
Major Steps of Certification and Compliance

for

2006 and Later Model Year HMCs

HMA Workshop, March 9, 2005

EPA/CARB

Major Steps of Certification and Compliance

Pre-Certification Requirements

1. Register with EPA (for New MFR)

2. Group Products into Engine Families

3. Conduct Durability and Emissions Tests

4. Prepare Application & Cert Summary Sheet

5. Submit Appropriate Certification Fees

6. Submit Application Package

Post -Certification Requirements

7. Build Vehicles to Certified Specifications

8. Label Each New Vehicle/Engine

9. Submit Amendments to Application

10. Submit Required Reports

11. Provide Maintenance Instructions and Warranty Service, Submit DRs and Conduct Recalls

Step 1. Register with EPA

- ▶ **Send a Manufacturer Registration Letter**
 - Provide a brief description of your company and your certification plan; include answers to List of Questions in Attachment 1
 - Send to EPA and CARB
- ▶ **Fill out the Manufacturer Code Entry Form**
 - Access www.epa.gov/otaq/cfeis.htm, download the form
 - Fill out and send it back to EPA via email: omscfeis@epa.gov

Step 2. Group Products into Engine Families

▶ **Group vehicles into Engine Families (EFs) based on engine displacement and emission characteristics (40 CFR §86.419-2006 & §86.420-78)**

- **Class I-A <50 cc** (currently N/A for CARB)
- **Class I-B 50< 170 cc**
- **Class II 170<280 cc**
- **Class III >= 280 cc**
- **Combustion cycle**
- **Cooling system**
- **Fuel system**
- **Method of air aspiration**
- **etc.**

▶ **Name an EF:**

Character Position	1	2	3	4	5	6	7	8	9	10	11	12
EF Name Example	6	B	A	C	X	.	1	2	5	D	6	F
Sequence	MY	Three letter MFR code assigned by EPA			Vehicle category	Displacement				MFR specified code		

Step 3. Conduct Emissions Tests to Demonstrate Compliance

1 of 2 - Exhaust emissions

- **Demonstrate compliance:**

- Certification level \leq applicable standard for each and every regulated pollutant

Where:

Certification level = Projected emission value at vehicle's end-of-useful life

- **Procedure:**

- Select one Emission Data Vehicle (EDV) from each EF
- Conduct service accumulation to stabilize emissions
- Conduct at least four emission tests at minimum test distance, total test distance, and points in between before and after periodic maintenance
- Use method of least squares to generate a straight line fit for data for each pollutant
- Extrapolate straight line fit to useful life distance for each pollutant
- Extrapolated emission results for each pollutant must be below the emission standards

Step 3. Conduct Emissions Tests to Demonstrate Compliance 2 of 2 - Evaporative/Permeation Emissions

- **Two methods may be used to show permeation emissions compliance:**
 - ▶ Emission Testing - 40 CFR §1051.515
 - ▶ Certify-by-Design - 40 CFR§1051.245(e)
- **No crankcase evaporative emissions allowed**
- *Whole vehicle SHED evap test required for CARB – T13
CCR Section 1976*

Step 4. Prepare a Complete Application Package

Complete Application Package:

1. **Common Application Information, if any (PDF format)**
2. **Application (Text content, PDF format)**
 - o A cover letter signed by an authorized representative of your company
 - o Complete content of application for certification according to 40CFR§86.416-80
 - o A Fee Payment Form (only required by EPA certification)
 - o California E.O., if sales area is “California only”
 - o EPA certificate for 50 state families certified in CA
 - o CARB - Corporate Average Plan (CAP)
3. **Certification Summary Information (CSI) XML Data File**
 - o Created via EPA Central Data exchange (CDX) web interactive site and saved on to your computer

Step 5. Pay Appropriate Certification Fees

- ▶ Payment is required in advance of any EPA certification service
 - ▶ \$ amount may change:
 - \$2,414 per EF per MY (Effective 7/12/04 to 12/31/05)
 - check www.epa.gov/otaq/fees.htm for updated fee schedule
 - ▶ Payment procedure: EPA Guidance CCD-04-14
 - ▶ Fee Payment Form and instructions:
 - downloadable from the same website as above
 - ▶ CARB certification fees due at end of each calendar year
- Note: Must also pay full certification fee for “CA-only” certificate*

Step 6. Submit Application Package

▶ Three procedures:

- 50 States: Submit to EPA & CARB concurrently
- 49 States: Submit to EPA only
- CA only: Submit to CARB first; receive CARB EO; finally, submit the application with EO to EPA

▶ Current application submission process

- Mail electronic application package (preferably on a CD-ROM with both application files and CSI files) to EPA and CARB separately

Step 7. Build Vehicles to Certified Specifications

Manufacturers must assure that the production vehicles or engines are within the scope of an issued certificate, with respect to:

- Materials
- Engine & drivetrain design
- Fuel system
- Emission control system components and strategies
- Exhaust after-treatment devices; or
- Any other device and component that may influence emissions

Step 8. Label Each New Vehicle/Engine

- ▶ **VIN** : Vehicle Identification Number
 - ▶ **VECI**: Vehicle Emission Control Information label
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Step 9. Submit Amendments to Application

- ▶ **Must submit amendments to EPA before taking action:**
 - Add a new configuration
 - Modify a FEL
 - Make any changes that may affect emissions

Note:

- 1. A lower FEL requires emission data from production vehicles*
- 2. CARB does not allow modifying FEL after certification.*

Step 10. Submit Required Reports

For example:

- ▶ **End-of-model Year Production Report**
- ▶ **Quarterly Production Reports (CARB)**

Step 11. Provide Maintenance Instructions and Warranty Service, Submit DR, Service of Process and Conduct Recalls

- ▶ **Maintenance Instructions**
 - ▶ **Warranty Requirements**
 - ▶ **Defect Reports and Recalls**
 - ▶ **Provide Information Regarding Service of Process Located in the United States**
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Summary

- ▶ **Manufacturer is responsible for pre- and post-certification requirements to assure the vehicles are in compliance for the full useful life**
 - ▶ **EPA /CARB will conduct additional tests to verify compliance and provide assistance in your compliance process.**
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