

REPAIRCARE

June 2002

Maryland Certified Emissions Technicians

& Certified Emissions Repair Facilities



VEIP BEGINS OBD TESTING

Greetings. We are pleased to announce the addition of on-board diagnostics (OBD) testing to the Vehicle Emissions Inspection Program (VEIP). OBD testing will be used for most model year 1996 and newer vehicles beginning in July 2002. The incorporation of OBD into the emissions testing program offers many benefits to consumers and you-the repair industry. For you, probably the most important benefit is the detailed and standardized information regarding a vehicle's failure of the emissions test.

This special edition of REPAIRCARE explains in detail the VEIP OBD test procedure and how to read the new VEIP test report. By providing a detailed description, we hope that you will use this information to verify repairs to vehicles that previously failed a VEIP inspection, and to interpret and explain necessary repairs to consumers. We hope that as our partner in the fight for clean air, you will use this information to reinforce our message to consumers that VEIP is critical for clean air.



OBD SCHEDULE

Mandatory pass/fail OBD testing of most 1996 and newer light-duty vehicles will begin in July 2002. In addition to the OBD test, these vehicles will continue to receive the gas cap leak check.

Based on a vehicle's Gross Vehicle Weight Rating and vehicle class, the following table summarizes the emissions test that will be used for each type of 1996 and newer model year vehicles.

1996 and Newer Model Years		
Test Type	Gross Vehicle Weight Rating	Vehicle Class
OBD	8,500 lbs or less	Passenger, LDGT1, LDGT2
IM240	8,501 to 9,999 lbs	Passenger, HDGT1
Idle	10,000 to 26,000 lbs	Passenger, HDGT2

Vehicles tested prior to the OBD start date (i.e., July 2002) that are in fail mode will receive the OBD test for all subsequent tests regardless of the initial test type.



The OBD test consists of two parts: A visual check of the Malfunction Indicator Light (MIL), commonly referred to as a bulb check, and an electronic scan of the OBD computer.

- The vehicle's instrument panel is visually examined to confirm that the MIL illuminates briefly when the ignition key is turned to the "Key On, Engine Off" (KOEO) position. A brief period of illumination of the MIL at start-up is normal, and confirms that the bulb is functioning properly.
- With the engine running, the scan tool will be connected to the Diagnostic Link Connector (DLC).
- **If the DLC is missing, damaged, modified, has been tampered with, or is otherwise inoperable, the vehicle will fail the OBD test.**
- If the DLC is present, but inaccessible (i.e., behind a fixed cover) or the motorist is unable to exit the vehicle due to a physical impairment, the OBD test results will be based on the bulb check and MIL illumination.

continued on two



TEST PROCEDURES *continued*

- Vehicles will be scanned in the "generic" OBD mode to determine the status of readiness monitors, MIL status (whether commanded on or off), and the presence of Diagnostic Trouble Codes (DTCs) that illuminate the MIL.
- The overall OBD test result will be printed in the Vehicle Emissions Inspection Certificate (VEIC) block currently labeled "OBD Codes." On future printing of the VEIC, the title of this block will be changed to "OBD Results." For vehicles failing the OBD test, the status of the bulb check and MIL illumination command, and a listing of retrieved MIL-triggering DTCs will be printed on a separate OBD Diagnostic Report (see sample page 3).

UNSET READINESS MONITORS



Vehicles with three or more unset readiness monitors (non-continuous monitors only) for model years 1996 to 2000, or two or more for model year 2001 and newer vehicles, will be designated as "Unable to Complete OBD Testing." Motorists whose vehicles are designated as "Unable to Complete OBD Testing," will be granted an extension and advised to return for testing after one week of normal driving.

The presence of unset readiness monitors does not mean that a vehicle will fail the OBD test. Rather, unset readiness codes indicate that the vehicle cannot be fully OBD tested because all the information needed to make a pass/fail determination is not available.

If a motorist returns after one week of normal driving and the vehicle still exceeds the allowable number of unset readiness monitors, the vehicle will be passed or failed based on the OBD pass/fail criteria.



WAIVER POLICY UNCHANGED

The waiver policy and waiver-qualifying repair expenditures for OBD tests are the same as those currently in place for tailpipe tests. To qualify for an emissions repair waiver, the vehicle must fail a VEIP test, and waiver-qualifying repairs must be made within 30 days prior to the initial test or within 120 days after the initial test failure. The minimum waiver qualifying expenditure is \$450 and may include diagnostic time for emissions repairs as well as actual parts and labor.



