

Environmental Protection Agency

§ 86.1844-01

Part 2 must be submitted to the Administrator within 90 days of the effective date on the applicable certificate of conformity.

(e) *Running change submissions.* Each running change notification, as required under § 86.1842-01, must include the information listed in § 86.1844-01(f) and shall be submitted to the Administrator concurrently with, or in advance of, the implementation of any change incorporated onto production vehicles.

(f) *Updates to the Application for Certification.* (1) The manufacturer must submit an update to the Part 1 Application by January 1st of the applicable model year to incorporate any running changes and/or corrections which occurred after certification. If a test group is certified less than 60 days prior to January 1st of the applicable model year, this update may be submitted to the Administrator within 90 days of the effective date on the applicable certificate of conformity.

(2) The manufacturer must submit a final update to Part 1 and Part 2 of the Application by January 1st of the subsequent model year to incorporate any applicable running changes or corrections which occurred between January 1st of the applicable model year and the end of the model year. A manufacturer may request the Administrator to grant an extension (of no more than 90 days) for submittal of the final update. The request must clearly indicate the circumstances necessitating the extension.

(3) The manufacturer may not use updates to its application to correct a misbuild situation with respect to vehicles already introduced into commerce.

(g) *Information to be submitted upon request.* Upon written request by the Administrator, a manufacturer shall submit any information as described in § 86.1844-01 within 15 business days. A manufacturer may request the Administrator to grant an extension. The request must clearly indicate the circumstances necessitating the extension.

(h) *In-use information requirements.* All information requirements of the in-use verification and confirmatory programs of §§ 86.1845-01 and 86.1846-01

must be met by the due dates listed in § 86.1847-01.

§ 86.1844-01 Information requirements: Application for certification and submittal of information upon request.

(a) All information listed in this section must be submitted to the Agency according to the requirements specified in § 86.1843-01.

(b) Nothing in this section limits the Administrator's discretion to require the manufacturer to submit additional records not specifically required by this section.

(c) Routine emission test records shall be retained by the manufacturer for a period of one (1) year after issuance of all certificates of conformity to which they relate. All records, other than routine emission test records, required to be produced by the manufacturer under this title shall be made available upon written request by the Administrator for a period of eight years after issuance of all certificates of conformity to which they relate.

(d) *Part 1 Application.* Part 1 must contain the following items:

(1) Correspondence and communication information, such as names, mailing addresses, phone and fax numbers, and e-mail addresses of all manufacturer representatives authorized to be in contact with EPA compliance staff. The address where official documents, such as certificates of conformity, are to be mailed must be clearly identified. At least one U.S. contact must be provided.

(2) A description of the durability group in accordance with the criteria listed in § 86.1820-01, or as otherwise used to group a product line.

(3) A description of applicable evaporative/refueling families in accordance with the criteria listed in § 86.1821-01, or as otherwise used to group a product line.

(4) Durability information. (i) A description of the durability method used to establish useful life durability, including exhaust and evaporative/refueling emission deterioration factors as required in §§ 86.1823, 86.1824 and 86.1825 when applicable.

(ii) The equivalency factor required to be calculated in § 1823-06(e)(iii)(B), when applicable.

(5) A description of each test group in accordance with the criteria listed in § 86.1827-01 or as otherwise used to group a product line.

(6) Identification and description of all vehicles for which testing is required by §§ 86.1822-01 and 86.1828-01 to obtain a certificate of conformity.

(7) A comprehensive list of all test results, including official certification levels, and the applicable intermediate and full useful life emission standards to which the test group is to be certified as required in § 86.1829-01.

(8) A statement that all applicable vehicles will conform with the emission standards for which emission data is not being provided, as allowed under § 86.1829-01. The statement shall clearly identify the standards for which emission testing was not completed.

