Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Parameters / Enable Conditions	Time Required	MIL Illumin.
TCM, Internal Fault	P0605	ROM checksum or RAM error	Calculated checksum differs from stored.		Ignition ON Number of failed calculations: 2	Immediately Continuous	Immediately
Lost communication with ECM (Engine)	U0100	Frame missing from ECM	Detect no Status CAN frame from ECM		Engine rpm > 500 rpm once within the driving cycle Ignition ON + 3 sec Battery voltage >10,2 V Limp home mode = Off	4 sec Continuous	Immediately
Invalid data from ECM	P1895	Engine Torque signal is indicated invalid	Invalid Torque data from ECM		Engine rpm > 400 rpm Not lost communication with ECM Ignition ON > 3 sec Battery voltage > 10,2 V Limp home mode = Off	4 sec Continuous	Immediately
Solenoid S1	P0985 P0986	Circuit continuity check	Short-cut ground Not connected or short-cut Ubatt		Engine rpm > 400 rpm Limp home mode = Off Time after ctrl status change > 25 ms Battery voltage > 10,2 V	500 msec Continuous	Immediately
Solenoid S2	P0973 P0974	Circuit continuity check	Short-cut ground Not connected or short-cut Ubatt		Engine rpm > 400 rpm Limp home mode = Off Time after ctrl status change > 25 ms Battery voltage > 10,2 V	500 msec Continuous	Immediately
Solenoid S3	P0976 P0977	Circuit continuity check	Short-cut ground Not connected or short-cut Ubatt		Engine rpm > 400 rpm Limp home mode = Off Time after ctrl status change > 25 ms Battery voltage > 10,2 V	500 msec Continuous	Immediately
Solenoid S4	P0979 P0980	Circuit continuity check	Short-cut ground Not connected or short-cut Ubatt		Engine rpm > 400 rpm Limp home mode = Off Time after ctrl status change > 25 ms Battery voltage > 10,2 V	500 msec Continuous	Immediately
Solenoid S5	P0982 P0983	Circuit continuity check	Short-cut ground Not connected or short-cut Ubatt		Engine rpm > 400 rpm Limp home mode = Off Time after ctrl status change > 25 ms	500 msec Continuous	Immediately

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Parameters / Enable Conditions	Time Required	MIL Illumin.
					Battery voltage > 10,2 V		
Torque Converter Clutch Slips	P0741	Comparison of engine speed and transmission input speed	Slipping: (Eng. Rpm - Trans. Input rpm) > 100 Converter is slipping with active lock-up.		Engine rpm > 400 rpm Throttle > 20% Trans. Input rpm signal OK CAN BUS signals OK (validity) Engine rpm < 4000 rpm SLU target current >= 1000mA Time after shifting > 0,5 sec Limp home mode = Off Battery voltage > 10,2 V Lock-up activated	12 sec Continuous	Immediately
Torque Converter Clutch Stuck On	P0742	Comparison of engine speed and transmission input speed	(Eng. Rpm - Trans. Input rpm) < 50 Converter clutch is locked when it should be slipping		Active gear: 3, 4, or 5 Lock-up status: OFF Trans. Input rpm signal < 3000 rpm Engine torque in defined range Oil temperature > 20 deg C Battery voltage > 10,2 V Engine speed > 400 rpm Time after shifter status change > 8 sec Time after shifting > 0,5 sec Time after ignition ON > 3 sec	Continuous	
Pressure solenoid SLU	P2764	Circuit continuity check	Short-cut ground or open	Low current, <92 mA, AD < 68	Limp home mode = Off Engine speed > 400 rpm Battery voltage > 10,2 V	12,5 sec Continuous	Immediately
	P2762		Terminal short	Error current > 80 mA	Limp home mode = Off Engine speed > 400 rpm Oil temp > 20 deg C System voltage change < 0,2V System voltage 11 -16 V Output current target > 835mA and not changed during detection.	2,75 sec Continuous	Immediately
	P2763		Short-cut Ubatt	Measured Current > 1.256 mA, AD > 1000	Limp home mode = Off	2 sec	Immediately

