North American Certification and Compliance Program for Highway Motorcycles and Recreational Vehicles

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September 16, 2019

Motorcycle/Recreational Vehicle Sectors

On-highway Motorcycles	
Off-road Motorcycles	
Recreational Vehicles	 
Snowmobiles	

Topics

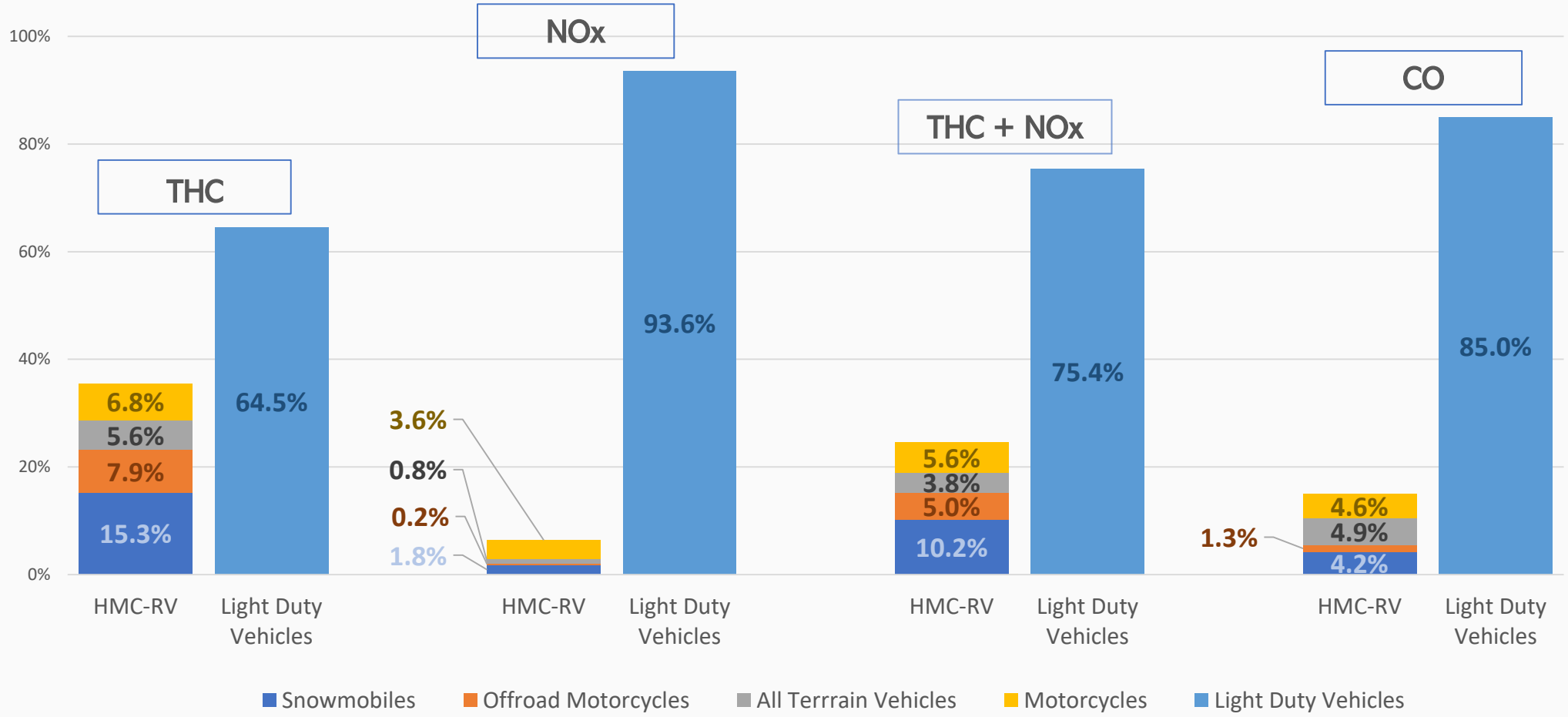
- Overview and Vision
- Industry Trends for HMC/RV Certification and Production
- Cert Requirements/ New Guidance /AECDs/Reporting Templates
- Compliance Testing Programs (Confirmatory, Production, SEA and PLT)
- In-Use Performance Assessment
- Enforcement Action Updates
- Round Robin Testing Programs
- Motorcycle Shift Modeling

Compliance Vision of EPA

- Provide compliance assistance to manufacturers to facilitate successful market participation while ensuring regulatory compliance
- Facilitate a level playing field to protect the investments of all market participants
- Ensure mobile source air quality goals are achieved or exceeded

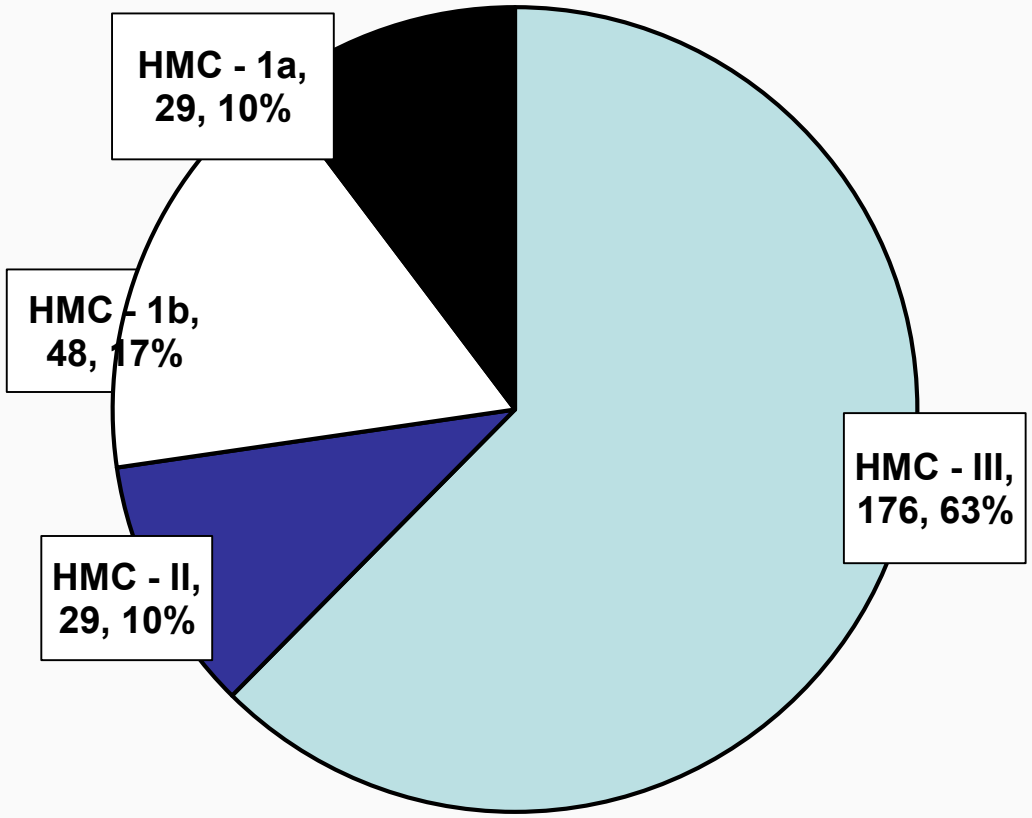
OVERVIEW OF RECENT TRENDS IN HMC/RV CERTIFICATION AND PRODUCTION

Percentage of 2018 Total Annual Tons of Emission Inventory



**2018 MOVES Model estimates based solely on model default parameter estimates and may differ from inventories generated using detailed local data.*

