

INSTRUCTIONS  
FOR THE  
PREPARATION AND SUBMISSION  
OF  
1996 AND LATER MODEL YEAR

SMALL-VOLUME

APPLICATION FOR CERTIFICATES  
OF CONFORMITY  
FOR  
LIGHT-DUTY VEHICLES,  
LIGHT-DUTY TRUCKS,  
AND  
HEAVY-DUTY ENGINES

May 2, 1996

Environmental Protection Agency  
Office of Mobile Sources  
Vehicle Programs & Compliance Division  
2565 Plymouth Road  
Ann Arbor, Michigan 48105  
(313) 668-4200

## Chapter 1

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## Chapter 2

### 2. Reporting Burden Statement

This information collection has been approved by OMB (Control No. 2060-0104). Public reporting burden for this collection of information is estimated to average 450 hours per engine family, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to:

Chief, Information Policy Branch, PM-223  
U.S. Environmental Protection Agency  
401 M St., SW  
Washington, DC 20460

and to the:

Office of Management and Budget  
Washington, DC 20503

## CHAPTER 3

### 3. Introduction

These instructions provide guidance regarding the preparation, submission, and revision of the application for 1996 and later model year small-volume gasoline and gaseous fueled engine families for light-duty vehicles and light-duty trucks certificates of conformity. These instructions identify the information which you must submit to the Certification Division when you apply for certification under the small-volume manufacturers certification procedures. (Reference 40 CFR 86.092-14).

The instructions include:

(a) detailed specifications regarding the information which must be provided to document compliance with applicable standards and

(b) suggestions regarding the organization and submission of the required information.

Numerous references are given throughout this format so that you can quickly find the regulations which deal with each reporting requirement and respond appropriately. For example, the reference code 40 CFR Part 86 refers to Title 40 of the Code of Federal Regulations Part 86, which is further divided and identified by section numbers and letters. Copies of the certification regulations are available for reference and copying at Government Depository Libraries. A complete list of Government Depository Libraries is available without charge from The Library, U. S. Government Printing Office, 5236 Eisenhower Avenue, Alexandria, VA 22304. The certification regulations may be purchased as reprints by writing to:

Superintendent of Documents  
U.S. Government Printing Office  
Washington, DC 20402

or calling (202) 783-3238 to place an order by telephone.

The other references, such as Advisory Circulars (A/C's), and manufacturers guidance letters are included in the information packet which is mailed to all applicants, or they may be obtained by writing to the Vehicle Programs and Compliance Division.

EPA has placed a significant amount of the material referenced throughout this document on the Technology Transfer Bulletin Board System (TTNBBS). The documents are located under OMS, Rulemaking and Reporting (and under Fuel Economy & Certification). TTNBBS is available 24 hours a day, 7 days a week except Monday morning from 8-12 EST, when the system is down for maintenance and backup. For help in reaching the system, call the system operator at 919-541-5384 in Research Triangle Park, North Carolina, during normal business hours EST.

## CHAPTER 4

### 4. General Instructions

#### 4.1 Submitting the Application

An application is EPA's principal source of information regarding the product line which is to be certified. This information provides the principal basis for the determination of compliance with emission control regulations. Therefore, the application must be complete and accurate when it is submitted. Failure to submit a complete and accurate application will delay EPA's issuing a certificate of conformity. After it is submitted, it needs to be kept current by the submission of the necessary updating material.

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U.S. Environmental Protection Agency  
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Ann Arbor, Mi 48105

Because of the numerous standards a vehicle could meet, the manufacturer must clearly identify the standards with which the vehicle/engine is complying.

The information specified in these instructions does not include all of the data and records which are specified in 40 CFR Part 86. The material which is not specified in the instructions must be retained in the applicant files to be provided to EPA upon receipt of a specific request.

#### 4.2 State of California Certification

Vehicles to be sold in California are subject to State of California certification requirements as well as federal requirements. For further information contact:

Mobile Sources Division  
Air Resources Board  
9528 Telstar Avenue  
El Monte, CA 91731-2990  
(Phone: (818)575-6800)

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### 4.3 Warning Statement

Warning: Any person who knowingly makes a false or fraudulent statement or conceals a material fact shall be fined not more than \$250,000 or imprisoned not more than 5 years, or both. 18 U.S.C. 1001.

### 4.4 Standardized Engine Family Name

Applicants are required to use the standardized engine family name format contained in Appendix 1. Advisory Circular No. 20B contains guidance on the determination of engine exhaust emission families and engine exhaust emission control systems for light-duty vehicles and light-duty trucks.

