

APPENDIX J

Smog Check OBD II Reference (Testability Issues)

Appendix J provides information and test instructions about known OBD II functional test difficulties. Technicians must familiarize themselves with the information contained in this Appendix and follow the specified test instructions when conducting a Smog Check inspection on any vehicle listed.

Please watch for Appendix J updates via mail-out, website update or ET Blast. If other problems or solutions arise concerning the testing of OBD II vehicles, BAR will provide updated information advising technicians how to test the affected vehicles.

- **Table 1** lists known OBD II testability issues.
- **Table 2** lists vehicles that currently cannot be OBD II tested. The test analyzer automatically bypasses the OBD II test for these vehicles. However, if the analyzer prompts for an OBD II test for a vehicle listed in table 2, 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.

Note: To ensure that any special test processes are appropriately applied, always select vehicle information (make, model, engine size, etc.) from the BAR-97 inspection menus.

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.
Dodge	1996	All 1996 Dodge Stealth models with 3.0L V6 engines	All monitors reset to “incomplete” upon ignition key-off <u>if all</u> monitors set to “complete” prior to ignition off.	Via the vehicle look-up process, the test analyzer automatically ignores monitor status; the monitors are not used for pass/fail decisions. No action on your part necessary.

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TABLE 1 – OBD II Testability Issues				
Make	Model Year	Model	Problem	Action
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 OBDII connector is used as an rpm source during the Smog Check, the MIL will illuminate.	Do not connect the OBDII connector until the analyzer prompts for the OBDII functional test. Use the conventional contact or non-contact method to obtain an rpm signal.
Mercedes-Benz	2001-2003	All models	No communication with some Snap-On BAR-97s.	Snap-On produces a revised chip that enables communication. If your Snap-On BAR-97 does not use the revised chip, do not inspect these vehicles; they will NOT communicate. Refer the motorist to another station for inspection.
Mitsubishi	1996-1997	Diamante, 3000GT, 3000GT Spyder, Montero, and Montero Sport, all equipped with 3.0L or 3.5L V6 engines.	All monitors reset to "incomplete" upon ignition key-off <u>if</u> all monitors set to "complete" prior to ignition off.	The test analyzer ignores monitor status. The Smog Check OBD readiness criteria for these vehicles allow all monitors to be incomplete.
Mitsubishi	1996	All models (Montero most commonly affected)	A defect in these systems causes the MIL to be commanded on without setting any DTCs. ARB believes that only a small population of Mitsubishi vehicles produced early for the 1996 model-year is affected by this problem.	Manufacturer recall in effect; refer to dealer for Mitsubishi recall #EMR-02-01.

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TABLE 1 – OBD II Testability Issues				
Make	Model Year	Model	Problem	Action
Mitsubishi	1996-2001	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 information to assist technicians to operate monitors. Mitsubishi Technical Service Bulletin #TSB-00-13-005 (incl. drive cycle for 1996-1997MY affected vehicles only). 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 <u>every</u> 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.
Subaru	1996	All Models	All monitors reset to "incomplete" upon <u>every</u> ignition key-off.	Via the vehicle look-up process, the test analyzer automatically ignores monitor status; the monitors are not used for pass/fail decisions.
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.

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TABLE 1 – OBD II Testability Issues				
Make	Model Year	Model	Problem	Action
Volvo	1996	850 Turbo	All monitors reset to “incomplete” upon <u>every</u> ignition key-off.	Via VID communication, the test analyzer ignores monitor status; the monitors are not used for pass/fail decisions.
Volvo	1996-1998	All Models except 1996 850 Turbo	Some monitors are difficult to set to “complete.”	Volvo provides drive cycles in its service information to assist technicians to operate monitors. See Volvo Technical Service Bulletin #SB 2-23-0059 (7/2002).
				End table 1.