(9) Information which describes each emission control diagnostic system required by § 86.1806-01 including:

(i) A description of the functional operation characteristics of the diagnostic system;

(ii) The general method of detecting malfunctions for each emission-related powertrain component;

(iii) Any deficiencies, including resolution plans and schedules.

(10) A description of all flexible or dedicated alternate fuel vehicles including, but not limited to, the fuel and/or percentage of alternate fuel for all such vehicles.

(11) A list of all auxiliary emission control devices (AECD) installed on any applicable vehicles, including a justification for each AECD, the parameters they sense and control, a detailed justification of each AECD which results in a reduction in effectiveness of the emission control system, and rationale for why the AECD is not a defeat device as defined under §§ 86.1809-01 and 86.1809-10. For any AECD uniquely used at high altitudes, EPA may request engineering emission data to quantify any emission impact and validity of the AECD. For any AECD uniquely used on multi-fuel vehicles when operated on fuels other than gasoline, EPA may request engineering emission data to quantify any

emission impact and validity of the AECD.

(12) Identification and description of all vehicles covered by each certificate of conformity to be produced and sold within the U.S. The description must be sufficient to identify whether any given in-use vehicle is, or is not, covered by a given certificate of conformity, the test group and the evaporative/refueling family to which it belongs and the standards that are applicable to it, by matching readily observable vehicle characteristics and information given in the emission control information label (and other permanently attached labels) to indicators in the Part 1 Application. In addition, the description must be sufficient to determine for each vehicle covered by the certificate, all appropriate test parameters and any special test procedures necessary to conduct an official certification exhaust or evaporative emission test as was required by this subpart to demonstrate compliance with applicable emission standards. The description shall include, but is not limited to, information such as model name, vehicle classification (light-duty vehicle, light-duty truck, or complete heavy-duty vehicle), sales area, engine displacement, engine code, transmission type, tire size and parameters necessary to conduct exhaust emission tests such as equivalent test weight, curb and gross vehicle weight, test horsepower (with and without air conditioning adjustment), coast down time, shift schedules, cooling fan configuration, etc. and evaporative tests such as canister working capacity, canister bed volume and fuel temperature profile. The Part 1 may include ranges for test parameters in lieu of actual values.

(13) Projected U.S. vehicle sales volumes for each test group and evaporative/refueling family combination organized in such a way to determine projected compliance with any applicable implementation schedules or minimum sales requirements as specified in § 86.1810 or as otherwise required by this chapter.

(14) A request for a certificate of conformity for each test group after all required testing has been completed. The request must be signed by an authorized manufacturer representative and

include a statement that the test group complies with all applicable regulations contained within this chapter.

(15) For HEVs, unless otherwise approved by the Administrator, the information required by the "California Exhaust Emission Standards and Test Procedures for 2003 and Subsequent Model Zero-Emission Vehicles, and 2001 and Subsequent Model Hybrid Electric Vehicles, in the Passenger Car, Light-Duty Truck and Medium-duty Vehicle Classes" must be supplied. These procedures are incorporated by reference (see § 86.1).

(16) (i) For Tier 2 and interim non-Tier 2 vehicles beginning with the 2004 model year, a statement indicating that the manufacturer has conducted an engineering analysis of the complete exhaust system to ensure that the exhaust system has been designed:

(A) To facilitate leak-free assembly, installation and operation for the full useful life of the vehicle; and

(B) To facilitate that such repairs as might be necessary on a properly maintained and used vehicle can be performed in such a manner as to maintain leak-free operation, using tools commonly available in a motor vehicle dealership or independent repair shop for the full useful life of the vehicle.

(ii) The analysis must cover the exhaust system and all related and attached components including the air injection system, if present, from the engine block manifold gasket surface to a point sufficiently past the last catalyst and oxygen sensor in the system to assure that leaks beyond that point will not permit air to reach the oxygen sensor or catalyst under normal operating conditions.

(iii) A "leak-free" system is one in which leakage is controlled so that it will not lead to a failure of the certification exhaust emission standards in-use.

