Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Parameters	Enable Conditions	Required	MIL Illumin.	Extra Prep
System Voltage	P0562	Low Supply	IG voltage	< 8.68 V	Ignition Emergency mode Transmission Input Speed No DTC set	ON FALSE > 800rpm P0716 P0717	20 sec Continuous	2nd	
	P0563	High Supply	IG voltage	> 18 V	Ignition Emergency mode Transmission Input Speed No DTC set	ON FALSE > 800rpm P0716 P0717	20 sec Continuous	2nd	
Internal Control Module Memory	P0601	Check Sum Error	Detectin of differences between the result of the checksum calculation executed after IG ON and the correct checksum. If there are differences from the correct checksum value stored in the FLASH ROM, a second calculation is made.		Ignition	OFF->ON (only at Transmission computer initialization function)	2 times	2nd	
Lost communication with ECM (Engine)	U0100	Frame missing from ECM	No CAN status frame from ECM detected		Diagnostic Service "Disable Normal Communication" not detected Engine speed Ignition DS Active CAN[2]	 > 400 rpm once within the driving cycle ON >3 sec TRUE	4 sec Continuous	2nd	
CAN Bus Off Counter Overrun	U0001	CAN controller continuity check	Receiving “BUS OFF” state from CAN controller		Ignition DS Active CAN[2]	ON >3 sec TRUE	8 times	2nd	
Invalid data from ECM	P1895	Engine Torque signal is indicated invalid	TCM receives Engine Torque Actual Validity	“Invalid”	Diagnostic Service "Disable Normal Communication" not detected Emergency mode Ignition DS Active CAN[2] No DTC set	 FALSE ON >3 sec TRUE U0100	4 sec Continuous	2nd	
Solenoid S1	P0985	Circuit continuity check	Short-cut ground Detected signal of the S1 monitor when S1 driver outputs the “ON”signal (12V)	“OFF” signal (0V)	DS Active[3] Time after solenoid output changed Emergency mode	TRUE >10 ms FALSE	500 msec Continuous	2nd	
	P0986		Not connected or short-cut Ubatt Detected signal of the S1 monitor when S1 driver outputs the “OFF”signal (0V)	“ON” signal (12V)					
Solenoid S2	P0973	Circuit continuity check	Short-cut ground Detected signal of the S2 monitor when S2 driver outputs the “ON”signal (12V)	“OFF” signal (0V)	DS Active[3] Time after solenoid output changed Emergency mode	TRUE >10 ms FALSE	500 msec Continuous	2nd	
	P0974		Not connected or short-cut Ubatt Detected signal of the S2 monitor when S2 driver outputs the “OFF”signal (0V)	“ON” signal (12V)					
Torque Converter Clutch	P0741	Comparison of engine speed and transmission input speed	Converter is slipping with active lock-up on. (Engine Speed - Transmission Input Speed)	> 100rpm	DS Active[3] Fdetect inh[4] Shift position Time after N-D shifting control[9] ends Engine Torque Engine Speed Time after SLU target current (_ir) >= 1000 mA abs(1- SpeedABS / Transmission Output Speed calculated from Transmission Input Speed) Time after shifting control[9] ends	TRUE FALSE RANGE_D(defined) 8 sec >= 0 Nm < 4000 rpm 3sec < 10 % 0.5 sec	12 sec Continuous	2nd	

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Parameters	Enable Conditions	Required	MIL Illumin.	Extra Prep
					Oil temperature Lock-up No DTC set	>= 20°C FALSE P2759 P0716 P0717 P0721 P0722			
