

Subject: Drive cycle for 1996–2005 cars and B-Series trucks

Source: Mazda service manuals

The purpose of the OBD-II Drive Cycle is to execute the monitors and identify any concerns with the system. The DTC P1000 code is erased when all monitors have been completed during the Drive Cycle.

IMPORTANT:

Strict observance of posted speed limits and attention to driving conditions are mandatory when performing the Drive Cycles.

The scan tool may be used to observe the status of each monitor at the completion of the OBD-II Drive Cycle. The completion status of the exhaust gas recirculation (EGR), heated oxygen sensor (HO2S), catalyst efficiency and evaporative emission (EVAP) monitors can be monitored during the OBD-II Drive Cycle by viewing the Readiness Monitors on the scan tool.



Risk of airbag deployment

- **At no time place the scan tool or any other object between the airbag and a person! In the case of airbag deployment, an object near the expanding airbag may be propelled at high speed and become a projectile capable of causing serious injury, death, or property damage.**

Accidental airbag deployment can cause death or serious injury.

Drive Cycle Recommendations

- If the OBD-II Readiness Monitor selection is not available for any given model, use the OBD-II Generic Selection.
- Most monitors complete more readily using a “steady foot” driving style during cruise or acceleration. Fuel tank level must be between 1/4 and 3/4 full with 3/4 being the most desirable.
- The Evaporative Monitor can only operate during the first 30 minutes of engine operation. When executing the procedure for this monitor, stay in part throttle mode and drive in a smooth fashion to minimize fuel slosh.
- If completed, the OBD-II Readiness Monitor flags change from NOT DONE to READY.
- After Drive Cycle completion, check for Codes and also Pending Codes in OBD-II Generic “Codes and Data” Menu.

Use the following procedures for all models except the 1996–97 626/MX6 with 2.0L engine and automatic transmission, 1996–2004 B-series trucks, and 2001–04 Tribute:

- See [“MODE 6—EVAP System Repair Verification Drive Mode” on page MA12](#). for 1996–97 626/MX6 2.0L models.
- See [“1996–2005 B-Series Trucks \(All\), 2001–05 Tribute” on page MA17](#). for 1996–2004 B-Series trucks and 2001–04 Tribute.

MODE 1—Adaptive Memory Produce Drive Mode

This mode applies to the following models:

- 1996–97 626 /MX6 with 2.5L engine
- 1996–97 626/MX6 with 2.0L engine and manual transmission
- 1996–2002 Millenia
- 1996–2003 MPV
- 1996–2003 MX5 Miata
- 1996–2003 Protege



To perform this Mode 1 drive cycle:

1. Verify that all electrical loads (headlights, blower motor, rear window defroster, and air conditioning (A/C) are off.
2. Start the engine and allow it to warm up completely.
3. Verify that the initial ignition timing and initial idle speed are within specifications.
4. Verify that terminal TEN in the underhood DLC is not grounded.
5. Carry out no-load racing at the specified speed for each model. Race the engine for more than 15 seconds at each time. Refer to [Figure MA000-1](#) through [Figure MA000-8](#) for proper engine speed for the model being tested.
6. Stop the vehicle and access the OBD-II Readiness Monitors with the scan tool to inspect the completion status.
7. Verify that no DTCs have been set.

MODE 1—PCM ADAPTIVE MEMORY

PRODUCE DRIVE MODE: 1996–98 MPV 3.0L

2000–01 MPV 2.5L

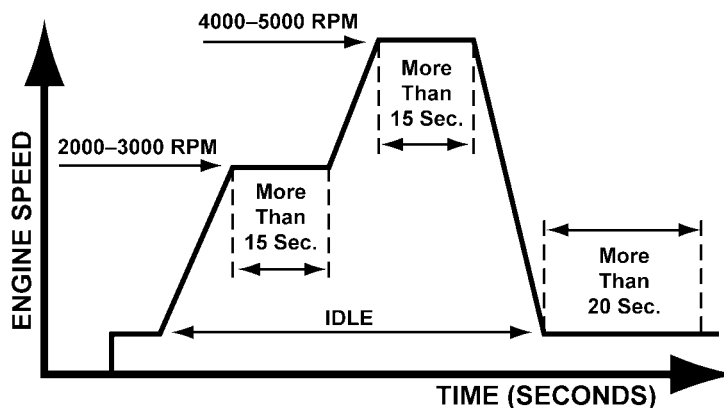


Figure MA000-1

**MODE 1—PCM ADAPTIVE MEMORY
PRODUCE DRIVE MODE: 2002-03 MPV**

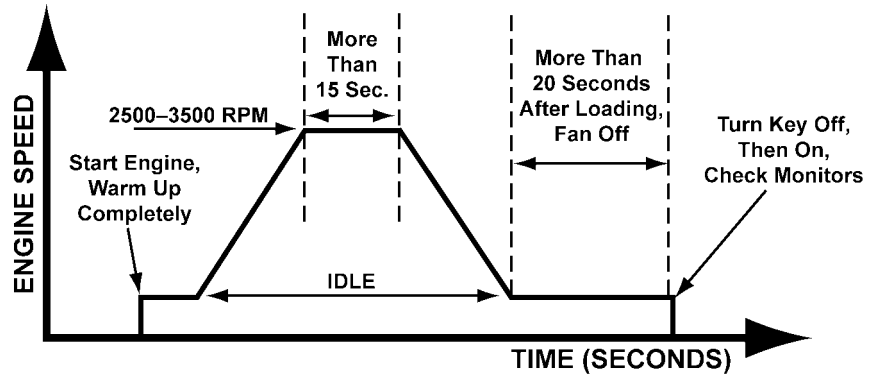


Figure MA000-2

**MODE 1 DRIVE CYCLE: 1996-97 MX5 MIATA
1999-2003 MX5 MIATA**

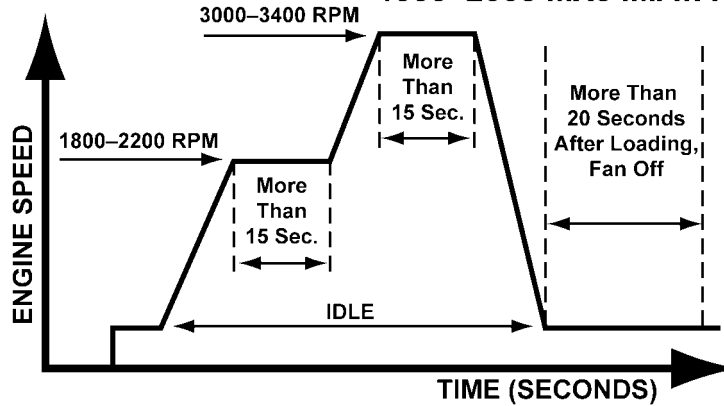


Figure MA000-3

**MODE 1 DRIVE CYCLE: 1996-98 PROTEGE 1.5L
1998-2000 PROTEGE 1.6L
1999-2000 PROTEGE 1.8L**

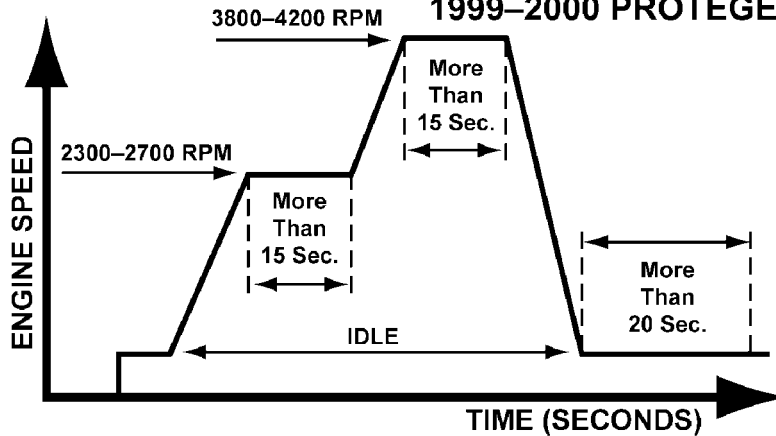


Figure MA000-4

MODE 1 DRIVE CYCLE: 1996-98 PROTEGE 1.8L

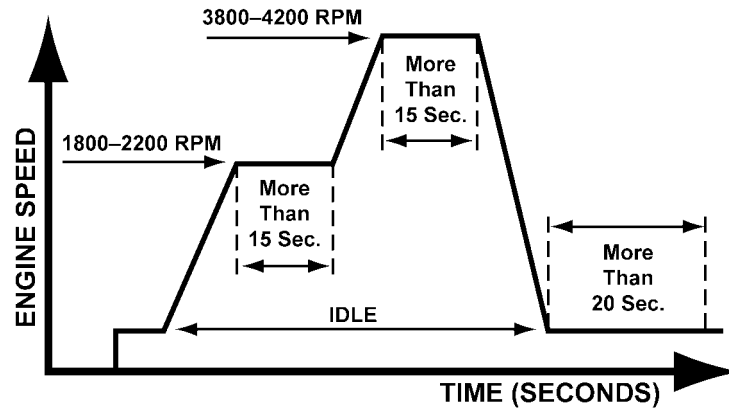


Figure MA000-5

MODE 1 DRIVE CYCLE: 1996-2002 MILLENIA 2.3L

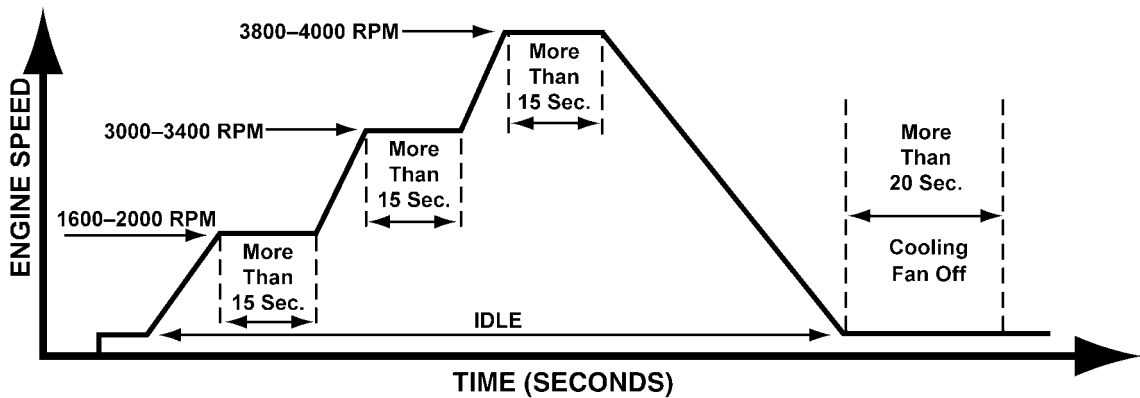


Figure MA000-6

**MODE 1 DRIVE CYCLE: 1996-97 626/MX6 2.0L, MTX
1996-97 626/MX6 2.5L
1996-2002 MILLENIA 2.5L**

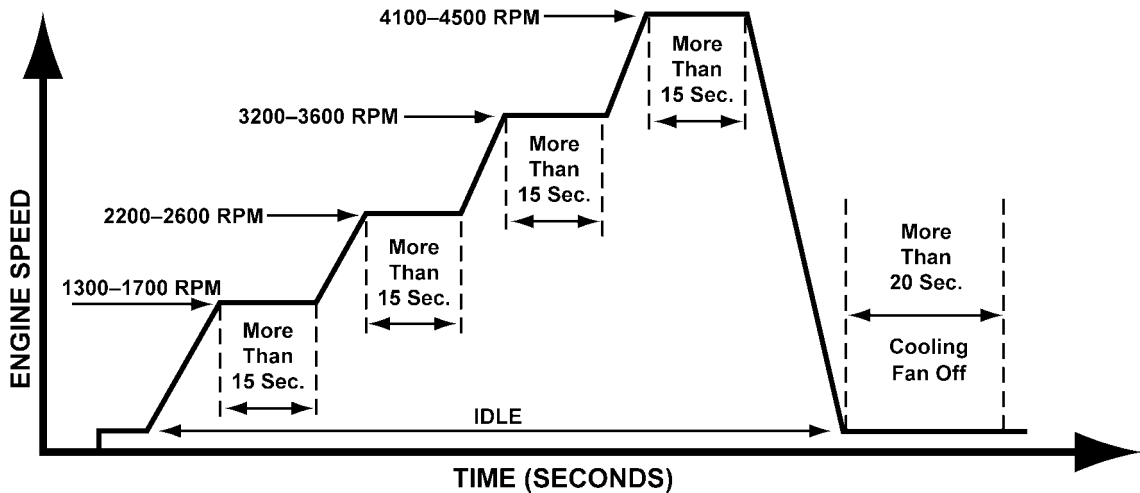


Figure MA000-7

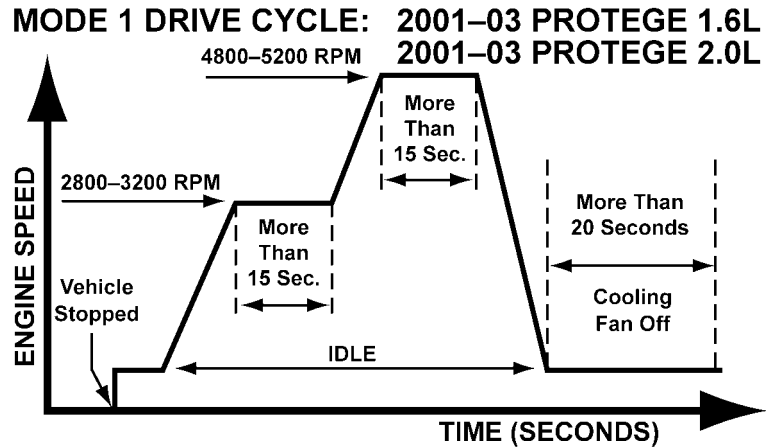


Figure MA000-8

MODE 2—EGR System Repair Verification Drive Mode

This mode applies to the following models:

- 1996–97 626/MX6 with 2.0L engine and manual transmission
- 1996–97 626/MX6 with 2.5L engine
- 1996–2002 Millenia with 2.3L or 2.5L engine
- 1996–2003 MX5 Miata
- 1996–2003 Protege
- 2000–03 MPV



To perform this Mode 2 EGR drive cycle:

1. Access OBD-II Readiness Monitors with the scan tool to verify Mode 1 is complete. If not, perform Mode 1 first.
2. Start the engine and warm up completely.
3. Switch all electrical accessories off.
4. Drive vehicle as indicated by the graph (Figure MA000-9).

MODE 2 DRIVE CYCLE, EGR REPAIR VERIFICATION:

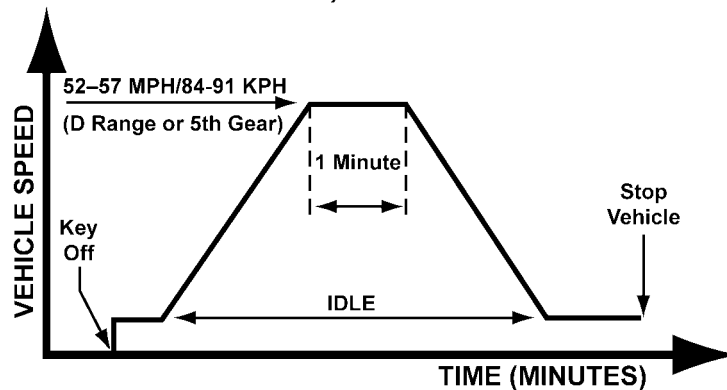


Figure MA000-9

5. Stop the vehicle and access the OBD-II Readiness Monitors with the scan tool to inspect the completion status. If not completed, repeat Step 4.
6. Verify that no DTCs have been set.

MODE 2—O₂S Heater, O₂S, and Catalyst Repair Verification Drive Mode

This mode applies to the following models:

- 1996–98 MPV with 3.0L engine



To perform this Mode 2 O₂S and catalyst drive cycle:

1. Verify that all electrical loads (headlights, blower, rear window defroster, and A/C) are off.
2. Start engine and warm it up completely.
3. Drive the vehicle as shown in the graph (Figure MA000-10). Driving condition before the constant speed driving is not specified.

MODE 2 DRIVE CYCLE, O₂S & CAT VERIFICATION:

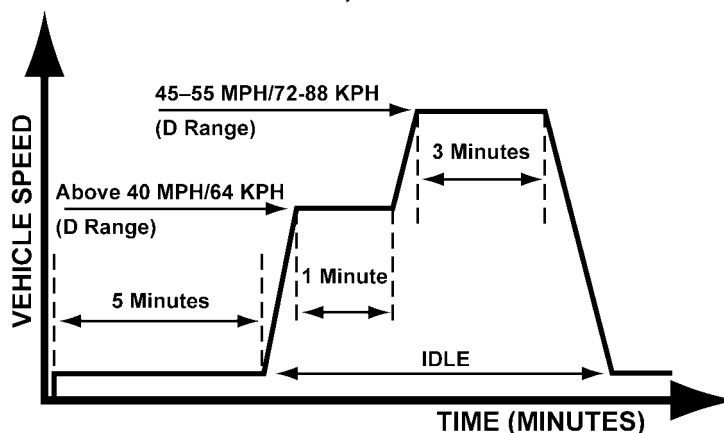


Figure MA000-10

4. Stop the vehicle and access the OBD-II Readiness Monitors with the scan tool to inspect the completion status.
5. If not completed, turn the ignition key to OFF then repeat Steps 1 to 3.
6. Verify that no DTCs have been set.