INTERPRETING OBD TEST RESULTS

Vehicle Passes if:

- Bulb Check OK,
- MIL not illuminated while engine running, and
- All required readiness monitors are set.

Vehicle Fails if:

- DLC missing, damaged, or tampered with, or
- Bulb check is failed, or
- MIL continuously illuminated or flashes with engine running, or
- Presence of DTCs that command the MIL on, or
- MIL commanded on, even with no DTCs present, or
- Excess number of unset readiness monitors with stored DTCs and an illuminated MIL, or
- Inaccessible DLC with a failed bulb check or illuminated MIL, or
- Scan tool unable to communicate with vehicle, and it is determined that the problem is with the vehicle.



Together, Let's Clear the Air!

SAMPLE

DIAGNOSTIC REPORT FOR OBD TESTING

Vehicle Identification Number (VIN) XXXXXXXXXXXXXXXXXX	Station 19	Lane 1	Test Date/Time 13-Sep-2002 17:28:03																				
Confirmation Number NNNNNNN		Tag Number XXXNNNN																					
<p>Year: 1997 Make: VOLK Model: JETTA Wt. Class: LDGV Cylinders: 4 Test Nimber: 1</p> <p>OBD TEST RESULTS</p> <p>MIL Engine Off: Pass MIL Engine On: Fail DLC Tampering: Pass OBD Communication: Pass MIL Command Status: Fail</p> <p>Fault Codes:</p> <table> <tr> <td>P0201</td> <td>Fuel and Air Metering Codes</td> </tr> <tr> <td>P0301</td> <td>Ignition System or Misfire Codes</td> </tr> <tr> <td>P0500</td> <td>Vehicle Speed Sensor Malfunction</td> </tr> <tr> <td>P0505</td> <td>Idle Control System Malfunction</td> </tr> <tr> <td>P0560</td> <td>System Voltage Malfunction</td> </tr> <tr> <td>P0725</td> <td>Engine Speed Input Circuit Malfunction</td> </tr> <tr> <td>P0726</td> <td>Engine Speed Input Circuit Malfunction</td> </tr> <tr> <td></td> <td>Range Performance</td> </tr> <tr> <td>P0727</td> <td>Engine Speed Input Circuit No Signal</td> </tr> <tr> <td>P0728</td> <td>Engine Speed Input Circuit Intermittent</td> </tr> </table>				P0201	Fuel and Air Metering Codes	P0301	Ignition System or Misfire Codes	P0500	Vehicle Speed Sensor Malfunction	P0505	Idle Control System Malfunction	P0560	System Voltage Malfunction	P0725	Engine Speed Input Circuit Malfunction	P0726	Engine Speed Input Circuit Malfunction		Range Performance	P0727	Engine Speed Input Circuit No Signal	P0728	Engine Speed Input Circuit Intermittent
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OBD TALK



Data Link Connector (DLC) - The socket interface between a vehicle's OBD computer and the OBD scanner plug. This device is usually located under the driver's side dashboard.

Diagnostic Trouble Codes (DTCs) - An alphanumeric code that is stored in a vehicle's on-board computer, which identifies a component or system failure that may cause the vehicle to exceed emissions standards.

Malfunction Indicator Light (MIL) - Also known as a "Check Engine" light. The Malfunction Indicator Light or MIL is illuminated on the dashboard when conditions exist that may result in the vehicle exceeding its emissions standards. Alternatives to a "Check Engine" light include a "Service Engine Soon" light and a light containing an unlabeled picture of an engine.

On-board Diagnostics (OBD) - A system of vehicle component and condition monitors controlled by a central, on-board computer running software designed to signal the motorist when conditions exist that could lead to the vehicle exceeding its emission standards.

Readiness Monitors - A "complete" or "not complete" status flag stored by a vehicle's on-board computer that indicates whether or not a specific component or system has been determined to be functioning properly. A list of readiness monitors is presented below.

Comprehensive Components (continuous)	Heated Catalyst
Fuel Trim (continuous)	Oxygen Sensor
Misfire (continuous)	Oxygen Sensor Heated
A/C System	PCV
Catalyst	Secondary Air System
EGR System	Thermostat
Evaporative System	

Scanner or Scan Tool - A PC-based or handheld device used to communicate with a vehicle's on-board computer.

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