

1998 MY for Shift Solenoid "B" Performance (Shift Solenoid Valve S2) Monitor (P0755)

1998 MY for Pressure Control Solenoid "B" Performance (Shift Solenoid Valve SL2) Monitor (P0755)

To return to monitor description, see page [Cm-158](#).

MONITOR STRATEGY

Required sensors/Components	Main	Shift solenoid valve No.2
	Sub	None
Frequency of operation	Continuous	
Duration	Less than 10 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
5E-FE (PASEO), 1ZZ-FE, 5S-FE (CAMRY), 1MZ-FE, 2JZ-GE, 2JZ-GTE, 1UZ-FE, 3S-FE, 3RZ-FE (Except Prerunner), 5VZ-FE (Except Prerunner)	Functional check		
	Transmission range	"D"	
5S-FE (CELICA)	Condition (A)		
	Transmission range	"D"	
	Engine coolant temperature	60 °C (140 °F)	105 °C (221 °F)
	Spark retard by KCS control	–	Less than 10° CA
	OFF failure		
	Intake air temperature	–10 °C (14 °F)	70 °C (158 °F)
	ECM selected gear	2nd	
	Throttle valve opening angle	10 % or more	35 % or more
	ON failure		
	Intake air temperature	–10 °C (14 °F)	70 °C (158 °F)
	ECM selected gear	4th with lock up	

Component T/M Outputs – Solenoid

5VZ–FE (Prerunner)	Condition (A)		
	Transmission range	"D"	
	Engine coolant temperature	60 °C (140 °F)	105 °C (221 °F)
	Spark retard by KCS control	–	Less than 8° CA
	Transmission fluid temperature	–	Less than 130 °C (266 °F) (hysteresis 110 °C (230 °F))
	Battery voltage	10 V or more	–
	OFF failure		
	Intake air temperature	–10 °C (14 °F)	70 °C (158 °F)
	ECM selected gear	2nd	
	Throttle valve opening angle	10 % or more	30 % or more
	ON failure		
	Intake air temperature	–10 °C (14 °F)	70 °C (158 °F)
	ECM selected gear	4th with lock up	
3RZ–FE (Prerunner)	Condition (A)		
	Transmission range	"D"	
	Engine coolant temperature	55 °C (131 °F)	105 °C (221 °F)
	Spark retard by KCS control	–	Less than 10° CA
	Transmission fluid temperature	–	Less than 130 °C (266 °F) (hysteresis 110 °C (230 °F))
	Battery voltage	10 V or more	–
	OFF failure		
	Intake air temperature	–10 °C (14 °F)	90 °C (194 °F)
	ECM selected gear	2nd	
	Throttle valve opening angle	12 % or more	35 % or more
	ON failure		
	Intake air temperature	–10 °C (14 °F)	90 °C (194 °F)
	ECM selected gear	4th with lock up	
2UZ–FE	Condition (A)		
	Transmission range	"D"	
	Engine coolant temperature	40 °C (104 °F) or more	–
	Transmission fluid temperature	–	Less than 130 °C (266 °F) (hysteresis 110 °C (230 °F))
	Transfer range	Hi	
	OFF failure (A)		
	ECM selected gear	2nd	
	OFF failure (B)		
	ECM selected gear	3rd	
	OFF failure (C)		
	ECM selected gear	2nd	

2UZ-FE	ON failure (A)		
	ECM selected gear	1st	
	Vehicle speed	–	Less than 40 km/h (25 mph)
	Throttle valve opening angle	15 % or more	–
	ON failure (B)		
	ECM selected gear	3rd	
	ON failure (C)		
	ECM selected gear	4th	
	Throttle valve opening angle	15 % or more	–

TYPICAL MALFUNCTION THRESHOLDS

Engine family	Detection criteria	Threshold
5S-FE (PASEO), 1ZZ-FE, 5S-FE (CAMRY), 1MZ-FE, 2JZ-GE, 2JZ-GTE, 1UZ-FE, 3S-FE, 3RZ-FE (Except Pre-runner), 5VZ-FE (Except Prerunner)	Function at check	
	ECM selected gear vs operating gear	Don't match
5S-FE (CELICA), 3RZ-FE (Prerunner), 5VZ-FE (Prerunner)	(A) and OFF malfunction	
	Engine speed	$\leq 1\text{st gear ratio} \times \text{output speed}$
	Number of detections	2 times/trip
	(A) and ON malfunction	
	Engine speed	$\leq 3\text{rd gear ratio} \times \text{output speed} - 50 \text{ rpm}$ $< 3\text{rd gear ratio} \times \text{output speed} + 50 \text{ rpm}$
	Number of detections	1 time/trip
2UZ-FE	Following conditions met a. and b. and c.	
	a. = (A) and OFF malfunction (A)	
	Input speed/Output speed (NCO/NO)	$1.40 \leq \text{NCO/NO} \leq 1.67$
	b. = (A) and OFF malfunction (B)	
	Input speed/Output speed (NCO/NO)	$0.93 \leq \text{NCO/NO} \leq 1.07$
	c. = (A) and OFF malfunction (C)	
	Input speed/Output speed (NCO/NO)	$0.93 \leq \text{NCO/NO} \leq 1.07$
	Number of detections	2 times/trip
	Following conditions met a. and b. and c.	
	a. = (A) and ON malfunction (A)	
	Input speed/Output speed (NCO/NO)	$1.40 \leq \text{NCO/NO} \leq 1.67$
	b. = (A) and ON malfunction (B)	
	Input speed/Output speed (NCO/NO)	$0.93 \leq \text{NCO/NO} \leq 1.07$
	c. = (A) and ON malfunction (C)	
	Input speed/Output speed (NCO/NO)	$0.93 \leq \text{NCO/NO} \leq 1.07$
	Number of detections	1 time/trip