MODE 3—O₂S Heater, O₂S, and Catalyst Repair Verification Drive Mode

This mode applies to the following models:

- 1996–97 626/MX6 with 2.0L engine and manual transmission
- 1996–97 626/MX6 with 2.5L engine
- 1996–98 Protege with 1.8L engine
- 1996–2002 Millenia with 2.3L or 2.5L engine
- 1996–2003 MX5 Miata

- 1999–2003 Protege
- 2000–03 MPV



To perform this Mode 3 O2S and catalyst drive cycle:

1. Verify that all electrical loads (headlights, blower, rear window defroster, and A/C) are off.
2. Start engine and warm it up completely.
3. Drive vehicle as indicated by the graphs (Figure MA000-11 and Figure MA000-12).
Driving condition before the constant speed driving is not specified.
4. Stop the vehicle and access the OBD-II Readiness Monitors with the scan tool to inspect the completion status.
5. If not completed, turn the ignition key off then repeat Steps 1 to 3.
6. Verify that no DTCs have been set.

MODE 3 DRIVE CYCLE, O2S & CAT VERIFICATION:

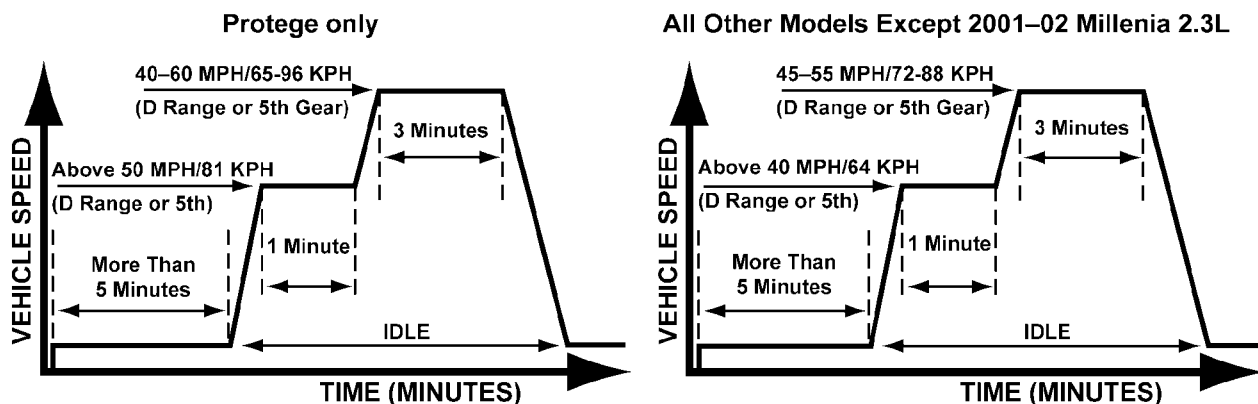


Figure MA000-11

**MODE 3—O2S, O2S HEATER, & CATALYST
VERIFICATION DRIVE MODE: 2001–02 MILLENIA 2.3L**

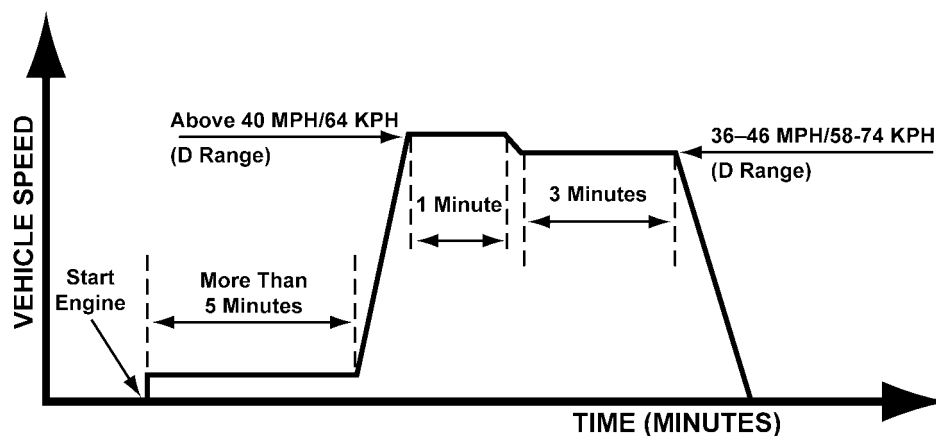


Figure MA000-12

MODE 3—EVAP System Repair Verification Drive Mode

This mode applies to the following models:

- 1996–98 MPV with 3.0L engine



To perform this Mode 3 EVAP drive cycle:

1. Verify that all electrical loads (headlights, blower, rear window defroster, and A/C) are off.
2. Verify that all of the following sensors are within the following specifications.
 - BARO—21.3 in-Hg (540 mm-Hg, 72.0 kPa) or higher.
 - IAT—14°F to 131°F (–10°C to 55°C)
 - FTL (fuel tank level)—1/4 to 3/4 Full
 - ECT—14°F to 90.5°F (–10°C to 32.5°C)
3. Start the engine and race it at 3500 RPM to warm up completely.
4. Drive vehicle as indicated by the graph (Figure MA000-13).

MODE 3 DRIVE CYCLE, EVAP REPAIR VERIFICATION:

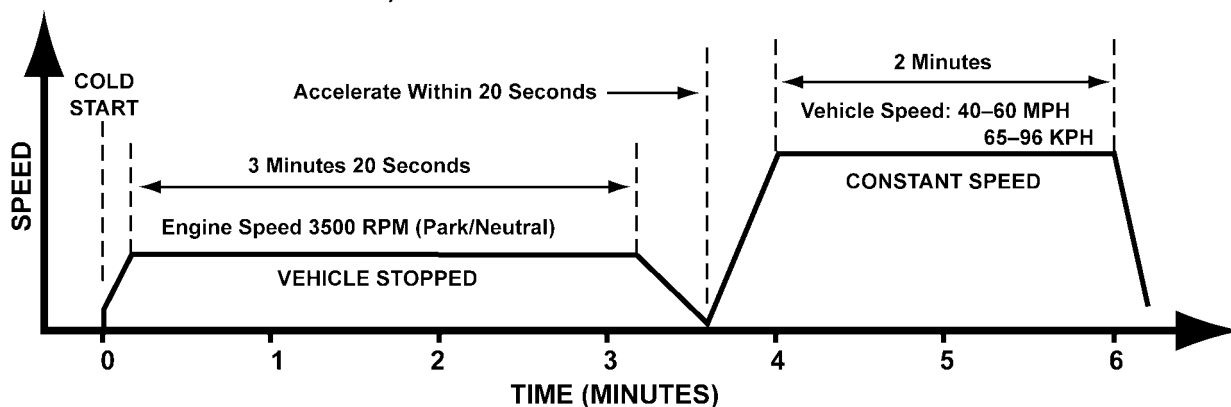


Figure MA000-13

5. Stop the vehicle and access the OBD-II Readiness Monitor with the scan tool to inspect the completion status.
6. If not completed, turn the ignition key off then repeat Steps 1 through 4.
7. Verify that no DTCs have been set.

MODE 4—EVAP System Repair Verification Drive Mode

This mode applies to the following models:

- 1996–97 626/MX6 with 2.0L engine and manual transmission
- 1996–97 626/MX6 with 2.5L engine
- 1996–2002 Millenia
- 1996–2003 MX5 Miata
- 1996–2003 Protege
- 2000–01 MPV


To perform this Mode 4 EVAP drive cycle:

1. Verify that all electrical loads (headlights, blower, rear window defroster, and A/C) are off.
2. Verify that all the sensors listed in the table below are within specification:

Table MA000-1

MODEL	YEAR	BARO in-Hg (mm-Hg/kPa)	IAT °F (°C)	FUEL TANK LEVEL % or VOLTS	ECT °F (°C)
626/MX6	1996–97	21.3 (540/72.0)	14 to 131 (-10 to 55)	15 to 85%	14 to 90.5 (-10 to 30)
Millenia	1996–98	21.3 (540/72.0)	50 to 140 (10 to 60)	15 to 85%	32 to 95 (0 to 35)
	1999–2002	21.3 (540/72.0)	50 to 140 (10 to 60)	15 to 85%	14 to X† (-10 to X†)
Miata	1996–99	21.3 (540/72.0)	50 to 140 (10 to 60)	15 to 85%	32 to 95 (0 to 35)
	2000–03	21.3 (540/72.0)	14 to 140 (-10 to 60)	0.24 to 2.0 V	14 to 90.5 (-10 to 30)
MPV	2000–01	21.3 (540/72.0)	50 to 140 (10 to 60)	0.5 to 2.5 V	32 to 95 (0 to 35)
Protege	1996–98	21.3 (540/72.0)	50 to 140 (10 to 60)	15 to 85%	32 to 95 (0 to 35)
	1999–2003	21.3 (540/72.0)	50 to 140 (10 to 60)	15 to 85%	14 to X† (-10 to X†)

† Value X is determined by ECT/BARO relationship as shown in the graph (Figure MA000-14)

ECT/BARO RELATIONSHIP GRAPH:

1999–2002 MILLENIA
1999–2003 PROTEGE 1.6L
1999–2000 PROTEGE 1.8L
2001–2003 PROTEGE 2.0L

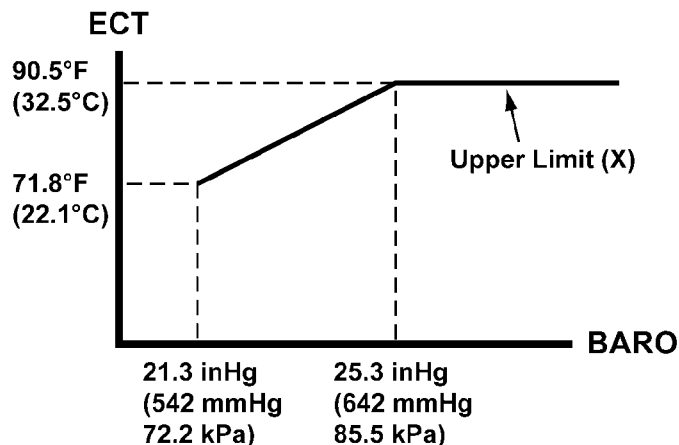


Figure MA000-14

3. Start the engine and race it at 3500 RPM to warm up completely.
4. Drive vehicle as indicated by the graph (Figure MA000-15).

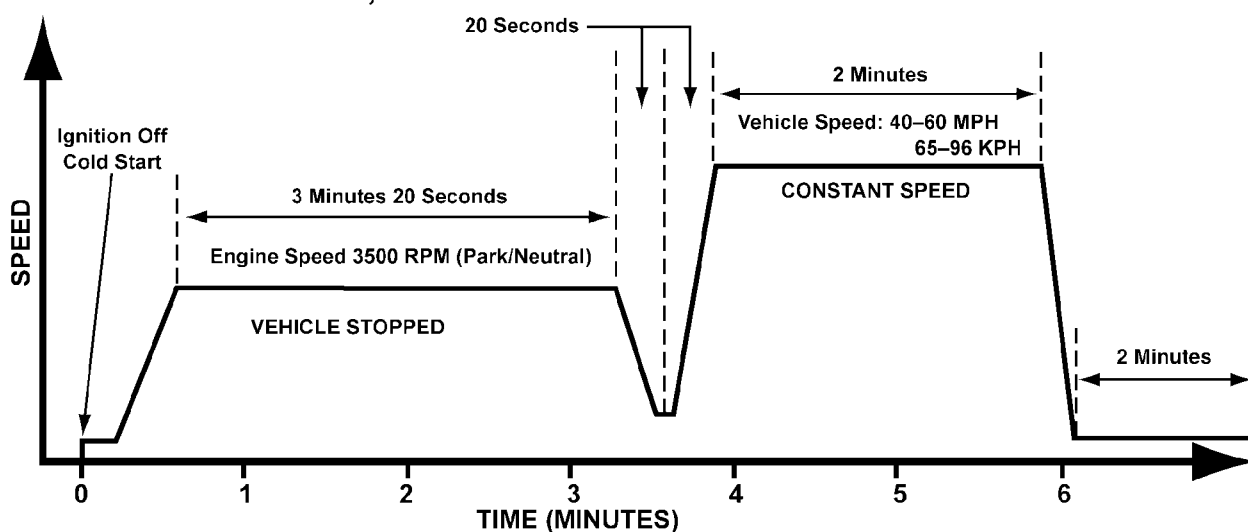
MODE 4 DRIVE CYCLE, EVAP REPAIR VERIFICATION:

Figure MA000-15

5. Stop the vehicle and access the OBD-II Readiness Monitor with the scan tool to inspect the completion status.
6. If not completed, turn the ignition key off then repeat Steps 1 through 4.
7. Verify that no DTCs have been set.

MODE 5—EVAP System Very Small Leak Repair Verification Drive Mode

This mode applies to the following models:

- 2002–03 Protege with 2.0L engine.



To perform this Mode 5 drive cycle:

1. Switch all electrical accessories off.
2. Verify that all the sensors listed in the table below are within specification:

Table 1:

MODEL	YEAR	BARO in-Hg (mm-Hg/kPa)	IAT °F (°C)	FUEL TANK LEVEL (VOLTS)	ECT °F (°C)
Protege	2002	20.5 (520.7/69.4)	14 to 140 (-10 to 60)	1.3 to 3.75	14 to 95 (-10 to 35)
	2003	20.5 (520.7/69.4)	14 to 140 (-10 to 60)	1.1 to 2.6	14 to X† (-10 to X†)

† Value X is determined by ECT/BARO relationship as shown in the graph ([Figure MA000-16](#))

ECT/BARO RELATIONSHIP GRAPH: 2002–03 PROTEGE 2.0L

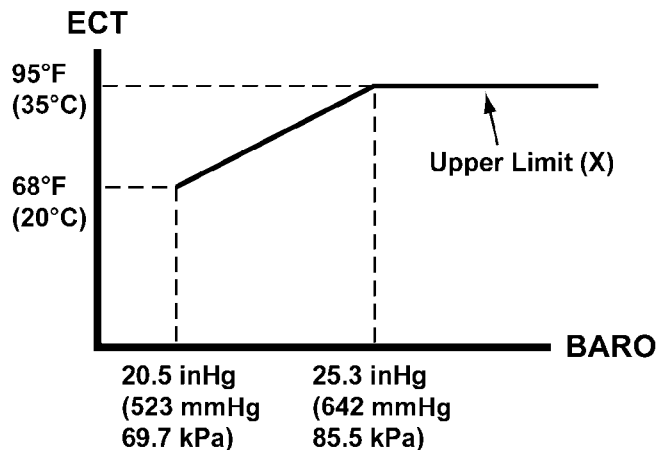


Figure MA000-16

**NOTE:**

All parameters must be within specification before the engine is started in order to initiate the EVAP system test.

3. Clear any DTCs from PCM memory.
4. Start the engine and run it at 3500 RPM for at least 200 seconds until it is completely warmed up. Then, run at idle for 120 seconds.
5. Stop the vehicle, switch the key off, then access the OBD-II Readiness Monitor with the scan tool to inspect the completion status. If not completed, turn the ignition key off and go back to Step 1.
6. Verify that no DTCs have been set.

MODE 6—EVAP System Repair Verification Drive Mode

This mode applies to the following models:

- 2002–04 MPV

**To perform this Mode 6 drive cycle:**

1. Switch all electrical accessories off.
2. Verify the following parameters are within the listed specifications:
 - BARO—21.3 in-Hg (542 mm-Hg, 72.3 kPa) or higher.
 - IAT—41 to 95°F (5 to 35°C).
 - FTL (fuel tank level):
 - 2002–03 model = 0.5 to 2.5V
 - 2004 model = 15% to 85% full.
 - VPWR (vehicle power)—10.9 to 14.6V.

**NOTE:**

All parameters must be within specification before the engine is started in order to initiate the EVAP system test.

3. Clear any DTCs from PCM memory.

4. Start the engine and let it run at idle for at least 10 seconds, then switch the ignition off
5. Allow the vehicle to sit as is for at least 5 hours.
6. Start the engine and run it at 2500 RPM until it is completely warmed up. Then, run at idle for at least 15 minutes.
7. Drive the vehicle at speeds between 40 and 50 MPH (65 to 80 KPH) for at least 5 minutes.
8. Stop the vehicle, switch the key off.
9. Allow the vehicle to sit as is for at least 20 minutes.
10. Start the engine, then access the OBD-II Readiness Monitor with the scan tool to inspect the completion status. If not completed, turn the ignition key off and go back to Step 1.
11. Verify that no DTCs have been set.