TABLE 2 – Vehicles currently not OBD II testable

The following vehicles use an OBDII protocol (known as Controller Area Network (CAN)) that will not currently communicate with the BAR-97 EIS. Once the BAR-97 EIS incorporates the CAN communication protocol, these vehicles will become testable and this table will be removed from Appendix J.

Model Year	Make	Model	Problem	Solution
2003	Ford	2.3L A/T Focus 2.3L M/T Focus 3.9L Thunderbird	Uses CAN, currently incompatible with BAR-97.	OBD II functional is automatically bypassed via analyzer vehicle look up process.
2003	Lincoln	3.0L A/T LS 3.9L A/T LS	Uses CAN, currently incompatible with BAR-97.	OBD II functional is automatically bypassed via analyzer vehicle look up process.
2003	Mazda	2.3L Mazda6 3.0L Mazda6	Uses CAN, currently incompatible with BAR97.	OBD II functional is automatically bypassed via analyzer vehicle look up process.
2003	Porsche	Cayenne S Cayenne Turbo	Uses CAN, currently incompatible with BAR-97.	OBD II functional is automatically bypassed via analyzer vehicle look up process.
2003	SAAB	9-3 Sedan (175hp) 9-3 Sedan (210hp)	Uses CAN, currently incompatible with BAR97.	OBD II functional is automatically bypassed via analyzer vehicle look up process.
2003	Saturn	Ion	Uses CAN, currently incompatible with BAR97.	OBD II functional is automatically bypassed via analyzer vehicle look up process.
2004				
2004	Buick	Rendezvous	Uses CAN, currently incompatible with BAR97.	OBD II functional is automatically bypassed via analyzer vehicle look up process.
2004	Cadillac	CTS, SRX, XLR	Uses CAN, currently incompatible with BAR97.	OBD II functional is automatically bypassed via analyzer vehicle look up process.
2004	Dodge	Durango	Uses CAN, currently incompatible with BAR97.	OBD II functional is automatically bypassed via analyzer vehicle look up process.
2004	Ford	Explorer, F-150, 2.3L Focus, Taurus, Thunderbird	Uses CAN, currently incompatible with BAR97.	OBD II functional is automatically bypassed via analyzer vehicle look up process.
2004	Lexus	LS430	Uses CAN, currently incompatible with BAR97.	OBD II functional is automatically bypassed via analyzer vehicle look up process.
2004	Lincoln	LS	Uses CAN, currently incompatible with BAR97.	OBD II functional is automatically bypassed via analyzer vehicle look up process.

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TABLE 2 – Vehicles currently not OBD II testable.

