



Maintenance of Application Records

Ref. 40 CFR 86.440-78

- **Retention Period:**
 - **Six years** for all records after certificate issuance
- **General Information Records:**
 - Each EDV ID and selection description
 - Emission Control System (ECS) description
 - Fuel system description
 - Test procedures description
 - Completed application in EPA recommended format
- **EDV & Emissions Tests Records:**
 - History of EDV(s)
 - Complete records of all emission tests
 - Service accumulation log with maintenance
- **Records Retention System:**
 - Organized
 - Indexed
 - Designated location established
 - Hard copies preserved for future reference
 - Available upon request by EPA

Records Required on a per Test Basis

Ref. 40 CFR 86.542-90

- Test Number
- System or device tested
- Date and time of test
- Instrument operator
- Driver or operator
- Complete Emission Data Vehicle (EDV) Description
- Dynamometer serial number
- Relevant instrument information
- or, if approved, test cell number
- Recorder charts
- Test cell atmospheric conditions
- Parameters related to Constant Volume Sampler (CVS) metering device
- Accumulated pump revolutions during exhaust sample collection or
- Number of standard cubic meters metered by a Venturi
- Humidity of dilution air
- Driving distance for each of three test phases
- Specifics for non-gas fueled vehicles

Report Filing Record Retention

Ref. 40 CFR 85.1906 Subpart T

- **Five years** from manufacturer date of engine or vehicle and available to the US EPA upon request:
- a) Voluntary Emissions Recall (40 CFR 85.1904)
- b) Emissions Defect Report (40 CFR 85.1903)

Prohibition of Defeat Devices

Ref. 40 CFR 86.409-78

- a) No motorcycle shall be equipped with a defeat device
- b) Defeat device means any element of design which:
 - 1) Senses temperature, vehicle speed, engine RPM, transmission gear, manifold vacuum, or any other parameter for the purpose of activating, modulating, delaying or deactivating the operation of any part of the emission control system and
 - 2) Reduces the effectiveness of the emission control system under conditions which may reasonably be expected to be encountered in normal urban vehicle operation and use, unless
 - i) Such conditions are substantially included in the Federal emission test procedure, or
 - ii) The need for the device is justified in terms of protecting the vehicle against damage or accident, or
 - iii) The device does not go beyond the requirements of engine starting or warm-up.

Commonly Used Abbreviations

CAA	Clean Air Act	g/km	Grams per Kilometer
CFR	Code of Federal Regulations	HC	Hydrocarbon
EDV	Emission Data Vehicle	CO	Carbon Monoxide
EPA	Environmental Protection Agency	NOx	Nitrogen Oxide
E.O.	Executive Order	CH4	Methane
DF	Deterioration Factor	CO2	Carbon Dioxide
FEL	Family Emission Limit	N2O	Nitrous Oxide

Disclaimer: The information in this pamphlet is not exclusive nor intended to be a substitute or replacement of the CFR detailed regulatory requirements.

Highway Motorcycle Certification & Compliance

Statute and Regulations

Clean Air Act

- Certification and Warranty Requirement
- Production Report

40 CFR 86 Subpart F

- Chassis Exhaust Emissions Testing Procedures

40 CFR 1051

- Evaporation/Permeation Standards/Test Procedures

40 CFR 1060

- Optional Evaporation/Permeation Certification and Test Procedures

40 CFR 85 Subpart S

- Recall Regulations

40 CFR 85 Subpart T

- Defect Report & Voluntary Emissions Recall Report



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EPA-420-F-16-051
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Exhaust Emissions Standards & Useful Life

Highway Motorcycle HMC Class Chart

Class ¹	IA	IB	II	III
Displacement (cc)	0-49	50-169	170-279	≥280
HC (g/km)	1.0	1.0	1.0	—
CO (g/km)	12.0	12.0	12.0	12.0
HC+NOx (g/km)	—	—	—	0.8 ⁶
Optional ² HC+NOx (g/km)	1.4	1.4	1.4	—
FEL ³ Max. HC+NOx (g/km)	5.0	5.0	—	2.5
Test Distance Minimum (km) ⁴	2,500	2,500	2,500	3,500
Total Test Distance (km)	6,000	6,000	9,000	15,000
Useful Life ⁵	5yr/6km	5yr/12km	5yr/18km	5yr/30km

