

Smog Check OBD II Reference (Testability Issues)

(formerly known as APPENDIX J)

The Smog Check OBD II Reference provides information and test instructions for inspecting vehicles with known OBD II functional test difficulties.

- **Table 1 - 1a** lists known OBD II testability issues.
- **Table 2** data no longer exists in this document, but the information is provided by BAR through a link to the [National OBD Clearinghouse](#). Many CAN-equipped gasoline vehicles currently cannot be OBD II tested. The EIS should automatically bypass the OBD II test for CAN equipped vehicles. However, if the EIS prompts for an OBD II test, bypass the test by answering “No” to the OBD II functional test prompt. Unless otherwise instructed by BAR, do not answer “No” to bypass the OBD II functional test for any other OBD II equipped vehicles.
- **Table 3** identifies Flexible Fuel Vehicle(s) (FFV) that have a U.S. EPA exception from performing some OBD II functions while under operation with an alternative fuel. Although some OBD II functionality may not be present, the OBD II portion of the Smog Check shall be performed as instructed in the Smog Check Inspection Manual. The OBD II test shall NOT be bypassed by the EIS or the technician.
- **Table 4** assists in identifying diesel vehicles that cannot receive the OBD II functional test as a result of either: 1) they are not OBD II compatible, or 2) they use the CAN communication protocol.

To ensure that any special test processes are appropriately applied, always select the correct vehicle from the vehicle information (make, model, engine size, etc.) provided from the VLT by the BAR-97 inspection menu lists.

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TABLE 1 – OBD II Testability Issues				
Make	Model Year	Model	Problem	Action
Audi and Volkswagen	1996-2002	All models with non-OEM stereos	If the OEM stereo has been replaced with an aftermarket stereo, these vehicles may not communicate with the analyzer and/or OBD code scanner and may cause severe damage to the analyzer/scanner. For more information, see VW Technical service bulletin 02-03 dated June 10, 2002.	BAR recommends that you check with your analyzer/scan tool manufacturer to determine whether or not your analyzer/scan tool has complete current/voltage override protection. Override protection will protect the test equipment in cases where aftermarket installations cause over current conditions. BAR's June 22, 2002 ET Blast provides a method of checking for high voltage conditions using a test light. An alternative is to send all 96-newer VW/Audis with non-OEM radio installations to a VW/Audi dealership for verification of proper OBD function.
Chrysler	1996	Cirrus, Concorde, LHS, Sebring, Sebring Convertible	All monitors reset to "incomplete" upon <u>every</u> ignition key-off.	Determine if Recall Campaign #678 (9/96) has been performed; if not, refer to dealer. TSB 18-005-01 applies to non-California certified vehicles, and may be performed at no cost, even if warranty is expired.
Dodge	1996	Avenger, Intrepid, Stratus, Neon	All monitors reset to "incomplete" upon <u>every</u> ignition key-off	Determine if Recall Campaign #678 (9/96) has been performed; if not, refer to dealer. TSB 18-005-01 applies to non-California certified vehicles, and may be performed at no cost, even if warranty is expired.
Eagle	1996	Talon, Vision	All monitors reset to "incomplete" upon <u>every</u> ignition key-off.	Determine if Recall Campaign #678 (9/96) has been performed; if not, refer to dealer. TSB 18-005-01 applies to non-California certified vehicles, and may be performed at no cost, even if warranty is expired.
Hyundai	2002	Sonata	Readiness monitors are difficult to complete. Must successfully complete drive cycle TWO times.	Hyundai TSB #02-36-030 applies. Hyundai TSB information at: < http://hmaservice.com/webtech >
Hyundai	2003	Tiburon	Will not communicate with generic OBD II test equipment.	A manufacturer recall is in effect; recall campaign #057 and Hyundai TSB #03-01-003-01. Refer to dealership for recall.
Infiniti	1996	All Models	The catalyst and evaporative monitors are difficult to set to "complete."	Nissan provides recommended drive cycles (drive patterns). See Nissan Technical Service Bulletin #NTB98-018, February 18, 1998.
Mercedes-Benz	1996	C220, E320, C280, S320, SL320	The MIL illuminates whenever a scan tool is connected to the DLC. Trouble codes are not stored. However, if the OBD II connector is used as an RPM source during the Smog Check, the MIL will illuminate.	Do not connect the OBD II connector until the analyzer prompts for the OBD II functional test. Use the conventional contact or non-contact method to obtain an rpm signal.