MODE 1—Standard Drive Mode

This mode applies to the following models:

- 1996–97 626/MX6 with 2.0L engine and automatic transmission
- 1998–2002 626 with 2.0L or 2.5L engine



To perform this Mode 1 standard drive cycle:

1. Cold soak the vehicle for at least 8 hours before performing the EVAP test.



NOTE:

When the 8-hour timer bypass procedure is performed, the cold soak period can be shortened up to 3 hours depending on vehicle conditions. If you shorten the soak period, the PCM may detect a malfunction by mistake even though the EVAP system has been repaired correctly. This misdiagnosis will happen more often under warm or hot ambient temperature. If you are not sure whether the system still has a malfunction, cold soak 8 hours and perform the drive mode again. If malfunction is not detected, the repair is completed.

2. Turn off all accessory loads (A/C, headlights, blower fan, etc.)
3. Drive vehicle as indicated by the graph (Figure MA000-17).

MODE 1 STANDARD DRIVE CYCLE:

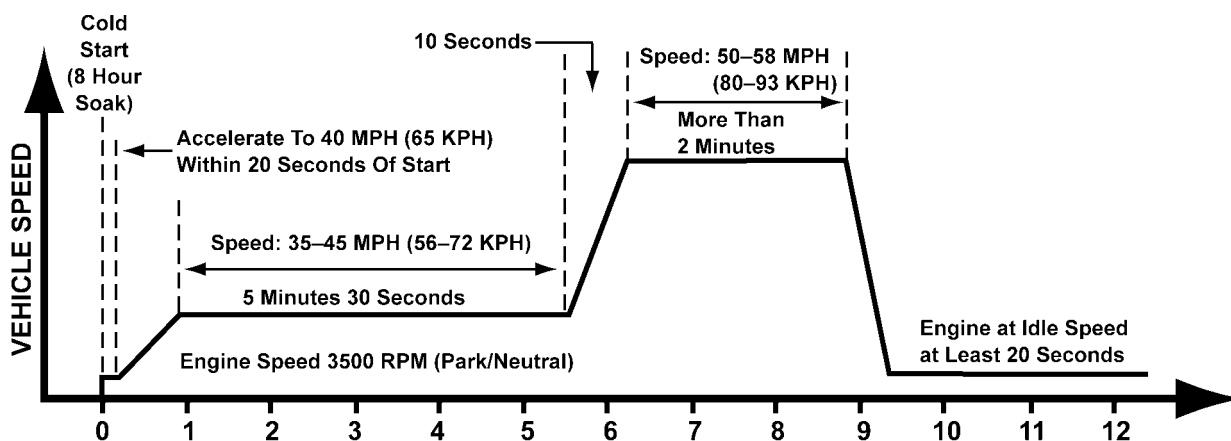


Figure MA000-17

4. Stop vehicle and access the OBD-II Readiness Monitor with the scan tool to inspect the completion status.
5. Verify no DTCs have been set.

MODE 2—EGR System Repair Verification Drive Mode

This mode applies to the following models:

- 1996–97 626/MX6 with 2.0L engine and automatic transmission
- 1998–2002 626 with 2.0L or 2.5L engine



To perform this Mode 2 EGR drive cycle:

1. Verify the following conditions are met:
 - Intake air temperature must be above 50°F (10°C) to initiate the monitor.
 - After the monitoring conditions are set, testing requires at least 30 seconds to complete.
2. Warm vehicle up to at least an engine coolant temperature of 165°F (74°C)
3. Verify all accessory loads (A/C, P/S, headlights, blower fan, etc.) are off.
4. Drive vehicle as indicated by the graph (Figure MA000-18).

MODE 2 DRIVE CYCLE, EGR REPAIR VERIFICATION:

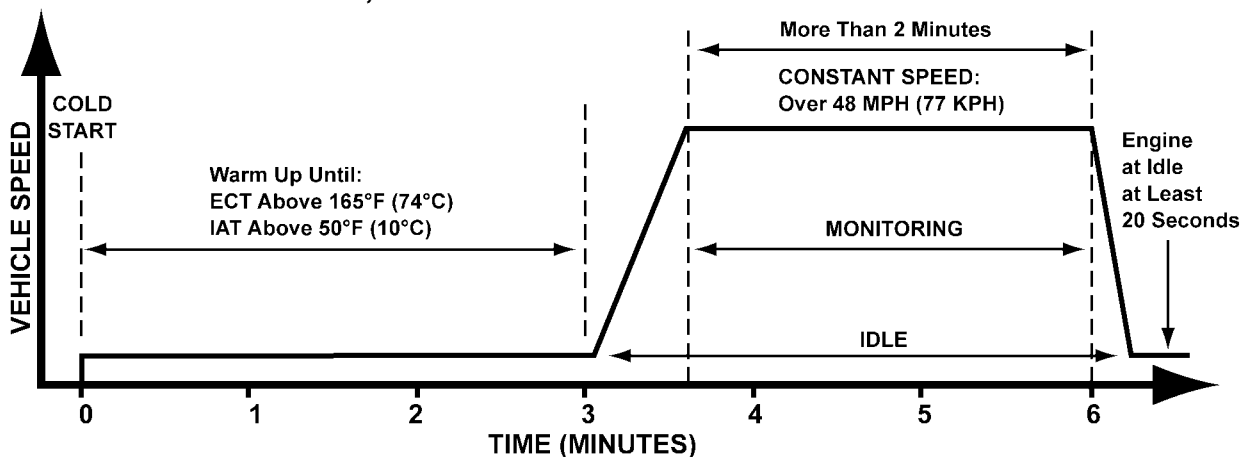


Figure MA000-18

5. Stop vehicle and access the OBD-II Readiness Monitor with the scan tool to inspect the completion status.
6. If not completed, turn the ignition key to OFF and repeat Steps 1 through 3 at least one more time.
7. Verify no DTCs have been set.

MODE 3—HO₂S and Catalyst Repair Verification Drive Mode

This mode applies to the following models:

- 1996–97 626/MX6 with 2.0L engine and automatic transmission
- 1998–2002 626 with 2.0L or 2.5L engine


To perform this Mode 3 HO2S and catalyst drive cycle:

1. Verify the following conditions are met:
 - The IAT sensor must be below 170°F (76°C) to initiate the monitor.
 - The fuel level must be above 1/4 full to initiate the monitor.
 - Monitor implement waiting condition begins 5 minutes after engine start.
 - After monitor conditions are set, testing requires at least 30 seconds to complete.
2. Warm vehicle up and verify that the ECT is 175°F to 240°F (80°C to 115°C).
3. Drive vehicle according to the graph (Figure MA000-19).
4. Stop vehicle and access the OBD-II Readiness Monitor with the scan tool to inspect the completion status.
5. If not completed, turn the ignition key to OFF and repeat Steps 1 through 3.
6. Verify that no DTCs have been set.

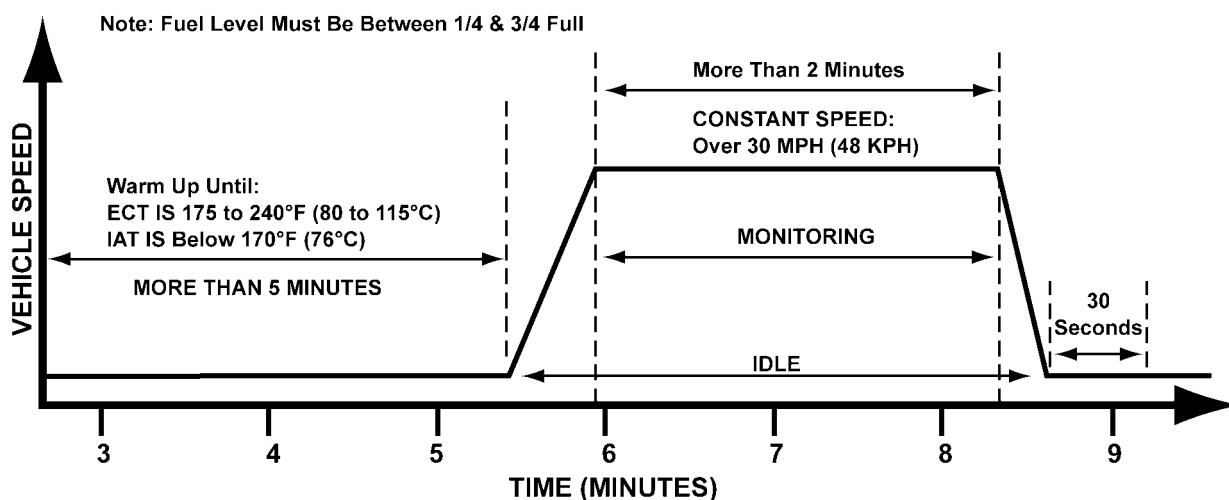
MODE 3 DRIVE CYCLE, H02S & CAT REPAIR VERIFICATION:


Figure MA000-19

MODE 4—EVAP System Repair Verification Drive Mode

This mode applies to the following models:

- 1996–97 626/MX6 with 2.0L engine and automatic transmission
- 1998–2002 626 with 2.0L or 2.5L engine


To perform this Mode 4 EVAP drive cycle:

NOTE:

Cold soak vehicle for at least 8 hours.

1. Verify the following conditions are met:
 - The IAT sensor must be within 20°F to 100°F (-7°C to 38°C) to initiate the EVAP system monitor.
 - The fuel level must be 1/4 to 3/4 full with 3/4 full being the most desirable.

- The drive mode conditions must be met within 4 to 10 minutes after start up. If the time exceeds 10 minutes, switch the ignition OFF to reset the timer, then restart.
- After monitor conditions are set, system testing requires at least 30 seconds.
- Fuel tank pressure will change as shown in the illustration during monitoring (Figure MA000-20).

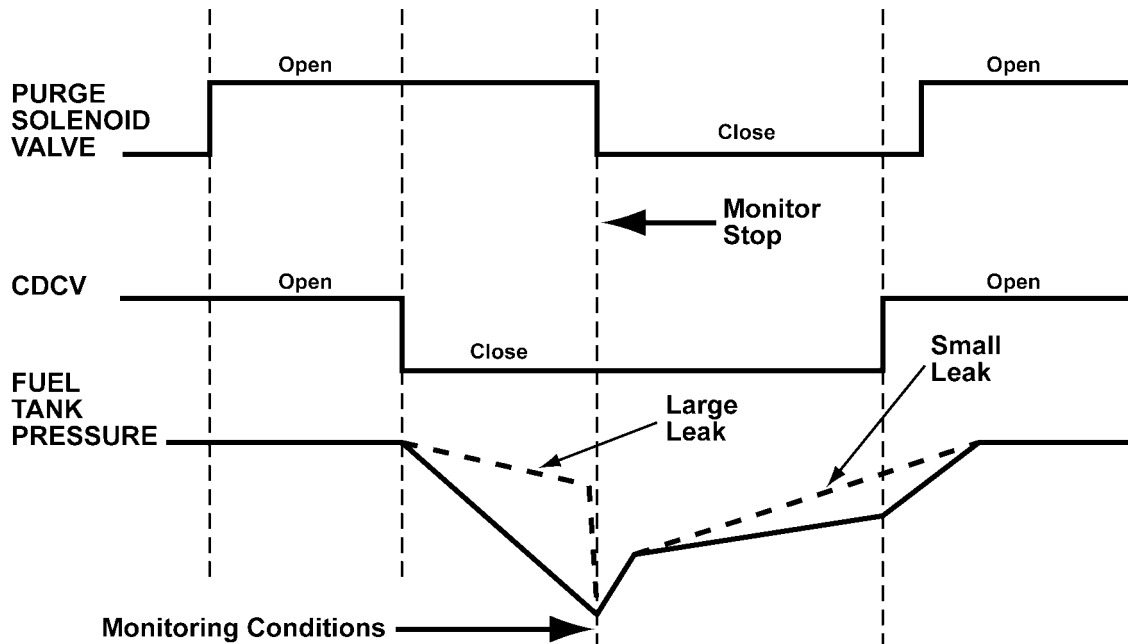


Figure MA000-20

2. Turn off all accessories (A/C, headlights, blower fan, etc.).
3. Drive vehicle as indicated by the graph (Figure MA000-21).
4. Stop vehicle and access the OBD-II Readiness Monitor to check completion status.
5. If not completed, turn the ignition key to OFF and repeat entire process.
6. Verify that no DTCs have been set.

MODE 4 DRIVE CYCLE, EVAP REPAIR VERIFICATION:

NOTE: Fuel Level Must Be Between 1/4 & 3/4 Full,
IAT Must Be Between 20 & 100°F (-7 & 38°C)

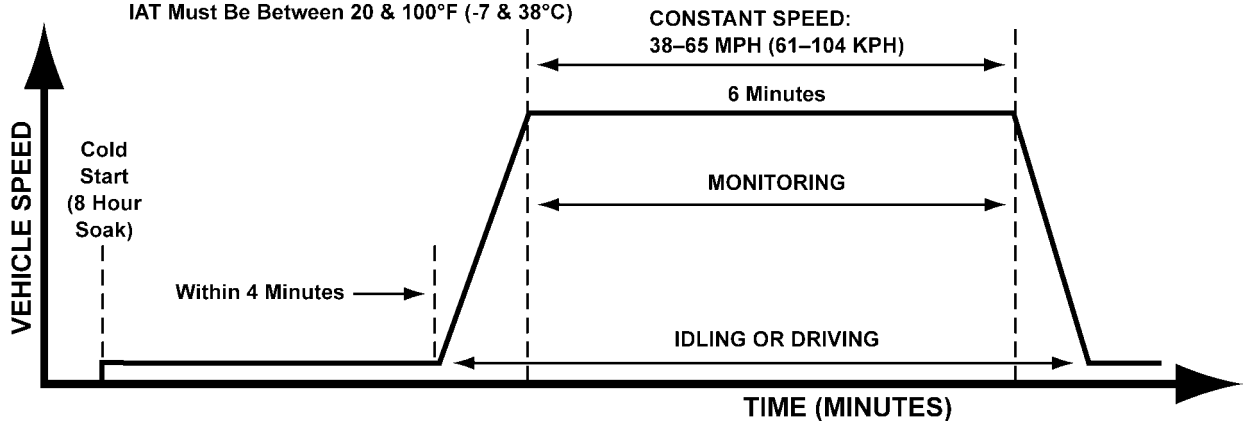


Figure MA000-21

1996–2005 B-Series Trucks (All), 2001–05 Tribute



To prepare the vehicle:

1. Connect the scan tool and access the fuel level indicator, coolant temperature and intake air temperature parameters.
2. Verify that the intake air temperature is 40°F to 100°F (4°C to 38°C).
3. Verify the fuel level is between 50 and 75 percent of capacity, with 75% being the most desirable.
4. Run the engine until coolant temperature reaches a minimum of 170°F (77°C).
5. Without returning to the key OFF position, clear all DTCs using the scan tool generic OBD-II function. Be aware, DTC P1000 does not clear.
6. Access the OBD-II Readiness Monitors in the generic selection on the scan tool to view the status of the monitors.
7. Proceed with the selected monitor repair verification Drive Cycle.



To perform the OBD-II Drive Cycle:

NOTE:

Once started, the engine must not be turned off during the Drive Cycle.

1. Start the engine and drive the vehicle.
2. Drive in stop and go traffic for 20 minutes with a least 4 idle periods.
3. Drive on an expressway or highway for 10 to 15 minutes. Heavy acceleration, sudden deceleration, or running with a wide open throttle are not recommended.

NOTE:

If intake air temperature falls below 40°F (4°C) at any time during the highway drive, the Evaporative Emission Monitor will not complete.

4. Stop the vehicle and access the OBD-II Readiness Monitors with the scan tool to inspect the completion status.
5. Verify that no additional DTCs have been set.

NOTE:

If the Evaporative Emission Monitor is the only monitor not showing completion status on the scan tool and P1000 has been cleared, the OBD-II drive cycle completed.



To perform the Comprehensive Component Monitor Repair Verification Drive Cycle:

1. Complete the Vehicle Preparation above.
2. This step varies according to the type of transmission:
 - a. Manual transmission; accelerate from 0 to 50 mph (0 to 80 kph), then go to Step 3.
 - b. Automatic transmission; from a stop with overdrive selected, moderately accelerate to 50 mph (80 kph) and cruise for at least 15 seconds. Stop the vehicle and repeat without overdrive selected, accelerating to 40 mph (64 kph) cruising for at least 30 seconds. While at 40 mph (64 kph) activate overdrive and accelerate to 50 mph (80 kph) and cruise for at least 15 seconds. Stop for at least 20 seconds and repeat this step five times before proceeding to Step 3.

