B	No 4th gear if Trans in Hot Mode Force TCC OFF Action Freeze Adapts Turn on MIL (2nd trip) FATKO

2005 **4T45E** *when used with: 2.2L (L61) in these vehicles: Malibu*

4T80E *when used with: 4.6L (LD8, L37) in these vehicles: Deville/Hearse/Limo, Bonneville*

4L60E *when used with: 2.8L (LK5), 3.5L (L52) in these vehicles: Colorado, Canyon*

TRANSMISSION DIAGNOSTIC PARAMETERS

SENSED PARAMETER	FAULT CODE	ACCEPTABLE OPERATING RANGE and RATIONALITY	PRIMARY MALFUNCTION DETECTION PARAMETERS	SECONDARY MALFUNCTION PARAMETERS and CONDITIONS	MONITORING TIME LENGTH and DTC TYPE A (MIL), B (MIL NIC), C (No MIL)	DEFAULT ACTIONS
Torque Converter Clutch Stuck ON	**P0742**	Detects low converter slip when TCC commanded OFF	-20 ≤ TCC Slip ≤ 150	No VSS, No TOSS, No TCC Elec, No SSP (Shift Solenoid Perf) No SSE (Shift Solenoid Elect), No TISS, No TransTPS DTCs TCC off D4 range indicated, not in 1st gear 450 ≤ Engine RPM ≤ 7500 ≥ 5.0 sec. 20.0% ≤ TPS ≤ 90.0% 20.0° C. ≤ TTS ≤ 133.0° C. 155 N-m ≤ Engine Torque ≤ 294 N-m 500 ≤ Engine RPM ≤ 5500 16.0 kph ≤ Vehicle Speed ≤ 130.0 kph 0.65 {≤ Diag Trans Ratio ≤ 1.05	≥ 4.5 sec. Fail test counter = 2 Type B	Turn on MIL (2nd trip) Freeze Adapts Force TCC Apply Action FATKO
Shift Solenoid A Stuck Off	**P0751**	Detects 2-2-3-3 shift pattern (Stuck OFF)	<u>Fail Case 1</u> Commanded Gear = 1 1.54 ≤ Diag Trans Ratio ≤ 1.71 <u>Fail Case 2</u> Commanded Gear = 4 0.95 ≤ Diag Trans Ratio ≤ 1.05 Valve stuck count = 2 (1 & 2) = TRUE Fails	No TOSS, No TISS, No TransTPS, No TCC, No SSE (Shift Solenoid Elect), DTCs No Engine Torque Default Transmission range = D4, D3, D2, or D1 450 ≤ Engine RPM ≤ 7500 ≥ 5.0 sec. {C} 20.0° C. ≤ TTS ≤ 133.0° C. Vehicle speed ≥ 8.0 kph TPS ≥ 7.5% 80.0 N-m ≤ Engine Torque ≤ 395 N-m	<u>Fail Case 1</u> ≥ 1.5 sec. <u>Fail Case 2</u> ≥ 4.0 sec. Continuous Type B	Offset PCA Pressure Action Freeze Adapts Turn on MIL (2nd trip) FATKO

2005 **4T45E** *when used with: 2.2L (L61) in these vehicles: Malibu*

4T80E *when used with: 4.6L (LD8, L37) in these vehicles: Deville/Hearse/Limo, Bonneville*

4L60E *when used with: 2.8L (LK5), 3.5L (L52) in these vehicles: Colorado, Canyon*