	P0742		Abs(EngineSpeed - Transmission Input Speed)	< 30 rpm for 2.0 sec continuously	DS Active[3] Fdetect inh[4] Shift position Time after N-D shifting control[9] end Time after changing to Shift position = RANGE_D(defined) Time after shifting control[9] ends EngineTorque noACC[8] Engine Speed abs(1- SpeedABS / Transmission Output Speed calculated from Transmission Input Speed) Oil temperature Time after SLU pressure = 0 kPa No DTC set	TRUE FALSE RANGE_D (defined) 1.0 sec 8.0 sec 0.5 sec >= 60Nm >1000 rpm < 3000 rpm <10 % >= 20 °C 3sec P2759 P0716 P0717 P0721 P0722	4sec	2nd	
Pressure solenoid SLU	P2764	Circuit continuity check	Short-cut ground or open Current (AD	<23 mA <15)	DS Active[3] Emergency mode No DTC set	TRUE FALSE P2763 for 1 sec and over	500 ms Continuous	2nd	
	P2762		Terminal short Error current	> 80 mA	No Shifting Control[9] Emergency mode Oil temperature System voltage change System voltage SLU Output current target DS Active[3] No DTC set	 FALSE > 20°C < 0,2V 11 -16 V > 835mA and constant. TRUE P0711 P0712 P0713	2,75 sec Continuous	2nd	
	P2763		Short-cut Ubatt (+B) Measured Current (AD	> 1,333 mA > 1000)	DS Active[3] Emergency mode No DTC set	TRUE FALSE P2764 for 1 sec and over	500 ms Continuous	2nd	
	P2759		Feed Back Current Stuck(Electrical) sum_ie **"ie" is added to "sum_ie" every 10 msec.** "ie" : Difference of "ir" and "ifb". "ir" : Target current "ifb": Feedback current "sum_ie" is cleared as follows: (1) or (2) or (3) (1): Detection window = FALSE	>20000	IG voltage Input AD value Emergency mode DS Active[3] No DTC set	> 10.5 V < 1000(1333mA) FALSE TRUE P2763 P2764	1 sec	2nd	

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Parameters	Enable Conditions	Required	MIL Illumin.	Extra Prep
			(2): -50 mA <= ie <= 50 mA (3): ie value cahnges from “ie < 0mA“ (“ie >0mA“) to “ie >0mA“ (“ie < 0mA“).						
Pressure solenoid SLT	P0962	Circuit continuity check	Short-cut ground or open Current (AD	<23 mA <15)	DS Active[3] Emergency mode No DTC set	TRUE FALSE P0963 for 1 sec and over	500 ms Continuous	2nd	
	P0961		Terminal short Error current	> 80 mA	No Shifting Control[9] Emergency mode Oil temperature System voltage change System voltage SLT Output current target DS Active[3] No DTC set	 FALSE > 20°C < 0,2V 11 -16 V > 835mA and constant. TRUE P0711 P0712 P0713	2.75 sec Continuous	2nd	
	P0963		Short-cut Ubatt (+B) Measured Current (AD	> 1,333 mA > 1000)	DS Active[3] Emergency mode No DTC set	TRUE FALSE P0962 for 1 sec and over	500 ms Continuous	2nd	
	P0748		Feed Back Current Stuck(Electrical) sum_ie **"ie" is added to “sum_ie” every 10 msec.** “ie” : Difference of “ir” and “ifb”. “ir” : Target current “ifb”: Feedback current “sum_ie” is cleared as follows: (1) or (2) or (3) (1): Detection window = FALSE (2): -50 mA <= ie <= 50 mA (3): ie value cahnges from “ie < 0mA“ (“ie >0mA“) to “ie >0mA“ (“ie < 0mA“).	>20000	IG voltage Input AD value Emergency mode DS Active[3] No DTC set	> 10.5 V < 1000(1333mA) FALSE TRUE P0962 P0963	1 sec	2nd	
Timing solenoid SLC1	P0966	Circuit continuity check	Short-cut ground or open Current (AD	<23 mA <15)	DS Active[3] Emergency mode No DTC set	TRUE FALSE P0967 for 1 sec and over	500 msec Continuous	2nd	
