

2004 MY for Torque Converter Clutch Solenoid Performance (Shift Solenoid Valve SL) Monitor (P0741)

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MONITOR STRATEGY

Required sensors/Components	Main	Shift solenoid valve SL (DSL)
	Sub	None
Frequency of operation	Continuous	
Duration	OFF malfunction (A) 0.05 sec. OFF malfunction (B) 1 sec. OFF malfunction (C) 3.2 sec. ON malfunction 1.8 sec.	
MIL operation	2 driving cycles	
Sequence of operation	None	

TYPICAL ENABLING CONDITIONS

Item		Specification	
		Minimum	Maximum
The monitor will run whenever the following DTCs are not present.		See page In-39	
Engine family	Item	Specification	
		Minimum	Maximum
All models	Condition (A)		
	Engine coolant temperature	-10 °C (14 °F) or more	-
	Transmission range	"D"	
	Transmission fluid temperature	-20 °C (-4 °F) or more	-
	Transmission fluid temperature sensor "A" circuit	Not circuit malfunction	
	ECT sensor circuit	Not circuit malfunction	
	Turbine speed sensor circuit	Not circuit malfunction	
	Intermediate shaft speed sensor "A" circuit	Not circuit malfunction	
	Output speed sensor circuit	Not circuit malfunction	
	Pressure control solenoid "A" circuit	Not circuit malfunction	
	Pressure control solenoid "B" circuit	Not circuit malfunction	
	Pressure control solenoid "C" circuit	Not circuit malfunction	
	Shift solenoid "D" circuit	Not circuit malfunction	
	Shift solenoid "E" circuit	Not circuit malfunction	
	Torque converter clutch solenoid circuit	Not circuit malfunction	
	OFF malfunction (A)		
	ECM selected gear	3rd	
	During gear shifting	2nd to 3rd	
	Throttle valve opening angle	4.5 % or more at engine speed 1,900 rpm (condition vary with engine speed)	-
	OFF malfunction (B)		
	ECM selected gear	5th	
	Throttle vale opening angle	5 % or more	-
	Vehicle speed	10 km/h (6 mph) or more	-
	OFF malfunction (C)		
	ECM lock-up command	ON	
	ECM selected gear	3rd or 4th or 5th	
	Vehicle speed	25 km/h (16 mph) or more	-
	ON malfunction		
	ECM lock-up command	OFF	
	ECM selected gear	3rd or 4th or 5th	
	Throttle valve opening angle	10 % or more	-
	Vehicle speed	25 km/h (16 mph) or more	Less than 60 km/h (37 mph)

TYPICAL MALFUNCTION THRESHOLDS

Engine family	Detection criteria	Threshold
All models	Following condition met (a. and b. and c.) or d.	
	a. = (A) & OFF malfunction (A)	
	Input speed/Intermediate speed (NT/NC)	$0.93 \leq \text{NT/NC} < 1.07$
	b. = (A) & OFF malfunction (B)	
	Intermediate speed/Output speed (NC/NO)	$1.02 \leq \text{NC/NO} < 1.16$
	c. = (A) & OFF malfunction (C)	
	Engine speed – Input speed (NE – NT)	
	When condition "a" of shift solenoid "D" is detected;	75 rpm or more
	When condition "a" of shift solenoid "D" is not detected;	100 rpm or more
	d. = (A) & ON malfunction	
	Engine speed – Input speed (NE – NT)	Less than 35 rpm