3. From a stop, accelerate to 65 mph (104 kph). Decelerate at closed throttle until 40 mph (64 kph) without applying the brakes. Repeat this step 3 times.
4. Stop the vehicle and access the OBD-II Readiness Monitors with the scan tool to inspect the completion status.
5. Verify that no DTCs have been set.

**To perform the EGR Monitor Repair Verification Drive Cycle:**

1. Complete the Vehicle Preparation listed above.
2. From a stop, accelerate to 45 mph (72 kph) at 1/2 to 3/4 throttle. Repeat three times.
3. Stop the vehicle and access the OBD-II Readiness Monitors with the scan tool to inspect the completion status.
4. Verify that no DTCs have been set.

**To perform the HO2S Monitor Repair Verification Drive Cycle:**

1. Complete the Vehicle Preparation listed above.
2. Cruise at 40 mph (64 kph) for at least five minutes.
3. Bring the vehicle to a stop and access the OBD-II Readiness Monitors with the scan tool to inspect the completion status.
4. Verify that no DTCs have been set.

**To perform the Fuel or Misfire Monitor Repair Verification Drive Cycle:**

1. Complete the Vehicle Preparation listed above.
2. On a highway, accelerate to 65 mph (104 kph), then coast down (foot off the accelerator and brakes not applied) to 40 mph (64 kph). Repeat this step three times.
3. Stop the vehicle and access the OBD-II Readiness Monitors with the scan tool to inspect the completion status.
4. Verify that no DTCs have been set.

**To perform the EVAP Running Loss System Repair Verification Drive Cycle:****NOTE:**

When the ambient air temperature outside is 40°F to 100°F (4.4°C to 37.8°C) or the altitude is above 8000 feet (2438 meters), the EVAP monitor will not run. The fuel level must be between 15 and 85 percent of capacity.

1. Complete the vehicle preparation listed above.
2. Cruise at 45 to 65 mph (72 to 104 kph) for ten minutes, avoid sharp turns and hills.
3. Bring the vehicle to a stop.
4. With the scan tool, view the EVAP monitor for completion through the On-Board System Readiness Tests menu. Repeat Step 2 if the EVAP monitor is not complete.
5. Verify that no DTCs are present with the exception of P1000.

**NOTE:**

To initiate the EVAP monitor, the EVAPPDC parameter must increase to at least 75% (canister purge vent open). At this time the EVAPCV parameter displays 100% (canister vent solenoid closed to seal the system) and the monitor begins to run. Continue driving at steady throttle with light steering until the EVAPCV parameter displays 0% (canister vent solenoid open, system unsealed).

**To perform the Catalyst Monitor Repair Verification Drive Cycle:**

1. Complete the Vehicle Preparation listed above.
2. Drive in stop and go traffic conditions. Include five different constant cruise speeds, ranging from 25 to 45 mph (40 to 72 kph) over a 10 minute period.
3. Stop the vehicle and access the OBD-II Readiness Monitors with the scan tool to inspect the completion status.
4. Verify that no DTCs have been set.

MODE 1—PCM Adaptive Memory Produce Drive Mode

This mode applies to the following models:

- 2003 Mazda 6

**NOTE:**

The PCM adaptive memory status can be confirmed with the RECFLAG parameter. If RECFLAG reads “yes” the PCM Adaptive Memory Drive Mode is not necessary because the PCM already has adaptive memory. If RECFLAG reads “no” the PCM Adaptive Memory Drive Mode should be performed before the EGR System Repair Verification Drive Mode or HO2S heater, HO2S, and TWC Repair Verification Drive Mode is performed.

**To perform this Mode 1 drive cycle:**

1. Start the engine and allow it to warm up completely.
2. Verify the following conditions and correct as necessary:
 - All electrical accessory loads (headlights, blower motor, rear window defroster, and air conditioning (A/C) are off.
 - Initial ignition timing and idle speed are within specification.
 - Perform no-load racing by running the engine at 2500 to 3500 RPM for at least 15 seconds.
3. Continue no-load racing by running the engine at 4500 to 5000 RPM for at least 15 seconds.
4. Run the engine at idle for more than 60 seconds after the cooling fan stops.
5. Switch the ignition off, then back on.
6. Access the RFCFLAG parameter with the scan tool to confirm adaptive memory status:
 - If RFCFLAG reads “yes”, PCM Adaptive Memory Produce Drive Mode is complete.
 - If RFCFLAG reads “no”, go back to Step 1 and repeat the procedure.
7. Verify that no DTCs have been set.

EGR System Repair Verification Drive Mode

This mode applies to the following models:

- 2003 Mazda 6



To perform this drive cycle:

1. Access the RFCFLAG parameter with the scan tool to confirm PCM adaptive memory status:
 - If RFCFLAG reads “no”, perform PCM Adaptive Memory Produce Drive Mode first.
 - If RFCFLAG reads “yes”, start the engine and warm it up completely.
2. Verify all electrical accessory loads (headlights, blower motor, rear window defroster, and air conditioning (A/C) are off.
3. Drive the vehicle as shown in [Figure MA000-22](#).

EGR REPAIR VERIFICATION DRIVE MODE

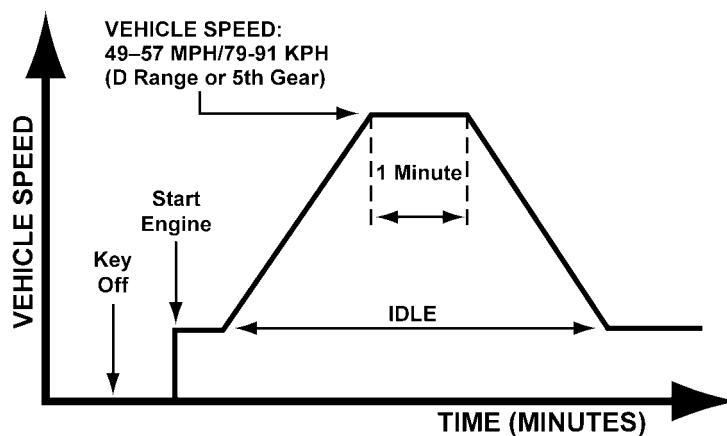


Figure MA000-22

4. Stop the vehicle and access the “On Board System Readiness” on the scan tool to inspect the Drive Mode completion status:
 - If completed, RFC reading changes from “no” to “yes”.
 - If not completed, switch the ignition off and return to Step 3.
5. Access the “Diagnostic Monitoring Test Results” on the scan tool to inspect the monitor results:
If data is not within specification, the repair has not completed.
6. Verify that no DTCs have been set.

HO2S Heater, HO2S, and TWC Repair Verification Drive Mode

This mode applies to the following models:

- 2003 Mazda 6



To perform this drive cycle:

1. Access the RFCFLAG parameter with the scan tool to confirm adaptive memory status:
 - If RFCFLAG reads “no”, perform PCM Adaptive Memory Produce Drive Mode first.

- If RFCFLAG reads “yes”, start the engine and warm it up completely.
- 2. Verify all electrical accessory loads (headlights, blower motor, rear window defroster, and air conditioning (A/C) are off.
- 3. Start the engine and run at idle for at least 5 minutes.
- 4. Drive the vehicle under one of the following conditions:
 - Vehicle speed over 55 mph (89 kph) for 1 minute (manual transmission in 5th gear, automatic transmission in D range).
 - Vehicle speed over 50 mph (80 kph) for 1 minute (manual transmission in 4th gear, automatic transmission in D range).
- 5. Continuously drive the vehicle at speeds between 45 to 55 mph (72 to 88 kph) for 3 minutes (manual transmission in 5th gear, automatic transmission in D range).
- 6. Stop the vehicle and access the “On Board System Readiness” on the scan tool to inspect the Drive Mode completion status:
 - If completed, RFC reading changes from “no” to “yes”.
 - If not completed, switch the ignition off and return to Step 3.
- 7. Access the “Diagnostic Monitoring Test Results” on the scan tool to inspect the monitor results:

If data is not within specification, the repair has not completed.
- 8. Verify that no DTCs have been set.

EVAP System Repair Verification Drive Mode

This mode applies to the following models:

- 2003 Mazda 6



NOTE:

The EVAP System Repair Verification Drive Mode can be performed regardless of RFCFLAG condition.



To perform this drive cycle:

1. Verify all of the following parameters are within the listed specifications:
 - BARO—21.3 in-Hg (542 mm-Hg, 72.3 kPa) or higher.
 - IAT—41 to 95°F (5 to 35°C).
 - FTL (fuel tank level)—15 to 85%.
 - B+—10.9 to 14.6V.



NOTE:

All listed parameters must be within specification before the engine is started to initiate the EVAP system test.

2. Clear any DTCs from PCM memory.
3. Start the engine and run it at idle for at least 10 seconds, then switch the ignition off.
4. Allow the vehicle to sit as is for at least 5 hours.
5. Start the engine and run at idle for at least 15 minutes.
6. Drive the vehicle at speeds between 40 to 50 mph (60 to 85 kph) for at least 5 minutes.

7. Stop the vehicle and switch the ignition off.
8. Allow the vehicle to sit as is for at least 10 minutes.
9. Start the engine.
10. Access “On Board System Readiness” on the scan tool to inspect Drive Mode completion status:
 - If completed, RFC reading changes from “no” to “yes”.
 - If not completed, switch the ignition off and return to Step 1.
11. Access “Diagnostic Monitoring Test Results” on the scan tool to inspect monitor results:
If data is not within specification, the repair has not completed.
12. Verify that no DTCs have been set.

2004–05 Mazda6 2.3L L3 OBD-II Drive Mode

Using the OBD-II drive mode, a monitoring item requested by OBD-II regulations can be easily diagnosed. Performing the Drive Mode inspects the OBD-II system for proper operation and must be performed to ensure that no additional DTCs are present. The OBD-II drive mode is divided into Specific Drive Mode and Single Drive Mode:

- For Specific Drive Mode, specified drive modes have been set for each individual monitoring item requested by OBD-II regulations, and they can be diagnosed individually.
- For the Single Drive Mode, the entire monitoring item requested by OBD-II regulations can be diagnosed.

The following modes are in the Specific Drive Mode. The applicable system is diagnosed by driving in the following drive modes:

- PCM Adaptive Memory Produce Drive Mode
- EGR System Repair Verification Drive Mode
- HO2S heater, HO2S, and TWC Repair Verification Drive Mode
- EVAP System Repair Verification Drive Mode

The following systems are diagnosed with the Single Drive Mode.

- EGR system
- Oxygen sensor (HO2S)
- Oxygen sensor heater
- Catalytic converter (TWC)
- Fuel, misfire and evaporative (EVAP) system

IMPORTANT:

While performing the Drive Mode, always operate the vehicle in a safe and lawful manner. When observing monitor system status while driving, be sure to have another technician with you, or record the data and inspect later.



NOTE:

Vehicle speed and RPM detected by the PCM may differ from that indicated by the speedometer and tachometer. Use the DATA PID to monitor vehicle speed.

If the OBD-II system inspection is not completed during the Drive Mode, the following causes are considered:

- The OBD-II system detects malfunction.
- The Drive Mode procedure is not completed correctly.
- Disconnecting the battery will reset the memory. Do not disconnect the battery after the Drive Mode.
- The scan tool can be used at anytime through the course of the Drive Mode to monitor completion status by viewing ON BOARD SYSTEM READINESS.
- OBD monitoring status can be confirmed with ignition key operation. During KOEO, MIL illuminates for fail-light inspection for approximately 17 seconds. The OBD monitoring status is confirmed after the fail-light inspection:
 - If all diagnosis is completed even once, MIL will continue to illuminate.
 - If diagnosis is not complete, the MIL flashes for approximately 7 seconds, and then illuminates until engine is started.

PCM Adaptive Memory Production Drive Mode



To perform this drive mode:

1. Start the engine and allow it to warm completely.
2. Verify following conditions and correct if necessary:
 - a. All accessory loads (A/C, headlights, blower fan, rear window defroster) are off.
 - b. Initial ignition timing and idle speed are within specifications.
3. Perform no load racing at the RPM shown in [Figure MA000-23](#), then idle the engine for more than 20 seconds after the cooling fan has stopped. If possible, monitor RPM PID for engine speed during this procedure.

PCM Adaptive Memory Production Drive Mode

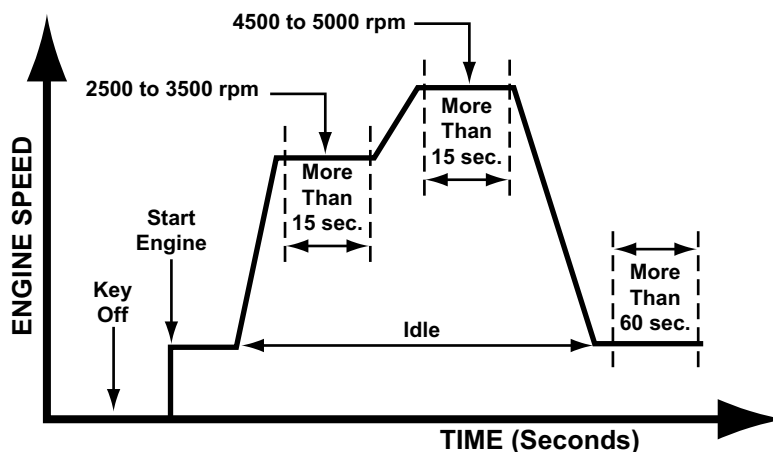


Figure MA000-23

EGR System Repair Verification Drive Mode



To perform this drive mode:

1. Perform "PCM Adaptive Memory Production Drive Mode" first.
2. Verify all accessory loads (A/C, headlights, blower fan, rear window defroster) are off.

3. Drive vehicle as shown in [Figure MA000-24](#).

EGR System Repair Verification Drive Mode

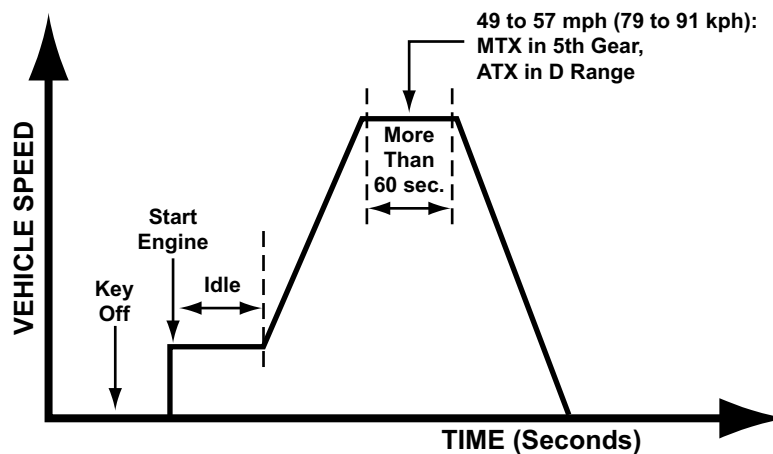


Figure MA000-24

4. Stop the vehicle and access ON BOARD SYSTEM READINESS to verify monitor status:
 - If completed, OBD monitoring status reads completed.
 - If not completed, turn the key off, then repeat from Step 3.
5. Access DIAGNOSTIC MONITORING TEST to verify monitoring results.
 - If detected values are not within specifications, repair has not been completed.
6. Verify no DTCs set.

HO2S heater, HO2S, and TWC Repair Verification Drive Mode



To perform this drive mode:

1. Perform "PCM Adaptive Memory Production Drive Mode" first.
2. Verify all accessory loads (A/C, headlights, blower fan, rear window defroster) are off.
3. Drive the vehicle as shown in [Figure MA000-25](#).

HO2S Heater, HO2S, and TWC Repair Verification Drive Mode

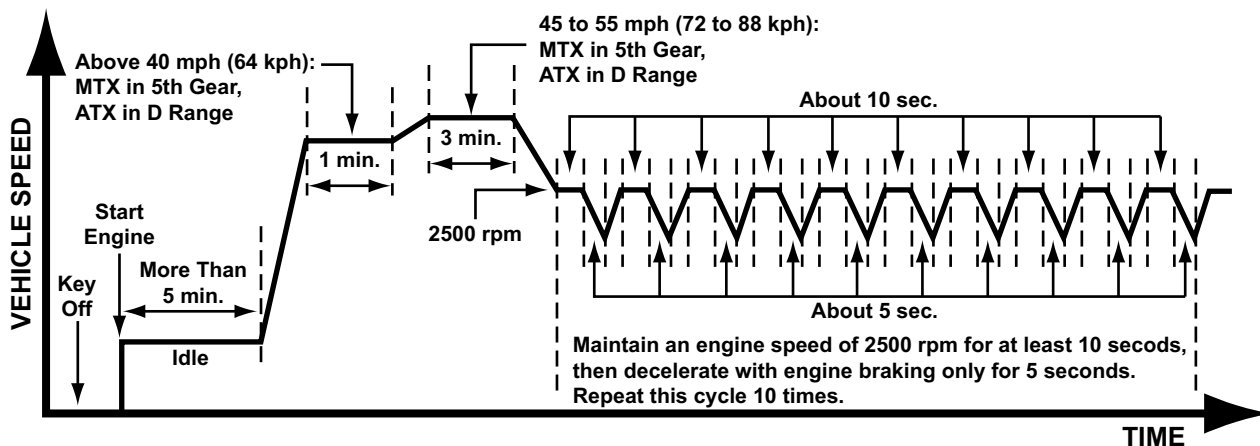


Figure MA000-25

NOTE:



. Driving conditions before driving at constant speed are not specified

4. Stop the vehicle and access ON BOARD SYSTEM READINESS to verify monitor status:
 - If completed, OBD monitoring status reads completed.
 - If not completed, turn the key off, then repeat from Step 3.
5. Access DIAGNOSTIC MONITORING TEST RESULTS to verify monitoring results.
 - If detected values are not within specifications, repair has not been completed.
6. Verify no DTCs set.