2018 MY HMC Certified Engine Families & Production

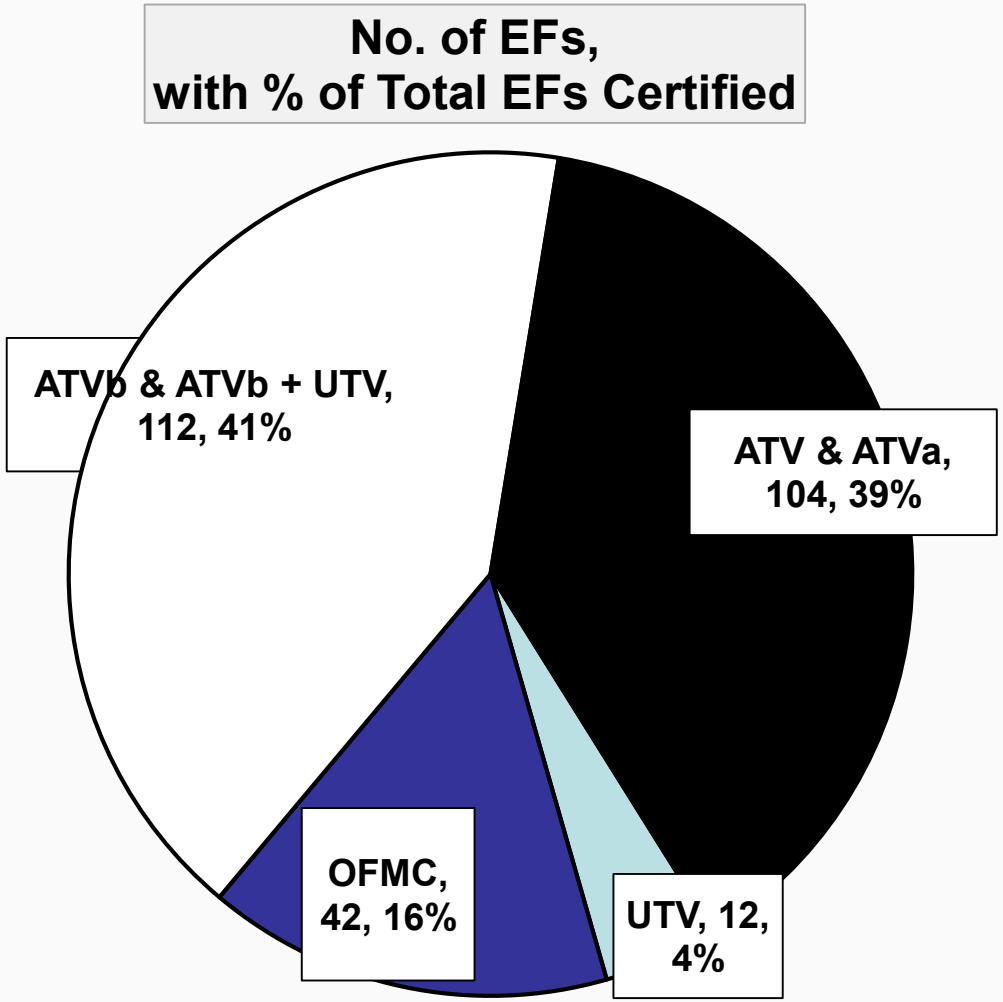


No. of EFs, with % of Total EFs Certified

	EFs with Fuel Injection	EFs with Carburetor	Total Certified Engine Families
HMC	210	72	282
%	60.3%	39.7%	100%
HMC - Class III	170	6	176
%	96.6%	3.4%	62.4%

	Production Units with Fuel Injection	Production Units with Carburetor
HMC - %	82.5%	17.5%
HMC - Class III - %	96.7%	3.3%

2018 MY RV Certified Engine Families & Production

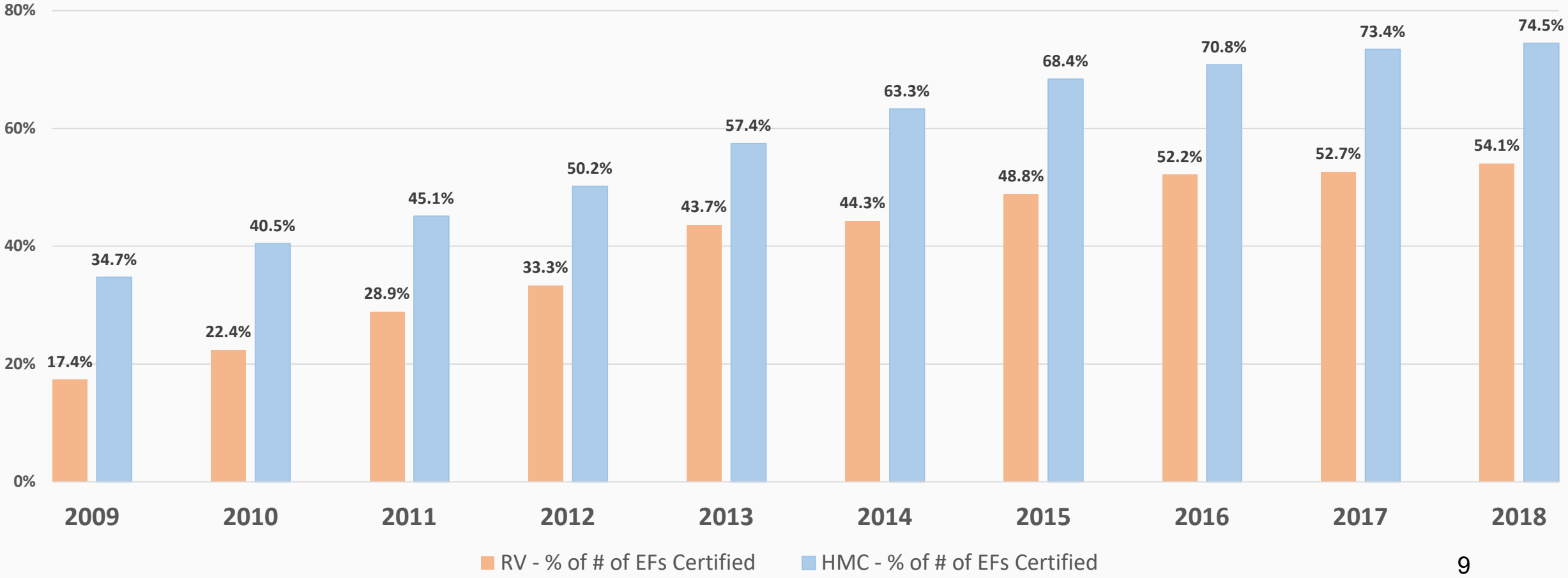


	EFs with Fuel Injection	EFs with Carburetor	Total Certified Engine Families
RV	146	124	270
%	54.1%	45.9%	100%

	Production Units with Fuel Injection	Production Units with Carburetor
RV - %	69.1%	30.9%

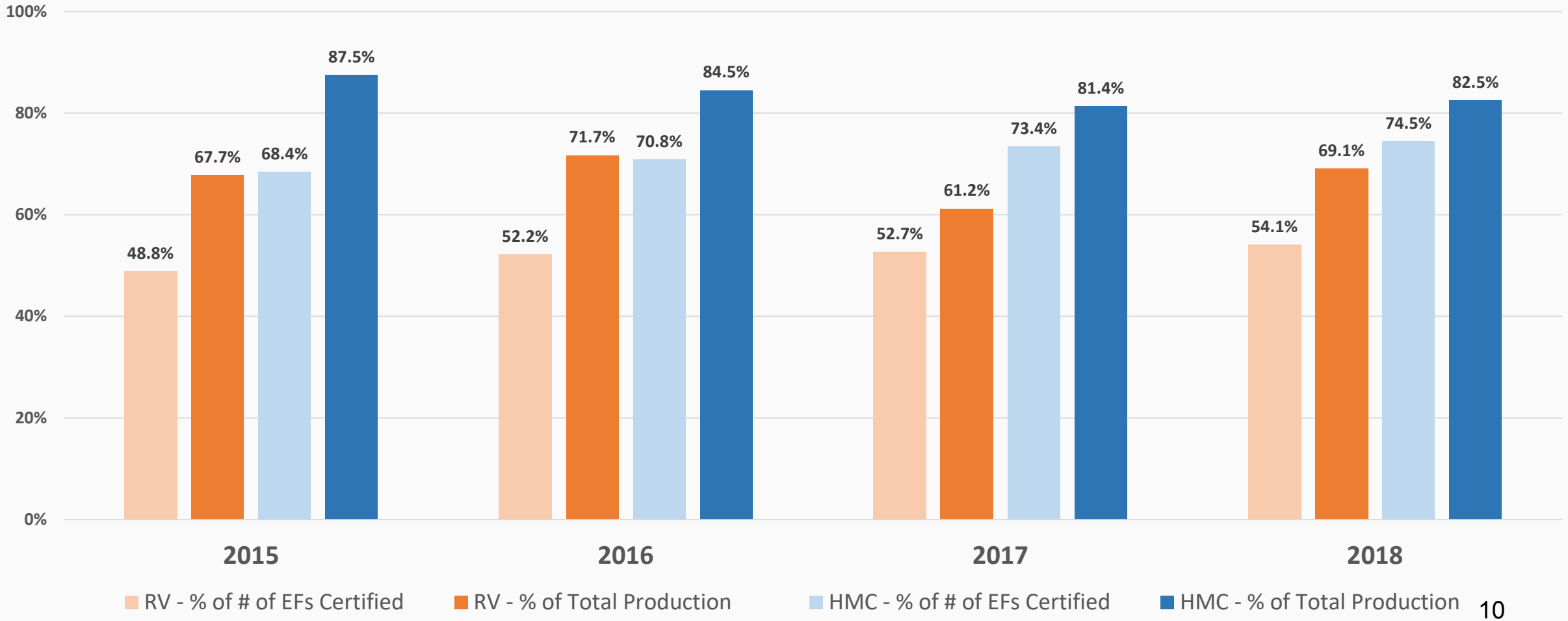
HMC & RV Vehicles with Fuel Injection Technology [MY 2009-MY 2018]