(iv) The provisions of paragraphs (d)(16)(i) and (ii) do not apply to vehicles whose certification is carried over from the NLEV program or carried across from the Cal LEV I program.

(17) The name of an agent for service of process located in the United States. Service on this agent constitutes service on you or any of your officers or employees for any action by EPA or

otherwise by the United States related to the requirements of this part.

(e) *Part 2 Application.* Part 2 must contain the following items:

(1) A list of part numbers of all emission-related components and AECs for each emission control system, including those found on actual components. The part numbers shall be organized by engine code or other similar classification scheme.

(2) Basic calibration information, organized by engine code (or other similar classification scheme), for the major components of the fuel system, EGR system, ignition system, oxygen sensor(s) and thermostat. Examples of major components and associated calibration information include, but are not limited to; fuel pump and fuel pump flow rate, fuel pressure regulator and regulated fuel pressure, EGR valve and EGR exhaust gas flow rate at specified vacuum levels, EGR vacuum regulator and regulated vacuum, EGR orifice and orifice diameter, basic engine timing, timing RPM, idle rpm, spark plug gap, oxygen sensor output (mV), and thermostat opening temperature.

(3) Identification and description of all vehicles covered by each certificate of conformity to be produced and sold within the U.S. The description must be sufficient to identify whether any given in-use vehicle is, or is not, covered by a given certificate of conformity, the test group and the evaporative/refueling family to which it belongs and the standards that are applicable to it, by matching readily observable vehicle characteristics and information given in the emission control information label (and other permanently attached labels) to indicators in the Part 1 Application. In addition, the description must be sufficient to determine for each vehicle covered by the certificate, all appropriate test parameters and any special test procedures necessary to conduct an official certification exhaust or evaporative emission test as was required by this subpart to demonstrate compliance with applicable emission standards. The description shall include, but is not limited to, information such as model name, vehicle classification (light-duty vehicle, light-duty truck, or complete heavy-duty vehicle), sales area, engine displacement,

engine code, transmission type, tire size and parameters necessary to conduct exhaust emission tests such as equivalent test weight, curb and gross vehicle weight, test horsepower (with and without air conditioning adjustment), coast down time, shift schedules, cooling fan configuration, etc and evaporative tests such as canister working capacity, canister bed volume and fuel temperature profile. Actual values must be provided for all parameters.

(4) Final U.S. vehicle sales volumes for each test group and evaporative/refueling family combination organized in such a way to verify compliance with any applicable implementation schedules. Final sales are not required until the final update to the Part 2 Application at the end of the model year.

(i) The manufacturer may petition the Administrator to allow actual volume produced for U.S. sale to be used in lieu of actual U.S. sales. The petition must establish that production volume is functionally equivalent to sales volume.

(ii) The U.S. sales volume shall be based on the location of the point of sale to a dealer, distributor, fleet operator, broker, or any other entity which comprises the point of first sale.

(5) Copies of all service manuals, service bulletins and instructions regarding the use, repair, adjustment, maintenance, or testing of such vehicles relevant to the control of crankcase, exhaust or evaporative emissions, as applicable, issued by the manufacturer (in written or electronic form) for use by other manufacturers, assembly plants, distributors, dealers, and ultimate purchasers. These shall be submitted to the Agency when they are made available to the public and must be updated as appropriate throughout the useful life of the corresponding vehicles.

(6) The NMOG/NMHC and HCHO to NMHC ratios established according to § 86.1845-04.

(f) Running change submissions. A manufacturer shall submit to the Administrator a notification of all running changes as required in accordance with §§ 86.1842-01 and 86.1843-01 at the time each change is incorporated into

production. Each running change notification shall include:

(1) A detailed description of the change;

(2) The reason for the change;

(3) The portion of the product line that is affected by the change, including information sufficient to identify whether any given in-use vehicle includes the change;

(4) The effect the change will have on emissions;

(5) Any test data that is determined to be necessary to demonstrate compliance with applicable emission standards; and

(6) A summary report for each test group which provides an overview of all running changes that have been incorporated since certification.

