

1996 to 2004 MY Knock Sensor Monitor (P0325, P0327, P0328, P0330, P0332, P0333)

To return to monitor description, see page [Ce-40](#).

MONITOR STRATEGY

Required sensors/Components	Main	Knock sensor
	Sub	Crankshaft position sensor, ECT sensor and MAF sensor (or MAP sensor)
Frequency of operation	Continuous	
Duration	10 sec.	Knock sensor signal level is too low
	1 sec.	Knock sensor circuit is open/shorted
MIL operation	Immediate	
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	
Case 1: Knock sensor signal level is too low		
Battery voltage	10.5 V	
ECT	60°C (140°F)	–
Engine RPM	Refer to Engine RPM chart*	
Throttle valve	Open	
Intake air amount	0.3 to 0.6 g/rev.	–
Time after engine start	5 sec.	–
Case 2: Knock sensor circuit is open/shorted (Knock sensor is low/high output)		
Battery voltage	10.5 V	–
Time after engine start	5 sec.	–

* Engine RPM chart:

Engine Family	1996 MY	1997 MY	1998 MY	1999 MY	2000 MY
4A-FE and 7A-FE	1,600 or more	1,600 or more	–	–	–
5E-FE	1,200 or more	1,200 or more	1,200 or more	2,000 or more	–
1FZ-FE	1,920 or more	1,800 or more	–	–	–
2JZ-GE	1,700 or more	1,700 or more	1,600 or more	1,600 or more	1,600 or more
2JZ-GTE	2,050 or more	2,050 or more	2,050 or more	–	–
1MZ-FE	2,000 or more	2,000 or more	2,000 or more	2,000 to 5,600	2,000 to 5,600
1NZ-FE	–	–	–	–	2,000 or more
2RZ-FE and 3RZ-FE	1,600 or more	1,600 or more	1,600 or more	1,600 or more	1,600 or more
3S-FE	2,000 or more	1,600 or more	1,600 or more	1,600 or more	1,600 or more
5S-FE	2,000 or more	2,000 or more	1,600 or more	1,600 or more	2,000 or more
2TZ-FZE	1,600 or more	1,600 or more	–	–	–
1UZ-FE	1,700 or more	1,700 or more	1,700 or more	1,700 or more	1,700 or more
2UZ-FE	–	–	1,700 or more	1,700 or more	1,700 or more
5VZ-FE	1,760 or more	1,760 or more	2,000 or more	2,000 to 5,600	2,000 to 5,600
1ZZ-FE Corolla and MR2	–	–	1,600 or more	1,200 or more	2,000 or more
1ZZ-FE Celica	–	–	–	–	1,200 or more
2ZZ-GE	–	–	–	–	1,200 or more

Engine Family	2001 MY	2002 MY	2003 MY	2004 MY
1AZ-FE	2,000 or more	1,500 or more	2,000 or more	
2AZ-FE	2,000 to 5,500	2,000 to 5,500	2,000 to 5,500	
1GR-FE	–	–	2,500 to 5,500	
2JZ-GE	2,000 or more	2,000 or more	2,000 or more	
1MZ-FE Camry and ES300	2,000 or more	2,000 to 5,500	2,000 to 5,500	
1MZ-FE Others	2,000 or more	2,000 or more	2,000 to 6,500	
3MZ-FE	–	–	–	2,000 to 5,500
1NZ-FE	2,000 or more	2,000 or more	2,000 to 6,000	
1NZ-FXE Prius	2,000 or more	2,000 or more	2,000 or more	
2RZ-FE and 3RZ-FE	2,000 or more	2,000 or more	2,000 or more	
5S-FE	2,000 or more	–	–	–
2UZ-FE	1,500 to 5,500	1,500 to 5,500	1,500 to 5,500	
3UZ-FE	1,500 or more	1,500 or more	1,500 to 6,000	
5VZ-FE 4Runner	1,500 to 6,000	2,000 or more	–	–
5VZ-FE Tacoma and Tundra	1,500 to 6,000	2,000 to 6,000	2,000 to 6,000	
1ZZ-FE Celica	2,000 or more	2,000 to 6,500	2,000 to 6,500	
1ZZ-FE Corolla	2,000 or more	2,000 or more	2,000 to 5,500	
1ZZ-FE MR2	2,000 or more	2,000 to 6,500	2,000 to 5,500	
2ZZ-GE	2,000 or more	2,000 to 5,500	2,000 to 5,500	

TYPICAL MALFUNCTION THRESHOLDS

Detection Criteria	Threshold
Case 1: Knock sensor signal level is too low	
Knock sensor signal	Signal level is too low
Case 2-1: Knock sensor circuit is open/shorted	
Knock sensor voltage	Less than 0.5 V or More than 4.5 V
Case 2-2: Knock sensor is low output	
Knock sensor voltage	Less than 0.5 V
Case 2-3: Knock sensor is high output	
Knock sensor voltage	More than 4.5 V