

2003 MY for Transmission Range Sensor Circuit Malfunction (PRNDL Input) Monitor (P0705 / P1780)

2003 MY for Park/Neutral Switch Input Circuit Monitor (P0705 / P1780)

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MONITOR STRATEGY

Required sensors/Components	Main	Park/Neutral position switch
	Sub	None
Frequency of operation	Continuous	
Duration	2JZ-GE	(A) 0.5 sec. / (B) 60 sec.
	3UZ-FE	(A) & (C) 2 sec. / (B) 60 sec.
	2UZ-FE, 1MZ-FE (Except CAMRY '03/01 L/O), 2RZ-FE, 3RZ-FE, 5VZ-FE, 1GR-FE, 2ZZ-GE, 1ZZ-FE (CELLICA), 2AZ-FE (CAMRY SOLARA, CAMRY, CAMRY Supplement)	0.5 sec.
	2AZ-FE (HIGH LANDER), 1AZ-FE, 1ZZ-FE (COROLLA, MATRIX)	Verify switch input 0.5 sec.
		Verify switch cycling 30 sec.
	1MZ-FE (CAMRY '03/01 L/O)	2 sec.
MIL operation	2 driving cycle	
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 (Except 1MZ-FE (CAMRY '03/01 L/O)), 2ZZ-GE, 2RZ-FE, 3RZ-FE	Park position switch	ON
1MZ-FE (Except 1MZ-FE (CAMRY '03/01 L/O)), 2ZZ-GE	Neutral position switch	ON
1MZ-FE (Except 1MZ-FE (CAMRY '03/01 L/O)), 2ZZ-GE	L range position switch	ON
1MZ-FE (Except 1MZ-FE (CAMRY '03/01 L/O)), 2ZZ-GE, 2RZ-FE, 3RZ-FE	2 range position switch	ON

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1MZ-FE (Except 1MZ-FE (CAMRY '03/01 L/O)), 2ZZ-GE, 2RZ-FE, 3RZ-FE	R range position switch	ON	
1AZ-FE	Verity switch input		
	None	—	—
	Verity switch cycling		
	Vehicle speed	70 km/h (43 mph) or more	—
	Engine speed	1,500 rpm or more	4,000 rpm or less
	Intake air amount per revolution	0.6 g/rev. or more	—
2AZ-FE	Verity switch input		
	None	—	—
	Verity switch cycling		
	Vehicle speed	70 km/h (43 mph) or more	—
	Engine speed	1,200 rpm or more	2,500 rpm or less
	Intake air amount per revolution	0.3125 g/rev. or more	—
1ZZ-FE	Verity switch input		
	None	—	—
	Verity switch cycling		
	Vehicle speed	70 km/h (43 mph) or more	—
	Engine speed	1,500 rpm	2,700 rpm or less
	Intake air amount per revolution	0.43 g/rev. or more	—
1MZ-FE (CAMRY '03/01 L/O)	Ignition switch	ON	
	Battery voltage	10.5 V or more	—

TYPICAL MALFUNCTION THRESHOLDS

Engine family	Detection criteria	Threshold
2RZ-FE, 3RZ-FE	Shift lever position signal (R, D, 2)	Any 2 or more input
	Park neutral switch	ON
2MZ-FE (SIENNA, AVALON, CAMRY SOLARA)	Shift lever position signal (R, 2, L)	Any 2 or more input
5VZ-FE, 1GR-FE, 2UZ-FE (TUNDRA, SEQUIA), 1MZ-FE (CAMRY), 1NZ-FE	Shift lever position signal (R, D, 2, L)	Any 2 or more input
	Park neutral switch	ON
1ZZ-FE (CELICA), 2ZZ-GE, 2AZ-FE, 1MZ-FE (RX300, HIGH LANDER)	Shift lever position signal (P, R, N, D, 2, L)	Any 2 or more input
2UZ-FE (GX470, 4RUNNER), 1MZ-FE (ES300, CAMRY '03/01 L/O)	Shift lever position signal (R, D, 3, 2)	Any 2 or more input
	Park neutral switch	ON
2JZ-GE, 2UZ-FE (LAND CRUISER, LX470)	Condition (A)	
	Shift lever position signal (R, N, D, 3, 2)	Any 2 or more input
	Condition (B)	
	All of following conditions are met	
	Shift lever position signal (P, R, N, D, 3, 2)	OFF

Component T/M Inputs – Shift Range

3UZ-FE	Condition (A)	
	Shift lever position signal (R, N, D, 3, 2)	Any 2 or more input
	Condition (B)	
	All of following conditions are met	
	Shift lever position signal (P, R, N, D, 3, 2)	OFF
	(C) (i) One of following is met	
	Shift lever position signal (P, R, N)	ON
	(C) (ii) One of following is met	
	Shift lever position signal (4, L)	ON
2AZ-FE (HIGH LANDER)	Verify switch input	
	Shift lever position signal (P, R, N, D, 2, L)	Any 2 or more input
	Verify switch cycling	
	PNP signal	ON
1ZZ-FE (COROLLA), 1ZZ-FE (MATRIX 2WD)	Verify switch input	
	Shift lever position signal (P, R, 2, L)	Any 2 or more input
	Verify switch cycling	
	PNP signal	ON
1AZ-FE, 2ZZ-GE, 1ZZ-FE (MATRIX 4WD)	Verify switch input	
	Shift lever position signal (P, R, N, D, 2, L)	Any 2 or more input
	Verify switch cycling	
	PNP signal	ON