(g) The manufacturer shall provide the following information, or other information as deemed necessary by the Administrator, to the Agency upon written request by the Administrator. This includes any information, or explanations of such information specified in paragraphs (d), (e), and (f) of this section.

(1) A detailed description of the basis for all good engineering judgment decisions that were required to be made by the manufacturer. These include, but are not limited to, placement of vehicles into durability and test groups, the appropriateness of a durability process for future model years, worst-case vehicle selections for durability and emission data purposes, and carry-over or carry-across of emission test data.

(2) The basis used for all compliance statements submitted under this section. Each statement must be supported by the manufacturer using good engineering judgment and should include any emission test data, development test data, or other supporting information deemed necessary. This includes information necessary to demonstrate compliance with any emission standards for which a compliance statement was submitted in lieu of actual emission test data as allowed under § 86.1810.

(3) Detailed technical descriptions of emission-related components and AECs, including schematic diagrams

Environmental Protection Agency

§ 86.1844-01

and hose and wire routings which describe the fundamental operating characteristics of each emission control system.

(4) Detailed calibration specifications for all emission-related components and AECs.

(5) Any information necessary to demonstrate that no defeat devices are present on any vehicles covered by a certificate including, but not limited to, a description of the technology employed to control CO emissions at intermediate temperatures, as applicable.

(6) The following information describing any adjustable parameters:

(i) A list of those parameters which are physically capable of being adjusted (including those adjustable parameters for which access is difficult) and that, if adjusted to settings other than the manufacturer's recommended setting, may affect emissions;

(ii) A specification of the manufacturer's intended physically adjustable range of each such parameter, and the production tolerances of the limits or stops used to establish the physically adjustable range;

(iii) A description of the limits or stops used to establish the manufacturer's intended physically adjustable range of each adjustable parameter, or any other means used to inhibit adjustment;

(iv) The nominal or recommended setting, and the associated production tolerances, for each such parameter;

(v) The specifications used during all emission testing required by this subpart.

(7) A history of each motor vehicle used for certification testing, including a general description of the buildup of the vehicle and engine. Each history shall begin when any of the selection or buildup activities occur and should include details of the use of the vehicle for development testing. Each history must include a description of the origin and selection process for fuel system components, fuel injection components and emission control system components and specify the steps taken to assure that the certification vehicle will be representative of production vehicles.

(8) A record of all emission tests performed on all durability and emission data vehicles required to be tested by this subpart including test results, the date and purpose of each test, and the number of miles accumulated on the vehicle.

(9) A record and description of any significant events (including extraordinary events such as vehicle accidents or dynamometer runaway) affecting any certification test vehicle, including all maintenance, servicing or tests performed to diagnose engine or emission control system performance. The date and time of each event and an explanation must be included.

(10) For vehicles with non-integrated refueling emission control systems, a description of the drivedown used to purge the refueling canister and a description of the procedures used to determine the number of equivalent UDDS cycles required to purge the refueling canisters, as determined from the fuel economy on the UDDS applicable to the test vehicle of that evaporative/refueling family and emission control system combination required to use a volume of fuel equal to 85% of fuel tank volume and from subpart B of this part.

(11) A description of all procedures, including any special procedures, used to comply with applicable test requirements of this subpart. Any special procedures used to establish durability data or emission deterioration factors required to be determined under §§ 86.1823-01, 86.1824-01 and 86.1825-01 and to conduct emission tests required to be performed on applicable emission data vehicles under § 86.1829-01 according to test procedures contained within this Title must also be included.

(12) A description of any unique procedures required to perform evaporative/refueling emission tests for all vehicles in each evaporative/refueling family and a description of the method used to develop those unique procedures, including canister working capacity, canister bed volume and fuel temperature profile for the running loss test.