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Parameters / Enable Conditions	Time Required	MIL Illumin.
				1,356 mA, AD > 1000	Engine speed > 400 rpm Battery voltage > 10,2 V	Continuous	
Pressure solenoid SLT	P0962	Circuit continuity check	Short-cut ground or open	Low current, <92 mA, AD < 68	Limp home mode = Off Engine rpm > 400 Battery voltage > 10,2 V	12.5 sec Continuous	Immediately
	P0961		Terminal short	Error current > 80 mA	Limp home mode = Off Engine speed > 400 rpm Oil temp > 20 deg C System voltage change < 0,2V System voltage 11 -16 V Output current target > 835mA and not changed during detection.	2.75 sec Continuous	Immediately
	P0963		Short-cut Ubatt	Measured Current > 1,356 mA, AD > 1000	Limp home mode = Off Engine speed > 400 rpm Battery voltage > 10,2 V	2 sec Continuous	Immediately
Timing solenoid SLS	P0787	Circuit continuity check	Short-cut ground or open	Low current, <92 mA, AD < 68	Limp home mode = Off Engine rpm > 400 Battery voltage > 10,2 V	12.5 sec Continuous	Immediately
	P0786		Terminal short	Error current > 80 mA	Limp home mode = Off Engine speed > 400 rpm Oil temp > 20 deg C System voltage change < 0,2V System voltage 11 -16 V Output current target > 835mA and not changed during detection.	2.75 sec Continuous	Immediately
	P0788		Short-cut Ubatt	Measured Current > 1,356 mA, AD > 1000	Limp home mode = Off Engine rpm > 400 Battery voltage > 10,2 V	2 sec Continuous	Immediately
Shift Malfunction	P0780	Shift time check	Shift time is too long, too short or “tie up” occurs		Oil temp > 60 deg C No other failure is detected	5 times detection during DCY	Immediately

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Parameters / Enable Conditions	Time Required	MIL Illumin.
					Limp home mode = Off Shifter position: D, 4, 3, L, or M	Continuous	
CAN Bus Off Counter Overrun	U0001	CAN controller continuity check	CAN controller Bus Off is detected	Counter reaches 64	Limp home mode = Off 3 sec after Ignition ON or reset of CAN controller. Battery voltage > 10,2 V	12,7 - 28 sec Continuous	Immediately
Transmission input speed sensor	P0717	Circuit continuity check	No pulse	No pulse of Input speed sensor during 3000 pulses of output speed sensor	Limp home mode = Off Shifter position: D, 4, 3, or L	Speed dependent (e.g 4 sec at 100 km/h) Continuous	Immediately
	P0716		Pulses incorrect	In rpm = 0 **AND** Speed from ABS sensor > 20 km/h	Limp home mode = off 3 sec after Ignition ON or reset of CAN controller.	2,30 sec Continuous	Immediately
				Short to Ubatt or to ground	Limp home mode = off	3,30 sec Continuous	Immediately
					DS_active???		
Invalid signal from ECM	P1820	Accelerator pedal position signal is invalid	Data from ECM indicated as invalid		Limp home mode = off 3 sec after Ignition ON or reset of CAN controller.	4 sec Continuous	Immediately
					Engine speed > 400 rpm		
					Battery voltage > 10,2 V		
Trans. Output speed sensor	P0722	Circuit continuity check	No pulse	No pulse of Output speed sensor during 6000 pulses of input speed sensor	Limp home mode = Off Out Rpm calculated from ABS > 3000 Selected gear D, 4, 3, L No temperature failure No ABS failure	6000 pulses Continuous	Immediately
				Out Rpm = 0 AND Speed ABS > 20 km /h	Limp home mode = Off Out Rpm calculated from ABS > 3000 Selected gear D, 4, 3, L	2.30 sec Continuous	Immediately