	P0965		Terminal short Error current	> 80 mA	No Shifting Control[9] Emergency mode Oil temperature System voltage change System voltage SLC1 Output current target DS Active[3] No DTC set	 FALSE > 20°C < 0,2V 11 -16 V > 835mA and constant. TRUE P0711 P0712 P0713	2.75 sec Continuous	2nd	
	P0967		Short-cut Ubatt (+B) Measured Current (AD	> 1,333 mA > 1000)	DS Active[3] Emergency mode No DTC set	TRUE FALSE P0966 for 1 sec and over	500 msec Continuous	2nd	
	P0778		Feed Back Current Stuck(Electrical) sum_ie **"ie" is added to “sum_ie” every 10 msec.** “ie” : Difference of “ir” and “ifb”.	>20000	IG voltage input AD value Emergency mode DS Active[3]	> 10.5 V < 1000(1333mA) FALSE TRUE	1 sec	2nd	

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Parameters	Enable Conditions	Required	MIL Illumin.	Extra Prep
			"ir" : Target current "ifb": Feedback current "sum_ie" is cleared as follows: (1) or (2) or (3) (1): Detection window = FALSE (2): -50 mA <= ie <= 50 mA (3): ie value cahnges from "ie < 0mA" ("ie >0mA") to "ie >0mA" ("ie < 0mA").		No DTC set	P0966 P0967			
Timing solenoid SLC2	P0970	Circuit continuity check	Short-cut ground or open Current (AD	<23 mA <15)	DS Active[3] Emergency mode No DTC set	TRUE FALSE P0971 for 1 sec and over	500 msec Continuous	2nd	
	P0969		Terminal short Error current	> 80 mA	No Shifting Control[9] Emergency mode Oil temperature System voltage change System voltage SLC2 Output current target DS Active[3] No DTC set	 FALSE > 20°C < 0,2V 11 -16 V > 835mA and constant. TRUE P0711 P0712 P0713	2.75 sec Continuous	2nd	
	P0971		Short-cut Ubatt (+B) Measured Current (AD	> 1,333 mA > 1000)	DS Active[3] Emergency mode No DTC set	TRUE FALSE P0970 for 1 sec and over	500 msec Continuous	2nd	
	P0798		Feed Back Current Stuck(Electrical) sum_ie **"ie" is added to "sum_ie" every 10 msec.** "ie" : Difference of "ir" and "ifb". "ir" : Target current "ifb": Feedback current "sum_ie" is cleared as follows: (1) or (2) or (3) (1): Detection window = FALSE (2): -50 mA <= ie <= 50 mA (3): ie value cahnges from "ie < 0mA" ("ie >0mA") to "ie >0mA" ("ie < 0mA").	>20000	IG voltage Input AD value Emergency mode DS Active[3] No DTC set	> 10.5 V < 1000(1333mA) FALSE TRUE P0970 P0971	1 sec	2nd	
Timing solenoid SLC3	P2720	Circuit continuity check	Short-cut ground or open Current (AD	<23 mA <15)	DS Active[3] Emergency mode No DTC set	TRUE FALSE P2721 for 1 sec and over	500 msec Continuous	2nd	
	P2719		Terminal short Error current	> 80 mA	No Shifting Control[9] Emergency mode Oil temperature System voltage change System voltage SLC3 Output current target DS Active[3] No DTC set	 FALSE > 20°C < 0,2V 11 -16 V > 835mA and constant. TRUE P0711 P0712 P0713	2.75 sec Continuous	2nd	
	P2721		Short-cut Ubatt (+B) Measured Current (AD	> 1,333 mA > 1000)	DS Active[3] Emergency mode No DTC set	TRUE FALSE P2720 for 1 sec and over	500 msec Continuous	2nd	

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Parameters	Enable Conditions	Required	MIL Illumin.	Extra Prep
