Ev00Y–01

# 1996 MY VSV for Vapor Pressure Sensor Monitor (P0446)

To return to monitor description, see page Ev–24.

## MONITOR STRATEGY

| | | |
|---|---|---|
| Related DTCs | P0446 | • VSV for vapor pressure sensor malfunction<br>• Purge line leak |
| Required sensors/Components | Main | Vapor pressure sensor |
| | Sub | EVAP VSV, VSV for vapor pressure sensor, IAT senor, ECT sensor and MAF sensor (or MAP sensor) |
| Frequency of operation | Once per driving cycle | |
| Duration | Within 20 sec. | Purge line leak |
| | Within 10 sec. | VSV for vapor pressure sensor malfunction |
| 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) |
| 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 % | – |
| “Run” (7 km/h [4 mph] or more) and “stop” (3 km/h [2 mph] or less) | Once | |

## TYPICAL MALFUNCTION THRESHOLDS

| Engine Family | Detection Criteria | Threshold |
|---|---|---|
| 1MZ–FE | • Change in canister pressure after purge cut<br>• Canister pressure at 7 to 12 sec. after purge cut | 3 mmHg (0.4 kPa) or more<br>Between –3 mmHg (–0.4 kPa) and 3 mmHg (0.4 kPa) |
| | • Change in canister pressure after VSV for vapor pressure sensor ON<br>• Change in canister pressure<br>• Change in fuel tank pressure | Less than 2.9 mmHg (0.39 kPa)<br>Less than 1.08 mmHg (0.14 kPa)<br>1.9 mmHg (0.25 kPa) or more |
| 3RZ–FE | • Change in canister pressure after purge cut<br>• Canister pressure at 7 to 12 sec. after purge cut | 3.5 mmHg (0.47 kPa) or more<br>Between –3 mmHg (–0.4 kPa) and 3 mmHg (0.4 kPa) |
| | • Change in canister pressure after VSV for vapor pressure sensor ON<br>• Change in canister pressure<br>• Change in fuel tank pressure | Less than 2 mmHg (0.27 kPa)<br>Less than 0.83 mmHg (0.11 kPa)<br>1.1 mmHg (0.15 kPa) or more |
| 3S–FE | • Change in canister pressure after purge cut<br>• Canister pressure at 7 to 12 sec. after purge cut | 3.5 mmHg (0.47 kPa) or more<br>Between –3 mmHg (–0.4 kPa) and 3 mmHg (0.4 kPa) |
| | • Change in canister pressure after VSV for vapor pressure sensor ON<br>• Change in canister pressure<br>• Change in fuel tank pressure | Less than 2.9 mmHg (0.39 kPa)<br>Less than 1.1 mmHg (0.15 kPa)<br>6.8 mmHg (0.90 kPa) or more |
| 5S–FE | • Change in canister pressure after purge cut<br>• Canister pressure at 7 to 12 sec. after purge cut | 3 mmHg (0.4 kPa) or more<br>Between –3 mmHg (–0.4 kPa) and 3 mmHg (0.4 kPa) |
| | • Change in canister pressure after VSV for vapor pressure sensor ON<br>• Change in canister pressure<br>• Change in fuel tank pressure | Less than 2.9 mmHg (0.39 kPa)<br>Less than 1.1 mmHg (0.15 kPa)<br>2.6 mmHg (0.35 kPa) or more |
| 1UZ–FE | • Change in canister pressure after purge cut<br>• Canister pressure at 7 to 12 sec. after purge cut | 3 mmHg (0.4 kPa) or more<br>Between –3 mmHg (–0.4 kPa) and 3 mmHg (0.4 kPa) |
| | • Change in canister pressure after VSV for vapor pressure sensor ON<br>• Change in canister pressure<br>• Change in fuel tank pressure | Less than 2.9 mmHg (0.39 kPa)<br>Less than 1.1 mmHg (0.15 kPa)<br>4 mmHg (0.53 kPa) or more |
| 5VZ–FE | • Change in canister pressure after purge cut<br>• Canister pressure at 7 to 12 sec. after purge cut | 3 mmHg (0.4 kPa) or more<br>Between –3 mmHg (–0.4 kPa) and 3 mmHg (0.4 kPa) |
| | • Change in canister pressure after VSV for vapor pressure sensor ON<br>• Change in canister pressure<br>• Change in fuel tank pressure | Less than 2 mmHg (0.27 kPa)<br>Less than 0.55 mmHg (0.07 kPa)<br>0.7 mmHg (0.09 kPa) or more |

## 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)