TRANSMISSION DIAGNOSTIC PARAMETERS

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SENSED PARAMETER	FAULT CODE	ACCEPTABLE OPERATING RANGE and RATIONALITY	PRIMARY MALFUNCTION DETECTION PARAMETERS	SECONDARY MALFUNCTION PARAMETERS and CONDITIONS	MONITORING TIME LENGTH and DTC TYPE A (MIL), B (MIL NIC), C (No MIL)	DEFAULT ACTIONS
Shift Solenoid A Stuck On	**P0752**	Detects 1-1-4-4 shift pattern (Stuck ON)	Fail Case 1 Commanded Gear = 2 2.87 ≤ Diag Trans Ratio ≤ 3.11 Fail Case 2 Commanded Gear = 3 0.65 ≤ Diag Trans Ratio ≤ 0.71 Valve stuck count = 2 (1 & 2) = TRUE Fails	No TOSS, No TISS, No TransTPS, No TCC, No SSE (Shift Solenoid Elect), DTCs No Engine Torque Default Transmission range = D4, D3, D2, or D1 450 ≤ Engine RPM ≤ 7500 ≥ 5.0 sec. 20.0° C. ≤ TTS ≤ 133.0° C. Vehicle speed ≥ 8.0 kph TPS ≥ 7.5% 80.0 N-m ≤ Engine Torque ≤ 395 N-m	Fail Case 1 ≥ 2.0 sec. Fail Case 2 ≥ 4.0 sec. Type B Continuous	Offset PCA Pressure Action Freeze Adapts Turn on MIL (2nd trip) Inhibit 3-2 downshift 3-2 downshifts commanded only < 50 kph FATKO
Shift Solenoid B Stuck On	**P0756**	Detects 4-3-3-4 shift pattern (Stuck ON)	Fail Case 1 Commanded Gear = 1 0.65 ≤ Diag Trans Ratio ≤ 0.71 Fail Case 2 Commanded Gear = 2 0.95 ≤ Diag Trans Ratio ≤ 1.05 Stuck-on count = 2 (1 & 2) = TRUE Fails	No TOSS, No TISS, No TransTPS, No TCC, No SSE (Shift Solenoid Elect), DTCs No Engine Torque Default No Engine Torque Default Transmission range = D4, D3, D2, or D1 450 ≤ Engine RPM ≤ 7500 ≥ 5.0 sec. 20.0° C. ≤ TTS ≤133.0° C. Vehicle speed ≥ 8.0 kph 10.0% ≤ TPS ≤ 100% 80.0 N-m ≤ Engine Torque ≤ 395 N-m	Fail Case 1 ≥ 1.0 sec. Fail Case 2 ≥ 0.5 sec. Continuous Type A	Offset PCA Pressure Action Freeze Adapts Turn on MIL (1st trip) Inhibit 1st Gear Inhibit 4th and 5th Gear FATKO

2005 **4T45E** *when used with: 2.2L (L61) in these vehicles: Malibu*

4T80E *when used with: 4.6L (LD8, L37) in these vehicles: Deville/Hearse/Limo, Bonneville*

4L60E *when used with: 2.8L (LK5), 3.5L (L52) in these vehicles: Colorado, Canyon*