	P2716		Feed Back Current Stuck(Electrical) sum_ie **"ie" is added to "sum_ie" every 10 msec.** "ie" : Difference of "ir" and "ifb". "ir" : Target current "ifb": Feedback current "sum_ie" is cleared as follows: (1) or (2) or (3) (1): Detection window = FALSE (2): -50 mA <= ie <= 50 mA (3): ie value cahnges from "ie < 0mA" ("ie >0mA") to "ie >0mA" ("ie < 0mA").	>20000	IG voltage Input AD value Emergency mode DS Active[3] No DTC set	> 10.5 V < 1000(1333mA) FALSE TRUE P2720 P2721	1 sec	2nd	
Timing solenoid SLB1	P2729	Circuit continuity check	Short-cut ground or open Current (AD	<23 mA <15)	DS Active[3] Emergency mode No DTC set	TRUE FALSE P2730 for 1 sec and over	500 msec Continuous	2nd	
	P2728		Terminal short Error current	> 80 mA	No Shifting Control[9] Emergency mode Oil temperature System voltage change System voltage SLB1 Output current target DS Active[3] No DTC set	 FALSE > 20°C < 0,2V 11 -16 V > 835mA and constant. TRUE P0711 P0712 P0713	2.75 sec Continuous	2nd	
	P2730		Short-cut Ubatt (+B) Measured Current (AD	> 1,333 mA > 1000)	DS Active[3] Emergency mode No DTC set	TRUE FALSE P2729 for 1 sec and over	500 msec Continuous	2nd	
	P2725		Feed Back Current Stuck(Electrical) sum_ie **"ie" is added to "sum_ie" every 10 msec.** "ie" : Difference of "ir" and "ifb". "ir" : Target current "ifb": Feedback current "sum_ie" is cleared as follows: (1) or (2) or (3) (1): Detection window = FALSE (2): -50 mA <= ie <= 50 mA (3): ie value cahnges from "ie < 0mA" ("ie >0mA") to "ie >0mA" ("ie < 0mA").	>20000	IG voltage Input AD value Emergency mode DS Active[3] No DTC set	> 10.5 V < 1000(1333mA) FALSE TRUE P2729 P2730	1 sec	2nd	
Gear error, hydraulic fault	P0729	Rationality	Calculation of actual gear ratio for 6th gear is not correct. (Condition A or Condition B) **Condition A** abs(1-GRCurrent/GRExpected) **Condition B** abs(1-Gear Ratio Current/ 4th Gear Ratio) **or** abs(1-Gear Ratio Current/ 5th Gear Ratio)	 > 20% <4% <4%	No Shifting Control[9] Not in neutral control[10] Not garage shifting control[11](N-D or N-R) Throttle (A only) Transmission Output Speed (A) Transmission Output Speed (B) Current gear Engine Torque noACC[8] (B only) DS Active[3] Fdetect Inh[4] Shift position Time after changing to Shift position = RANGE_D(defined) Time after garage shift control[11] end Time after neutral control[10] end	 >= 10% >= 500rpm >=250rpm 6 >=80Nm TRUE FALSE RANGE_D(defined) 8.0 sec 1.0 sec 1.0 sec	12 sec Continuous	2nd	

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Parameters	Enable Conditions	Required	MIL Illumin.	Extra Prep
					Time after shifting control[9] end	0.5 sec			
					Oil temperature	>= 20°C			
					Brake	OFF			
					abs(1-SpeedABS/Trans. Output Speed)	< 10%			
					QS AirSuction[5]	FALSE			
					No DTC set	P0703 P0716 P0717 P0721 P0722			
	P0731	Rationality	Calculation of actual gear ratio for 1st gear is not correct.		Not garage shifting control[11](N-D or N-R) Not in neutral control[10] No Shifting Control[9]		12 sec Continuous	2nd	
			abs(1 - GRCurrent/ 2nd GearRatio)	< 4%	Current Gear	GEAR_1ST or GEAR_1STEB			
			or		Transmission Output Speed	1350 rpm >= outRpm >= 250 rpm			