(shown as Percentage of # of EFs Certified)



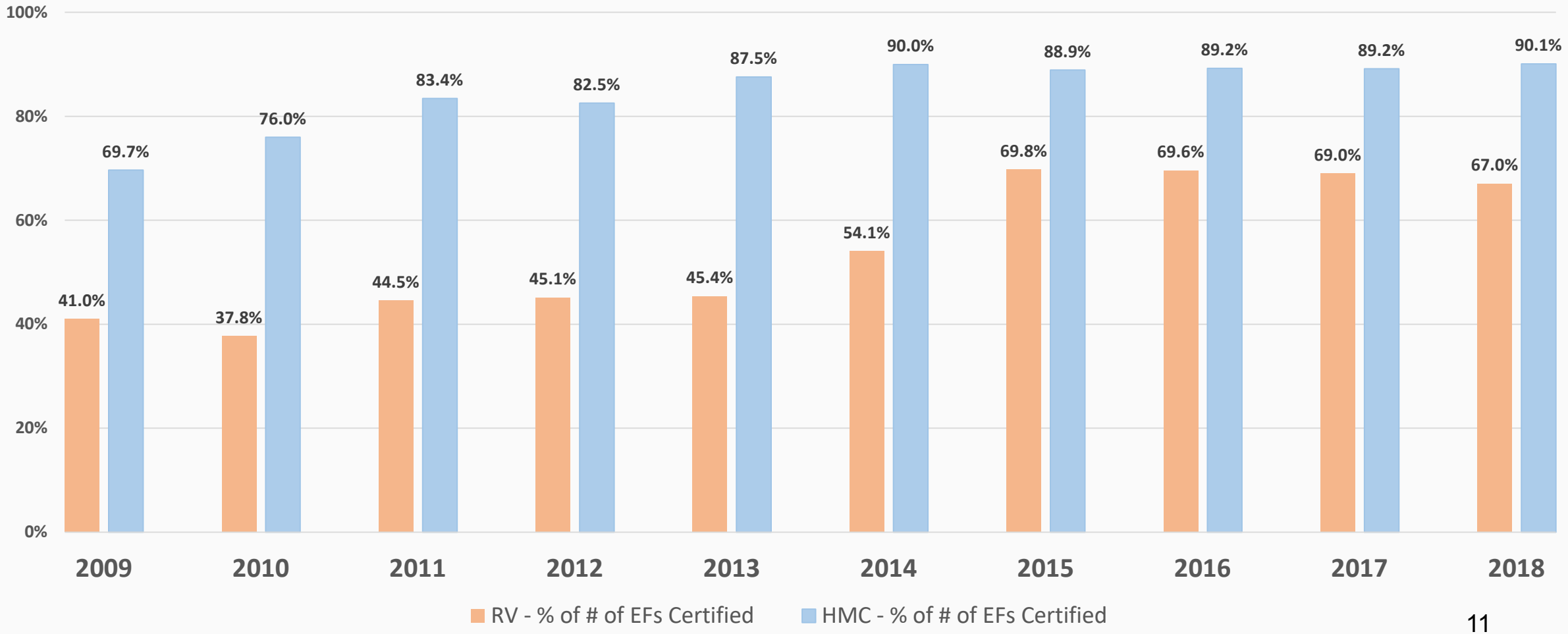
HMC & RV Vehicles with Fuel Injection Technology

(shown as Percentage of # of EFs Certified, and as Percentage of Total Production)



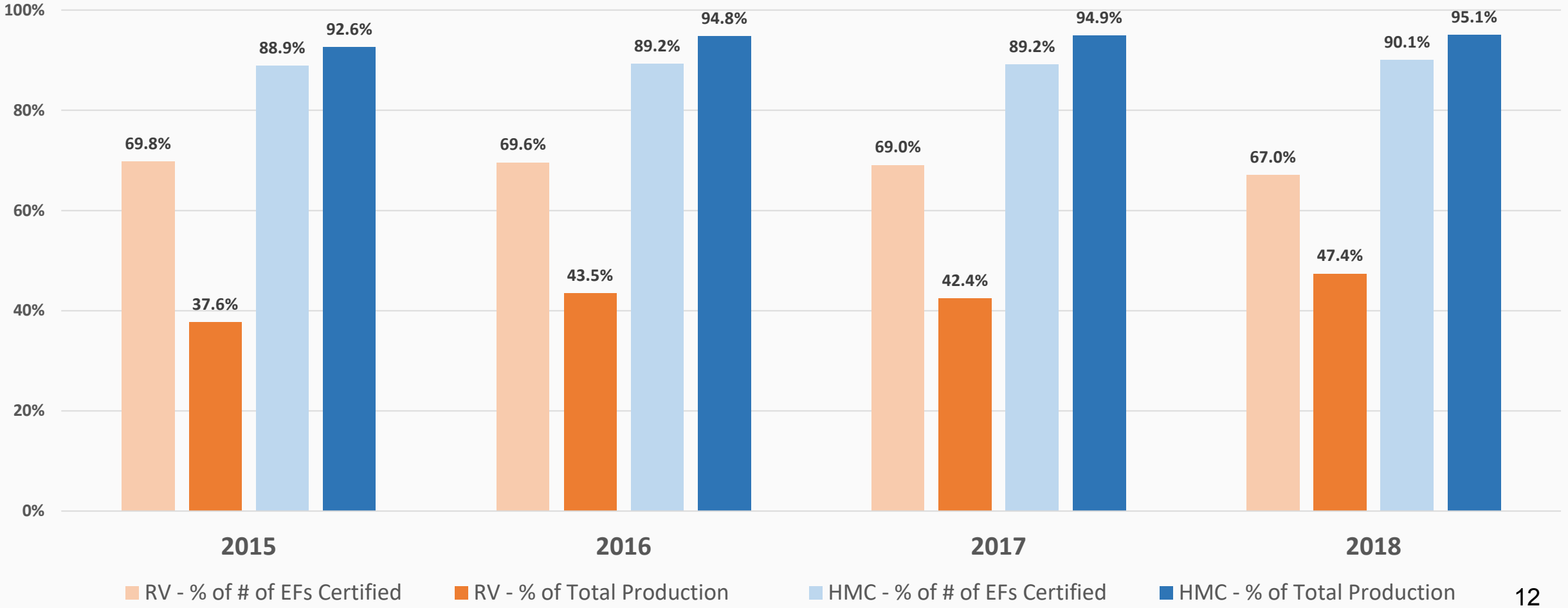
HMC & RV Vehicles with Catalysts [MY 2009 - MY 2018]

(shown as Percentage of # of EFs Certified)

