05ITC-02

READINESS MONITOR DRIVE PATTERN

1. PURPOSE OF THE READINESS TESTS

- The On-Board Diagnostic (OBD II) system is designed to monitor the performance of emission-related components, and report any detected abnormalities with Diagnostic Trouble Codes (DTCs). Since various components need to be monitored during different driving conditions, the OBD II system runs separate monitoring programs called readiness monitors.
- The hand-held tester's software must be version 9.0 or newer to view the readiness monitor status. From the "ENHANCED OBD II" menu, select "MONITOR STATUS" to view the readiness monitor status.
- A generic OBD II scan tool can also be used to view the readiness monitor status.
- When the readiness monitor status reads "complete", the necessary conditions have been met for running performance tests for that readiness monitor.

HINT:

Many state Inspection and Maintenance (I/M) programs require a vehicle's readiness monitor status to show "complete".

- The readiness monitor will be reset to "incomplete" if:
  - The ECM has lost battery power or blown a fuse.
  - DTCs have been cleared.
  - The conditions for running the readiness monitor have not been met.
- If the readiness monitor status shows "incomplete", follow the appropriate readiness monitor drive pattern to change the status to "complete".

CAUTION:

Strictly observe posted speed limits, traffic laws, and road conditions when performing these drive patterns.

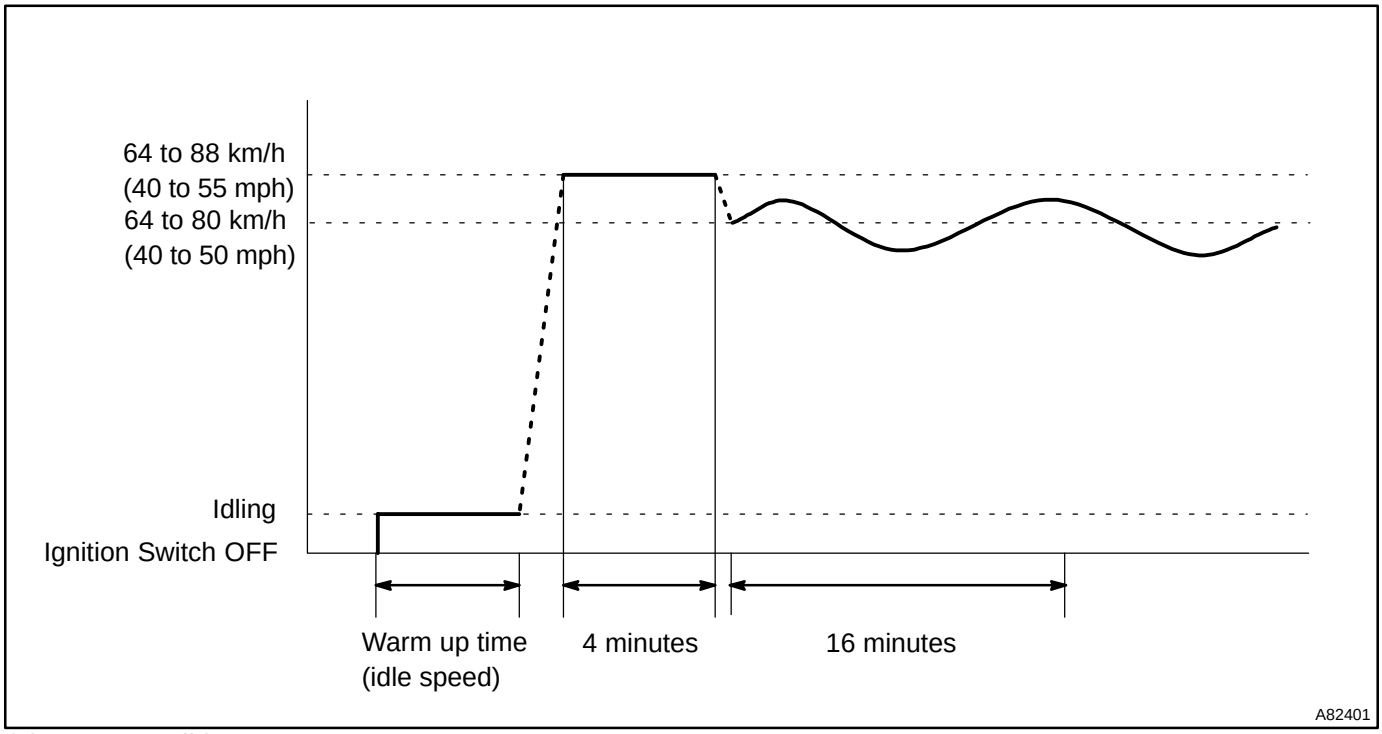
NOTICE:

The following drive patterns are the fastest method of completing all the requirements necessary for making the readiness monitor status read "complete".

If forced to momentarily stop a drive pattern due to traffic or other factors, the drive pattern can be resumed. Upon completion of the drive pattern, in most cases, the readiness monitor status will change to "complete".

Sudden changes in vehicle load and speed, such as driving up and down hills and/or sudden acceleration, hinder readiness monitor completion.

2. CATALYST MONITOR (A/F SENSOR TYPE)



(a) Preconditions

The monitor will not run unless:

- The MIL is OFF.
- Engine Coolant Temperature (ECT) is 75˚C (167˚F) or higher.
- Intake Air Temperature (IAT) is -10˚C (14˚F) or higher.*

NOTICE:

*** 2002 and later MY vehicles:**

To complete the readiness test in cold ambient conditions (less than -10˚C/14˚F), turn the ignition switch OFF and then back to ON. Perform the drive pattern a second time.

(b) Drive Pattern

(1) Connect the OBD II scan tool to the DLC3 to check readiness monitor status and preconditions (refer to step (a)).

(2) Drive the vehicle at 40 to 55 mph (64 to 88 km/h) for approximately 4 minutes.

NOTICE:

Drive with smooth throttle operation and avoid sudden acceleration.

If IAT was less than 10˚C (50˚F) when the engine was started, drive the vehicle at 40 to 55 mph (64 to 88 km/h) for an additional 4 minutes.

(3) Drive the vehicle allowing speed to fluctuate between 40 to 50 mph (64 to 80 km/h) for about 16 minutes.

NOTICE:

Drive with smooth throttle operation and avoid sudden closure of the throttle.

(4) Check the status of the readiness monitor on the scan tool display. If the readiness monitor status did not switch to complete, ensure preconditions are met, turn the ignition OFF, and then repeat steps (2) and (3).

3. EVAP MONITOR (KEY-OFF MONITOR)

(a) Preconditions

The monitor will run when all of the following conditions are met:

