

2003 MY for Shift Solenoid "C" Performance (Shift Solenoid Valve S3) Monitor (P0796)

2003 MY for Pressure Control Solenoid "C" Performance (Shift Solenoid Valve SL3) Monitor (P0796)

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MONITOR STRATEGY

Required sensors/Components	Main	Shift solenoid valve No.3
	Sub	None
Frequency of operation	Continuous	
Duration	(A) & OFF malfunction (A) 0.8 sec. (A) & OFF malfunction (B) 1 sec. (A) & (ON malfunction (A), (B)) 0.8 sec. (A) & ON malfunction (C) 0.4 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 (Except 1MZ-FE (CAMRY '03/01 L/O))	Condition (A)		
	Engine coolant temperature	10 °C (50 °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	

All models (Except 1MZ-FE (CAMRY '03/01 L/O))	OFF malfunction (A)		
	ECM selected gear	4th or 5th	
	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	4th	
	Throttle valve opening angle	5 % or more	—
	Vehicle speed	10 km/h (6 mph) or more	—
	ON malfunction (A)		
	ECM selected gear	1st	
	Vehicle speed	—	Less than 40 km/h (25 mph)
	Throttle valve opening angle	4.5 % or more at engine speed 1,900 rpm (condition vary with engine speed)	—
	ON malfunction (B)		
	ECM selected gear	3rd	
	Throttle valve opening angle	7.0 % or more at engine speed 1,400 rpm (condition vary with engine speed)	—
	Malfunction of pressure control so- lenoid "B" & "C"	Not detected	
	ON malfunction (C)		
	Throttle valve opening angle	7.0 % or more at engine speed 1,050 rpm (condition vary with engine speed)	—
	Malfunction of pressure control so- lenoid "B"	Not detected	

Component T/M Outputs – Solenoid

1MZ-FE (CAMRY '03/01 L/O)	Condition (A)		
	Engine coolant temperature	10 °C (50 °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	4th or 5th	
	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	4th	
	Throttle valve opening angle	5 % or more	–
	Vehicle speed	10 km/h (6 mph) or more	–
	ON malfunction (A)		
	ECM selected gear	1st	
	Vehicle speed	–	Less than 40 km/h (25 mph)
	Throttle valve opening angle	4.5 % or more at engine speed 1,900 rpm (condition vary with engine speed)	–
	ON malfunction (B)		
	ECM selected gear	3rd	
	Throttle valve opening angle	7.0 % or more at engine speed 1,400 rpm (condition vary with engine speed)	–
	Malfunction of pressure control solenoid "B" & "C"	Not detected	
	ON malfunction (C)		
	Throttle valve opening angle	7.0 % or more at engine speed 1,050 rpm (condition vary with engine speed)	–
	Malfunction of pressure control solenoid "B"	Not detected	

TYPICAL MALFUNCTION THRESHOLDS

Engine family	Detection criteria	Threshold
All models (Except 1MZ-FE (CAMRY '03/01 L/O))	Following condition met (a. and b.) or (c. and d. and e.)	
	It is necessary 2 judgements/driving cycle 1st judgement; temporary flag ON 2nd judgement; pending fault code ON	
	a. = (A) & OFF malfunction (A)	
	Input speed/Intermediate shaft speed (NT/NC)	$0.93 \leq \text{NT/NC} < 1.07$
	b. = (A) & OFF malfunction (B)	
	Intermediate shaft speed/Output speed (NC/NO)	$0.95 \leq \text{NC/NO} < 1.09$
	c. = (A) & ON malfunction (A)	
	Input speed/Intermediate shaft speed (NT/NC)	$0.93 \leq \text{NT/NC} < 1.07$
	d. = (A) & ON malfunction (B)	
	Input speed – Intermediate shaft speed (NT – NC)	700 rpm or more
	e. = (A) & ON malfunction (C)	
	Input speed – Intermediate speed (NT – NC)	$< -500 \text{ rpm or } \geq 700 \text{ rpm}$
1MZ-FE (CAMRY '03/01 L/O)	Following condition met (a. and b.) or (c. and d. and e.)	
	It is necessary 2 judgements/driving cycle 1st judgement; temporary flag ON 2nd judgement; pending fault code ON	
	a. = (A) & OFF malfunction (A)	
	Input speed/Intermediate shaft speed (NT/NC)	$0.93 \leq \text{NT/NC} < 1.07$
	b. = (A) & OFF malfunction (B)	
	Intermediate shaft speed/Output speed (NC/NO)	$1.02 \leq \text{NC/NO} < 1.16$
	c. = (A) & ON malfunction (A)	
	Input speed/Intermediate shaft speed (NT/NC)	$0.93 \leq \text{NT/NC} < 1.07$
	d. = (A) & ON malfunction (B)	
	Input speed – Intermediate shaft speed (NT – NC)	700 rpm or more
	e. = (A) & ON malfunction (C)	
	Input speed – Intermediate speed (NT – NC)	$< -500 \text{ rpm or } \geq 700 \text{ rpm}$