			abs(1 - GRCurrent/ 3rd GearRatio)	< 4%	EngineTorque_noACC[8]	>=100Nm (GEAR_1ST)			
			or		EngineTorque_noACC[8]	>= 80 Nm (GEAR_1STEB)			
			abs(1 - GRCurrent/ 4th GearRatio)	< 4%	DS Active[3]	TRUE			
					Fdetect Inh[4]	FALSE			
					Shift position	RANGE_D(defined)			
					Time after changing to Shift position = RANGE_D(defined)	8.0 sec			
					Time after garage shift control[11] end	1.0 sec			
					Time after neutral control[10] end	1.0 sec			
					Time after shifting control[9] end	0.5 sec			
					Oil temperature	>= 20°C			
					Brake	OFF			
					abs(1-SpeedABS/Trans.Output Speed)	< 10%			
					QS AirSuction[5]	FALSE			
					No DTC set	P0703 P0716 P0717 P0721 P0722			
	P0732	Rationality	Calculation of actual gear ratio for 2nd gear is not correct. (Condition A or Condition B)		No Shifting Control[9] Not in neutral control[10] Not garage shifting control[11](N-D or N-R)		12 sec Continuous	2nd	
			Condition A						
			abs(1-GRCurrent/GRExpected)	>20%	Throttle (A only)	>= 10%			
			Condition B		Transmission Output Speed (A)	>= 500rpm			
			abs(1-Gear Ratio Current/ 1st Gear Ratio)	<4%	Transmission Output Speed (B)	>=250rpm			
			or		Current gear	2			
			abs(1-Gear Ratio Current/ 3rd Gear Ratio)	<4%	Engine Torque noACC[8] (B only)	>=80Nm			
			or		DS Active[3]	TRUE			
			abs(1-Gear Ratio Current/ 4th Gear Ratio)	<4%	Fdetect Inh[4]	FALSE			
			or		Shift position	RANGE_D(defined)			
			abs(1-Gear Ratio Current/ 6th Gear Ratio)	<4%	Time after changing to Shift position = RANGE_D(defined)	8.0 sec			
					Time after garage shift control[11] end	1.0 sec			
					Time after neutral control[10] end	1.0 sec			
					Time after shifting control[9] end	0.5 sec			
					Oil temperature	>= 20°C			

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Parameters	Enable Conditions	Required	MIL Illumin.	Extra Prep
					Brake	OFF			
					abs(1-SpeedABS/Trans. Output Speed)	< 10%			
					QS AirSuction[5]	FALSE			
					No DTC set	P0703 P0716 P0717 P0721 P0722			
	P0733	Rationality	Calculation of actual gear ratio for 3rd gear is not correct. (Condition A or Condition B)		No Shifting Control[9] Not in neutral control[10] Not garage shifting control[11](N-D or N-R)		12 sec Continuous	2nd	
			Condition A						
			abs(1-GRCurrent/GRExpected)	>20%	Throttle (A only)	>= 10%			
			Condition B		Transmission Output Speed (A)	>= 500rpm			
			abs(1-Gear Ratio Current/ 1st Gear Ratio)	<4%	Transmission Output Speed (B)	>=250rpm			
			or		Current gear	3			
			abs(1-Gear Ratio Current/ 4th Gear Ratio)	<4%	Engine Torque noACC[8] (B only)	>=80Nm			
			or		DS Active[3]	TRUE			
			abs(1-Gear Ratio Current/ 5th Gear Ratio)	<4%	Fdetect Inh[4]	FALSE			
					Shift position	RANGE_D(defined)			
					Time after changing to Shift position = RANGE_D(defined)	8.0 sec			
					Time after garage shift control[11] end	1.0 sec			
					Time after neutral control[10] end	1.0 sec			
					Time after shifting control[9] end	0.5 sec			
					Oil temperature	>= 20°C			
					Brake	OFF			
					abs(1-SpeedABS/Trans. Output Speed)	< 10%			
					QS AirSuction[5]	FALSE			
					No DTC set	P0703 P0716 P0717 P0721 P0722			