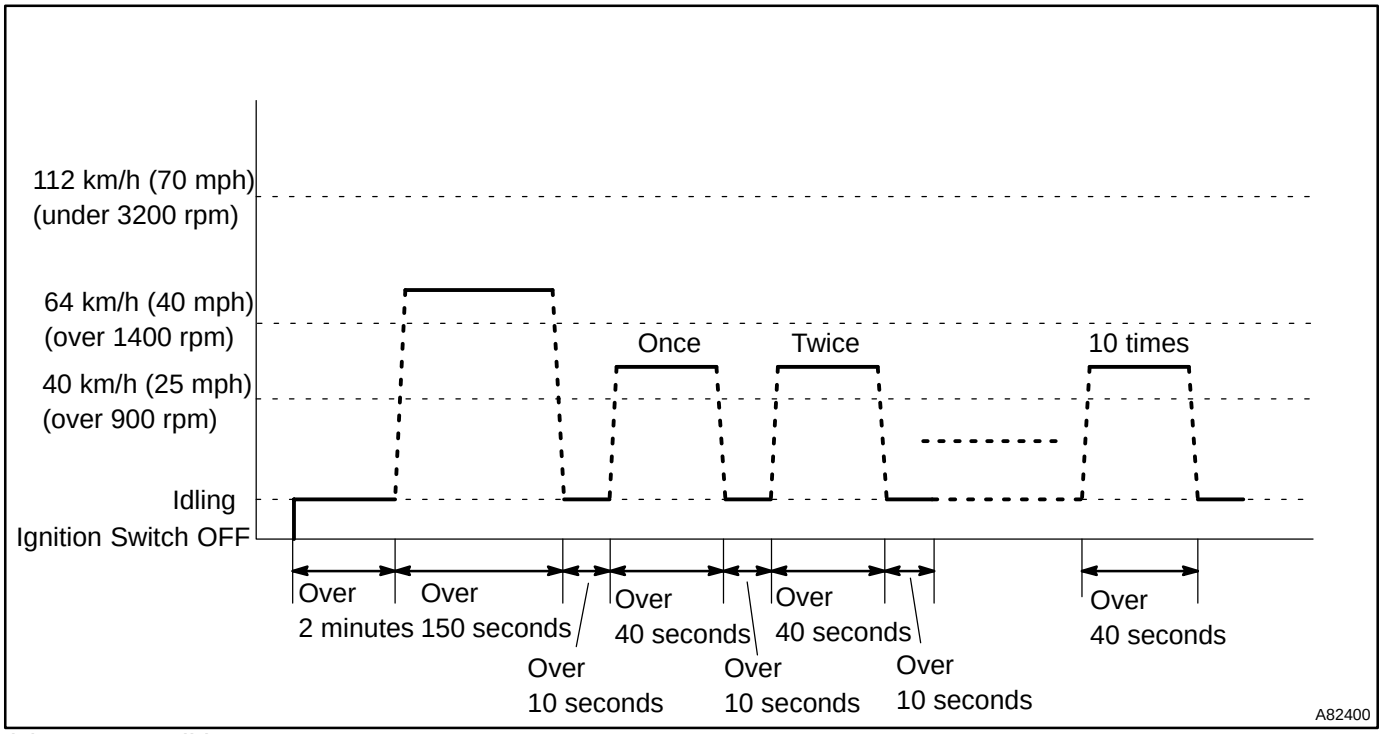
- The fuel level is less than 90 %.
- The altitude is less than 8,000 ft. (2,450 m).
- The vehicle is stopped.
- The Engine Coolant Temperature (ECT) is between 4.4 and 35˚C (40 to 95˚F).
- The Intake Air Temperature (IAT) is between 4.4 and 35˚C (40 to 95 ˚F).

(b) Monitor condition

(1) Allow the engine to idle for 300 seconds or more.
(2) Turn the ignition switch OFF and wait for 6 hours.
(3) Connect the scan tool to the DLC3 to check the monitor status and the preconditions.
(4) Check the readiness monitor status.

If ”INCMP” is displayed , the monitor is not completed. Turn the ignition switch OFF, confirm the preconditions and perform the monitor condition again.

4. OXYGEN / AIR FUEL RATIO SENSOR MONITOR (FRONT A/F SENSOR AND REAR O2S SYSTEM)



(a) Preconditions

The monitor will not run unless:

The MIL is OFF.

(b) Drive Pattern

(1) Connect the OBD II scan tool to the DLC3 to check monitor status and preconditions (refer to step (a)).

(2) Start the engine and allow it to idle for 2 minutes or more.

(3) Drive the vehicle at 64 to 112 km/h (40 to 70 mph) for at least 150 seconds.

(4) Stop the vehicle and allow the engine to idle for 10 seconds or more.

