

## GENERIC OBD II "DRIVE CYCLE"

Most OBD II ("On-Board Diagnostics II") diagnostic monitors will run at some time during normal operation of the vehicle.

However, to satisfy all of the different Trip enable criteria and run all of the OBD II diagnostic monitors, the vehicle must be driven under a variety of conditions. The following drive cycle will (theoretically) allow all monitors to run on (??) vehicle. (*Note: Drive cycle specifics vary by vehicle!*)

1. Ensure that the fuel tank is between 1/4 and 3/4 full.
2. Start cold (below 86°F /30°C) and warm up until engine coolant temperature is at least 160° F (typically requires at least one minute; up to 3 minutes).
3. Accelerate to 40-55 MPH at 25% throttle and maintain speed for five minutes.
4. Decelerate without using the brake (coast down) to 20 MPH or less, then stop the vehicle. Allow the engine to idle for 10 seconds, turn the key off, and wait one minute.
5. Restart and accelerate to 40-55 MPH at 25% throttle and maintain speed for two minutes.
6. Decelerate with using the brake [or the clutch!] by coasting down to 20 MPH or less, then stop the vehicle. Allow the engine to idle for 10 seconds, turn the key off, and wait one minute.

## GENERAL MOTORS (SPECIFIC) OBD II DRIVE CYCLE

Performing a GM OBDII Driving cycle:

1. **Cold Start.** In order to be classified as a cold start the engine coolant temperature must be **below 122°F** (50°C) and within 11°F (6°C) of the ambient air temperature at startup. Do not leave the key in prior to the cold start or the heated oxygen sensor diagnostic may not run.
2. **Idle.** The engine must be run for two and a half minutes with the air conditioner on and rear defroster on. The more electrical load you can apply the better. This will test the **O2 heater, Passive Air, Purge "No Flow", Misfire**, and - if closed loop is achieved- **Fuel Trim**.
3. **Accelerate.** Turn off the air conditioner and all the other loads and apply half throttle until 55mph (88km/hr) is reached. During this time the Misfire, Fuel Trim, and Purge Flow diagnostics will be performed.

4. **Hold Steady Speed.** Hold a steady speed of 55mph (88km/hr) for 3 minutes. During this time the O2 response, air Intrusive, EGR, Purge, Misfire, and Fuel Trim diagnostics will be performed.
5. **Decelerate.** Let off the accelerator pedal. **Do not shift, touch the brake or clutch.** It is important to let the vehicle coast along gradually slowing down to 20 mph (32km/hr). During this time the EGR, Purge and Fuel Trim diagnostics will be performed.
6. **Accelerate.** Accelerate at 3/4 throttle until 55-60mph (88-96 km/hr). This will perform the same diagnostics as in step 3.
7. **Hold Steady Speed.** Hold a steady speed of 55mph (88km/hr) for five minutes. During this time, in addition to the diagnostics performed in step 4, the catalyst monitor diagnostics will be performed. If the catalyst is marginal or the battery has been disconnected, it may take 5 complete driving cycles to determine the state of the catalyst.
8. **Decelerate.** This will perform the same diagnostics as in step 5. Again, don't press the clutch or brakes or shift gears.