	P0734	Rationality	Calculation of actual gear ratio for 4th gear is not correct. (Condition A or Condition B)		No Shifting Control[9] Not in neutral control[10] Not garage shifting control[11](N-D or N-R)		12 sec Continuous	2nd	
			Condition A						
			abs(1-GRCurrent/GRExpected)	>20%	Throttle (A only)	>= 10%			
			Condition B		Transmission Output Speed (A)	>= 500rpm			
			abs(1-Gear Ratio Current/ 1st Gear Ratio)	<4%	Transmission Output Speed (B)	>=250rpm			
			or		Current gear	4			
			abs(1-Gear Ratio Current/ 5th Gear Ratio)	<4%	Engine Torque noACC[8] (B only)	>=80Nm			
			or		DS Active[3]	TRUE			
			abs(1-Gear Ratio Current/ 6th Gear Ratio)	<4%	Fdetect Inh[4]	FALSE			
					Shift position	RANGE_D(defined)			
					Time after changing to Shift position = RANGE_D(defined)	8.0 sec			
					Time after garage shift control[11] end	1.0 sec			
					Time after neutral control[10] end	1.0 sec			
					Time after shifting control[9] end	0.5 sec			
					Oil temperature	>= 20°C			
					Brake	OFF			
					abs(1-SpeedABS/Trans. Output Speed)	< 10%			
					QS AirSuction[5]	FALSE			

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Parameters	Enable Conditions	Required	MIL Illumin.	Extra Prep
					No DTC set	P0703 P0716 P0717 P0721 P0722			
	P0735	Rationality	Calculation of actual gear ratio for 4th gear is not correct. (Condition A or Condition B) **Condition A** abs(1-GRCurrent/GRExpected) **Condition B** abs(1-Gear Ratio Current/ 4th Gear Ratio) **or** abs(1-Gear Ratio Current/ 6th Gear Ratio)	 >20% <4% <4%	No Shifting Control[9] Not in neutral control[10] Not garage shifting control[11](N-D or N-R) Throttle (A only) Transmission Output Speed (A) Transmission Output Speed (B) Current gear Engine Torque noACC[8] (B only) DS Active[3] Fdetect Inh[4] Shift position Time after changing to Shift position = RANGE_D(defined) Time after garage shift control[11] end Time after neutral control[10] end Time after shifting control[9] end Oil temperature Brake abs(1-SpeedABS/Trans. Output Speed) QS AirSuction[5] No DTC set	 >= 10% >= 500rpm >=250rpm 5 >=80Nm TRUE FALSE RANGE_D(defined) 8.0 sec 1.0 sec 1.0 sec 0.5 sec >= 20°C OFF < 10% FALSE P0703 P0716 P0717 P0721 P0722	12 sec Continuous	2nd	
Engine speed signal	P0725	Signal from ECM stated as unreliable	Engine Speed Validity	"Invalid"	Diagnostic Service "Disable Normal Communication" not detected Ignition DS_Active_CAN[2] Emergency mode No DTC set	 ON >3 sec TRUE FALSE U0100	4 sec Continuous	2nd	
Transmission Range Sensor Circuit	P0707	Voltage low	POS1 Voltage or POS2 Voltage	< 0.127 (AD value=26) V	Battery voltage Diagnosis Service mode	6.0 V < Battery Voltage < 15.5 V FALSE	200ms	2nd	
	P0708	Voltage high	Input POS1 Voltage or Input POS2 Voltage	> 4.87 (AD value=997)V	Diagnosis Service mode Battery voltage	FALSE 6.0 V < Battery Voltage < 15.5 V	200 ms Continuous	2nd	
	P0706	Signal out of range	Input POS1 Voltage + Input POS2 Voltage	<= 5V -0.29V or >= 5V +0.29V	Diagnosis Service mode Battery voltage	FALSE 6.0 V < Battery Voltage < 15.5 V	200 ms Continuous	2nd	
