

2000 MY for Transmission Range Sensor Circuit Malfunction (PRNDL Input) Monitor (P1780)

2000 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	Continuous	
Duration	1MZ-FE (RX300, SIENNA), 3RZ-FE, 5VZ-FE, 2JZ-GE (SC300), 2ZZ-GE, 1ZZ-FE, 5S-FE	(A) Less than 10 sec.
		(B) 30 sec.
	1MZ-FE (AVALON, ES300), 1UZ-FE, 2JZ-GE (GS300)	Less than 10 sec.
	1MZ-FE (CAMRY, CAMRY SOLARA), 2RZ-FE, 2UZ-FE, 1NZ-FE, 3S-FE	30 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
1MZ-FE (CAMRY, CAMRY SOLARA)	Vehicle speed	40 km/h (25 mph) or more	–
1NZ-FE	Vehicle speed	65 km/h (40 mph) or more	–
2RZ-FE, 2UZ-FE	Vehicle speed	70 km/h (43 mph) or more	–
1MZ-FE (CAMRY, CAMRY SOLARA), 1NZ-FE	Engine speed	1,500 rpm	4,000 rpm
2RZ-FE, 2UZ-FE	Engine speed	1,500 rpm	2,500 rpm
1MZ-FE (CAMRY, CAMRY SOLARA)	Intake air amount per revolution	0.55 g/rev. or more	–
1NZ-FE	Intake air amount per revolution	0.29 g/rev. or more	–
2RZ-FE, 2UZ-FE	Intake air amount per revolution	0.6 g/rev. or more	–
2UZ-FE	PM	47 kPa (350 mmHg, 14 in.Hg) or more	–

Component T/M Inputs – Shift Range

1ZZ-FE (COROLLA)	(B) Verify switch cycling		
	Vehicle speed	70 km/h (43 mph) or more	–
	Engine speed	1,500 rpm	2,500 rpm
	PM	47 kPa (350 mmHg, 14 in.Hg) or more	–
1MZ-FE (RX300, HIGH LANDER, SIENNA)	(B) Verify switch cycling		
	Vehicle speed	40 km/h (25 mph) or more	–
	Engine speed	1,500 rpm	4,000 rpm
	Intake air amount per revolution	0.55 g/rev. or more	–
3RZ-FE, 5VZ-FE, 2JZ-GE (SC300)	(B) Verify switch cycling		
	Vehicle speed	70 km/h (43 mph) or more	–
	Engine speed	1,500 rpm	2,500 rpm
	G/N	0.6 g/rev. or more	–
5S-FE	(B) Verify switch cycling		
	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-GE, 1ZZ-FE (CELICA)	(B) Verify switch cycling		
	Vehicle speed	80 km/h (50 mph) or more	–
	Engine speed	1,500 rpm	5,000 rpm
	PM	40 kPa (300 mmHg, 12 in.Hg) or more	–
3S-FE	(B) Verify switch cycling		
	Vehicle speed	70 km/h (43 mph) or more	–
	Engine speed	1,500 rpm	2,500 rpm
	PM	47 kPa (350 mmHg, 14 in.Hg) or more	–

TYPICAL MALFUNCTION THRESHOLDS

Engine family	Detection criteria	Threshold
1MZ-FE (AVALON, ES300), 1UZ-FE	Shift lever position signal (N, R, 2, L)	Any 2 or more input
1MZ-FE (RX300, SIENNA), 3RZ-FE, 5VZ-FE, 2ZZ-GE, 1ZZ-FE, 5S-FE	(A) Verify switch cycling	
	Shift lever position signal (N, R, 2, L)	Any 2 or more input
	(B) Verify switch cycling	
	PNP signal	ON
2JZ-GE (SC300)	(A) Verify switch cycling	
	Shift lever position signal (R, D, 3, 2, L)	Any 2 or more input
	(B) Verify switch cycling	
	PNP signal	ON
2JZ-GE (GS300)	(A) Verify switch cycling	
	Shift lever position signal (P, R, N, D, 4, 3, 2, L)	Any 2 or more input
1MZ-FE, (CAMRY, CAMRY SOLARA), 2RZ-FE, 2UZ-FE, 1NZ-FE, 3S-FE	PNP signal	ON