TRANSMISSION DIAGNOSTIC PARAMETERS

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SENSED PARAMETER	FAULT CODE	ACCEPTABLE OPERATING RANGE and RATIONALITY	PRIMARY MALFUNCTION DETECTION PARAMETERS	SECONDARY MALFUNCTION PARAMETERS and CONDITIONS	MONITORING TIME LENGTH and DTC TYPE A (MIL), B (MIL NIC), C (No MIL)	DEFAULT ACTIONS
Shift Solenoid B Stuck Off	**P0757**	Detects 1-2-2-1 shift pattern (Stuck OFF)	Fail Case 1 Commanded Gear = 3 1.54 ≤ Diag Trans Ratio ≤ 1.71 Fail Case 2 Commanded Gear = 4 2.87 ≤ Diag Trans Ratio ≤ 3.11 Stuck-off count = 2 (1 & 2) = TRUE Fails	No TOSS, No TISS, No TransTPS, No TCC, No SSE (Shift Solenoid Elect), DTCs No Engine Torque Default No Engine Torque Default Transmission range = D4, D3, D2, or D1450 ≤ Engine RPM ≤ 7500 ≥ 5.0 sec. 20.0° C. ≤ TTS ≤ 133.0° C. Vehicle speed ≥ 8.0 kph TPS ≥ 10.0% FC1: 80.0 N-m ≤ Engine Torque ≤ 395 N-m FC2: 10.0 N-m ≤ Engine Torque ≤ 395 N-m	Fail Case 1 ≥ 3.0 sec. Fail Case 2 ≥ 2.0 sec. Continuous Type A	Offset PCA Pressure Action Freeze Adapts Turn on MIL (1st trip) Inhibit Max Gear Hot Mode Action Inhibit Max Gear Not Hot Mode Action Inhibit TCC FATKO
Trans Range Switch No Start/Wrong Range	**P1819**	0 to 12 Volts This DTC detects a wrong range is indicated during a request to crank the engine	IMS<> Park or Neutral	System Voltage between 9 and 18 volts Engine Speed <= 10 rpm	1.0second 3 counts Type C	None FATKO
Internal Mode Switch Mode A Circuit Low	**P1820**	Mode A circuit = 0 V when should be 12	Mode A has always been LOW In [Park] ≥ 2.0 sec. {G}, then later in [Transitional_1] ≥ 5.0 sec.	No Engine Torque default 450 {A} ≤ Engine RPM ≤ 7500 {B} ≥ 5.0 sec. {C} 8.0 {D} ≤ System Voltage ≤ 18.0 {E} 40.0 N-m {H} ≤ Engine Torque ≤ 200 N-m {I}	Fail count = 1 {F} Type B	Maximum Line Pressure (640 kPa) Use [Drive4] for shift pattern control Freeze Adapts Turn on MIL (2nd trip) FATKO

2005 **4T45E** *when used with: 2.2L (L61) in these vehicles: Malibu*

4T80E *when used with: 4.6L (LD8, L37) in these vehicles: Deville/Hearse/Limo, Bonneville*

4L60E *when used with: 2.8L (LK5), 3.5L (L52) in these vehicles: Colorado, Canyon*

TRANSMISSION DIAGNOSTIC PARAMETERS

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SENSED PARAMETER	FAULT CODE	ACCEPTABLE OPERATING RANGE and RATIONALITY	PRIMARY MALFUNCTION DETECTION PARAMETERS	SECONDARY MALFUNCTION PARAMETERS and CONDITIONS	MONITORING TIME LENGTH and DTC TYPE A (MIL), B (MIL NIC), C (No MIL)	DEFAULT ACTIONS
Internal Mode Switch Mode B Circuit High	**P1822**	Mode B circuit = 12 V when should be 0	Mode B has always been HIGH (12 V) In [Park] ≥ 2.0 sec. {G}, then [Transitional_13} ≥ 5.0 sec. {J}	No Engine Torque default 450 {A} ≤ Engine RPM ≤ 7500 {B} ≥ 5.0 sec. {C} 8.0 {D} ≤ System Voltage ≤ 18.0 {E} 40.0 N-m {H} ≤ Engine Torque ≤ 200 N-m {I}	Fail count = 1 {F} Type B	Offset PCA Pressure Action Use [Drive4] for shift pattern control Freeze Adapts Turn on MIL (2nd trip) FATKO
Internal Mode Switch Mode P Circuit Low	**P1823**	Mode P circuit = 0 V when should be 12	Mode P has always been LOW (0 V) In [Park] ≥ 2.0 sec. {G}, then [Transitional_8] ≥ 5.0 sec. {J}	No Engine Torque default 450 {A} ≤ Engine RPM ≤ 7500 {B} ≥ 5.0 sec. {C} 8.0 {D} ≤ System Voltage ≤ 18.0 {E} 40.0 N-m {H} ≤ Engine Torque ≤ 200 N-m {I}	Fail count =1 {F} Type B	Offset PCA Pressure Action Use [Drive4] for shift pattern control Freeze Adapts Turn on MIL (2nd trip) FATKO
Transmission Range Sensor Malfunction	**P1825**	Range Switch = Illegal (PRNDL code =15)	Mode Switches A, B, and C are OPEN; Mode Switch P is shorted to power	450 {A} ≤ Engine RPM ≤ 7500 {B} ≥ 5.0 sec. {C} 8.0 {D} ≤ System Voltage ≤ 18.0 {E}	Illegal state ≥ 5.0 {F} sec. Type B	Offset PCA Pressure Action Use [Drive4] for shift pattern control Freeze Adapts Turn on MIL (2nd trip) FATKO