Table 1 continued on next page

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TABLE 1 – OBD II Testability Issues				
Make	Model Year	Model	Problem	Action
Mercedes-Benz	2001-2003	All models	No communication with some Snap-On EIS.	Snap-On produces a revised chip that enables communication. If your Snap-On EIS does not use the revised chip, do not inspect these vehicles; they will NOT communicate. Refer the motorist to another station for inspection.
Mitsubishi	1998-2001	Montero, Montero Sport, Diamante, 3000GT, Mirage, Galant, Expo/Expo LRV, and Eclipse models (except 2.0L non-turbo 420A engine models)	Some monitors are difficult to set to "complete."	Mitsubishi provides recommended drive cycles in its service. See service manual for 1998-2001 drive cycles.
Nissan	1996-1997	All Models	The catalyst and evaporative monitors are difficult to set to "complete."	Nissan provides recommended drive cycles (drive patterns) in its service information to assist technicians to operate monitors. See Nissan Technical Service Bulletin #NTB98-018c, January 3, 2002.
Plymouth	1996	Breeze Neon	All monitors reset to "incomplete" upon every ignition key-off.	A manufacturer recall is in effect. Verify recall has been performed. If not, refer to dealer for the recall.
Saab	1996-1998	900 (B234i with Motronic 4.1)	All monitors are difficult to set to "complete."	Saab Service Instruction No. 248 describes the correct drive cycle for completion of the monitors.
Saab	1996-1998	All Models	The catalyst and evaporative monitors are difficult to set to "complete."	The Smog Check OBD readiness criteria for this vehicle allow two monitors to be incomplete.
Toyota	1997	Tercel, Paseo	The evaporative monitor will never set to "complete."	The Smog Check OBD readiness criteria for these vehicles allow two monitors to be incomplete.
Volkswagen and Audi	1997-2002	All models with non-OEM stereos	If the OEM stereo has been replaced with an aftermarket stereo, these vehicles may not communicate with OBD code scanners and may cause severe damage to code scanning tools. For more information, see VW Technical service bulletin 02-03 dated June 10, 2002.	BAR recommends that you check with your analyzer/scan tool manufacturer to determine whether or not your analyzer/scan tool has complete current/voltage override protection. Override protection will protect the test equipment in cases where aftermarket installations cause over current conditions. BAR's June 22, 2002 ET Blast provides a method of checking for over current conditions using a test light. An alternative is to send all 96-newer VW/Audis with non-OEM radio installations to a VW/Audi dealership for verification of proper OBD function.
				End Table 1

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TABLE 1a – The EIS Ignores Monitor Readiness Status

Make	Model Year	Model	Displacement	Action
BMW	1996	750iL, 850Ci, 850Csi 12-cylinder engines.		Complete Inspection as prompted by the EIS.
Dodge	1996	Stealth, Stealth RT	3.0	Complete Inspection as prompted by the EIS.
Mitsubishi	1996-97	3000 GT, 3000 GT Spider, 3000 GT VR-4, Diamante, Eclipse, Galant, Mighty Max, Mirage, Montero, Montero Sport	1.5, 1.8, 2.0, 2.4, 2.5, 3.0, 3.5	Complete Inspection as prompted by the EIS.
Subaru	1996	Impreza, Legacy, SVX	1.8, 2.2, 2.5, 3.3	Complete Inspection as prompted by the EIS.
Volvo	1996-97	960	2.5, 2.9	Complete Inspection as prompted by the EIS.
Volvo	1996-97	850, 850R, 850Turbo	2.3, 2.4	Complete Inspection as prompted by the EIS.
Volvo	1998	C70, S70, V70, S90, V90	2.3, 2.4, 2.9	Complete Inspection as prompted by the EIS.
				End Table 1a

TABLE 2 – Vehicles Currently Not OBD II Testable

Many vehicles use an OBD II protocol known as Controller Area Network (CAN), which will not currently communicate with the BAR-97 emissions inspection system.

BAR will no longer publish Table 2 data. Instead, refer to the CAN vehicle information published in the following link.

<http://obdclearinghouse.com/index.php?body=can>

**This is an official archive of CAN vehicle listings. Click on the link that is most current (top of the list).
When the Excel workbook is opened, click the 'CAN' worksheet tab.**

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TABLE 3 – Flex Fuel Vehicle Testability Issues

Table 3 identifies Flexible Fuel Vehicle(s) (FFV) that have a U.S. EPA exception from performing some OBD II functions while under operation with an alternative fuel. Although some OBD II functionality may not be present, the OBD II portion of the Smog Check shall be performed as instructed in the Smog Check Inspection Manual.