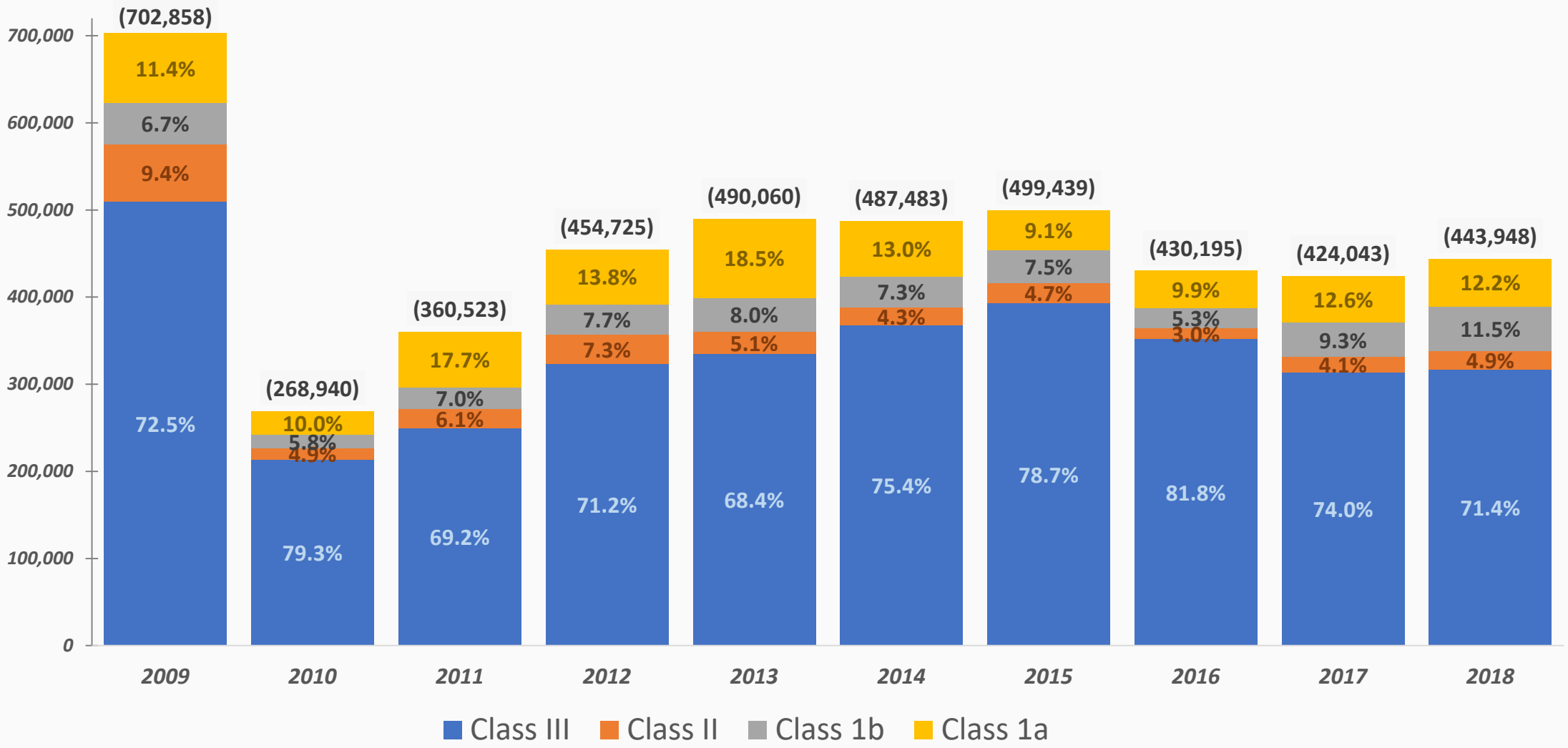


HMC & RV Vehicles with Catalysts [MY 2015 – MY 2018]

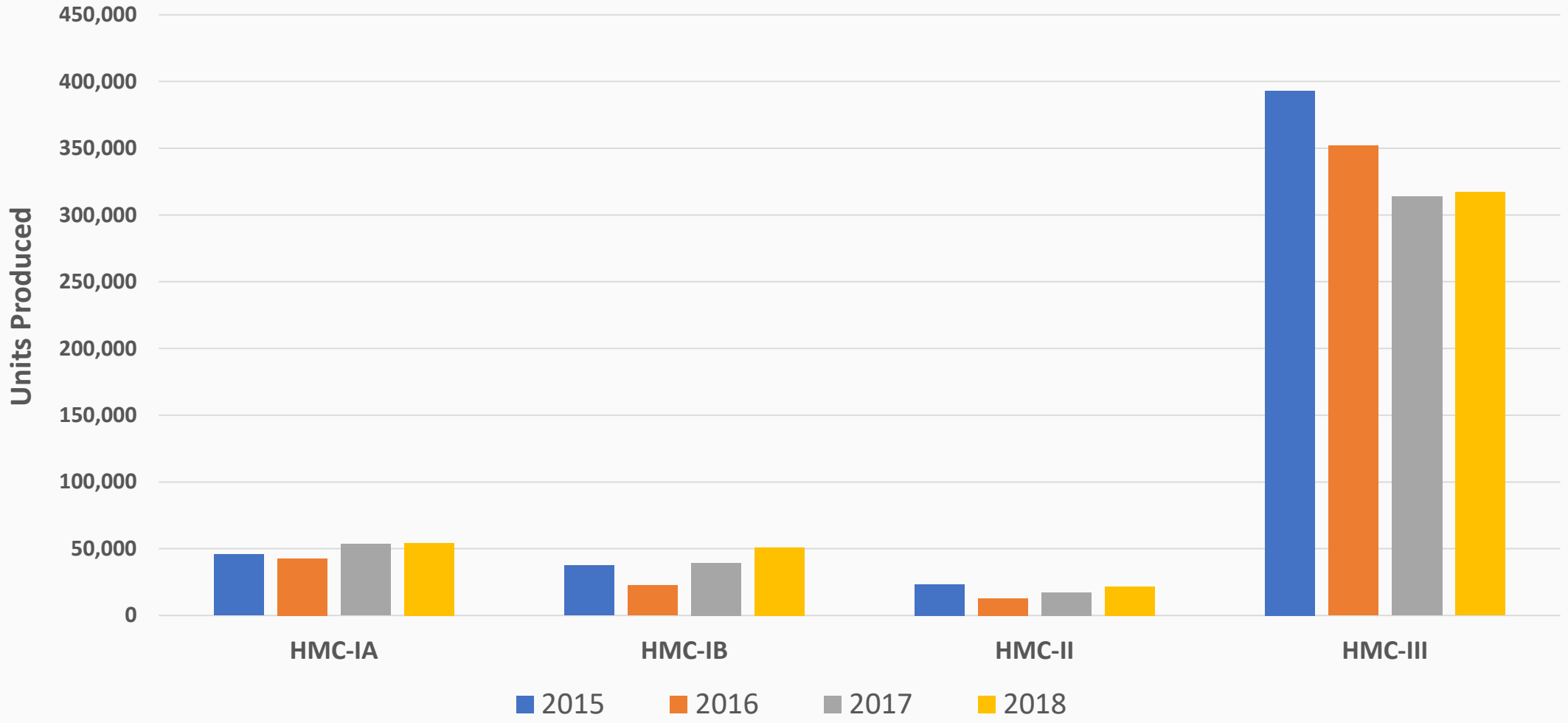
(shown as Percentage of # of EFs Certified, and as Percentage of Total Production)