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Parameters / Enable Conditions	Time Required	MIL Illumin.
					No temperature failure No ABS failure		
				Short to Ubatt or GND	Limp home mode = off	3.30 sec Continuous	Immediately
	P0721		Incorrect rpm	Difference > 15% compared to calculated from input speed		10 sec	
						Continuous	
Gear error, hydraulic fault	P0730	Rationality	Calculation of actual gear ratio is not correct	Calculated ratio differs more than 10% from expected	Limp home mode = Off	12 sec Continuous	Immediately
				Driving on 5th gear - gear ratio equals ratio for 3rd gear	out Rpm > 500		
				Driving on 4th gear - gear ratio equals ratio for 3rd gear	throttle > 10 %		
Transmission range switch	P0705	Check of switch output pattern	Failure combination of signals from Gear Selector range switch		Limp home mode = Off Engine speed > 400 rpm Battery voltage > 10,2 V	5 sec Continuous	Immediately
Transmission oil temperature sensor	P0711	Rationality	Oil temp change less than	5°C	Limp home mode = Off Oil temp sensor AD >10 & < 1000 Oil temp at initialization < 20°C Selected gear R, D, 4, 3, L Eng. rpm > 400 rpm 15min driving time Vehicle speed > 40 km/h once Battery voltage > 10,2 V	15 min Once / DCY	Two DCY
	P0712	Circuit continuity check	Short-cut ground	Voltage < 50 mV, AD < 10	Limp home mode = off Engine speed > 400 rpm Battery voltage > 10,2 V	5 min Continuous	Two DCY
	P0713	Circuit continuity check	Short-cut Ubat or open circuit	AD > 1000	Limp home mode = off Engine speed > 400 rpm ECT > 50 deg C ECT signal valid	12 sec + 15 min Continuous	Two DCY

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Parameters / Enable Conditions	Time Required	MIL Illumin.
					15 min driving time Battery voltage > 10,2 V		
Gear error, hydraulic fault	P0731	Rationality	Calculation of actual gear ratio for 1st gear is not correct.	Calculated ratio for 1st gear differs more than 4% from expected	Limp home mode = Off Selected gear D, 4, 3, L 500 < output shaft speed < 1260 (rpm) No other failure detection A/T oil temp. > 20 °C	12 sec Continuous	Immediately
	P0732	Rationality	Calculation of actual gear ratio for 2nd gear is not correct.	Calculated ratio for 2nd gear differs more than 20% from expected	Throttle > 10% 0,5 sec after shifting control done Current gear = 2 out Rpm >= 500	12 sec Continuous	Immediately
	P0733	Rationality	Calculation of actual gear ratio for 3rd gear is not correct.	Calculated ratio for 3rd gear differs more than 20% from expected	Throttle > 10% Current gear = 3 out Rpm >= 500	12 sec Continuous	Immediately
	P0734	Rationality	Calculation of actual gear ratio for 4th gear is not correct.	Calculated ratio for 4th gear differs more than 20% from expected, but not equals 3rd gears.ratio +- 4%	Throttle > 10% Current gear = 4 out Rpm >= 500	12 sec Continuous	Immediately
	P0735	Rationality	Calculation of actual gear ratio for 5th gear is not correct.	Calculated ratio for 5th gear differs more than 20% from expected	Throttle > 10% Current gear = 5 out Rpm >= 500	12 sec Continuous	Immediately
	P0736	Rationality	Calculation of actual gear ratio for Reverse gear is not correct	Calculated ratio for Reverse gear differs more than 20% from expected	Limp home mode = Off Selected gear R A/T oil temp. > 20 °C Throttle > 10% 0,5 sec after shifting Eng. Rpm > 400 rpm 8 sec after N-R-D shift IG voltage > 10,5 V out Rpm >= 500 out Rpm stable value	12 sec Continuous	Immediately

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Parameters / Enable Conditions	Time Required	MIL Illumin.
Battery voltage	P0562	Voltage low		< 8,68 V	Limp home mode = Off	20 sec	Immediately
	P0563	Voltage high		> 18 V	Transmission input speed > 800 rpm	Continuous	
					Ignition ON		
Engine speed signal	P0725	Signal from ECM stated as unreliable			Ignition on > 3 sec	4 sec	Immediately
					Engine speed > 500 rpm	Continuous	
					Limp home mode = Off		
					Battery voltage > 10,2 V		

Note: All components/system (DTCs) have a test frequency of 30~60ms