

(1) *SAE material.* Copies of these materials may be obtained from the Society of Automotive Engineers, Inc., 400 Commonwealth Drive, Warrendale, PA 15096–0001.

(i) SAE J1850 July 1995, “Class B Data Communication Network Interface,” shall be used as the on-board to off-board communications protocol. All emission related messages sent to the scan tool over a J1850 data link shall use the Cyclic Redundancy Check and the three byte header, and shall not use inter-byte separation or checksums.

(ii) Basic diagnostic data (as specified in § 86.094–17(e) and (f)) shall be provided in the format and units in SAE J1979 July 1996, E/E Diagnostic Test Modes.

(iii) Diagnostic trouble codes shall be consistent with SAE J2012 July 1996, “Recommended Practices for Diagnostic Trouble Code Definitions.”

(iv) The connection interface between the OBD system and test equipment and diagnostic tools shall meet the functional requirements of SAE J1962 January 1995, “Diagnostic Connector.”

(2) *ISO materials.* Copies of these materials may be obtained from the International Organization for Standardization, Case Postale 56, CH–1211 Geneva 20, Switzerland.

(i) ISO 9141–2 February 1994, “Road vehicles—Diagnostic systems—Part 2: CARB requirements for interchange of digital information,” may be used as an alternative to SAE J1850 as the on-board to off-board communications protocol.

(ii) [Reserved]

(i) *Deficiencies and alternate fueled vehicles.* Upon application by the manufacturer, the Administrator may accept an OBD system as compliant even though specific requirements are not fully met. Such compliances without meeting specific requirements, or deficiencies, will be granted only if compliance would be infeasible or unreasonable considering such factors as, but not limited to, technical feasibility of the given monitor, lead time and production cycles including phase-in or phase-out of engines or vehicle designs and programmed upgrades of computers, and if any unmet requirements

are not carried over from the previous model year except where unreasonable hardware or software modifications would be necessary to correct the non-compliance, and the manufacturer has demonstrated an acceptable level of effort toward compliance as determined by the Administrator. Furthermore, EPA will not accept any deficiency requests that include the complete lack of a major diagnostic monitor (“major” diagnostic monitors being those for the catalyst, oxygen sensor, engine misfire, and evaporative leaks), with the possible exception of the special provisions for alternate fueled vehicles. For alternate fueled vehicles (e.g., natural gas, liquefied petroleum gas, methanol, ethanol), beginning with the model year for which alternate fuel emission standards are applicable and extending through the 2004 model year, manufacturers may request the Administrator to waive specific monitoring requirements of this section for which monitoring may not be reliable with respect to the use of the alternate fuel. At a minimum, alternate fuel vehicles shall be equipped with an OBD system meeting OBD requirements to the extent feasible as approved by the Administrator.

(j) Demonstration of compliance with California OBD II requirements (Title 13 California Code Sec. 1968.1), as modified pursuant to California Mail Out #97–24 (December 9, 1997), shall satisfy the requirements of this section, except that compliance with Title 13 California Code Secs. 1968.1(b)(4.2.2), pertaining to evaporative leak detection, and 1968.1(d), pertaining to tampering protection, are not required to satisfy the requirements of this section, and the deficiency fine provisions of 1968.1(m)(6.1) and (6.2) shall not apply.

[63 FR 70694, Dec. 22, 1998]

§ 86.099–30 Certification.

This § 86.099–30 includes text that specifies requirements that differ from § 86.094–30, § 86.095–30, § 86.096–30, or § 86.098–30. Where a paragraph in § 86.094–30, § 86.095–30, § 86.096–30, or § 86.098–30 is identical and applicable to § 86.099–30, this may be indicated by specifying the corresponding paragraph and the statement “[Reserved]. For

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guidance see § 86.094–30.” or “[Reserved]. For guidance see § 86.095–30.” or “[Reserved]. For guidance see § 86.096–30.” or “[Reserved]. For guidance see § 86.098–30.”.

