

2002 MY EVAP VSV Monitor (P0441)

To return to monitor description, see page [Ev-9](#).

MONITOR STRATEGY

Required sensors/Components	Main	Vapor pressure sensor
	Sub	EVAP VSV, VSV for vapor pressure sensor, IAT sensor, ECT sensor and MAF sensor (or MAP sensor)
Frequency of operation	Once per driving cycle	
Duration	10 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	
IAT	–10° C (14° F)	–
(a) ECT at engine start	10° C (50° F)	35° C (95° F)
(b) IAT at engine start	10° C (50° F)	35° C (95° F)
Difference between (a) and (b)	–	7° C (45° F)
Running (7km/h [4 mph] or more) and stopped (3 km/h [2 mph] or less)	Once	
Case 1: EVAP VSV stuck open		
Time after engine start	6 sec.	6.5 sec.
EVAP purge	Cut	
Case 2: EVAP VSV stuck closed		
Time after engine start	300 sec.	–
Intake air amount (MAF sensor equipped)	–	0.6 g/rev.
Intake manifold vacuum (MAP sensor equipped)	–	–200 mmHg (–26.7 kPa)
EVAP VSV duty signal	20 %	–

TYPICAL MALFUNCTION THRESHOLDS

Engine Family	Detection Criteria	Threshold
Case 1: EVAP VSV stuck open		
2UZ-FE	Canister pressure	Less than –24 mmHg (–3.20 kPa)
	Decrease in canister pressure after engine start	18 mmHg (2.40 kPa) or more
5VZ-FE Tundra	Canister pressure	Less than –15.5 mmHg (–2.1 kPa)
	Decrease in canister pressure after engine start	15.5 mmHg (2.07 kPa) or more
Case 2: EVAP VSV stuck closed		
2UZ-FE	Canister pressure	–18 mmHg (–2.40 kPa) or more
	Pulsation in canister pressure	Less than 0.82 mmHg (0.11 kPa)
5VZ-FE Tundra	Canister pressure	–22 mmHg (–2.93 kPa) or more
	Pulsation in canister pressure	Less than 0.55 mmHg (0.07 kPa)

OBD MONITOR DRIVE PATTERNS

See page [In-13](#)

MODE 06 DATA (MONITOR RESULT)

- (a) Checking monitor status (See page [In-43](#))
- (b) Detecting Mode 06 data (See page [In-44](#))