EVAP System Repair Verification Drive Mode

NOTE:



If "EVAP System Repair Verification Drive Mode" cannot be performed (it is impossible to drive the vehicle under this drive mode condition), perform evaporative system test procedure as an alternative.



To perform this drive mode:

1. Verify that the following PIDs are within the following specifications. All PIDs must be within specifications before engine is started to initiate the evaporative system test:
 - BARO: 21.3inHg (72.3 kPa, 542 mmHg) or higher
 - IAT: 41°F to 95°F (5°C to 35°C)
 - FTL: 15% to 85%
 - B+: above 10.9V
2. Clear DTC from PCM memory.
3. Start engine and idle for more than 10 seconds, then turn key off.
4. Leave vehicle for 5 hours or more.
5. Start engine and idle for more than 15 minutes.
6. Drive the vehicle at 40 to 50 mph (65 to 80 kph) for more than 5 minutes.

7. Stop vehicle and turn key off.
8. Leave vehicle as it is for 10 minutes or more.
9. Start the engine.
10. Access ON BOARD SYSTEM READINESS to verify OBD monitoring status.
 - If completed, OBD monitoring status reads completed.
 - If not completed, turn the key off, then go back to Step 1.
11. Access DIAGNOSTIC MONITORING TEST RESULTS to verify monitoring results.
 - If detected values are not within specifications, repair has not completed.
12. Verify no DTCs set.

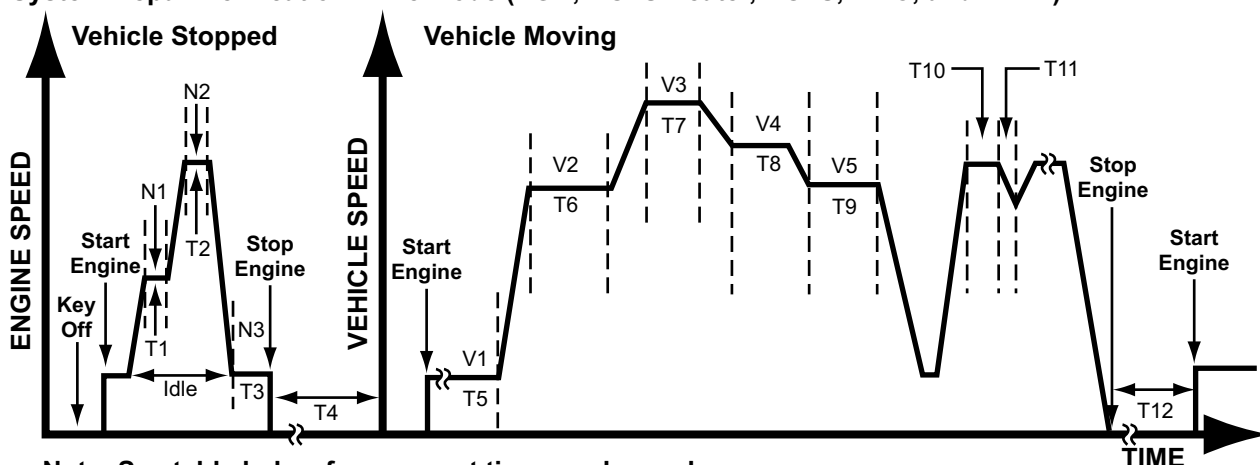
PCM Adaptive Memory Production, EGR, HO2S heater, HO2S, TWC, and EVAP System Repair Verification Drive Mode



To perform this drive mode:

1. Start engine and warm completely.
2. Clear DTCs from the PCM memory.
3. Verify following conditions and correct if necessary:
 - All accessory loads (A/C, headlights, blower fan, rear window defroster) are off.
 - Initial ignition timing and idle speed are within specifications.
4. Verify that following PIDs are within following specifications:
 - BARO: more than 21.3inHg (72.3 kPa, 542 mmHg)
 - IAT: 41°F to 95°F (5°C to 35°C)
 - FTL: 15% to 85%
 - B+: above 10.9 VAll PIDs must be within specifications from Step 5 to Step 6:
5. With vehicle stopped, race engine at RPM indicated, then drive vehicle as shown in [Figure MA000-26](#). Driving conditions before driving at constant speed are not specified. If possible, monitor RPM PID for engine speed during this procedure.

System Repair Verification Drive Mode (EGR, HO2S Heater, HO2S, TWC, and EVAP)



Note: See table below for segment times and speeds.

Figure MA000-26

Table MA000-1

Step	Time	Engine Speed		Vehicle Speed		Condition
		Step	RPM	Step	MPH(KPH)	
T1	More than 15 seconds	N1	2500 to 3500	—	0	—
T2	More than 15 seconds	N2	4500 to 5000	—	0	—
T3	More than 60 seconds	N3	Idle	—	0	Idle engine after cooling fan stops
T4	More than 5 hours	—	0	—	0	Keep key off
T5	More than 15 minutes	—	Idle	V1	0	—
T6	5 minutes	—	—	V2	40–50 (65–80)	—
T7	1 minute	—	—	V3	49–57 (79–91)	MTX in 5th gear, ATX in D range
T8	1 minute	—	—	V4	Above 40 (64)	
T9	3 minutes	—	—	V5	45–55 (72–88)	
T10	About 10 seconds	—	Above 2500	—	—	—
T11	About 5 seconds	—	Decelerating	—	Decelerating	Engine braking only! Repeat 10 times
T12	More than 10 minutes	—	0	—	0	Keep key off

6. Turn key off.
7. Access ON BOARD SYSTEM READINESS to verify OBD monitoring status.
 - If completed, all OBD monitoring status items read completed.
 - If not completed, turn key off, then perform applicable specific drive mode for any monitoring item that was not in detection condition.
8. Access DIAGNOSTIC MONITORING TEST RESULTS to verify monitoring results.
 - If detected values are not within specifications, repair has not been completed.

2004–05 Mazda6 AJ 3.0L OBD-II Drive Mode

The following modes are in Specific Drive Mode. The applicable system is diagnosed by driving in the following Drive Modes:

- PCM Adaptive Memory Produce Drive Mode
- EGR System Repair Verification Drive Mode
- HO2S heater, HO2S, and TWC Repair Verification Drive Mode
- EVAP System Repair Verification Drive Mode

The following systems are diagnosed with the Single Drive Mode:

- EGR system
- Oxygen sensor (HO2S)
- Oxygen sensor heater
- Catalytic converter (TWC)
- Fuel, misfire and evaporative (EVAP) system

IMPORTANT:

While performing the Drive Mode, always operate vehicle in a safe and lawful manner. When observing monitor system status while driving, be sure to have another technician with you, or record and inspect later.



NOTE:

Vehicle speed and engine speed detected by PCM may differ from that indicated by speedometer and tachometer. Use DATA PID to monitor vehicle speed.

If the OBD-II system inspection is not completed during Drive Mode, the following causes are considered:

- The OBD-II system detects malfunction.
- The Drive Mode procedure is not completed correctly.
- Disconnecting the battery will reset memory. Do not disconnect battery after Drive Mode.
- Monitoring can be done by viewing the ON BOARD SYSTEM READINESS menu.
- OBD monitoring status can be confirmed with ignition switch operation. During KOEO, the MIL illuminates for fail-light inspection for approximately 17 seconds. The OBD monitoring status is confirmed after the fail-light inspection:
 - If diagnosis is completed even one time, MIL will continue to illuminate.
 - If diagnosis is not completed, MIL flashes for approximately 7 seconds, and then illuminates until engine is started.

Mode 1 (PCM Adaptive Memory Produce Drive Mode)

**To perform this drive mode:**

1. Start the engine and warm completely.
2. Verify the following conditions and correct if necessary:
 - All accessory loads (A/C, headlights, blower fan, rear window defroster) are off.
 - Initial ignition timing and idle speed are within specifications.
3. Perform no load racing at 2500 to 3500 rpm for 15 seconds or more, then idle engine for 60 seconds or more after cooling fan has stopped. If possible, monitor RPM PID for engine speed during this procedure.

Mode 2 (EGR System Repair Verification Drive Mode)



To perform this drive mode:

1. Perform "PCM Adaptive Memory Produce Drive Mode" first.
2. Verify that all accessory loads (A/C, headlights, blower fan, rear window defroster) are off.
3. Drive the vehicle as shown in [Figure MA000-27](#).

Mode 2 (EGR System Repair Verification Drive Mode)

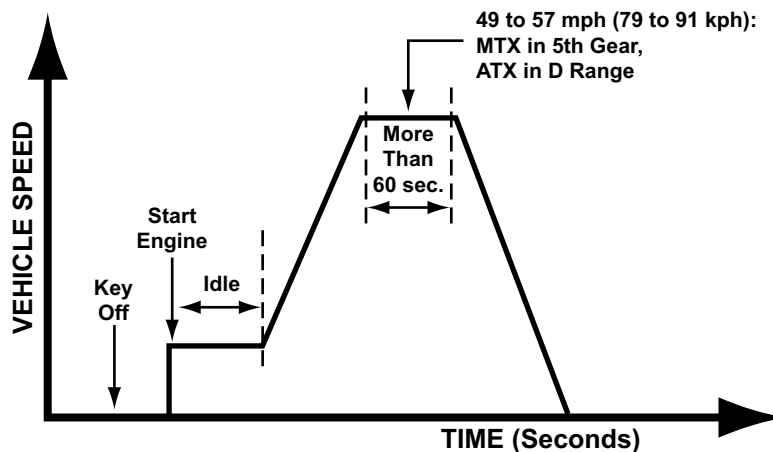


Figure MA000-27

4. Stop vehicle and access ON BOARD SYSTEM to verify OBD monitoring status:
 - If completed, OBD monitoring status items change from non-completed to completed.
 - If not completed, turn key off, then repeat from Step 3.
5. Access DIAGNOSTIC MONITORING TEST to verify monitoring results.
 - If detected values are not within specifications, repair has not been completed.
6. Verify no DTCs set.

Mode 3 (HO2S heater, HO2S, and TWC Repair Verification Mode)



To perform this drive mode:

1. Perform "PCM Adaptive Memory Produce Drive Mode" first.
2. Verify that all accessory loads (A/C, headlights, blower fan, rear window defroster) are off.
3. Drive vehicle as shown in [Figure MA000-28](#).

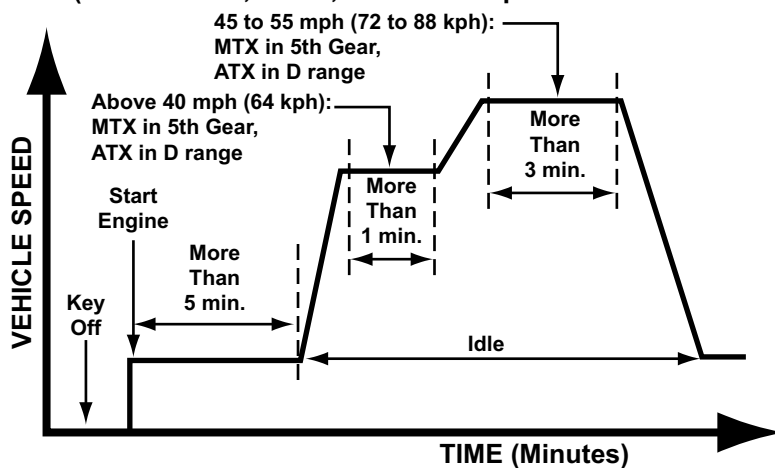
MODE 3 (HO2S Heater, HO2S, and TWC Repair Verification Drive Mode)

Figure MA000-28

NOTE:

Driving condition before driving at constant speed is not specified.

4. Stop vehicle and access ON BOARD SYSTEM to verify OBD monitoring status:
 - If completed, OBD monitoring status items change from non-completed to completed.
 - If not completed, turn key off, then repeat from Step 3.
5. Access DIAGNOSTIC MONITORING TEST to verify monitoring results:
 - If detected values are not within specifications, repair has not been completed.
6. Verify no DTCs set.

Mode 6 (EVAP System Repair Verification Drive Mode)**NOTE:**

If "EVAP System Repair Verification Drive Mode" cannot be performed (you cannot drive the vehicle under the specified condition), perform evaporative system test procedure as an alternative. (See "Evaporative System Test" in "Tests and Procedures" section of Driveability Troubleshooter.)

**To perform this drive mode:**

1. Verify that the following PIDs are within specifications. All PIDs must be within specifications before engine is started to initiate evaporative system test.
 - BARO: 21.3 inHg (72.3 kPa, 542 mmHg) or higher
 - IAT: 41°F to 95°F (5°C to 35°C)
 - Fuel tank level: 15% to 85%
 - Battery (+): 10.9V to 14.6V
2. Clear DTCs from PCM memory.
3. Start the engine and idle it for 10 seconds or more, then turn key to OFF.
4. Leave the vehicle in this condition for 5 hours or more.

5. Start the engine and idle it for 15 minutes or more.
6. Drive the vehicle at 40 to 50 mph (65 to 80 kph) for 5 minutes or more.
7. Stop vehicle and turn key to OFF.
8. Leave vehicle in this condition for 10 minutes or more.
9. Start the engine.
10. Access ON BOARD SYSTEM READINESS menu of GENERIC OBD-II FUNCTION to verify OBD monitoring status:
 - If completed, OBD monitoring status items read completed.
 - If not completed, turn key off, then repeat from Step 3.
11. Access DIAGNOSTIC MONITORING TEST to verify monitoring results.
 - If detected values are not within specifications, repair has not been completed.
12. Verify no DTCs set.

Single Drive Mode (PCM Adaptive Memory Produce, EGR System, HO2S heater, HO2S, TWC, and EVAP System Repair Verification Drive Mode)



To perform this drive mode:

1. Start the engine and warm completely.
2. Clear DTCs from PCM memory.
3. Verify following conditions and correct if necessary:
 - All accessory loads (A/C, headlights, blower fan, rear window defroster) are off.
 - Initial ignition timing and idle speed are within specifications.
4. Verify that following PIDs are within specifications:
 - BARO: 21.3 inHg (72.3 kPa, 542 mmHg) or higher
 - IAT: 41°F to 95°F (5°C to 35°C)
 - Fuel tank level: 15% to 85%
 - Battery (+): 10.9V to 14.6V

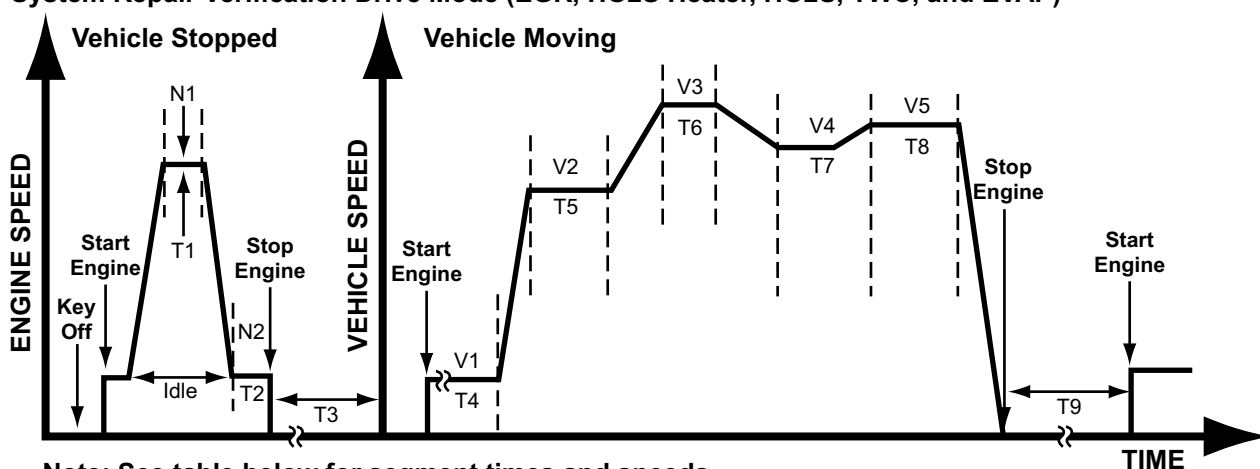


NOTE:

All PIDs must be within specifications from Step 5 to Step 6.

