

TCM 2100/2200/2210 Diagnostic Descriptions
Rev 4

Delphi / GM ALDL 2 Digit DTC#	OBD2 3 Digit DTC#	J1939 SPN	DESCRIPTION	Fail Conditions	TCM Actions Taken	Reasons For Action Taken	Clear Condition
21			Throttle Position High	Throttle Position High Throttle position voltage has been above 4.9 Volts for more than 1 second.	Maximum line pressure. Shift points fixed at 35% throttle.	Assumes fixed shift points. Goes to maximum pressure because engine load is unknown.	Throttle Position below 4.9 Volts for more than 1 second
22			Throttle Position Low	TPS voltage is less than 0.20 volts for more than 1 second.	Maximum line pressure. Shift points fixed at 35% throttle.	Assumes fixed shift points. Goes to maximum pressure because engine load is unknown.	Throttle Position Above 0.20 volts for more than 1 second
24	P0722	522741	Output Speed Sensor	No Code 21,22,U0001. Sets When not in Park or Neutral, Engine RPM greater than 3000, Input shaft speed greater than 2800, Throttle position greater than 10%, Output Speed Less than 200. All condition met for 3 seconds.	Calculate Output shaft speed from input shaft speed and commanded gear, Maximum line pressure	Calculates output shaft speed to determine shift points. Assumes maximum pressure because transmission slippage cannot be measured.	Key Cycle
28	P1810	522751	Range Pressure Switch / Lever Position Error	Sets when TCM sees one of two illegal combinations from pressure switch manifold for 2 Seconds.	Maximum pressure. Assume Overdrive 4 is selected. Inhibit 4th and TCC.	Assumes D4 so that performance of the vehicle is not limited. Inhibits 4th and TCC because actual selector position is unknown.	Key Cycle
37	P0719	522740	Brake Switch Stuck Off	Sets when Brake is not pressed, Vehicle speed is below 5 mph for greater than 6 seconds, then Vehicle speed is greater than 20 mph for greater than 6 seconds, for a total of 7 times.	Inhibit TCC.	Inhibits TCC to prevent engine stalling in panic brake situation.	Key Cycle or When Brake Pedal is pressed
38	P0724	522743	Brake Switch Stuck On	Sets when Brake is pressed, Vehicle speed is below 5 mph for greater than 6 seconds, then Vehicle speed is greater than 20 mph for greater than 6 seconds, for a total of 7 times.	Inhibit TCC.	Inhibits TCC to prevent engine stalling in panic brake situation.	Key Cycle or When Brake Pedal is released
39	P0741	522744	TCC Stuck OFF	TCC slip is greater than 65 RPM for 3 seconds when TCC is commanded on in 2nd or 3rd	Inhibit TCC and 4th gear	Inhibits TCC and 4th gear because code could be tripped by slipping 4th clutch.	Key Cycle
51	P0601	522736	Transmission Control Module	Sets when Internal memory writes/reads fail, COP stops operating or processor executes an Illegal Opcode.	2 nd Gear, Maximum line pressure, Inhibit TCC		Key Cycle
52	P0560	522733	System Voltage High Long	Sets when system voltage is greater than 16 volts for 30 minutes.	2 nd Gear, Maximum line pressure, Inhibit TCC	Turns off all solenoids to protect them from overheating/overcurrent	Key Cycle or when system voltage drops below 15V
53	P0561	522734	System Voltage High	Sets when system voltage is greater than 19.5 volts for 5 seconds.	2 nd Gear, Maximum line pressure, Inhibit TCC	Turns off all solenoids to protect them from overheating/overcurrent	Key Cycle or when system voltage drops below 18V
58	P0712	522737	Trans Temp High or TFT circuit low	Sets When Transmission Temperature Is above 151 Deg. C (304 Deg. F) for 1 second.	Inhibit 4th and TCC	Transmission Temperature is unknown	When Transmission Temperature drops below 148 Deg C for 5 second
59	P0713	522738	Trans Temp Low or TFT Circuit High	Transmission Temperature Is Below -37 Deg. C (-34 Deg. F) for 1 second.	Inhibit 4th and TCC	Transmission Temperature is unknown	When Transmission Temperature goes above -35 Deg C for 5 second
63			Reserved. Only Flashes through diagnostic light on Military Humvee	None	None	Is Barometric Pressure code on older Delphi Modules.	
68	P1870	522753	Component Slipping / TCC or 4th Clutch Slipping	No 28,71,74,U0001. Throttle Position is Greater Than 25%, Engine speed is 200 rpm or more than input speed for 6 seconds when in 4th gear and TCC engaged.	Maximum line pressure. Inhibit 4th.	Inhibits 4th because either TCC or 4th clutch could be slipping. Goes to maximum pressure to attempt to stop the slippage. If TCC slippage continues in 3rd code 39 will activate	Key Cycle
69	P0742	522745	TCC Stuck On	No DTC 21,22,71,74,U0001 Sets when TCC slip is between -25 and 25 rpm, TCC solenoid is commanded off, TPS is greater than 25% for 4 seconds	TCC Commanded on, Maximum Line Pressure	Commands TCC on in case of partial TCC pressure being applied.	Key Cycle
71			Engine Speed Circuit Low	Sets when Engine speed is less than 50 rpm, transmission range is R,D4,D3,D1 for 2 seconds	Inhibit 4th and TCC	Inhibits 4th and TCC because slippage of either clutch cannot be measured.	When Engine RPM goes above 300 RPM