Model Year	Model	Engine	Engine Family and VIN	Problem	Action
Chrysler					
1998	Chrysler Caravan and Town and Country / Dodge Caravan / Plymouth Voyager	3.3L V-6 (E85)	WCRXT03.32BP (VIN 8 th digit: G)	All monitors disabled for operation >E30 and ethanol fuel content learning.	Complete Inspection as prompted by the EIS.
1999	Chrysler Town and Country / Dodge Caravan / Plymouth Voyager	3.3L V-6 (E85)	XCRXT03.32BP (VIN 8 th digit: G)	Desensitized system monitors: <ul style="list-style-type: none"> • fuel system rail check only for >E30; • fuel system rich for >E50; • fuel system lean and misfire for E0-E10 and coolant temp >230 deg. F; • purge flow check. 	
2000	Chrysler Caravan, Voyager, and Town and Country / Dodge Caravan / Plymouth Voyager	3.3L V-6 (E85)	YCRXT03.32BP (VIN 8 th digit: G)		
Ford					
2002	Ford Ranger 2-wheel drive	3.0L V-6 (E85)	2FMXT03.02F6 (50 State) (VIN 8 th digit: V)	Monitors Disabled for operation >E10 blends: catalyst. Desensitized evaporative leak/purge check monitor to detect gross leak for operation >E75 blends (monitor fully compliant up to E75 blends).	Complete Inspection as prompted by the EIS.
General Motors					
2000	Chevrolet S-10/GMC Sonoma 2-wheel drive	2.2 L I-4 (E85)	YGMXT02.2121 YGMXT02.2122 (VIN 8 th digit: 5)	System monitors disabled for operation ≥E15 blends: O2 sensor heater, secondary air, catalyst. System monitors disabled for operation ≥E10 blends: evaporative leak check. Desensitized O2 sensor monitor implemented; only reports faults during operation ≤E15 blends.	Complete Inspection as prompted by the EIS.

Table 3 continued on next page

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Model Year	Model	Engine	Engine Family and VIN	Problem	Action
General Motors – continued					
2001	Chevrolet S-10/GMC Sonoma 2-wheel drive	2.2 L I-4 (E85)	1GMXT02.2122 (VIN 8 th digit: 5)	System monitors disabled for operation \geq E15 blends: O2 sensor heater, secondary air, catalyst. System monitors disabled for operation \geq E10 blends: evaporative leak check. Desensitized O2 sensor monitor implemented; only reports faults during operation \leq E15 blends.	Complete Inspection as prompted by the EIS.
2002	Chevrolet S-10/GMC Sonoma 2-wheel drive	2.2 L I-4 (E85)	2GMXT02.2122 (VIN 8 th digit: 5)	System monitors disabled for operation \geq E15 blends: O2 sensor heater, secondary air, catalyst. System monitors disabled for operation \geq E10 blends: evaporative leak check. Desensitized O2 sensor monitor implemented; only reports faults during operation \leq E15 blends.	
Isuzu					
2000	Hombre 2-wheel drive	2.2 L I-4 / (E85)	YGMXT02.2121 YGMXT02.2122 (VIN 8 th digit: 5)	This model shares a platform with the Chevrolet S-10 and GMC Sonoma. <i>For guidance on these models, please refer to General Motors section.</i>	Complete Inspection as prompted by the EIS.
2001	Hombre 2-wheel drive	2.2 L I-4 / (E85)	YGMXT02.2121 YGMXT02.2122 (VIN 8 th digit: 5)		
Mazda					
2002	B3000 2-wheel drive	3.0 L V-6 (E85)	2FMXT03.02F6 (VIN 8 th digit: V)	This model shares a platform with the Ford Ranger. <i>For guidance on these models, please refer to Ford section.</i>	Complete Inspection as prompted by the EIS.
2003	B3000 2-wheel drive	3.0 L V-6 (E85)	3FMXT03.02F6 (VIN 8 th digit: V)		
End Table 3					

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Table 4 – Diesel Vehicle OBDII Compatibility with BAR-97				
Model-Year	California OBDII	Federal Light-Duty OBDII	Federal Heavy-Duty OBDII (>8500 lb GVWR)	CAN protocol prevents OBDII communication with BAR-97
1998-2002	OK	OK	not OBDII testable	CAN was not used
2003	OK	OK	not OBDII testable	some vehicles not OBDII testable
2004-2007	OK	OK	OK	some vehicles not OBDII testable
2008-2009	OK	OK	OK	MOST vehicles not OBDII testable with BAR-97