(13) A description of the method to be used to decode vehicle identification numbers.

(14) For complete heavy-duty vehicles only, all hardware (including scan tools) and documentation necessary for EPA to read, interpret, and store (in engineering units if applicable) any information broadcast by an engine's on-board computers and electronic control modules which relates in anyway to emission control devices and auxiliary emission control devices, provided that such hardware, passwords, or documentation exists and is not otherwise commercially available. Passwords include any information necessary to enable generic scan tools or personal computers access to proprietary emission related information broadcast by an engine's on-board computer, if such passwords exist. This requirement includes access by EPA to any proprietary code information which may be broadcast by an engine's on-board computer and electronic control modules. Information which is confidential business information must be marked as such. Engineering units refers to the ability to read, interpret, and store information in commonly understood engineering units, for example, engine speed in revolutions per minute or per second, injection timing parameters such as start of injection in degree's before top-dead center, fueling rates in cubic centimeters per stroke, vehicle speed in milers per hour or per kilometer.

(h) *In-use information requirements.* Manufacturers must submit the information required in § 86.1847-01.

(i) For exhaust emission testing for Tier 2 and interim non-Tier 2 vehicles, if approved by the Administrator in advance, manufacturers may submit exhaust emission test data generated under California test procedures to comply with any certification and in-use testing requirements under this subpart. The Administrator may require supporting information to establish that differences between California and Federal exhaust testing procedures and fuels will not produce significant differences in emission results. The Administrator may require that in-use testing be performed using Federal test fuels as specified in § 86.113-04(a)(1).

(j) For complete heavy-duty vehicles only, measure CO₂, N₂O, and CH₄ as described in this paragraph (j) with each

certification test on an emission data vehicle. Do not apply deterioration factors to the results. Use the analytical equipment and procedures specified in 40 CFR part 1065 as needed to measure N₂O and CH₄. Report these values in your application for certification. The requirements of this paragraph (j) apply starting with model year 2011 for CO₂ and 2012 for CH₄. The requirements of this paragraph (j) related to N₂O emissions apply for test groups that depend on NO_x after-treatment to meet emission standards starting with model year 2013. Businesses that are defined as a small business by the Small Business Administration size standards in 13 CFR 121.201 may omit measurement of N₂O and CH₄; other manufacturers may provide appropriate data and/or information and omit measurement of N₂O and CH₄ as described in 40 CFR 1065.5. Use the same measurement methods as for your other results to report a single value for CO₂, N₂O, and CH₄. Round the final values as follows:

- (1) Round CO₂ to the nearest 1 g/mi.
- (2) Round N₂O to the nearest 0.001 g/mi.
- (3) Round CH₄ to the nearest 0.001 g/mi.

[64 FR 23925, May 4, 1999, as amended at 65 FR 6865, Feb. 10, 2000; 65 FR 59976, Oct. 6, 2000; 71 FR 2837, Jan. 17, 2006; 71 FR 51489, Aug. 30, 2006; 72 FR 8566, Feb. 26, 2007; 75 FR 66457, Oct. 28, 2010]

§ 86.1845-01 Manufacturer in-use verification testing requirements.

(a) *General requirements.* A manufacturer light-duty vehicles, light-duty trucks, and complete heavy-duty vehicles shall test, or cause to have tested a specified number of light-duty vehicles, light-duty trucks, and complete heavy-duty vehicles. Such testing shall be conducted in accordance with the provisions of this section. For purposes of this section, the term vehicle shall include light-duty vehicles, light-duty trucks, and complete heavy-duty vehicles.

(b) *Low mileage testing.* [Reserved]

(c) *High-mileage testing—(1) Test groups.* Testing must be conducted for each test group.

(2) *Vehicle mileage.* All test vehicles must have a minimum odometer mileage of 50,000 miles. At least one vehicle