2005 **4T45E** *when used with: 2.2L (L61) in these vehicles: Malibu*

4T80E *when used with: 4.6L (LD8, L37) in these vehicles: Deville/Hearse/Limo, Bonneville*

4L60E *when used with: 2.8L (LK5), 3.5L (L52) in these vehicles: Colorado, Canyon*

TRANSMISSION DIAGNOSTIC PARAMETERS

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SENSED PARAMETER	FAULT CODE	ACCEPTABLE OPERATING RANGE and RATIONALITY	PRIMARY MALFUNCTION DETECTION PARAMETERS	SECONDARY MALFUNCTION PARAMETERS and CONDITIONS	MONITORING TIME LENGTH and DTC TYPE A (MIL), B (MIL NIC), C (No MIL)	DEFAULT ACTIONS
Internal Mode Switch Mode C Circuit High	**P1826**	Mode C circuit = 12 V when should be 0	IMS Circuit "C" High for 8.0 sec	8.0 {D} ≤ System Voltage ≤ 18.0 {E} 50 N-m {H} ≤ Engine Torque Vehicle Speed ≥ 16 KPH Correct Gear Ratio for Commanded Gear No TOSS Failures P1826 Did not Pass TKO	Fail count = 1 {F} Type B	Offset PSA Pressure Action Use [Drive4] for shift pattern control Freeze Adapts Turn on MIL (2nd trip) FATKO
Shift Solenoid A: Open/Short to GND	**P0973**	Detects cont. open or short to GND in SSA ckt/sensor	Shift Solenoid A short to ground bit is set OR (solenoid commanded ONn AND open bit is set)	450 {A} ≤ Engine RPM ≤ 7500 {B} ≥ 5.0 sec. {C} 8.0 {D} ≤ System Voltage ≤ 18.0 {E} High Side Driver 2 enabled	Fail test = TRUE 43 times {G} of possible 50 {H} Type B	Offset PCA Pressure Action Turn on MIL (2nd trip) Freeze Adapts Inhibit 3-2 downshifts > 50 kph {K} Inhibit Pressure Actuator Action FATKO

2005 **4T45E** *when used with: 2.2L (L61) in these vehicles: Malibu*

4T80E *when used with: 4.6L (LD8, L37) in these vehicles: Deville/Hearse/Limo, Bonneville*

4L60E *when used with: 2.8L (LK5), 3.5L (L52) in these vehicles: Colorado, Canyon*

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SENSED PARAMETER	FAULT CODE	ACCEPTABLE OPERATING RANGE and RATIONALITY	PRIMARY MALFUNCTION DETECTION PARAMETERS	SECONDARY MALFUNCTION PARAMETERS and CONDITIONS	MONITORING TIME LENGTH and DTC TYPE A (MIL), B (MIL NIC), C (No MIL)	DEFAULT ACTIONS
Shift Solenoid A Short to Power	**P0974**	Detects cont. short to 12 V in SSA ckt/sensor	Shift Solenoid A short to power bit is set	Shift Solenoid A commanded ON 450 {A} ≤ Engine RPM ≤ 7500 {B} ≥ 5.0 sec. {C} 8.0 {D} ≤ System Voltage ≤ 18.0 {E} High Side Driver 2 enabled	Fail test = TRUE 43 times {G} of possible 50 {H} Type B	Offset PCA Pressure Action Inhibit Pressure Actuator Action Turn on MIL (2nd trip) Freeze Adapts FATKO
Shift Solenoid B Open/Short to GND	**P0976**	Detects cont. open/short to GND in SSB ckt/sensor	Shift Solenoid B short to ground bit is set OR (solenoid commanded ON and open bit is set)	450 {A} ≤ Engine RPM ≤ 7500 {B} ≥ 5.0 sec. {C} 8.0 {D} ≤ System Voltage ≤ 18.0 {E} High Side Driver 2 enabled	Fail test = TRUE 43 times {G} of possible 50 {H} Type A	Offset PCA Pressure Action Turn on MIL (1st trip) Freeze Adapts Immediate landing to 2nd gear {J} Inhibit First Gear Action Inhibit 4th and 5th Gear Action Inhibit Pressure Actuator Action If 3rd or 4th commanded, assume 2nd gear FATKO