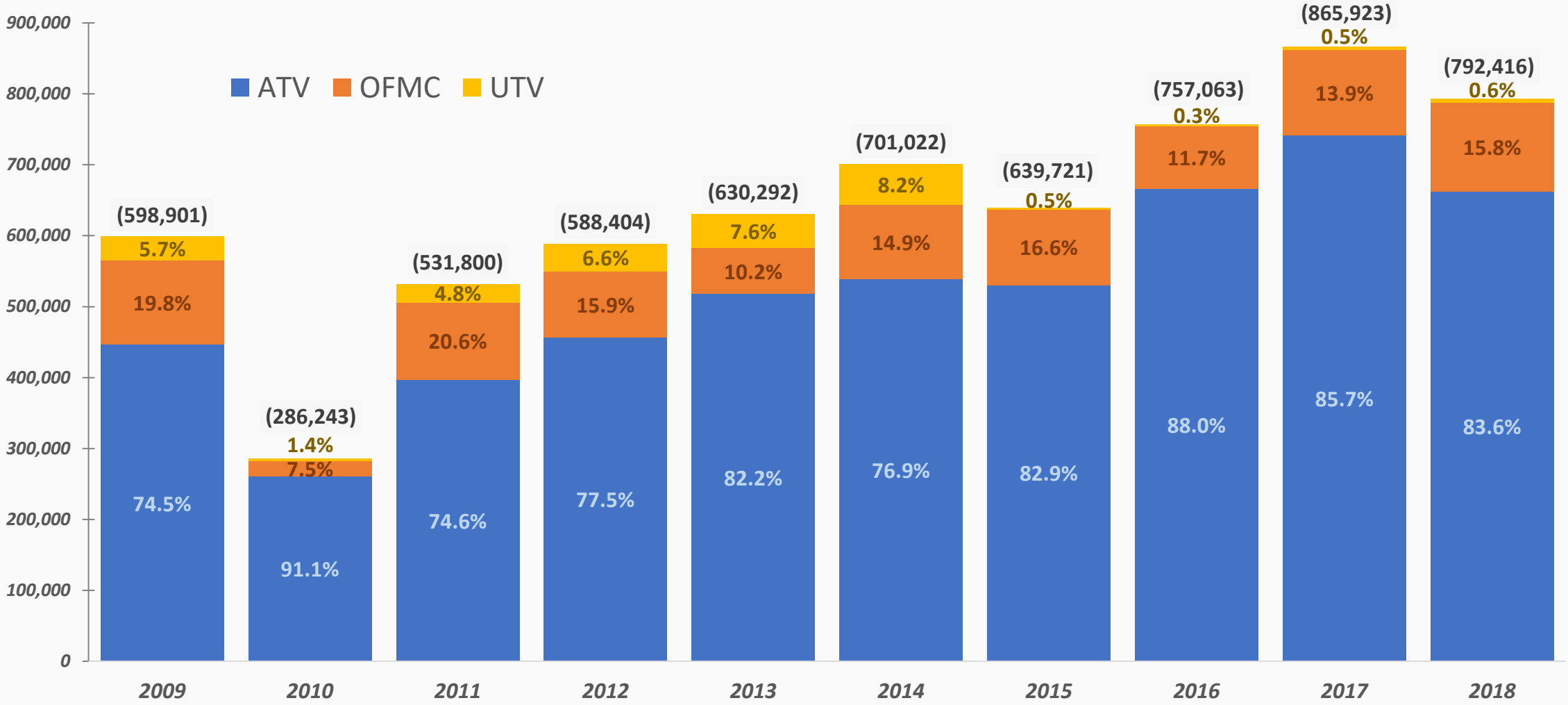
HMC Annual US Production by MY (with Class Percentage)



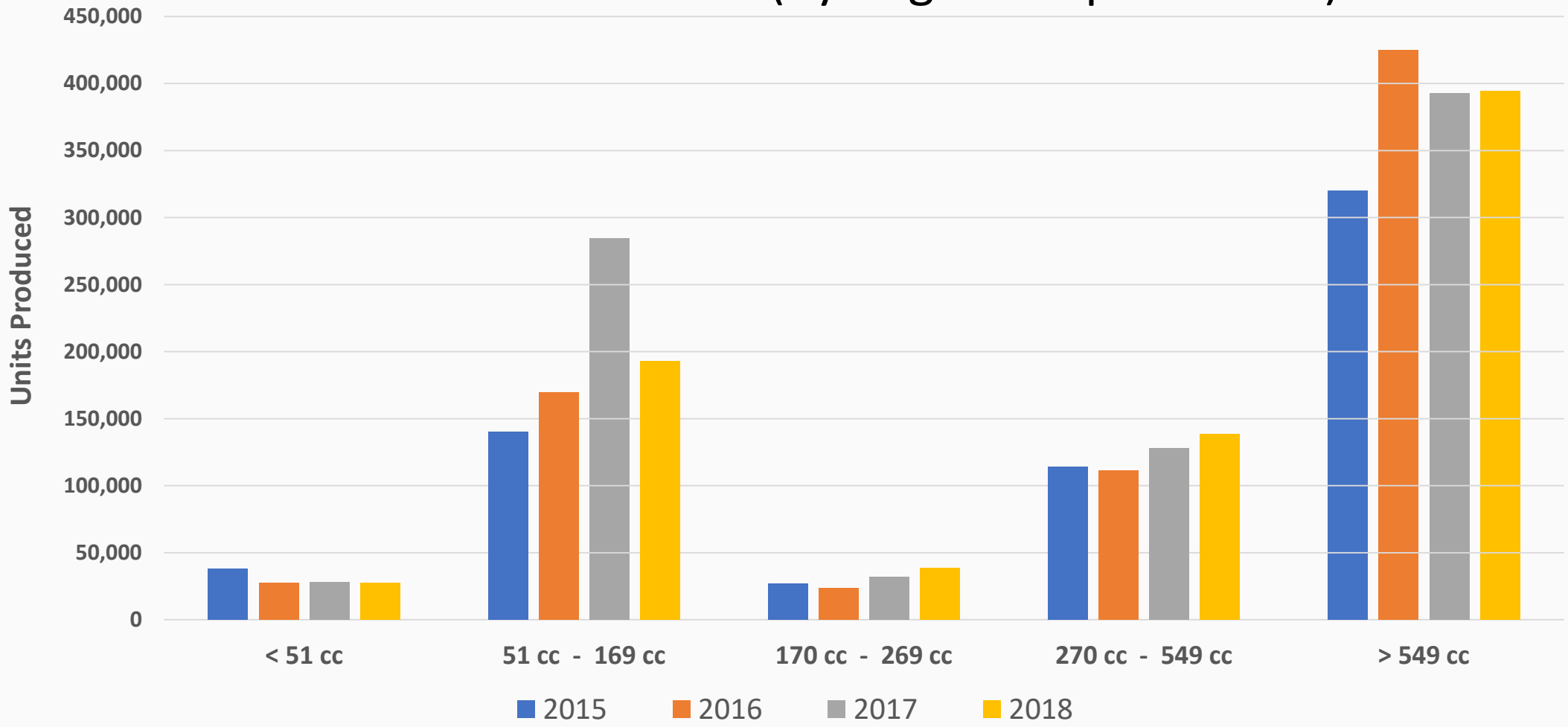
HMC Production Trend (by Class)



RV Annual US Production by MY (with RV Type Percentage)