5. With the vehicle stopped, race the engine at RPM indicated, and then drive the vehicle as shown in [Figure MA000-29](#). Driving conditions before driving at constant speed are not specified. If possible, monitor RPM PID for engine speed during this procedure.

System Repair Verification Drive Mode (EGR, HO2S Heater, HO2S, TWC, and EVAP)



Note: See table below for segment times and speeds.

Figure MA000-29

Table MA000-2

Step	Time	Engine Speed		Vehicle Speed		Condition
		Step	RPM	Step	MPH(KPH)	
T1	More than 15 seconds	N1	2500 to 3500	—	0	—
T2	More than 60 seconds	N2	Idle	—	0	Idle engine after cooling fan stops
T3	More than 5 hours	—	0	—	0	Keep key off
T4	More than 15 minutes	—	Idle	V1	0	—
T5	5 minutes	—	—	V2	25–31 (40–50)	—
T6	1 minute	—	—	V3	31–35 (49–57)	MTX in 5th gear, ATX in D range
T7	1 minute	—	—	V4	Above 25 (40)	
T8	3 minutes	—	—	V5	28–34 (44–55)	
T9	More than 10 minutes	—	0	—	0	Keep key off

6. Turn key off and leave vehicle for 10 minutes or more with key off.
7. Start and stop engine.
8. Access ON BOARD SYSTEM READINESS menu of GENERIC OBD-II to verify OBD monitoring status:
 - If completed, all OBD monitoring status items change to read completed.
 - If not completed, turn key off, then perform applicable specific drive mode for any monitoring item that was not complete.
9. Access DIAGNOSTIC MONITORING TEST RESULTS menu of GENERIC OBD-II FUNCTIONS to verify monitoring results:
 - If detected values are not within specification, repair has not been completed.

2004–05 Mazda3 2.0L (LF) and 2.3L (L3) OBD-II Drive Mode

Using the OBD-II drive mode, a monitoring item requested by OBD-II regulations can be easily diagnosed. Performing the Drive Mode inspects the OBD-II system for proper operation and must be performed to ensure that no additional DTCs are present. The OBD-II drive mode is divided into Specific Drive Mode and Single Drive Mode:

- For Specific Drive Mode, specified drive modes have been set for each individual monitoring item requested by OBD-II regulations, and they can be diagnosed individually.
- For the Single Drive Mode, the entire monitoring item requested by OBD-II regulations can be diagnosed.

The following modes are in the Specific Drive Mode. The applicable system is diagnosed by driving in the following drive modes:

- PCM Adaptive Memory Produce Drive Mode
- EGR System Repair Verification Drive Mode
- HO2S heater, HO2S, and TWC Repair Verification Drive Mode
- EVAP System Repair Verification Drive Mode

The following systems are diagnosed with the Single Drive Mode.

- EGR system
- Oxygen sensor (HO2S)
- Oxygen sensor heater
- Catalytic converter (TWC)
- Fuel, misfire and evaporative (EVAP) system

IMPORTANT:

While performing the Drive Mode, always operate the vehicle in a safe and lawful manner. When observing monitor system status while driving, be sure to have another technician with you, or record the data and inspect later.

NOTE:

Vehicle speed and RPM detected by the PCM may differ from that indicated by the speedometer and tachometer. Use the DATA PID to monitor vehicle speed.

If the OBD-II system inspection is not completed during the Drive Mode, the following causes are considered:

- The OBD-II system detects malfunction.
- The Drive Mode procedure is not completed correctly.
- Do not disconnect the battery after the Drive Mode, this will reset the memory.
- The scan tool can be used at anytime through the course of the Drive Mode to monitor completion status by viewing ON BOARD SYSTEM READINESS.
- OBD monitoring status can be confirmed with ignition key operation. During KOEO, MIL illuminates for fail-light inspection for approximately 17 seconds. The OBD monitoring status is confirmed after the fail-light inspection.
- If all diagnosis is completed even once, MIL will continue to illuminate.
- If diagnosis is not complete, the MIL flashes for approximately 7 seconds, and then illuminates until engine is started.

PCM Adaptive Memory Production Drive Mode



To perform this drive mode:

1. Start the engine and warm completely.
2. Verify following conditions and correct if necessary:
 - All accessory loads (A/C, headlights, blower fan, rear window defroster) are off.
 - Initial ignition timing and idle speed are within specifications.
3. Perform no load racing at RPM shown in [Figure MA000-30](#) or [Figure MA000-31](#), then idle engine for more than 20 seconds after cooling fan has stopped. If possible, monitor RPM PID for engine speed during this procedure.

PCM Adaptive Memory Production Drive Mode (California Model)

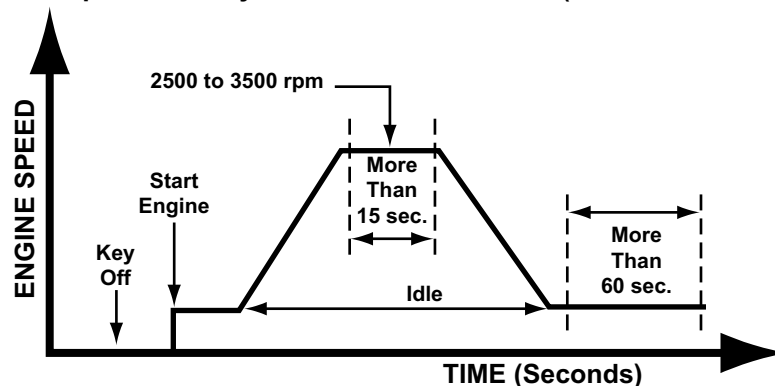


Figure MA000-30 California emission specification model

PCM Adaptive Memory Production Drive Mode (Federal Model)

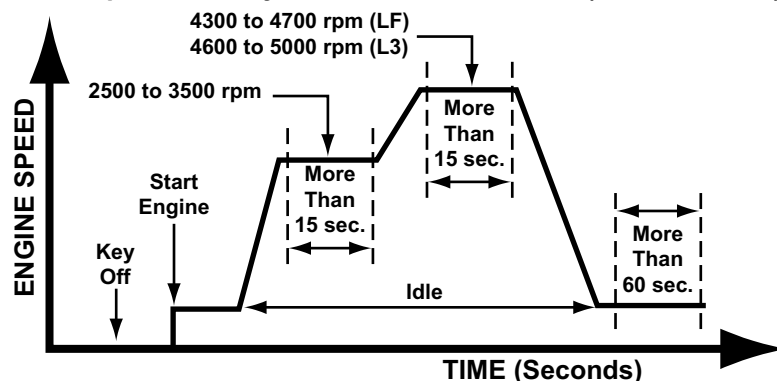


Figure MA000-31 Federal emission specification model

EGR System Repair Verification Drive Mode



To perform this drive mode:

1. Perform "PCM Adaptive Memory Production Drive Mode" first.
2. Verify all accessory loads (A/C, headlights, blower fan, rear window defroster) are off.
3. Drive the vehicle as shown in [Figure MA000-32](#).

EGR System Repair Verification Drive Mode

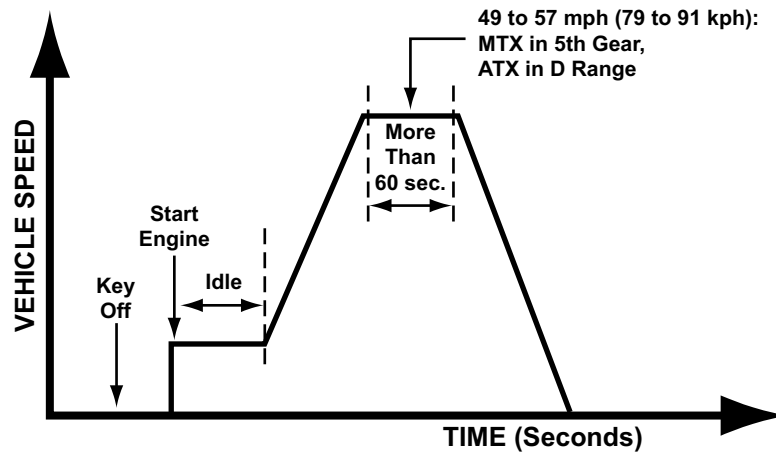


Figure MA000-32

4. Stop the vehicle and access ON BOARD SYSTEM verify OBD monitoring status:
 - If completed, the OBD monitoring status items change from non-completed to completed.
 - If not completed, turn the ignition key off then repeat from Step 3.
5. Access DIAGNOSTIC MONITORING TEST RESULTS to verify the monitor results:
 - If values are not within specification, repair has not been completed.
6. Verify no DTCs set.

HO2S heater, HO2S, and TWC Repair Verification Drive Mode



To perform this drive mode:

1. Perform "PCM Adaptive Memory Production Drive Mode" first.
2. Verify all accessory loads (A/C, headlights, blower fan, rear window defroster) are off.
3. Drive vehicle as shown in [Figure MA000-33](#). Driving conditions before driving at constant speed are not specified.
4. Stop vehicle and verify OBD monitoring status:
 - If completed, OBD monitoring status items change from non-completed to completed.
 - If not completed, turn key off, then repeat from Step 3.
5. Access DIAGNOSTIC MONITORING TEST RESULTS to verify the monitor results:
 - If detected values are not within specifications, repair has not been completed.
6. Verify no DTCs set.

HO2S Heater, HO2S, and TWC Repair Verification Drive Mode

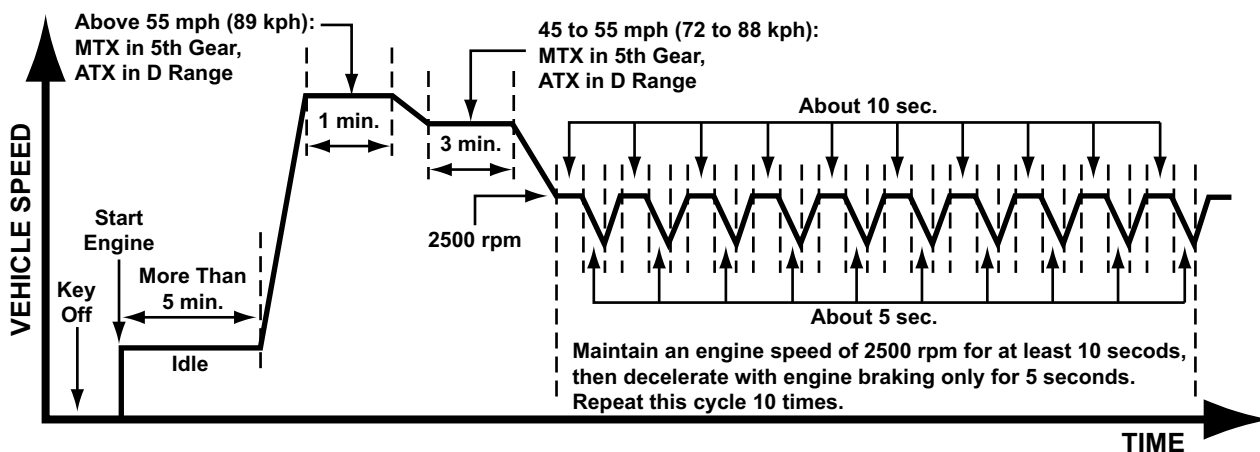


Figure MA000-33

EVAP System Repair Verification Drive Mode



NOTE:

If "EVAP System Repair Verification Drive Mode" cannot be performed (it is impossible to drive the vehicle as indicated), perform evaporative system test procedure as an alternative.



To perform this drive mode:

1. Verify that all of the following PIDs are within the following specifications:
 - BARO: 21.2 inHg (72.2 kPa, 541 mmHg) or higher
 - IAT: 41°F to 95°F (5°C to 35°C)
 - FTL: 15% to 85%
 - B+: above 10.9 V

All PIDs must be within specifications before engine is started to initiate the evaporative system test.

2. Clear DTC from PCM memory.
3. Start engine and idle for more than 10 seconds, then turn key off.
4. Leave vehicle for 5 hours or more.
5. Start engine and idle for more than 15 minutes.
6. Drive vehicle at 40 to 50 mph (65 to 80 kph) for more than 5 minutes.
7. Stop vehicle and turn key off.
8. Leave vehicle as it is for 10 minutes or more.
9. Start the engine.
10. Access the ON BOARD SYSTEM READINESS to verify OBD monitoring status:
 - If completed, OBD monitoring status items change to read completed.
 - If not completed, turn key off, then go back to Step 1.
11. Access DIAGNOSTIC MONITORING TEST RESULTS to verify the monitor results:
 - If detected values are not within specification, repair has not completed.
12. Verify no DTCs set.

PCM Adaptive Memory Production, EGR, HO2S heater, HO2S, TWC, and EVAP System Repair Verification Drive Mode

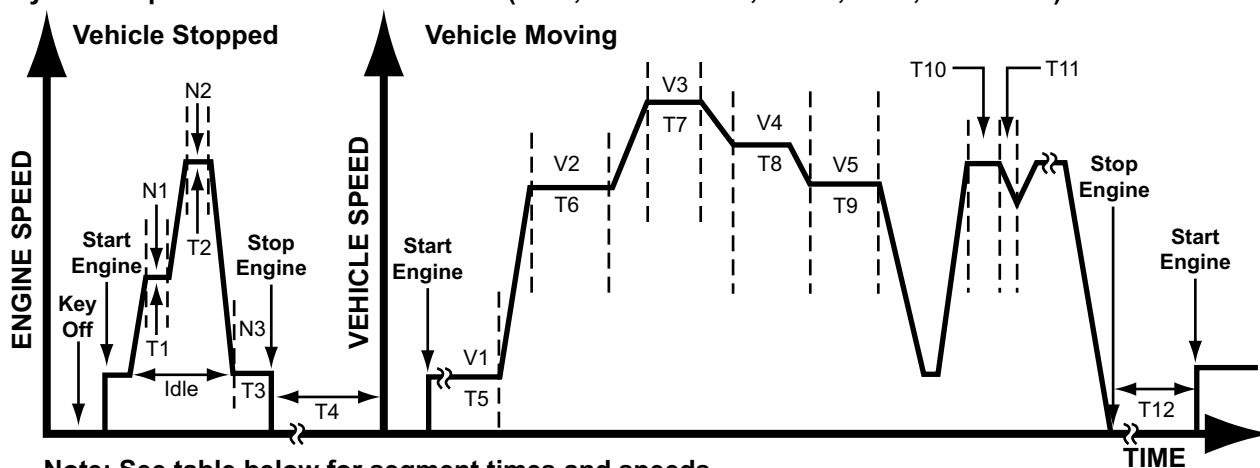


To perform this drive mode:

1. Start the engine and warm completely.
2. Clear DTCs from PCM memory.
3. Verify following conditions and correct if necessary:
 - All accessory loads (A/C, headlights, blower fan, rear window defroster) are off.
 - Initial ignition timing and idle speed are within specifications.
4. Verify that following PIDs are within specifications:
 - BARO: 21.2 inHg(72.2 kPa, 541 mmHg) or higher
 - IAT: 41°F to 95°F(5°C to 35°C)
 - FTL: 15% to 85%
 - B+: above 10.9 V

All PIDs must be within specifications from Step 5 to Step 6.
5. With vehicle stopped, race engine at RPM indicated, and then drive vehicle as shown in [Figure MA000-34](#). Driving conditions before driving at constant speed are not specified. If possible, monitor RPM PID for engine speed during this procedure.

System Repair Verification Drive Mode (EGR, HO2S Heater, HO2S, TWC, and EVAP)



Note: See table below for segment times and speeds.

Figure MA000-34

Table MA000-3 (part 1 of 2)

Step	Time	Engine Speed		Vehicle Speed		Condition
		Step	RPM	Step	MPH(KPH)	
T1	More than 15 seconds	N1	2500 to 3500	—	0	—
T2	More than 15 seconds	N2	4300 to 4700 (LF)	—	0	—
			4600 to 5000 (L3)			
T3	More than 60 seconds	N3	Idle	—	0	Idle engine after cooling fan stops
T4	More than 5 hours	—	0	—	0	Keep key off
T5	More than 15 minutes	—	Idle	V1	0	—

Table MA000-3 (part 2 of 2)

Step	Time	Engine Speed		Vehicle Speed		Condition
		Step	RPM	Step	MPH(KPH)	
T6	5 minutes	—	—	V2	40–50 (65–80)	—
T7	1 minute			V3	49–57 (79–91)	MTX in 5th gear, ATX in D range
T8	1 minute			V4	Above 55 (88)	
T9	3 minutes			V5	45–55 (72–88)	
T10	About 10 seconds	—	Above 2500	—	—	—
T11	About 5 seconds	—	Decelerating	—	Decelerating	Engine braking only! Repeat 10 times
T12	More than 10 minutes	—	0	—	0	Keep key off

6. Turn key off.
7. Access ON BOARD SYSTEM READINESS to verify OBD monitoring status:
 - If completed, OBD monitoring status items change from non-completed to completed.
 - If not completed, turn key off, then perform the applicable specific drive mode for any monitoring item that was not in detection condition.
8. Access DIAGNOSTIC MONITORING TEST RESULTS to verify monitoring results:
 - If detected values are not within specification, repair has not been completed.