### 4.5 Evaporative Family Name

Applicants must determine the evaporative emission family name. EPA does not require standardized evaporative emission family names. Applicants may use any combination of alpha and/or numeric characters. However, evaporative family names should not exceed 14 digits. Advisory Circular No. 59 contains guidance on the determination of evaporative emission families and evaporative emission control systems.



## Chapter 5

### 5.0 Recommended Application Format

This format identifies the information and the suggested format for submitting the information required in the application for certification. The use of this format is not mandatory; however, submitting the required information in the suggested format will assure that it is included in the application and will speed EPA processing of the application. Therefore, the use of this format is highly beneficial to both the applicant and EPA.

5.1 Title Page of Application The following title page is recommended.

Application for Certification

for the 19\*\*Model Year

Light-Duty (Vehicle or Truck)

Engine Family: (Name)

Evaporative Family: (Name)

[Insert one or more of the following: (Car) or (Truck)  
line(s):(Name(s) of vehicle(s) or truck(s) to be listed  
on the certificate of conformity)]

Originally produced in  
(original production year)

by

Original Manufacturer Name

(Your Company Name)

Date:

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### 5.2 Application Table of Contents

The following table of contents outline is recommended.

#### Table of Contents

1. Title Page
2. Table of Contents
3. Communications
4. Certificate Information
5. Vehicle Information
6. Vehicle Technical Description
7. Emission Control Information
8. Durability Information
  - 8.1 Assigned Deterioration Factors
  - 8.2 Manufacturer Determined Deterioration Factors
  - 8.3 Durability Data Vehicle
  - 8.4 Test Data and Maintenance Log
  - 8.5 DF Summary Sheet
9. Emission Test Results
10. Statements
11. Test Vehicle Selection
  - 11.1 Worst Case Test Vehicle
  - 11.2 Tabulation of Vehicle Selection Criteria
12. Maintenance

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### 13. Labels

#### 13.1 Emission Label

#### 13.2 Unleaded Fuel Label

### 14. Confidential Material

### 5.3 Communications

#### A. Manufacturer's Name

Address

List manufacturer's personnel authorized to communicate with EPA, including titles and numbers of each.

B. Name of company authorized by the manufacturer to interface as its agent with EPA (if applicable). Please include a copy of the letter of authorization.

Address

Agent personnel authorized to communicate with EPA, including titles and telephone number(s) of each.

### 5.4 Certificate Information

A. Corporate Name \*\*1 to be printed on certificate of conformity

B. Address to which the certificate should be mailed

C. Models to be listed on the certificate of conformity

D. Standardized Engine Family name and Evaporative Family name

### 5.5 Vehicle Information

A. Supply the following information on the vehicles which you are modifying:

1. Company name of the original manufacturer
2. Original model name(s)

## Chapter 5 - Continued

3. Original production date (i.e., month and year) of the vehicles.

4. Address of the facility where the vehicles are modified for compliance including name, title, and telephone number of person in charge.

5. Projected U.S. sales\*<sup>2</sup> for this engine family.

6. Total projected U.S. sales\*<sup>2</sup> for all other engine families previously certified by your company so far this model year (including all light-duty vehicles (automobiles), light-duty trucks, and heavy-duty engines).

7. Total (add) sales under lines 5 and 6 above (Note - the total sales must be less than 10,000 units to qualify as a small-volume manufacturer).

B. High-or low-altitude exemptions (if applicable). Describe the light-duty vehicles and light-duty trucks which you claim as exempt from meeting the applicable emission standards either at high-or low-altitude (Ref. 40 CFR 86.090-8(h) and -8(i) and 86.091-9(g)(2)), and attach your rationale justifying the exemptions.

C. Light-Duty Truck Adjustments (if applicable). Describe the adjustments or modifications required to light-duty trucks certified to low altitude emission-standards to allow them to meet high altitude emission standards (Ref., 40 CFR 86.091-9(g)(1)).

### 5.6 Vehicle Technical Description

Reference the original equipment manufacturer's application, where applicable, and add information changed per the modifications being made in this application.