(a)(1) and (a)(2) [Reserved]. For guidance see § 86.094–30.

(a)(3)(i) [Reserved]. For guidance see § 86.098–30.

(a)(3)(ii) and (a)(4)(ii) [Reserved]. For guidance see § 86.095–30.

(a)(4)(iii) introductory text through (a)(4)(iii)(C) [Reserved]. For guidance see § 86.094–30.

(a)(4)(iv) introductory text [Reserved]. For guidance see § 86.095–30.

(a)(4)(iv)(A)–(a)(9) [Reserved]. For guidance see § 86.094–30.

(a)(10)(i)–(a)(11)(ii)(C) [Reserved]. For guidance see § 86.098–30.

(a)(12) [Reserved]. For guidance see § 86.094–30.

(a)(13) [Reserved]. For guidance see § 86.095–30.

(a)(14) [Reserved]. For guidance see § 86.094–30.

(a)(15)–(a)(18) [Reserved]. For guidance see § 86.096–30.

(a)(19) introductory text through (a)(19)(iii) [Reserved]. For guidance see § 86.098–30.

(b)(1) introductory text through (b)(1)(i)(B) [Reserved]. For guidance see § 86.094–30.

(b)(1)(i)(C) [Reserved]. For guidance see § 86.098–30.

(b)(1)(ii)–(b)(1)(iv) [Reserved]. For guidance see § 86.094–30.

(b)(2) [Reserved]. For guidance see § 86.098–30.

(b)(3)–(b)(4)(i) [Reserved]. For guidance see § 86.094–30.

(b)(4)(ii) [Reserved]. For guidance see § 86.098–30.

(b)(4)(ii)(A) [Reserved]. For guidance see § 86.094–30.

(b)(4)(ii)(B)–(b)(4)(iv) [Reserved]. For guidance see § 86.098–30.

(b)(5)–(e) [Reserved]. For guidance see § 86.094–30.

(f) For engine families required to have an emission control diagnostic system (an OBD system), certification will not be granted if, for any test vehicle approved by the Administrator in consultation with the manufacturer, the malfunction indicator light does not illuminate under any of the following circumstances, unless the man-

ufacturer can demonstrate that any identified OBD problems discovered during the Administrator’s evaluation will be corrected on production vehicles. Only paragraphs (f)(5) and (f)(6) of this section apply to diesel cycle vehicles and diesel cycle trucks where such vehicles and trucks are so equipped.

(1) A catalyst is replaced with a deteriorated or defective catalyst, or an electronic simulation of such, resulting in an increase of 1.5 times the NMHC standard above the NMHC emission level measured using a representative 4000 mile catalyst system.

(2) An engine misfire condition is induced resulting in exhaust emissions exceeding 1.5 times the applicable standards for NMHC, CO or NO_x.

(3) Any oxygen sensor is replaced with a deteriorated or defective oxygen sensor, or an electronic simulation of such, resulting in exhaust emissions exceeding 1.5 times the applicable standard for NMHC, CO or NO_x.

(4) A vapor leak is introduced in the evaporative and/or refueling system (excluding the tubing and connections between the purge valve and the intake manifold) greater than or equal in magnitude to a leak caused by a 0.040 inch diameter orifice, or the evaporative purge air flow is blocked or otherwise eliminated from the complete evaporative emission control system.

(5) A malfunction condition is induced in any emission-related powertrain system or component, including but not necessarily limited to, the exhaust gas recirculation (EGR) system, if equipped, the secondary air system, if equipped, and the fuel control system, singularly resulting in exhaust emissions exceeding 1.5 times the applicable emission standard for NMHC, CO or NO_x.

(6) A malfunction condition is induced in an electronic emission-related powertrain system or component not otherwise described above that either provides input to or receives commands from the on-board computer resulting in a measurable impact on emissions.

[63 FR 70697, Dec. 22, 1998]