Output speed sensor circuit	P0722		No pulse Number of pulses from Transmission Output Speed Sensor Number of pulses from Transmission Input Speed Sensor	 0 16	Not in neutral control[10] No Shifting Control[9] Not garage shifting control[11](N-D) DS Active[3] Emergency mode Shift position Time since change from P,R or N range to others if vehicle speed >= 66km/h and oil temperature >20°C	 TRUE FALSE RANGE_D(defined) 2.5sec	Dependent of Speed	2nd	

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Parameters	Enable Conditions	Required	MIL Illumin.	Extra Prep
					Time since change from P,R or N range to others if vehicle speed < 66km/h and oil temperature <= 20°C	10sec			
					SpeedABS	> 300 rpm			
					No DTC set	P0501 P0706 P0707 P0708 P0716 P0717 P0748 P0778 P0798 P0961 P0962 P0963 P0965 P0966 P0967 P0969 P0970 P0971 P0973 P0974 P0985 P0986 P1895 P2159 P2716 P2719 P2720 P2721 P2725 P2728 P2729 P2730 U0001 U0121			
	P0721		Range/Performance, wrong pulse | 1-SpeedABS/Transmission Output Speed |	> 15 %	Not garage shifting control[11] (N-D) No Shifting Control[9]		10 sec	2nd	
					CurrentGear	>= 2ND			
					| 1-SpeedABS/ Trans. Output Speed |	< 5%			
					Time after shifting control	8 sec			
					Time after changing to Position	8 sec			
					Shift position	RANGE_D(defined)			
					Engine speed	> 400rpm			
					Speed ABS	>= 30 km/h			
					Spinning[6]	FALSE			
					DS_Active[3]	TRUE			
					Emergency mode	FALSE			
					No DTC set	P0501 P0706 P0707 P0708 P0711 P0712 P0713 P0725			

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Parameters	Enable Conditions	Required	MIL Illumin.	Extra Prep
						P0741 P0742 P0748 P0778 P0798 P0961 P0962 P0963 P0965 P0966 P0967 P0969 P0970 P0971 P0973 P0974 P0985 P0986 P1820 P1895 P2159 P2716 P2719 P2720 P2721 P2725 P2728 P2729 P2730 P2759 P2762 P2763 P2764 U0001 U0121			
Transmission input speed sensor	P0717		No pulse No of pulses from Transmission Input Speed Sensor No of pulses from Transmission Output Speed Sensor	 0 24	No Shifting Control[9] Not garage shifting control[11](N-D) DS_Active[3] Emergency mode Trans. Output Speed * CurrentGearRatio Shift position CurrentGear Time since change from P,R or N range to others if vehicle speed >= 66km/h and oil temperature >20°C Time since change from P,R or N range to others if vehicle speed < 66km/h and oil temperature <= 20°C No DTC set	 TRUE FALSE > 600 rpm RANGE_D(defined) >= 2nd gear 2.5sec 10sec P0501 P0706 P0707 P0708 P0721 P0722 P0748 P0778 P0798 P0961	Dependent of Speed	2nd	

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Parameters	Enable Conditions	Required	MIL Illumin.	Extra Prep
						P0962 P0963 P0965 P0966 P0967 P0969 P0970 P0971 P0973 P0974 P0985 P0986 P1895 P2159 P2716 P2719 P2720 P2721 P2725 P2728 P2729 P2730 U0001 U0121			
	P0716		Wrong Pulse | 1-speedABS/Transmission Input Speed |	> 15 %	No Shifting Control[9] Not garage shifting control[11](N-D) | 1-SpeedABS/Trans. Output Speed | | 1-SpeedABS/Engine Speed | Time after shifting control Time after changing to Position switch = RANGE_D Gear Range Engine speed Spinning[6] DS_Active[3] LockUpActive Emergency mode Speed ABS No DTC set	 < 5 % < 5 % 8 sec 8 sec >= 2ND other than P and N and R > 400rpm FALSE TRUE TRUE FALSE > 30 km/h U0001 P0501 P0706 P0707 P0708 P0711 P0712 P0713 P0721 P0722 P0725 P0741 P0742 P0748 P0778 P0798 P0961 P0962 P0963 P0965	10 sec	2nd	