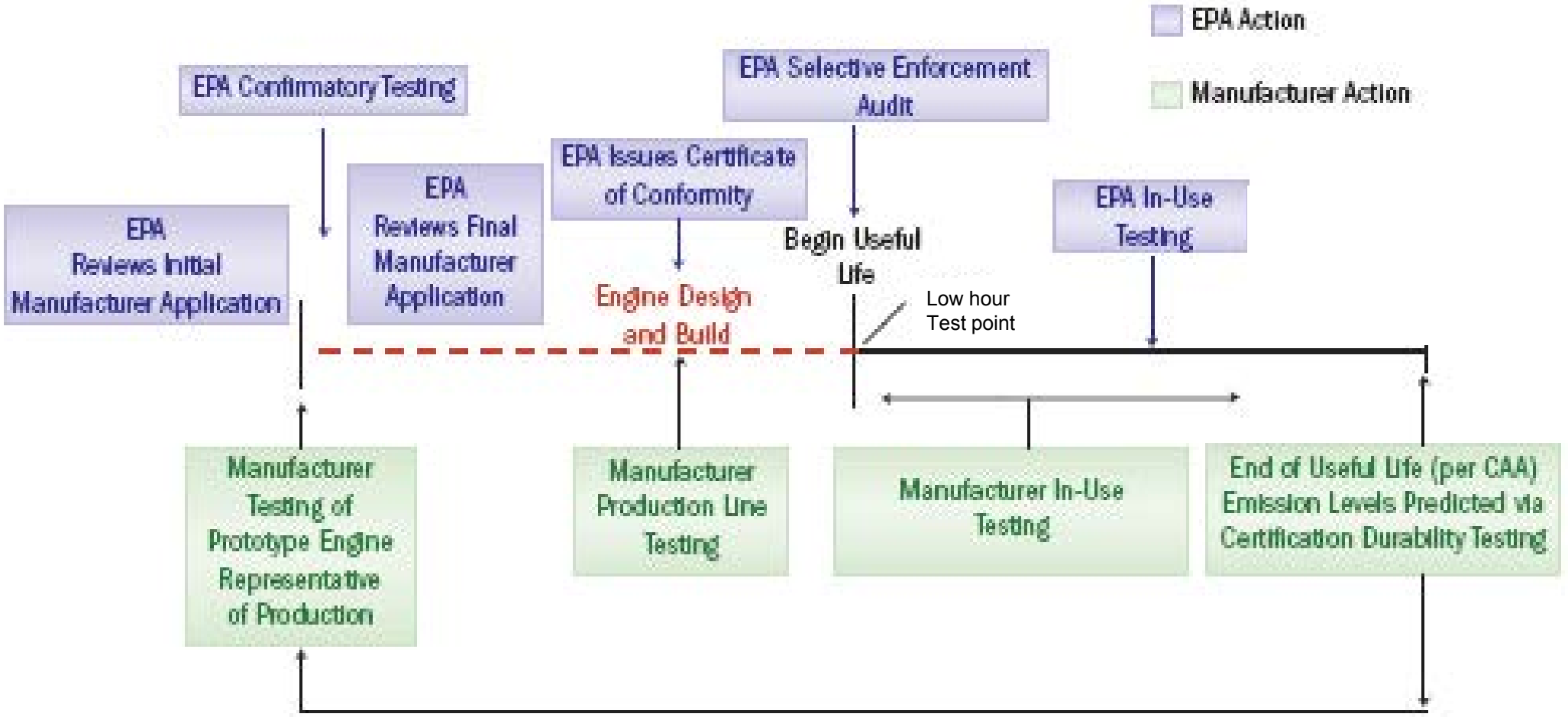


ATV Production Trend (by Engine Displacement)



CERTIFICATION REQUIREMENTS

Highway Motorcycles (HMCs) and Recreational Vehicle Certification/Compliance Timeline



Certification

- Who may certify?
  - Manufacturer-of-Record (MOR)
  - Importer (CAA defines importers as manufacturers). EPA expects importers to exercise a degree of control over the production facility, to be aware of production line changes and have control and access to all test data and articles.

Motorcycle Definition (§ 86.402-98)

Motorcycle means any motor vehicle with a headlight, taillight, and stoplight and having: Two wheels, or Three wheels and a curb mass less than or equal to 793 kilograms (1749 pounds).

- A motorcycle is a motorcycle regardless whether it has adaptors for snow.

Motor Vehicle Definition

In your application, you must demonstrate that your vehicle is not a motor vehicle:

- 42 U.S. Code § 7550. Definitions

  Clean Air Act - CAA § 216 (2) The term “motor vehicle” means any self-propelled vehicle designed for transporting persons or property on a street or highway.

- 40 CFR 85.1703 – Definition of motor vehicle.

(a) For the purpose of determining the applicability of section 216(2), a vehicle which is self-propelled and capable of transporting a person or persons or any material or any permanently or temporarily affixed apparatus shall be deemed a motor vehicle, unless any one or more of the criteria set forth below are met, in which case the vehicle shall be deemed not a motor vehicle:

(1) The vehicle cannot exceed a maximum speed of 25 miles per hour over level, paved surfaces; or

(2) The vehicle lacks features customarily associated with safe and practical street or highway use, such features including, but not being limited to, a reverse gear (except in the case of motorcycles), a differential, or safety features required by state and/or federal law; or

(3) The vehicle exhibits features which render its use on a street or highway unsafe, impractical, or highly unlikely, such features including, but not being limited to, tracked road contact means, an inordinate size, or features ordinarily associated with military combat or tactical vehicles such as armor and/or weaponry.

(b) Note that, in applying the criterion in paragraph (a)(2) of this section, vehicles that are clearly intended for operation on highways are motor vehicles. Absence of a particular safety feature is relevant only when absence of that feature would prevent operation on highways.

Significance of a Certificate of Conformity:

- Generally, this means the vehicles or engines must be:
  - Built to same design specifications as the test engine and match the specifications in the application for certification;
  - Among the models named in the application for certification;
  - Built in the model year named on the certificate;
  - Built at the production facilities named in the application for certification;
  - Built by the manufacturer named in the application for certification; and
  - Not introduced into commerce prior to the effective date of the certificate.
  - See 40 C.F.R. § 85.2305 and § 1068.103(a).

Application for Certification

- Manufacturer prepares and submits an Application for Certification which:
  - Follows EPA format and electronic submission protocols;
  - Follows EPA guidance;
  - Fully describes ALL of the models in the engine family that will be covered by the certificate; and
  - Contains a compliance statement that the test engines/vehicles were tested in accordance with regulations and all production engines/vehicles will be built to conform to the description in the application for certification.
  - See additional requirements:
    - For highway motorcycles - 40 CFR 86.420-78
    - For recreational vehicles - 40 CFR 1051.205

- Manufacturer updates the application when models are added or other changes made (Running Change).
- Submission of incomplete or inaccurate applications will result in delays in the completion of the review and may result in denial.

Emission Data Demonstration

- Manufacturer tests worst case engine/vehicle in the engine family
  - A new worst case may require a new engine family.
  - For Highway motorcycles - 40 CFR 86.420-78
  - For recreational vehicles - 40 CFR 1051.205(o)

- Manufacturer emission data submissions can be checked with confirmatory or production test orders

Emission Data Demonstration

- For common questions regarding vehicle configurations that may affect catalyst durability, follow guidance AC-17F to demonstrate equivalent catalysts and see example below.

	600-650 (degC)	650-700 (degC)	700-750 (degC)	800-850 (degC)	850-900 (degC)
New Cat	19	21	105	100	80
Orig Cat1	21	19	135	80	70

Time at temperature interval, sec

Confirmatory Testing

- EPA may order testing to confirm results of manufacturer-submitted Emission Data Vehicle (EDV) demonstrations
- EPA-ordered confirmatory testing of Emission Data Vehicles (EDV's) (pre-certification) has demonstrated improved pass rates over time.
- Testing results of Production Vehicles (PV's) have not matched the level of improvement that has been seen on pre-certification vehicles
- Challenges fulfilling the regulatory requirement to provide production vehicles for testing may impact the review of future applications

EPA TEST METRICS

Highway Motorcycle Test (2012 to present, Sep. 12, 2019)		
HMC Class		**Failure Rate %**
<50 cc		11.76%
50 - 169 cc		21.43%
170 - 279 cc		0.00%
>279 cc		4.00%

Recreational Vehicle Test (2012 to present, Sep. 12, 2019)		
Vehicle Category		**Failure Rate %**
ATV/UTV		6.67%
170 - 279 cc		0.00%

Other Manufacturer Responsibilities

- Manufacturer must not introduce product into U.S. Commerce until the effective date of the Certificate of Conformity (COC). **Vehicles with a California COC that do not have an EPA COC may not be sold in California.**
- Certification for the engine family must be renewed annually (but data may be reused or "carried over" when there is no design change from year to year).
- Manufacturer must label each engine/vehicle produced with an EPA-approved label.
- Manufacturer must warrant that its engine/vehicle will meet standards for full useful life (both performance and defect warranties are required).
- Manufacturer must report emission-related defects if the reporting threshold is exceeded (40 CFR 85.1903(a)(2); 40 CFR 1068.501
- Manufacturer must maintain records.
  - Keep testing and production records for 6 years [40 CFR 86.440-78] or 8 years [40 CFR 1051.250(c)]. This requirement is renewed each time a carryover application is approved.

Deterioration Factor Calculations

- The regulations for applying the deterioration factor(DF) for highway motorcycles(HMCs) and recreational vehicles(RVs) are different.
- EPA has received inquiries regarding DFs and how it pertains to using data between HMCs and RVs.
- EPA will post a template and publish a guidance.
- When entering CSI.5 data, please ensure that the measured data that you report is the data that you use for your DF calculation.

