

2001 MY for Transmission Range Sensor Circuit Malfunction (PRNDL Input) Monitor (P1780)

2001 MY for Park/Neutral Switch Input Circuit Monitor (P1780)

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MONITOR STRATEGY

Required sensors/Components	Main	Park/Neutral position switch
	Sub	None
Frequency of operation	1MZ-FE (AVALON, ES300), 2AZ-FE, 3RZ-FE, 5VZ-FE, 2UZ-FE, 2ZZ-GE, 1ZZ-FE, 1NZ-FE, 1AZ-FE, 5S-FE	(A) Continuous
		(B) Continuous
	1MZ-FE (SIENNA, CAMRY, CAMRY SOLARA, RX300, HIGH LANDER), 2RZ-FE, 3UZ-FE, 2JZ-GE	Continuous
Duration	1MZ-FE (AVALON, ES300), 2AZ-FE, 3RZ-FE, 5VZ-FE, 2UZ-FE, 2ZZ-GE, 1ZZ-FE, 1NZ-FE, 1AZ-FE, 5S-FE	(A) 0.5 sec.
		(B) 30 sec.
	1MZ-FE (SIENNA, CAMRY, CAMRY SOLARA), 2RZ-FE	30 sec.
	1MZ-FE (RX300, HIGH LANDER), 3UZ-FE, 2JZ-GE	0.5 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
1NZ-FE	Condition (B)		
	Vehicle speed	65 km/h (40 mph) or more	–
	Engine speed	1,500 rpm	4,000 rpm
	Intake air amount per revolution	0.29 g/rev. or more	–
2AZ-FE	Condition (B)		
	Vehicle speed	70 km/h (43 mph) or more	–
	Engine speed	1,500 rpm	2,500 rpm
	Intake air amount per revolution	0.3125 g/rev. or more	–

Component T/M Inputs – Shift Range

1AZ-FE	Condition (B)		
	Vehicle speed	70 km/h (43 mph) or more	–
	Engine speed	1,500 rpm	4,000 rpm
	Intake air amount per revolution	0.6 g/rev. or more	–
5VZ-FE	Condition (B)		
	Vehicle speed	70 km/h (43 mph) or more	–
	Engine speed	1,500 rpm	2,500 rpm
3RZ-FE, 1ZZ-FE (COROLLA)	Condition (B)		
	Vehicle speed	70 km/h (43 mph) or more	–
	Engine speed	1,500 rpm	2,500 rpm
	Intake air amount per revolution	0.6 g/rev. or more	–
2UZ-FE	Condition (B)		
	Vehicle speed	70 km/h (43 mph) or more	–
	Engine speed	1,200 rpm	2,500 rpm
	PM	47 kPa (350 mmHg, 14 in.Hg) or more	–
	Intake air amount per revolution	0.6 g/rev. or more	–
5S-FE	Condition (B)		
	Vehicle speed	80 km/h (50 mph) or more	–
	Engine speed	1,500 rpm	4,000 rpm
	PM	55 kPa (410 mmHg, 16 in.Hg) or more	–
2ZZ-FE, 1ZZ-FE (CELICA)	Condition (B)		
	Vehicle speed	70 km/h (43 mph) or more	–
	Engine speed	1,200 rpm	2,500 rpm
	Intake air amount per revolution	0.6 g/rev. or more	–
2RZ-FE	Vehicle speed	70 km/h (43 mph) or more	–
1MZ-FE	Vehicle speed	40 km/h (25 mph) or more	–
1MZ-FE (SIENNA)	Engine speed	1,500 rpm or more	Less than 4,000 rpm
1MZ-FE (AVALON, CAMRY, CAMRY SOLARA, ES300)	Engine speed	1,500 rpm or more	4,000 rpm
2RZ-FE	Intake air amount per revolution	0.6 g/rev. or more	–
1MZ-FE	Intake air amount per revolution	0.55 g/rev. or more	–
1MZ-FE	PM	60 kPa (450 mmHg, 18 in.Hg) or more	–
1MZ-FE	QN	0.5 l/rev. or more	–

TYPICAL MALFUNCTION THRESHOLDS

Engine family	Detection criteria	Threshold
1MZ-FE (RX300, HIGH LANDER), 3UZ-FE, 2JZ-GE	Shift lever position signal (N, R, 2, L)	Any 2 or more input
1MZ-FE, (SIENNA, CAMRY, CAMRY SOLARA), 2RZ-FE	PNP signal	ON
2AZ-FE, 1MZ-FE (AVALON, ES300), 3RZ-FE, 5VZ-FE, 2UZ-FE, 2ZZ-GE, 1ZZ-FE, 1AZ-FE, 1NZ-FE, 5S-FE	Condition (A)	
	Shift lever position signal (N, R, 2, L)	Any 2 or more input
	Condition (B)	
	PNP signal	ON