(Ref., 40 CFR 86.092-14(c)(11)(ii)(B))

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- A. Standardized Engine Family Name: (Enter the engine family name you determined using the information contained in paragraph 4.4, above, and the guidance contained in Appendix 1 and A/C No. 20B. (Ref., the definition of engine family contained in 40 CFR 86.082-2).
- B. Evaporative Family Name: (Enter the evaporative family name you determined in accordance with paragraph 4.5, above.)
- C. Equivalent test weight and dynamometer road-load horsepower setting for each vehicle configuration. The information should be presented in tabular form and indicate how it was determined (i.e., frontal area or coastdown method.) (Ref. Advisory Circular No's 55C and 73.)
- D. Engine combustion cycle (Otto or Diesel).
- E. Engine cooling mechanism (e.g., air cooled, liquid cooled).
- F. Number of engine cylinders.
- G. Engine displacement.
- H. Fuel system type (e.g., carburetor, fuel injected).
- I. Number of catalytic converters, type(s), precious metal loading and composition.
- J. Method of air aspiration (e.g., natural, turbocharged, etc.).
- K. Thermal reactor characteristics (if applicable).
- L. Special equipment (if applicable).
1. Detonation sensor
  2. Shift indicator light
  3. Multi-mode transmission (describe features) (Ref., Advisory Circular No. 83A)

## Chapter 5 - Continued

M. Suppliers' and/or manufacturers' name and model number of any emission related items of the above, if purchased from a supplier who uses the items in its own certified vehicle(s) or engine(s) (e.g., part numbers of emission related parts purchased from an original equipment manufacturer) also show a listing of the parts removed from the vehicle and those replacing them, (i.e. from-to), parts removed from and not replaced, and parts added by your modification to the OEM's vehicle.

N. A list of emission component part numbers (i.e., a list of all emission components with part number for each component) (this list may be combined with the list required in paragraph M., above).

### 5.7 Emission Control Information

Reference the OEM's application where applicable and add information changed per the modifications being made in this application.

(Ref: 40 CFR 86.092-14(c)(11)(ii)(B)(15))

A. Descriptions for all emission related components and systems in sufficient detail to permit a full understanding of their functions and interactions.

B. For light-duty vehicles, describe the modifications made by you to assure compliance with emissions standards at high altitudes.

THE INFORMATION IDENTIFIED IN "C THROUGH H" MUST BE OBTAINED BY THE SUBMITTER. THIS INFORMATION DOES NOT NEED TO BE SUBMITTED TO EPA UNLESS EPA MAKES A REQUEST FOR THIS INFORMATION.

C. Drawings of all the emission related components.

D. Dimensioned drawings for dimension-critical parts (e.g., diameter of fuel filler inlet restrictor and location-sensitive components, location of catalyst(s) downstream of exhaust manifold, etc.).

E. Schematics of the control systems(s) identifying hoses, tubing and wires connecting the emission control components and other devices.

F. The calibrations (specifications or curves as applicable) including ranges of adjustability, flow bands, etc., of all emission related components.

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G. The parameters which have been sealed to prevent tampering [(Ref. 40 CFR 86.085-22(e), Dear Manufacturer Letters CD-86-11 (LD) entitled: Determination of Adjustable ECM Parameters and CD-87-5 (LD) entitled: Determination of a New Adjustable Parameter) available on the TTNBBS.].

H. Drawings of the items listed under G above, showing the seal material and design provided to prevent tampering.

I. For light-duty vehicles, describe the modifications made by you to assure compliance with emission standards at high altitudes.

### 5.8 Durability Information

(Ref. 40 CFR 86.092-14(c)(11)(ii)(E))

#### A. Deterioration Factors:

1. (If applicable) Indicate that EPA provided assigned deterioration factors are being utilized for light-duty vehicle exhaust emission certification.

2. (If applicable) Manufacturers utilizing deterioration factors determined by the manufacturer based on its good engineering judgment (ref: 40 CFR 86.092-14 (c)(7)(i)(C)(2) shall provide a description of the method(s) used by the manufacturer to determine the deterioration factors. The description should include information on the minimum deterioration factors (i.e., either the manufacturers specific average or 70th percentile or EPA assigned deterioration factors whichever is applicable).

3. (If applicable) Provide a description of the durability-data vehicle selected. The description should include information concerning the durability-data vehicle selection which provides proof of compliance with the vehicle selection criteria contained in 40 CFR 86.092-24. In addition, the description shall include a complete description of the vehicle selected including, but not limited to, those criteria listed in 40 CFR 86.092-24.

#### B. Test Data and Maintenance Log

If the deterioration factors are based on a durability-data vehicle, a copy of the test data and maintenance log must be included in the application. An example of a test data and maintenance log is



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attached as Appendix 2.

### C. DF Summary Sheet

Include a completed copy of the DF Summary Sheet applicable to the engine family being certified.

## 5.9 Emission Test Results

### A. Manufacturer's Testing

1. Name of Test Laboratory.
2. Address.
3. Name of Laboratory supervisor and telephone number.
4. Copies of all test data reports generated, all retests and voids.
5. Special (other than manufacturer determined or assigned) deterioration factors (if applicable).

Include rationale supporting the special deterioration factors.