72	P0723	522742	Intermittent Output Shaft Speed	No DTC 21,22,28,71,74,U0001. Sets when Engine RPM is greater than 300, range is D4,D3,D2, or D1, Throttle position is greater than 25%, and Output shaft speed changes more than 500 rpm in one measurement period.	Maximum line pressure. Calculate TOSS from TISS and commanded Gear.	Calculates output shaft speed to determine shift points. Assumes maximum pressure because transmission slippage cannot be measured. Inhibits TCC to prevent inadvertent stalling at low speeds.	Key Cycle
73	P0748	522746	Pressure Control Circuit	Force motor current is more than 0.16 Amps different than commanded current for 2 seconds.	Maximum line pressure.	Commands maximum pressure because pressure control	Key Cycle
74	P0717	522739	Input Speed Sensor Circuit	No DTC 28. Sets when Range is not park or neutral, engine speed greater than 300rpm, Output speed greater than 200rpm, Input speed less than 50 rpm, for 2 seconds.	Maximum line pressure. Inhibit 4th and TCC.	Commands Maximum pressure because Transmission slippage cannot be measured. Inhibits 4th and TCC because TCC slippage cannot be measured	When Input Speed goes above 75rpm for 2 seconds
75	P0562	522735	System Voltage Low	Sets when the ignition is on, voltage is less than the following conditions: -40F (-40C) = 7.3 volts 194F (90C) = 10.3 volts 302F (150C) = 11.7 volts Engine Speed is greater than 300 rpm for 4 seconds.	2 nd Gear with Maximum pressure. Inhibit TCC	Turns off all solenoids because the TCM cannot properly control them	Clears when system voltage is greater than the following conditions for 4 seconds: -40F (-40C) = 7.3 volts 194F (90C) = 10.3 volts 302F (150C) = 11.7 volts
79	P0218	522732	Transmission Fluid Overtemp	No DTC 58 Sets when transmission fluid temperature is greater than 270F (132C), for 5 minutes	None		When Temperature falls below 266F (130C) for 5 seconds
81	P0758	522750	2-3 Shift Solenoid Circuit Fault - Shift Solenoid B Electrical	Battery Voltage above 10volts TCM detects an open circuit, short to battery, short to ground, or over-current condition on the shift solenoid "B" circuit for 2 seconds	2 nd or 3 rd gears only. Maximum Line Pressure.	Turns off all solenoids. Depending on the Fault 2nd or 3rd gear is possible	When Fault condition removed for 2 seconds
82	P0753	522748	1-2 Shift Solenoid Circuit Fault - Shift Solenoid A Electrical	Battery Voltage above 10volts TCM detects an open circuit, short to battery, short to ground, or over-current condition on the shift solenoid "A" circuit for 2 seconds	2 nd and 3 rd gears only or 1 st and 4 th gear only. Maximum Line Pressure	Turns off all solenoids. Depending on the Fault 2nd and 3rd gear or 1st and 4th is possible.	When Fault condition removed for 2 seconds
83	P1860	522752	TCC Solenoid Circuit Fault	Battery Voltage above 10 Volts. TCM detects an open circuit, short to battery, short to ground, or over-current condition on the TCC solenoid circuit.	Inhibit TCC. Inhibit 4th when in Hot mode	Turns off the TCC output to prevent damage to the driver	When Fault condition removed for 2 seconds
85	P1871	522754	Undefined Ratio Error	No DTC 21,22,24,28,71,72,U0001 Sets when TPS is greater than 25%, Engine speed is greater than 300 rpm, Vehicle speed is greater than 7mph, Ratio falls out of following table for 6 seconds. Gear Low Limit High Limit 1 2.38 2.63 2 1.43 1.58 3 .95 1.05 REV 1.97 2.17	2 nd Gear with Maximum line pressure. Inhibit TCC	Turns off all solenoids in an attempt to protect the transmission.	Key Cycle
86	P0756	522749	Low ratio error (Shift Solenoid B Stuck On)	No DTC 21,22,24,28,71,72,74,85,U0001 Sets when RPM is greater than 300rpm, TPS is greater than 25%, VSS is greater than 7mph, Transmission ratio matches 4th when 1st is commanded or 3rd gear when 2nd gear is commanded, for 6 seconds.	2 nd Gear with Maximum line pressure Inhibit TCC.	Turns off all solenoids in an attempt to protect the transmission.	Key Cycle
87	P0751	522747	High ratio error (Shift Solenoid B Stuck off)	No DTC 21,22,24,28,71,72,74,85,U0001 Sets When RPM is Greater than 300rpm, TPS is greater than 25%, VSS is greater than 7mph, Transmission ratio matches 1st gear when 4th is commanded or 2nd gear when 3rd gear is commanded, for 6 seconds.	2 nd Gear with Maximum line pressure Inhibit TCC.	Turns off all solenoids in an attempt to protect the transmission.	Key Cycle
	U0001	522731	Can Communications Lost	No Can communications for greater than 5 seconds.	Maximum line pressure. Shift points fixed at 35% throttle. Inhibit 4th and TCC.	Assumes fixed shift points. Goes to maximum pressure because engine load is unknown.	