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Parameters	Enable Conditions	Required	MIL Illumin.	Extra Prep
						P0966 P0967 P0969 P0970 P0971 P0973 P0974 P0985 P0986 P1820 P1895 P2159 P2716 P2719 P2720 P2721 P2725 P2728 P2729 P2730 P2759 P2762 P2763 P2764 U0121			
Transmission oil temperature sensor	P0711	Rationality	Oil temperature change less than	Oil Temperature at initialization = the highest oil temperature during 10 min ± 4 (AD value)	Oil temp at initialization Engine coolant temp at initialization AD value of oil temperature AD value of oil temperature Range No DTC set	< 50°C < 70°C < 1000 > 10 D,R(defined) P0706 P0707 P0708	10 min	2nd	
	P0712	Circuit continuity check	Short-cut ground AD value of Oil Temp	< 10*1 (More than 200 OC).	DS_Active[3]	TRUE	300sec	2nd	
	P0713	Circuit continuity check	Short-cut Ubat or open circuit AD value of Oil temperature	> 1000*1 (-43 OC)	DS Active[3] DriveTime Engine CoolantTemperature No DTC set	TRUE > 15 min > 50°C P0116 U0100 U0001	12 sec	2nd	
Invalid signal from ECM	P1820	Accelerator pedal position signal is invalid	Accelerator Position Validity	"Invalid"	Diagnostic Service "Disable Normal Communication" not detected Ignition DS Active CAN[2] Emergency mode No DTC set	 ON > 3sec TRUE FALSE U0100	4 sec	2nd	
Neutral condition	P1701		**Step 1:** abs(Engine Speed - Transmission Input Speed) Transmission Input Speed (at D range) Transmission Input Speed (at R range) **Step 2:** Transmission Input Speed Engine Speed	 <150rpm > Transmission Output Speed x (1st gear ratio at RANGE_D) +400rpm > Transmission Output Speed x (reverse gear ratio at RANGE_R) +1000rpm <200rpm >600rpm	Not garage shifting control[11](N-D or N-R) Not in neutral control[10] No Shifting Control[9] DS Active[3] Fdetect_Inh[4] Oil temperature Shift position	 TRUE FALSE (except P0966) >0°C RANGE_D or RANGE_R (defined)	**Step1:** at D range: 3.3 sec if (0 <= X <= 1500) 1.3 sec if (1501 <= X <= 3000) 0.8 sec if	2nd	

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Parameters	Enable Conditions	Required	MIL Illumin.	Extra Prep
					Time after changing to shift position = RANGE_D or R(defined) Time after garage shifting end Time after neutral control end Time after shifting control end Transmission Output Speed SpeedABS Lockup Current gear QS_AirSuction[5] No DTC set	1.0sec 1.0sec 1.0sec 0.5sec <=500rpm <=500rpm FALSE 1 or 2 or 3 or 4 FALSE P0716 P0717 P0721 P0722	(3001 <= X) at R range: 1.8 sec if (0 <= Y <= 1500) 1.3 sec if (1501 <= Y <= 3000) 0.8 sec if (3001 <= Y) X = inRpm - outRpm X (1st gear ratio at RANGE_D) Y = inRpm - outRpm X (reverse gear ratio at RANGE_R) **Step 2:** 0.1sec		
Neutral control	P1704		C1 apply control Transmission Input Speed C1 pressure	>= (Transmission Input Speed at apply start + 400rpm + Transmission Output Speed x gear ratio) >=3.0kg/cm^2	DS_Active[3] Shift position Fdetect_Inh[4] Oil temperature QS_AirSuction[5] No DTC set	TRUE RANGE_D(defined) FALSE >=10°C FALSE P0716 P0717 P0721 P0722	0.3sec	2nd	