

## Drive Cycle (OBD-11)

A “drive cycle” carries out EPA diagnostics on all systems.

The drive cycle can be completed in approximately 15 – 20 minutes and is performed in the following 8 stages:

### 1. Cold Start

To qualify as a “cold start” the engine coolant temperature must be below 0°C and within 6°C of ambient air temperature. Don't leave the ignition key on prior to the cold start or the heated oxygen sensor diagnostic test may not run.

### 2. Idle

The engine must be run for two and a half minutes with the air conditioner and heated rear screen ON. The heavier electrical load the better as 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 AC and all the other loads and apply half throttle until 55mph is reached. During this time the Misfire, Fuel Trim, and Purge Flow diagnostics will be performed.

### 4. Maintain Steady Speed

Maintain a steady speed of 55mph for 3 minutes. During this time the O2 response, EGR, Purge, Misfire, and Fuel Trim diagnostics will be performed.

### 5. Decelerate

Lift off the accelerator pedal. Do not shift gear selector or touch the brakes. It's important to let the vehicle coast, gradually slowing down to 20 mph. During this time the EGR, Purge and Fuel Trim diagnostics will be performed.

### 6. Accelerate

Accelerate at 3/4 throttle to 55-60mph. This will perform the same diagnostics as in stage 3 above.

### 7. Maintain Steady Speed

Maintain a steady speed of 55mph for five minutes. During this time, in addition to the diagnostics performed in stage 4, the catalyst monitor diagnostics will be performed.

### 8. Decelerate

This performs the same diagnostics as in stage 5. Again, don't shift the gear selector or touch the brakes.

If the catalyst is marginal or the battery has been disconnected, it can take 5 complete driving cycles to determine the state of the catalyst.