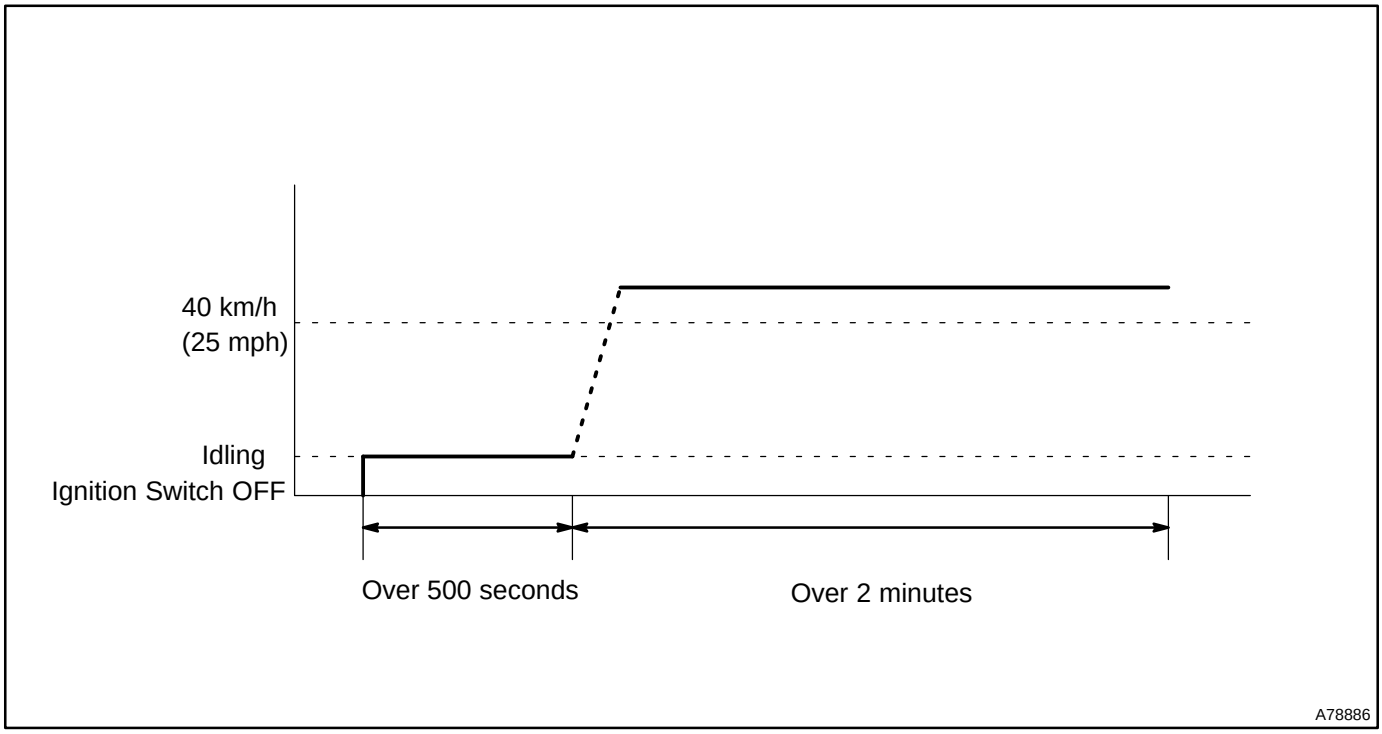
(5) Drive the vehicle at 40 to 64 km/h (25 to 40 mph) for at least 40 seconds.

(6) Stop the vehicle and allow the engine to idle for 10 seconds or more.

(7) Perform steps (5) and (6) ten times.

(8) Check the readiness monitor status. If the readiness monitor status did not change to ”complete”, check the preconditions, turn the ignition switch OFF, and repeat steps (1) to (6).

5. OXYGEN / A/F SENSOR HEATER MONITOR



(a) Preconditions
The monitor will not run unless:
The MIL is OFF.

(b) Drive Pattern
(1) Connect the OBD II scan tool to the DLC3 to check monitor status and preconditions (refer to step (a)).
(2) Start the engine and allow it to idle for 500 seconds or more.
(3) Drive the vehicle at 40 km/h (25 mph) or more for at least 2 minutes.
(4) Check the readiness monitor status. If the readiness monitor status did not change to ”complete”, check preconditions, turn the ignition switch OFF, and repeat steps (2) and (3).