2005 **4T45E** *when used with: 2.2L (L61) in these vehicles: Malibu*

4T80E *when used with: 4.6L (LD8, L37) in these vehicles: Deville/Hearse/Limo, Bonneville*

4L60E *when used with: 2.8L (LK5), 3.5L (L52) in these vehicles: Colorado, Canyon*

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SENSED PARAMETER	FAULT CODE	ACCEPTABLE OPERATING RANGE and RATIONALITY	PRIMARY MALFUNCTION DETECTION PARAMETERS	SECONDARY MALFUNCTION PARAMETERS and CONDITIONS	MONITORING TIME LENGTH and DTC TYPE A (MIL), B (MIL NIC), C (No MIL)	DEFAULT ACTIONS
Shift Solenoid B Short to Power	**P0977**	Detects cont. short to 12 V in SSB ckt/sensor	Shift Solenoid B short to power bit is set	Shift Solenoid B commanded ON 450 {A} ≤ Engine RPM ≤ 7500 {B} ≥ 5.0 sec. {C} 8.0 {D} ≤ System Voltage ≤ 18.0 {E} High Side Driver 2 enabled	Fail test = TRUE 43 times {F} of possible 50 {G} Type A	Offset PCA Pressure Action Turn on MIL (1st trip) Freeze Adapts Immediate landing to 2nd gear {J} Inhibit TCC Inhibit 4th and 5th Gear Action Inhibit Pressure Actuator Action FATKO
Torque Converter Clutch Pulse Width Modulator Solenoid Electrical	**P2763**	TCC solenoid short to power	TCC_PWM bit equals short to power	8.0 {A} ≤ System Voltage ≤ 18.0 {B} 450 {C} ≤ Engine RPM ≤ 7500 {D} ≥ 5.0 sec. {E} Solenoid DC ≤ 0% High Side Driver 2 enabled	Fail test = TRUE 43 times {H} of possible 50 {I} Type B	Turn on MIL (2nd trip) Freeze Adapts Inhibit 4th gear, if Transmission in Hot Mode Offset PCA Pressure Action Overrride PCA Pressure Action FATKO

2005 **4T45E** *when used with: 2.2L (L61) in these vehicles: Malibu*

4T80E *when used with: 4.6L (LD8, L37) in these vehicles: Deville/Hearse/Limo, Bonneville*

4L60E *when used with: 2.8L (LK5), 3.5L (L52) in these vehicles: Colorado, Canyon*

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SENSED PARAMETER	FAULT CODE	ACCEPTABLE OPERATING RANGE and RATIONALITY	PRIMARY MALFUNCTION DETECTION PARAMETERS	SECONDARY MALFUNCTION PARAMETERS and CONDITIONS	MONITORING TIME LENGTH and DTC TYPE A (MIL), B (MIL NIC), C (No MIL)	DEFAULT ACTIONS
Torque Converter Clutch Pulse Width Modulator Solenoid Electrical	**P02764**	TCC solenoid short to ground or open	TCC_PWM bit equals short to ground or open	8.0 {A} ≤ System Voltage ≤ 18.0 {B} 450 {C} ≤ Engine RPM ≤ 7500 {D} ≥ 5.0 sec. {E} Solenoid DC ≤ 0% High Side Driver 2 enabled	Fail test = TRUE 43 times {H} of possible 50 {I} Type B	Turn on MIL (2nd trip) Freeze Adapts Inhibit 4th gear, if Transmission in Hot Mode Offset PCA Pressure Action Override PCA Pressure Action FATKO