2004–05 MPV OBD-II Drive Mode

Using the OBD-II drive mode, a monitoring item requested by OBD-II regulations can be easily diagnosed. Performing the Drive Mode inspects the OBD-II system for proper operation and must be performed to ensure that no additional DTCs are present. The OBD-II drive mode is divided into Specific Drive Mode and Single Drive Mode:

- For Specific Drive Mode, specified drive modes have been set for each individual monitoring item requested by OBD-II regulations, and they can be diagnosed individually.
- For the Single Drive Mode, the entire monitoring item requested by OBD-II regulations can be diagnosed.

The following modes are in the Specific Drive Mode. The applicable system is diagnosed by driving in the following drive modes:

- PCM Adaptive Memory Produce Drive Mode
- EGR System Repair Verification Drive Mode
- HO2S heater, HO2S, and TWC Repair Verification Drive Mode
- EVAP System Repair Verification Drive Mode

The following systems are diagnosed with the Single Drive Mode:

- EGR system
- Oxygen sensor (HO2S)
- Oxygen sensor heater
- Catalytic converter (TWC)
- Fuel, misfire and evaporative (EVAP) system

IMPORTANT:

While performing the Drive Mode, always operate the vehicle in a safe and lawful manner. When observing monitor system status while driving, be sure to have another technician with you, or record the data and inspect later.

**NOTE:**

Vehicle speed and RPM detected by the PCM may differ from that indicated by the speedometer and tachometer. Use the DATA PID to monitor vehicle speed.

If the OBD-II system inspection is not completed during the Drive Mode, the following causes are considered:

- The OBD-II system detects malfunction.
- The Drive Mode procedure is not completed correctly.
- Do not disconnect the battery after the Drive Mode, this will reset the memory.
- The scan tool can be used at anytime through the course of the Drive Mode to monitor the completion status by viewing ON BOARD SYSTEM READINESS.
- The OBD monitoring status can be confirmed with the ignition key operation. During KOEO, MIL illuminates for a fail-light inspection for approximately 17 seconds. The OBD monitoring status is confirmed after the fail-light inspection:
 - If all of the diagnosis is completed even once, the MIL will continue to illuminate.
 - If all diagnosis is not completed, the MIL flashes for approximately 7 seconds, and then illuminates until engine is started.

Mode 1 (PCM Adaptive Memory Produce Drive Mode)

**To perform this drive mode:**

1. Start the engine and warm completely.
2. Verify following conditions and correct if necessary:
 - All accessory loads (A/C, headlights, blower fan, rear window defroster) are off.
 - Initial ignition timing and idle speed are within specifications.
3. Perform no load racing at 2500 RPM to 3500 RPM for 15 seconds or more, then idle the engine for 1 minute or more after cooling fan has stopped. If possible, monitor RPM PID for engine speed during this procedure.

Mode 2 (EGR System Repair Verification Drive Mode)

**To perform this drive mode:**

1. Perform “PCM Adaptive Memory Produce Drive Mode” first.
2. Verify that all accessory loads (A/C, headlights, blower fan, rear window defroster) are off.
3. Drive the vehicle as shown in [Figure MA000-35](#).
4. Stop the vehicle and access ON BOARD SYSTEM READINESS menu to verify the monitor status:
 - If completed, OBD monitoring status items change to read completed.
 - If not completed, turn the key off, then repeat from Step 3.

Mode 2 (EGR System Repair Verification Drive Mode)

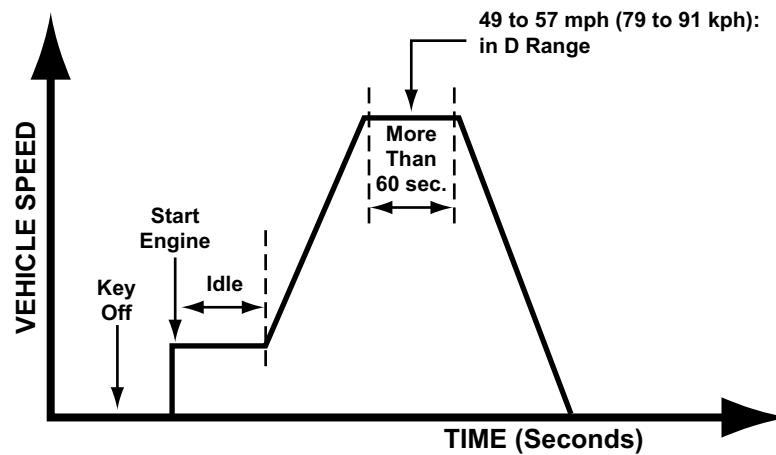


Figure MA000-35

5. Access DIAGNOSTIC MONITORING TEST RESULTS to verify monitoring results:
 - If detected values not within specifications, repair has not been completed.
6. Verify no DTCs set.

Mode 3 (HO2S heater, HO2S, and TWC Repair Verification Mode)



To perform this drive mode:

1. Perform "PCM Adaptive Memory Produce Drive Mode" first.
2. Verify that all accessory loads (A/C, headlights, blower fan, rear window defroster) are off.
3. Drive vehicle as shown in [Figure MA000-36](#).

MODE 3 (HO2S Heater, HO2S, and TWC Repair Verification Drive Mode)

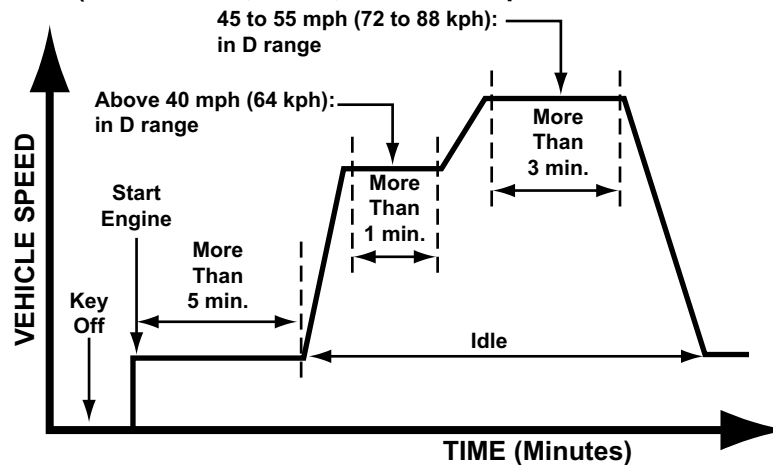


Figure MA000-36



NOTE:

The driving condition before driving at constant speed driving is not specified.

4. Stop the vehicle and access ON BOARD SYSTEM READINESS to verify monitor status:
 - If completed, OBD monitoring status items change to read completed.
 - If not completed, turn key off, then repeat from Step 3.
5. Access DIAGNOSTIC MONITORING TEST RESULTS to verify monitoring results.
 - If detected values are not within specification, repair has not been completed.
6. Verify no DTCs set.

Mode 6 (EVAP System Repair Verification Drive Mode)



NOTE:

If “EVAP System Repair Verification Drive Mode” cannot be performed (you cannot drive the vehicle under specified conditions), perform evaporative system test procedure as an alternative. (See “Evaporative System Test” in “Test and Procedures” section of Driveability Troubleshooter.)



To perform this drive mode:

1. Verify that the following PIDs are within specifications. All PIDs must be within specifications before engine is started to initiate evaporative system test:
 - BARO: 21.2 inHg (72.2 kPa, 541 mmHg) or higher
 - IAT: 41°F to 95°F (5°C to 35°C)
 - FTL: 15% to 85%
 - VPWR: 10.9V to 14.6V
2. Clear DTCs from PCM memory.
3. Start the engine and idle for 10 seconds or more, then turn key OFF.
4. Leave vehicle in this condition for 5 hours or more.
5. Start engine, and idle for 15 minutes or more.
6. Drive the vehicle at 40mph to 50mph (65km/h to 80km/h) for 5 minutes or more.
7. Stop the vehicle and turn the key OFF.
8. Leave vehicle in this condition for 10 minutes or more.
9. Start the engine.
10. Stop the vehicle and access ON BOARD SYSTEM READINESS to verify monitor status:
 - If completed, OBD monitoring status items change to read completed.
 - If not completed, turn key off, then repeat from Step 3.
11. Access DIAGNOSTIC MONITORING TEST RESULTS to verify monitoring results:
 - If detected values are not within specifications, repair has not been completed.
12. Verify no DTCs set.

Single Drive Mode (PCM Adaptive Memory Produce, EGR System, HO2S heater, HO2S, TWC, and EVAP System Repair Verification)



To perform this drive mode:

1. Start the engine and warm completely.
2. Clear DTCs from the PCM memory.

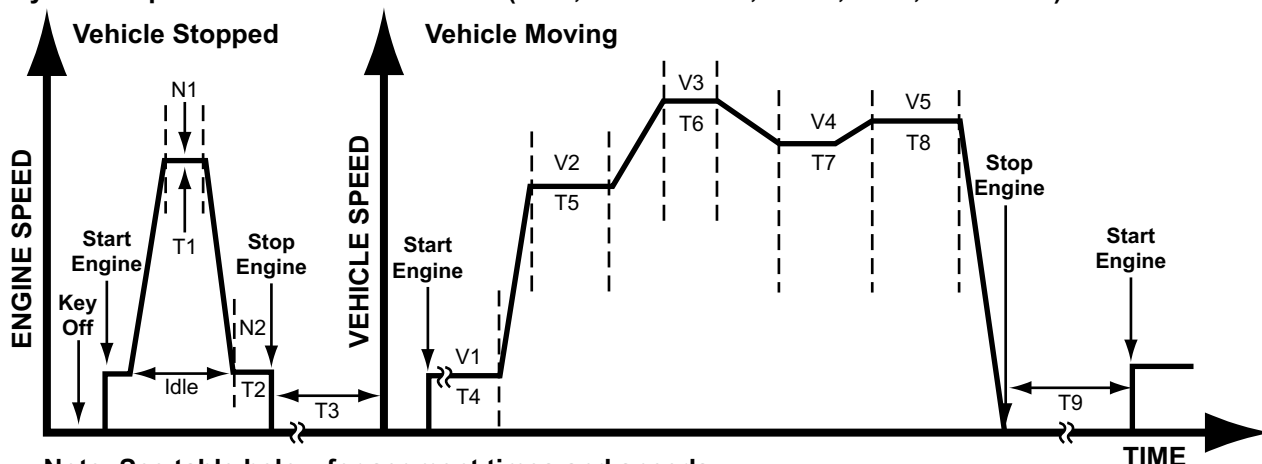
3. Verify following conditions and correct if necessary:
 - All accessory loads (A/C, headlights, blower fan, rear window defroster) are off.
 - Initial ignition timing and idle speed are within specifications.
4. Verify that the following PIDs are within specifications:
 - BARO: 21.2 inHg (72.2 kPa, 541 mmHg) or higher
 - IAT: 41°F to 95°F (5°C to 35°C)
 - FTL: 15% to 85%
 - VPWR: 10.9V to 14.6V

**NOTE:**

All PIDs must be within specifications from Step 5 to Step 6

5. With vehicle stopped, race engine at RPM indicated, then drive vehicle as shown in [Figure MA000-37](#). Driving conditions before driving at constant speed are not specified. If possible, monitor RPM PID for engine speed during this procedure.

System Repair Verification Drive Mode (EGR, HO2S Heater, HO2S, TWC, and EVAP)



Note: See table below for segment times and speeds.

Figure MA000-37

Table MA000-4

Step	Time	Engine Speed		Vehicle Speed		Condition
		Step	RPM	Step	MPH(KPH)	
T1	More than 15 seconds	N1	2500 to 3500	—	0	—
T2	More than 60 seconds	N2	Idle	—	0	Idle engine after cooling fan stops
T3	More than 5 hours	—	0	—	0	Keep key off
T4	More than 15 minutes	—	Idle	V1	0	—
T5	5 minutes	—	—	V2	40–50 (65–80)	Transmission in D range
T6	1 minute	—	—	V3	49–57 (79–91)	
T7	1 minute	—	—	V4	Above 40 (64)	
T8	3 minutes	—	—	V5	45–55 (72–88)	
T9	More than 10 minutes	—	0	—	0	Keep key off

6. Stop the engine.

7. Access ON BOARD SYSTEM READINESS menu of GENERIC OBD-II FUNCTION to verify the OBD monitoring status:
 - If completed, all of the OBD monitoring status items change to read completed.
 - If not completed, turn the ignition switch off, then perform the applicable specific drive mode for any monitoring item that was not in the detection condition.
8. Access DIAGNOSTIC MONITORING TEST RESULTS menu of GENERIC OBD-II FUNCTIONS to verify the monitor results:
 - If detected values are not within specification, repair has not been completed.

2004–05 MX-5 Miata OBD-II Drive Mode

Using the OBD-II drive mode, a monitoring item requested by OBD-II regulations can be easily diagnosed. Performing the Drive Mode inspects the OBD-II system for proper operation and must be performed to ensure that no additional DTCs are present. The OBD-II drive mode is divided into Specific Drive Mode and Single Drive Mode:

- For Specific Drive Mode, specified drive modes have been set for each individual monitoring item requested by OBD-II regulations, and they can be diagnosed individually.
- For the Single Drive Mode, the entire monitoring item requested by OBD-II regulations can be diagnosed.

The following modes are in the Specific Drive Mode. The applicable system is diagnosed by driving in the following drive modes:

- Mode 1 (PCM Adaptive Memory Produce Drive Mode)
- Mode 2 (EGR System Repair Verification Drive Mode)
- Mode 3 (HO2S heater, HO2S, and TWC Repair Verification Drive Mode)
- Mode 4 (EVAP System Repair Verification Drive Mode)

The following systems are diagnosed with the Single Drive Mode:

- EGR system
- Oxygen sensor (HO2S)
- Oxygen sensor heater
- Catalytic converter (TWC)
- Fuel, misfire and evaporative (EVAP) system

IMPORTANT:

While performing the Drive Mode, always operate the vehicle in a safe and lawful manner. When observing monitor system status while driving, be sure to have another technician with you, or record the data and inspect later.



NOTE:

Vehicle speed and RPM detected by PCM may differ from that indicated by speedometer and tachometer. Use DATA PID to monitor vehicle speed.

If the OBD-II system inspection is not completed during the Drive Mode, the following causes are considered:

- The OBD-II system detects a malfunction.
- The Drive Mode procedure is not completed correctly.

- Do not disconnect the battery after Drive Mode, this will reset PCM memory.
- The scan tool can be used at anytime through the course of the Drive Mode to monitor completion status by viewing ON BOARD SYSTEM READINESS menu.
- The OBD monitoring status can be confirmed with ignition key operation. During KOEO, MIL illuminates for a fail-light inspection for approximately 17 seconds. OBD monitoring status is confirmed after fail-light inspection:
 - If all diagnosis is completed even one time, MIL will continue to illuminate.
 - If diagnosis is not completed, the MIL flashes for approximately 7 seconds, and then illuminates until engine is started.

Mode 1 (PCM Adaptive Memory Production Drive Mode)



To perform this drive mode:

1. Start the engine and warm completely.
2. Verify the following conditions and correct if necessary:
 - All accessory loads (A/C, headlights, blower fan, rear window defroster) are off.
 - Initial ignition timing and idle speed are within specifications.
 - TEN and GND pins of DLC are not connected.
3. Perform no load racing at RPM shown in [Figure MA000-38](#), then idle engine for more than 20 seconds after cooling fan has stopped. If possible, monitor RPM PID and FAN2 PID (with A/C), FAN1 PID (without A/C) for cooling fan status during this procedure.

Mode 1 Drive Mode

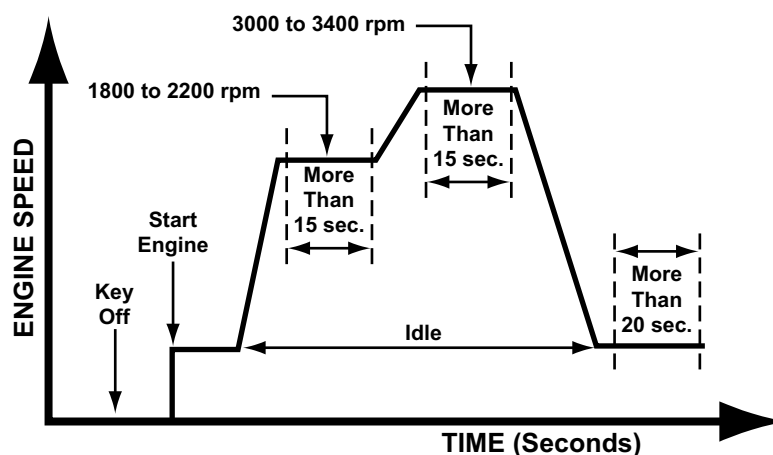


Figure MA000-38

Mode 2 (EGR System Repair Verification Drive Mode)



To perform this drive mode:

1. Perform Mode 1 first.
2. Verify all accessory loads (A/C, headlights, blower fan, rear window defroster) are off.
3. Drive the vehicle as shown in [Figure MA000-39](#).