Model Year	Make	Model	Problem	Solution
2004	Mazda	Mazda3, Mazda6, RX8	Uses CAN, currently incompatible with BAR97.	OBD II functional is automatically bypassed via analyzer vehicle look up process.
2004	Mercury	Mountaineer, Sable	Uses CAN, currently incompatible with BAR97.	OBD II functional is automatically bypassed via analyzer vehicle look up process.
2004	Porsche	Cayenne S Cayenne Turbo	Uses CAN, currently incompatible with BAR97.	OBD II functional is automatically bypassed via analyzer vehicle look up process.
2004	Saab	9-3	Uses CAN, currently incompatible with BAR97.	OBD II functional is automatically bypassed via analyzer vehicle look up process.
2004	Saturn	Ion	Uses CAN, currently incompatible with BAR97.	OBD II functional is automatically bypassed via analyzer vehicle look up process.
2004	Toyota	Prius	Uses CAN, currently incompatible with BAR97.	OBD II functional is automatically bypassed via analyzer vehicle look up process.
2004	Volvo	2.4L S40 2.5L S40	Uses CAN, currently incompatible with BAR97.	OBD II functional is automatically bypassed via analyzer vehicle look up process.
2005				
2005	Audi	A4 A6	Uses CAN, currently incompatible with BAR97.	OBD II functional is automatically bypassed via analyzer vehicle look up process.
2005	Buick	LaCrosse, Rainier, Rendezvous	Uses CAN, currently incompatible with BAR97.	OBD II functional is automatically bypassed via analyzer vehicle look up process.
2005	Cadillac	CTS, SRX, STS, XLR	Uses CAN, currently incompatible with BAR97.	OBD II functional is automatically bypassed via analyzer vehicle look up process.
2005	Chevrolet	Cobalt, Corvette, Equinox, Malibu, SSR, Trailblazer EXT	Uses CAN, currently incompatible with BAR97.	OBD II functional is automatically bypassed via analyzer vehicle look up process.
2005	Chrysler	300C	Uses CAN, currently incompatible with BAR97.	OBD II functional is automatically bypassed via analyzer vehicle look up process.
2005	Dodge	Dakota, Durango, Magnum	Uses CAN, currently incompatible with BAR97.	OBD II functional is automatically bypassed via analyzer vehicle look up process.
2005	Ford	Crown Vic, E-150, E-250, E-350, Escape, Excursion, Expedition, Explorer, F-150, F-250, F-350, Five Hundred, Focus, Freestyle, Mustang, Taurus, Thunderbird	Uses CAN, currently incompatible with BAR97.	OBD II functional is automatically bypassed via analyzer vehicle look up process.
2005	GMC	Envoy ESV Envoy XL	Uses CAN, currently incompatible with BAR97.	OBD II functional is automatically bypassed via analyzer vehicle look up process.
2005	Isuzu	Ascender	Uses CAN, currently incompatible with BAR97.	OBD II functional is automatically bypassed via analyzer vehicle look up process.
2005	Jeep	Grand Cherokee	Uses CAN, currently incompatible with BAR97.	OBD II functional is automatically bypassed via analyzer vehicle look up process.
Table 2 continued on next page...				

TABLE 2 – Vehicles currently not OBD II testable				
Model Year	Make	Model	Problem	Solution
2005	Land Rover	LR3	Uses CAN, currently incompatible with BAR97.	OBD II functional is automatically bypassed via analyzer vehicle look up process.
2005	Lexus	LS400, LS430, GX470	Uses CAN, currently incompatible with BAR97.	OBD II functional is automatically bypassed via analyzer vehicle look up process.
2005	Lincoln	LS, Navigator, Town Car	Uses CAN, currently incompatible with BAR97.	OBD II functional is automatically bypassed via analyzer vehicle look up process.
2005	Mazda	Mazda3, Mazda6, RX8, MPV, Tribute	Uses CAN, currently incompatible with BAR97.	OBD II functional is automatically bypassed via analyzer vehicle look up process.
2005	Mercedes	SLK350	Uses CAN, currently incompatible with BAR97.	OBD II functional is automatically bypassed via analyzer vehicle look up process.
2005	Mercury	Grand Marquis, Mariner, Montego, Mountaineer, Sable	Uses CAN, currently incompatible with BAR97.	OBD II functional is automatically bypassed via analyzer vehicle look up process.
2005	Pontiac	G6, Grand Prix, GTO	Uses CAN, currently incompatible with BAR97.	OBD II functional is automatically bypassed via analyzer vehicle look up process.
2005	Porsche	Cayenne S Cayenne Turbo	Uses CAN, currently incompatible with BAR97.	OBD II functional is automatically bypassed via analyzer vehicle look up process.
2005	Saab	9-3 9-7X	Uses CAN, currently incompatible with BAR97.	OBD II functional is automatically bypassed via analyzer vehicle look up process.
2005	Saturn	Ion	Uses CAN, currently incompatible with BAR97.	OBD II functional is automatically bypassed via analyzer vehicle look up process.
2005	Toyota	Avalon, Prius, Tacoma, 4Runner, Tundra, Sequoia	Uses CAN, currently incompatible with BAR97.	OBD II functional is automatically bypassed via analyzer vehicle look up process.
2005	Volvo	S40, V50, S60, V70, S80, XC90	Uses CAN, currently incompatible with BAR97.	OBD II functional is automatically bypassed via analyzer vehicle look up process.
				End table 2