¹ Class determined by displacement (40 CFR 86.419-2006)

² In lieu of the HC standard for Class I and II only (40 CFR 86.410-2006)

³ Maximum Family Emission Limit (FEL) for (40 CFR 86.449)

⁴ ≥ Four tests of emissions, (40 CFR 86.427-78)

⁵ Whichever occurs first (40 CFR 86.402-98)

⁶ Small Volume MFR: {< 500 employees worldwide & <3k US sales/model year (MY)} may use 1.4g/km for compliance {40 CFR 86.410-2006(a)(2)(e)}



Required Reports

Who?	What?	When?	Why? 40 CFR	How? to Whom?
All Certificate Holders	Final US Production Report for MY	Within 45 Days from MY End	86.415(b)	V E R I F Y & C E R T R E P R E S E N T A T I V E
Certificate Holders Using FEL(s) Averaging for Compliance	Initial Averaging Report	Pre-MY Production	86.449	
	Final Averaging Report	Within 120 Days after MY End		
Certificate Holders Finding ≥25 of Same Defect	Emission Defect Information Report (EDIR)	15 Days from Discovery for 5 Years from MY End	85.1901-1909	
	Voluntary Emissions Recall Report (VERR)	Within 15 Days from Owner Noti- fication		
		Minimum Six Quar- terly Follow- up Reports Required		

Emission-related Warranty Requirements Q&A

Q1: What are key regulatory references?

- A1. The Clean Air Act §207 Title 42§7541
- A2. Guidance Letter CISD-06-15 (MC) July 25, 2006
- A3. 40 CFR §86.411-78 and 86.412-78
- A4. 40 CFR §86, Appendix VI: Emission Related Components

Q2: What is to be covered?

- A1. Components whose failure would increase regulated emissions (40 CFR§86, Appendix VI)

Q3: What timeframe is required for warranty coverage?

- A1. The useful life of a vehicle as specified in 40 CFR §86.402 (See HMC Chart)

Q4: How is the warranty coverage to be communicated?

- A1. To the US EPA: Certification Application
To be complete (40 CFR §86.417-78(b)), must show:
 - 1) Appropriate coverage
 - 2) Effective warranty claims processing system
- A2. To the Customer: Owner’s Manual (OM):
Identical warranty content as presented in Application for Certification

Q5: What is required to insure effective warranty claims processing?

- A1. No Cost Repair/Replacement (The Clean Air Act 207)
- A2. A clear procedure in OM for end user to obtain parts, service & warranty repairs (CISD-06-15)
- A3. Demonstrated ability to meet the needs above, e.g. dealer network, 24 hour service or toll-free number, or other clear end user access procedure

Q6: What is required for emission defect reporting?

- A1. An established defect tracking approach {40 CFR§85.1903(c)}

Q7: When is a defect report submittal required?

- A1. Same emission-related defect existent in ≥25 vehicles {40 CFR§85.1903(a)(2)}

EPA Confirmatory Testing

Ref. 40 CFR 86.434-78

- Number of test vehicles at EPA’s discretion
- Test facility at EPA’s discretion
- EPA official results determine compliance
 - Manufacturer completes service accumulation

EPA Production Vehicle Testing

Ref. 40 CFR 86.422-78

- Same as above

Manufacturer Certification Testing

Ref. 40 CFR 86.418-78; 86.427-78

- Four test points minimum
- If maintenance: Test before & after
- No maintenance: Equidistant test distances
- Minimum/Total Test Distances:
 - By Class (40 CFR 86.410-2006)
- EDV selection criteria (40 CFR 86.420-78):
 - Greatest potential to exceed applicable emission standards
- Deterioration Factor (DF) Calculation Cautions:
 - If calculated DF<1.000, then DF =1.000 (40 CFR 86.432-78(e))
 - If tested value <0.10 g/km, then use 0.10 g/km (40 CFR 86.432-78(b))