6. Copy of "Shift Schedule Information Sheet".

### B. EPA Testing

1. Copy of EPA "Vehicle Summary Sheet" report.
2. Copy of "Shift Schedule Information Sheet".

## 5.10 Statements

The application for certification shall include the following statements:

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A. A statement as required by (40 CFR 86.092-14(c)(11)(ii)(D)(1)) signed by your authorized representative.

Testing Conformance

The vehicles described herein have been tested in accordance with Subparts A, B, D, J, M, N, or P (list applicable subparts) of Part 86, title 40 United States Code of Federal Regulations, and on the basis of those tests are in conformance with that subpart. All of the data and records required by that subpart are on file and are available for inspection by the EPA Administrator. We project the total U. S. sales of vehicles (engines) subject to this subpart to be fewer than 10,000 units.

(Signature)

(Title)

B. A statement as required by 40 CFR 86.092-14(c)(11)(ii)(D)(2) signed by your authorized representative.

For Adjustable Parameters, further described in 40 CFR 86.085-22(e) in the limits, stops, or other means used to inhibit adjustment have been designed to accomplish their intended purpose based on good engineering practice and past experience. (Ref. Dear Manufacturer Letters CD-86-11 (LD) entitled: Determination of Adjustable Parameters, and CD-87-5 (LD) entitled: Determination of a new Adjustable Parameter).

(Signature)

(Title)

C. The following statement as required by 40 CFR 86.092-14(c)(11)(ii)(D)(3). (Ref. 40 CFR 86.082-2 and Advisory Circular No. 24)

Defeat Devices

The vehicles described in this application for certification are not equipped with auxiliary emission control devices which can be classified as a defeat device as defined in 40 CFR 86.082-2. The limits, stops, and seals (or other means used to inhibit adjustment) have been designed to accomplish their intended purpose based on good engineering judgment and past experience.

D. A statement as required by 40 CFR 86.092-14(c)(11)(ii)(D)(4).

Unreasonable Risks

(your company name) states that any element of design, system, or emission control device installed on or incorporated in our vehicles for the purpose of complying

with standards prescribed under section 202 of the Clean Air Act, will not, to the best of our information and belief, cause the emission into the ambient air of pollutants in the operation of our motor vehicles which cause or contribute to an unreasonable risk to the public health or welfare except as specifically permitted by the standards prescribed under section 202 of the Clean Air Act. Any element of design, system, or emission control device installed on or incorporated in our vehicles, for the purpose of complying with standards prescribed under section 202 of the Clean Air Act, will not, to the best of our information and belief, cause or contribute to an unreasonable risk to public safety. The term "Pollutant" means:

1. Diesel Particulates
2. Nickel
3. MMT Combustion Products
4. Ammonia
5. Sulfates
6. Hydrogen Sulfide
7. Hydrogen Cyanide
8. Ruthenium Combustion Products
9. Nitosamines

or any other pollutant which we have identified which can reasonably be expected to be emitted from these vehicles.

E. A statement as required by 40 CFR 86.092-14(c)(11)(ii)(D)(5) for light-duty vehicles:

High-Altitude Compliance

Based on our engineering evaluation or emission testing (state which one) the light-duty vehicles described in this application comply with emission standards at high-altitude unless exempt under 40 86.090-8(h).

F. A statement as required by 40 CFR 86.092-14(c)(11)(ii)(D)(6) for light-duty trucks, if applicable.

### High-Altitude Compliance

Based on our engineering evaluation or emission testing (state which one) the light-duty trucks sold for principal use at designated high-altitude comply with the high-altitude emission requirements. All other light-duty trucks are capable of being modified to meet high-altitude emission standards unless exempted under 40 CFR 86.091-9(g)(2).

G. A statement as required by 40 CFR 86.092-14(c)(11)(ii)(D)(7):

### Spare Parts and Maintenance Service

(your company's name) affirms that a list of emission and emission-related service parts, including part numbers and sources of parts, will be provided to the vehicle owner. In addition, service facilities and emission-related repair parts will be conveniently available.

H. Warranty statement- The modifier accepts the responsibility to warrant the parts installed by them for the useful life of the modified vehicles. (or words to that effect) OEM will warrant the vehicle as it was, when sold to the modifier.

## 5.11 Test Vehicle Selection

### A. Worst Case Test Vehicle:

1. The test vehicle selection criteria is specified in 40 CFR 86.092-14(c)(7)(i)(A)(1).
2. Tabulate the vehicle parameters subject to the selection criteria. The specific values for each selection criterion for your vehicles should be listed. In addition, indicate the test vehicle chosen based on the selection criteria.