Mode 2 (EGR System Repair Verification Drive Mode)

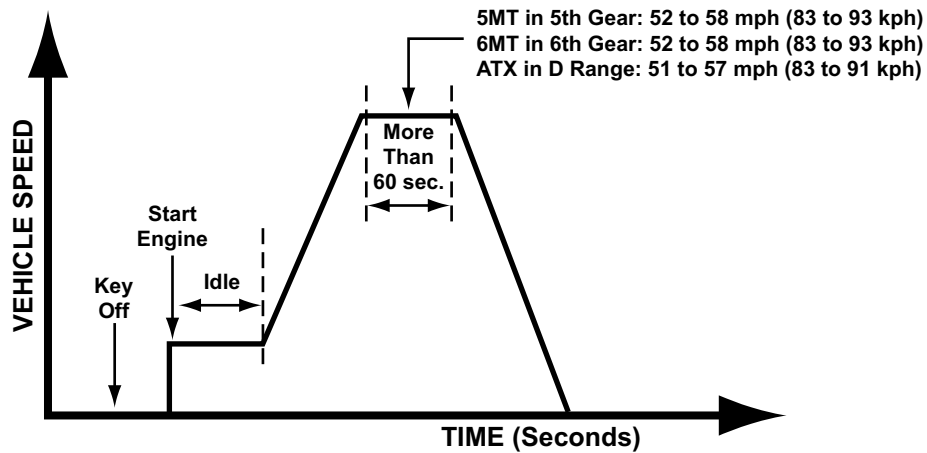


Figure MA000-39

4. Stop the vehicle and access ON BOARD SYSTEM READINESS menu to inspect OBD monitoring status:
 - If completed, all OBD monitoring status items change to read completed.
 - If not completed, turn key off, then repeat from Step 3.
5. Access DIAGNOSTIC MONITORING TEST to inspect monitoring results:
 - If detected values are not within specifications, repair has not been completed.
6. Verify no DTCs set.

Mode 3 (HO2S heater, HO2S, and TWC Repair Verification Mode)



To perform this drive mode:

1. Perform Mode 1 first.
2. Verify all accessory loads (A/C, headlights, blower fan, rear window defroster) are off.
3. Drive the vehicle as shown in [Figure MA000-40](#).

Mode 3 (HO2S Heater, HO2S, and TWC Repair Verification Drive Mode)

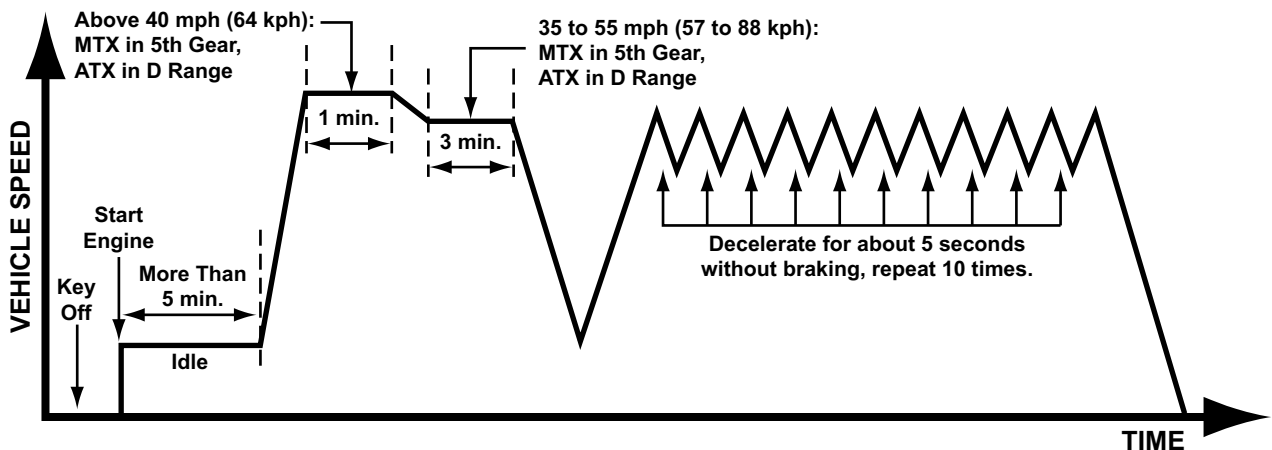


Figure MA000-40

**NOTE:**

Driving conditions before driving at constant speed are not specified.

4. Stop the vehicle and access ON BOARD SYSTEM READINESS to inspect the completion status:
 - If completed, all OBD monitoring status items change to read completed.
 - If not completed, turn key off, then repeat from Step 3.
5. Access DIAGNOSTIC MONITORING TEST to inspect monitoring results:
 - If detected values are not within the specifications, repair has not been completed.
6. Verify no DTCs set.

Mode 4 (EVAP System Repair Verification Drive Mode)

**NOTE:**

If Mode 4 cannot be performed (it is impossible to drive the vehicle under Mode 4 condition), perform evaporative system test procedure as an alternative (also see “Evaporative System Test” in “Test and Procedures” section of Driveability Troubleshooter). Mode 4 can be performed regardless of RFCFLAG status.

**To perform this drive mode:**

1. Verify that the following PIDs are within specifications:
 - BARO: 21.2 inHg (72.2 kPa, 541 mmHg) or higher
 - IAT: 41°F to 95°F (5°C to 35°C)
 - FTL: 15% to 85%
 - VPWR: 10.9V to 14.6V

All PIDs must be within specifications before engine is started to initiate the evaporative system test.
2. Clear DTC from PCM memory.
3. Start the engine, and idle for more than 10 seconds, then turn key OFF.
4. Leave the vehicle for 5 hours or more.
5. Start the engine and idle for more than 15 minutes.
6. Drive the vehicle at an engine speed of 40 mph to 50 mph (65 to 80 kph) for more than 5 minutes.
7. Stop the vehicle and turn key OFF.
8. Leave the vehicle as it is for 10 minutes or more.
9. Start the engine.
10. Access ON BOARD SYSTEM READINESS to inspect the monitor status:
 - If completed, all OBD monitoring status items change to read completed.
 - If not completed, turn key off, then go back to Step 1.
11. Access DIAGNOSTIC MONITORING TEST RESULTS to inspect monitoring results:
 - If values are not within specification, repair has not completed.
12. Verify no DTCs set.

Single Drive Mode (PCM Adaptive Memory Production, EGR System, HO2S Heater, HO2S, TWC, and EVAP System Verification)



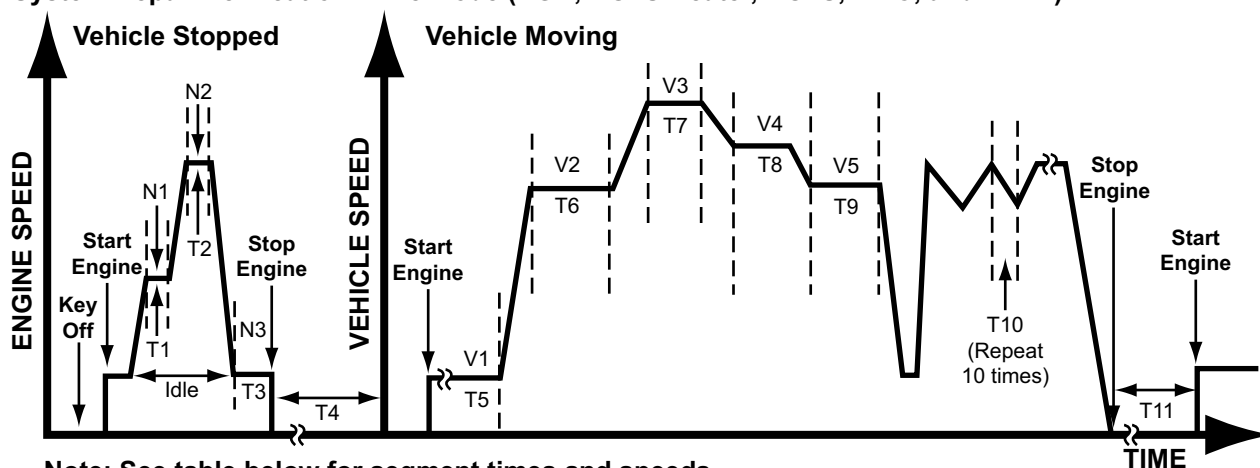
To perform this drive mode:

1. Start the engine and warm completely.
2. Clear DTCs from PCM memory.
3. Verify the following conditions and correct if necessary:
 - All accessory loads (A/C, headlights, blower fan, rear window defroster) are off.
 - Initial ignition timing and idle speed are within specifications.
 - TEN and GND pins of DLC are not connected.
4. Verify that the following PIDs are within specifications:
 - BARO: 21.2 inHg (72.2 kPa, 541 mmHg) or higher
 - IAT: 41°F to 95°F (5°C to 35°C)
 - FTL: 15% to 85%
 - VPWR: 10.9V to 14.6V

All PIDs must be within specifications from Step 5 to Step 6.

5. With the vehicle stopped, race the engine at RPM indicated, then drive as shown in [Figure MA000-41](#). Driving conditions before driving at constant speed are not specified. If possible, monitor RPM PID and FAN2 PID (with A/C), FAN1 PID (without A/C) for cooling fan status during this procedure.

System Repair Verification Drive Mode (EGR, HO2S Heater, HO2S, TWC, and EVAP)



Note: See table below for segment times and speeds.

Figure MA000-41

Table MA000-5 (part 1 of 2)

Step	Time	Engine Speed		Vehicle Speed		Condition
		Step	RPM	Step	MPH(KPH)	
T1	More than 15 seconds	N1	1800 to 2200	—	0	—
T2	More than 15 seconds	N2	3000 to 3400	—	0	—
T3	More than 20 seconds	N3	Idle	—	0	Idle engine after cooling fan stops
T4	More than 5 hours	—	0	—	0	Keep key off

Table MA000-5 (part 2 of 2)

Step	Time	Engine Speed		Vehicle Speed		Condition
		Step	RPM	Step	MPH(KPH)	
T5	More than 5 minutes	—	Idle	V1	0	—
T6	5 minutes	—	—	V2	40–50 (65–80)	5MTX in 5th gear, 6MTX in 6th gear ATX in D range
T7	1 minute			V3	52–57 (84–91)	
T8	1 minute			V4	Above 40 (64)	
T9	3 minutes			V5	35–55 (57–88)	
T10	About 5 seconds	—	Above 2500	—	0	—
T11	More than 10 minutes	—	0	—	0	Keep key off

6. Turn key off.
7. Access ON BOARD SYSTEM READINESS to inspect the monitor status:
 - If completed, all OBD monitoring status items change to read completed.
 - If not completed, turn key off, then perform the applicable specific drive mode for any monitoring item that was not in detection condition.
8. Access DIAGNOSTIC MONITORING TEST RESULTS to inspect monitoring results:
 - If detected values are not within specification, repair has not been completed.

2004–05 RX8 OBD-II Drive Mode

Performing the Drive Mode inspects the OBD-II system for proper operation. It must be performed to ensure that no additional DTCs are present.

During the Drive Mode, the following systems are inspected:

- HO2S heater
- HO2S
- TWC
- Fuel system, Misfire and EVAP system

IMPORTANT:

While performing the Drive Mode, always operate the vehicle in a safe and lawful manner. When observing monitor system status while driving, be sure to have another technician with you, or record the data and inspect later.



NOTE:

Vehicle speed and RPM detected by the PCM may differ from that indicated by speedometer and tachometer. Use DATA PID to monitor vehicle speed.

If the OBD-II system inspection is not completed during the Drive Mode, the following causes are considered:

- The OBD-II system detected a malfunction.
- The Drive Mode procedure was not completed correctly.
- Do not disconnect the battery during Drive Mode, this will reset PCM memory.
- The scan tool can be used at anytime through the course of the Drive Mode to monitor completion status by viewing the ON BOARD SYSTEM READINESS menu.

Mode 1 (PCM Adaptive Memory Produce Drive Mode)



To perform this drive mode:

1. Start the engine and warm completely.
2. Verify that the following conditions and correct if necessary:
 - All accessory loads (A/C, headlights, blower fan, rear window defroster) are off.
 - Initial ignition timing and idle speed are within specification.
3. Perform no load racing at 2500 RPM to 3500 RPM for more than 15 seconds.
4. Continuously perform no load racing at the 4500 RPM to 5000 RPM for more than 15 seconds.
5. Idle the engine for more than 1 minute after the cooling fan has stopped.
6. Turn the key off.

Mode 3 (HO2S heater, HO2S, and TWC Repair Verification Drive Mode)



To perform this drive mode:

1. Perform Mode 1 first.
2. Verify that all accessory loads (A/C, headlights, blower fan, rear window defroster) are off.
3. Drive vehicle as shown in [Figure MA000-42](#). Driving condition before driving at constant speed is not specified.

MODE 3 (HO2S Heater, HO2S, and TWC Repair Verification Drive Mode)

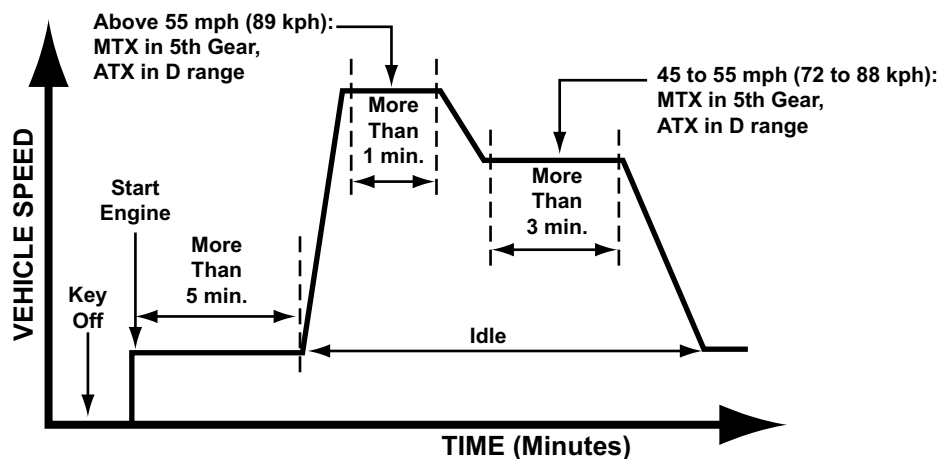


Figure MA000-42

4. Stop the vehicle and access the ON BOARD SYSTEM READINESS to inspect Drive Mode completion status:
 - If completed, RFC changes to read Yes.
 - If not completed, turn key off, then repeat Step 3.
5. Access DIAGNOSTIC MONITORING TEST RESULTS to inspect monitor results:
 - If not within specification, the repair has not been completed.

6. Verify no DTCs set.

Mode 6 (EVAP System Repair Verification Drive Mode)



NOTE:

If the Mode 6 cannot be performed (you cannot drive the vehicle under the Mode 6 condition), perform the "Evaporative System Test" as an alternative. (See Evaporative System Test in "Test and Procedures" section of Driveability Troubleshooter).

**To perform this drive mode:**

1. Verify that the following PIDs are within specifications. All PIDs must be within specifications before engine is started to initiate evaporative system test:
 - BARO: 21.2 inHg (72.2 kPa, 541 mmHg) or higher
 - IAT: 41°F to 95°F (5°C to 35°C)
 - FTL: 15% to 85%
 - VPWR: 10.9V to 14.6V
2. Clear DTCs from PCM memory.
3. Start the engine and idle for more than 10 seconds, then turn the key off.
4. Leave the vehicle in this condition for more than 5 hours.
5. Start the engine and idle for more than 15 minutes.
6. Drive the vehicle at a speed of 40 to 50 mph (65 to 80 kph) for more than 5 minutes.
7. Stop the vehicle and turn the key off.
8. Leave the vehicle in this condition for more than 10 minutes.
9. Start the engine.
10. Access ON BOARD SYSTEM READINESS to inspect monitor completion status:
 - If completed, RFC changes to read Yes.
 - If not completed, turn key off, then go back to Step 1.
11. Access DIAGNOSTIC MONITORING TEST RESULTS to inspect monitoring results:
 - If not within specification, repair has not been completed.
12. Verify no DTCs set.