### B. Road-load horsepower:

(Ref. 40 CFR 86.092-14(c)(11)(ii)(B)(3) and 86.129-80, and Advisory Circular Nos. 55C and 73.)

1. Method of determination (frontal area or coastdown).
2. Description of Frontal area calculation (if applicable).

3. Copy vehicle coastdown report (if applicable).
4. Description of coastdown vehicle (including tires) (if applicable).
5. Name of facility performing coastdown (if applicable).
6. Address of coastdown facility (if applicable).
7. Date coastdown performed and date of coastdown report (if applicable).

5.12 Maintenance

(Ref. 40 CFR 86.090-25, 86.087-38, 86.079-39, 85.1510(a)(1))

A. Durability-data vehicle maintenance record (if assigned deterioration factors are not used) (Maintenance on durability-data vehicles must be performed in accordance with 40 CFR 86.090-25.).

B. Recommended maintenance schedule as contained in owners manual.

C. Maintenance instructions for the proper maintenance and use of the vehicle by the purchaser, including a description of the documentation required as evidence of compliance with the instructions.

(Note - Maintenance instructions should be written in clear non-technical language. The maintenance instructions should include information on how to contact your company for assistance.)

### 5.13 Labels

(Ref. 40 CFR 86.092-35 and 85.1510(c))

(Ref. 40 CFR 80.24 (Controls applicable to motor vehicle Manufacturers.))

A. Vehicle Emission Control Label: Provide a copy of the Vehicle Emission Control Information label (actual label), or a copy of the exact label information (if actual label is not available). The primary label requirements are specified in 40 CFR 86.092-35.

The Vehicle Emission Control Label should include the vacuum hose routing diagram applicable to the vehicles as required by 40 CFR 85.1510(c).

B. Unleaded Gasoline Only labels: Provide a copy of the "Unleaded Gasoline Only" labels (or actual labels) which will be mounted on the dashboard and adjacent to each gasoline tank filler inlet.

### 5.14 Confidential Material

(Ref. Advisory Circular No. 92.)

Note: Under the provisions of the Freedom of Information Act (FOIA), EPA is required to release on request information contained in this Application for Certification, unless it is being claimed by you to be "Confidential" for good sufficient cause. Please consult the above reference for limitations.

EPA has developed regulations to elaborate on confidential material. This regulation is found in 40 CFR, Subpart B, Part 2. The Federal Regulations governing confidential material are found in 5 U.S.C. 552(b)(4) -- Exemption 4.

As a matter of policy, EPA only releases information that has been claimed as business confidential when a final determination has been made that the information is not entitled to confidential treatment by EPA's Office of General Counsel. Any determination to release material that has been classified as confidential by the submitter will be made AFTER the business has received appropriate notice of the decision.

EPA has made determinations in the past for certain materials routinely submitted as classified by the submitter as confidential. These determinations are called "Class Determinations." Examples of material in these class determinations are:

Any material submitted prior to the issuance of a certificate of conformity. If the submitter wants these materials to be classified as confidential until the vehicles (or engines) are introduced into commerce, the submitter MUST identify the date these vehicles will be introduced into commerce.

After introduction into commerce the only materials that have been classified as confidential are: 1. Projected sales, 2. Catalyst loading, 3. Drawings or graphs that could not be determined by inspection.

Examples of information that is very unlikely to be classified as confidential: Facility descriptions, exhaust system dimensions, name and location of the submitter.

Actual data used to demonstrate compliance will not be classified as confidential.

If this application contains information claimed by you as confidential, mark it "CONFIDENTIAL" and include it in this section. All other sections will be considered by EPA to be free from confidential material and thus will be subject to release upon request.



## Chapter 6

### 6. Revising the Application:

After the application has been submitted, revisions may become necessary. The material which needs to be submitted depends upon whether or not a revision involves a product line change that may have an effect on emissions.

If a revision merely corrects an error or omission and does not involve a product line change which may have an effect on emissions, only a brief description or explanation of the revision and the revised application pages are submitted.

If a revision involves a product line change which may have an effect on emissions, a Certificate Change Request must be submitted along with a description of the revision and the revised application pages.

\*<sup>1</sup>. If the name of the company on the certificate is to be different from the manufacturer's name, please explain why.

\*<sup>2</sup>. Projected U.S. sales includes motor vehicle and motor vehicle engines offered for importation or imported under 40 CFR 85.1505 and 85.1509.

## Appendix 1

(Instructions for the engine family name assignment will be here - Per section 4.4 of the General Instructions)

(Instructions for the evaporative family name assignment should also appear here - Per 4.5 of the General Instructions)

Appendix 2