What must be covered by an Emission Warranty [CAA § 207(a)(1)]

- You must warrant to the ultimate purchaser and each subsequent purchaser that the new engine, including all parts of its emission-control system, meets two conditions:
  - (1) It is designed, built, and equipped so it conforms at the time of sale to the ultimate purchaser with the requirements of this part.
  - (2) It is free from defects in materials and workmanship that may keep it from meeting these requirements.

- A warranty must be offered for new vehicles/engines that warrants that it conforms at the time of sale
- Your emission-related warranty must be valid for the period of time proscribed by regulations; for recreational vehicles; this is 50% of the vehicle's minimum useful life in kilometers or hours of engine operation (where applicable), or at least 30 months, whichever comes first. (40 CFR 1051.120) You may offer an emission-related warranty more generous than we require. The emission-related warranty for the engine may not be shorter than any published warranty you offer without charge for the engine.[1]
- EPA may confirm that warranty service is accessible per manufacturer's instructions to purchaser

[1] See 40 CFR 1051.120 and 40 CFR part 1068, Appendix I

AUXILIARY EMISSION CONTROL DEVICES (AECD'S)

AECDs and Defeat Devices

- ***Auxiliary emission-control device*** means any element of design that senses temperature, motive speed, engine RPM, transmission gear, or any other parameter for the purpose of activating, modulating, delaying, or deactivating the operation of any part of the emission-control system.

- AECDs should be **fully disclosed** in the application for certification.

- ***Defeat devices.*** You may not equip your vehicles with a defeat device. A defeat device is an auxiliary emission-control device that reduces the effectiveness of emission controls under conditions that the vehicle may reasonably be expected to encounter during normal operation and use. This does not apply to auxiliary emission-control devices you identify in your certification application if any of the following is true:
- (1) The conditions of concern were substantially included in the applicable test procedures described in subpart F of this part.
- (2) You show your design is necessary to prevent vehicle damage or accidents.
- (3) The reduced effectiveness applies only to starting the engine.

AECD Descriptions Submitted within Application

EPA is working on an AECD submission template that will be implemented in the future. Until this template s implemented, be sure to provide the following details with AECD descriptions:

- Explain what criteria are used to justify the AECD
- Describe parameter(s) sensed and parameter(s) controlled
- Describe onboard sensors involved in the AECD
- Describe the function of the algorithm, entry and exit conditions, describe any timers, operational thresholds, etc.
- Explain the effect on emissions and the duration of the reduced effectiveness of the AECD's control function
- If component protection is the justification, explain how the component may be damaged and how the AECD is used only to the extent necessary

Additional Information We May Request:

1. Submit a base engine map with torque(or throttle angle) and power vs. engine RPM. The map may be a 10 by 10 grid or finer resolution. Please add the following to this map:
   a. Target lambda contours, highlight region of closed-loop lambda control
   b. Exhaust temperature contours (measured after engine before TWC)
   c. FTP cycle operation region (or dots for each second)
   d. Vehicle top speed at the highest gear in which lambda equals 1
2. Identify each engine or emission control component that needs protection through your enrichment strategies
3. Indicate the temperature limitations of those components
4. Describe how each of enrichment strategy addresses those temperature limitations;
5. Explain why you believe the enrichments as seen in the lambda contour map for the purpose of increasing power do not go beyond the need for protecting those components.
6. Submit the temperature contour maps for each protected component, with X- rpm and y-Torque
7. Identify any other alternative A/F maps used for transient, excursions, or any other purposes
8. Identify other strategies that modify fuel injection quantities.
9. Identify any other user control that may modify fuel injection quantities.

Compliance Reviews

Reporting

- EPA reviews Production, ABT, and PLT reporting for manufacturers to determine if the reporting and testing obligations are met

- Leveraging information technology to identify potential problems from manufacturer-submitted compliance reports

Additional Application-Related Items

- Test Data Significant digits must be carried out to at least one more significant figure than the standard
- GHG reported values must be based on actual test data. However the regulations allow manufacturers to use data from other sources and related engines and technologies to propose GHG values that are appropriate for their engines.
- FOIA material must be included with every application. The FOIA document must be identical to the application document with blank pages where there is CBI (ie. AECDs, projected sales, part numbers, etc).
- Always include Engine and vehicle OEM information.
- The CDI has AECDs. Please always include a map of spark timing vs. engine speed for all CDI.
- Use the numbers you have reported to calculate your DFs. We have found that some manufacturers are using numbers rounded to different significant digits for their DF calculations.
- Testing with fuels other than E0 must have their own data set in CSI.5.
- Emission related parts numbers must match the part on the vehicle, or the manufacturer must be able to produce a cross reference.

Prohibition on Introduction Into U.S. Commerce of New Uncertified Engines or Vehicles

- CAA Section 203(a)(1), 42 U.S.C. § 7522(a)(1): The following acts and the causing thereof are prohibited
  - In the case of a manufacturer of new motor vehicles or new motor vehicle engines for distribution in commerce, the sale, or the offering for sale, or the introduction, or delivery for introduction, into commerce, or (in the case of any person, except as provided by regulation of the Administrator), the importation into the United States, of any new motor vehicle or new motor vehicle engine, manufactured after the effective date of regulations under this part which are applicable to such vehicle or engine unless such vehicle or engine is covered by a certificate of conformity issued (and in effect) under regulations prescribed under this part or part C in the case of clean-fuel vehicles (except as provided in subsection (b));

RECENT GUIDANCE DOCUMENTS

- CD-19-03 RV testing with E10
- CD-18-14 RV GHG reporting
- CD-18-09 Fee Refunds
- CD-18-04 “Carry-Across” guidance for certification and testing

Helpful Websites

- Publications
  https://www3.epa.gov/otaq/verify/publications.htm#edir

- Guidance Documents
  https://www.epa.gov/ve-certification/guidance-letters-and-advisory-circulars-vehicle-engine-and-equipment-programs

- Emission Standards for Motorcycles
  https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P100O9ZX.pdf

- Emission Standards for Recreational Vehicles
  https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P100OA0L.pdf

COMPLIANCE PROGRAMS

Compliance Reporting Requirements for HMC and RV:

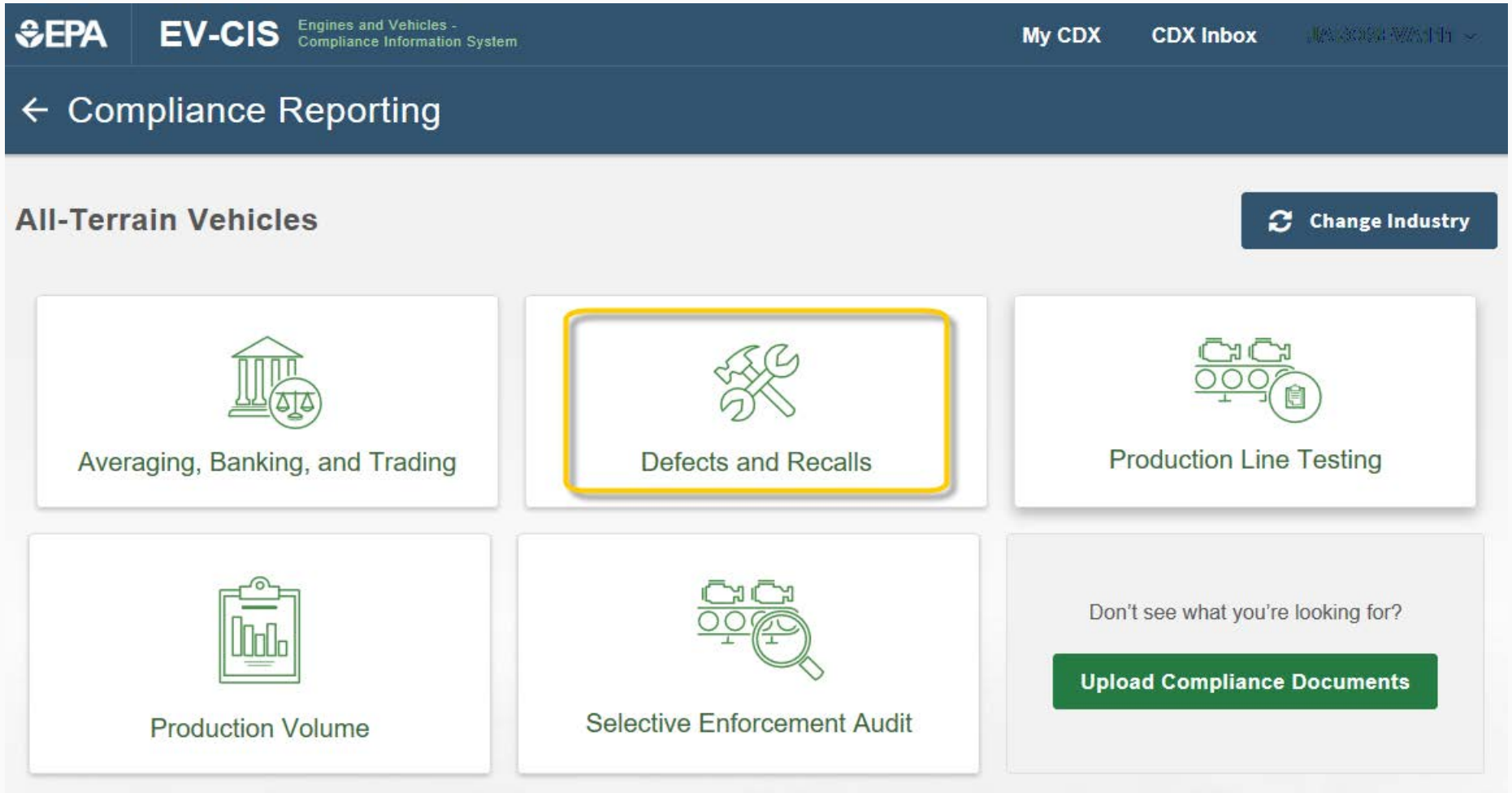
		Production Volume Report	Production-Line Testing Report	Averaging, Banking, & Trading (ABT) Report			Defect Report
				Cert. App. Projections	*Initial Report*	*Final Report*	
HMC	**Reg citation:**	40 CFR 86.415-78 (b)		40 CFR 86.449		40 CFR 86.449	40 CFR Part 85 Subpart T
	Due	Within 45 days after the end of the model year	N/A	Pre-MY Production	N/A	Within 120 days after the end of the model year	The specific emission-related defect exists in twenty-five or more vehicles or engines of the same model year
RV	**Reg citation:**	40 CFR 1051.250	40 CFR 1051.301	40 CFR 1051.725	40 CFR 1051.701	40 CFR 1051.701	40 CFR 1068.501
	Due	Within 45 days after the end of the model year	Within 30 days of the end of each test period	Pre-MY Production	Within 90 days after the end of the model year	Within 270 days after the end of the model year	< 1,000 units: 20 defects 1,000-50,000 units: 2.0% >50,000 units: 1.1% to 2.0%

Defect & Recall Reporting

- After obtaining a certificate of conformity, vehicle and engine manufacturers are required to submit a number of reports to EPA under a variety of compliance programs. Manufacturers should submit compliance reporting data to the Engines and Vehicles – Compliance Information System (EV-CIS) in accordance with the regulations.

- The new EV-CIS Defects and Recalls compliance reporting module will support the defect and recall reports based on regulations in Parts 85 and 1068.

Defect Reporting - Guidance Document: CD-16-12



RECOMMENDED TEMPLATES

Catalyst Information Form

Catalyst Information

40 CFR §86.416-80(a)(2)(i), 40 CFR §86.420-78(b)(7), and/or 1051.230(b)(5) where applicable

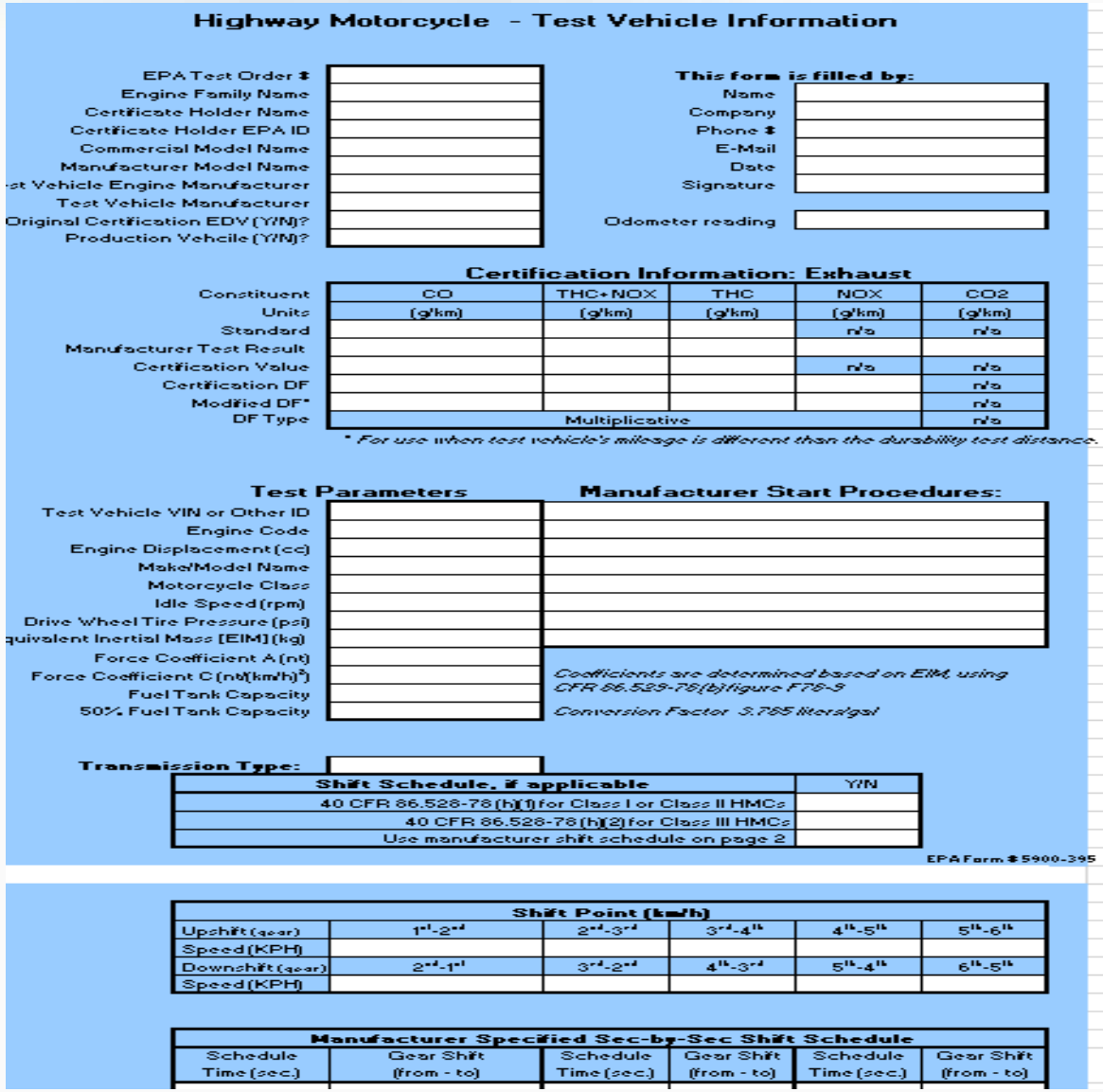
Note 1. For fields in which the catalyst information is not applicable or not available, please type "NA". We may consider your application to be incomplete if appropriate information is not provided.

Note 2. Production tolerances for the specifications below may be included at the applicant's discretion.

Engine Family Name:

Catalyst Information (Catalyst on this form refers to the loaded substrate without casing)

		Catalytic Converter Catalyst 1	Catalytic Converter Catalyst 2	Catalytic Converter Catalyst 3
Section 1	Catalyst Manufacturer			
	Part # shown on catalyst			
	Part # shown on catalyst casing			
	Vehicle Manufacturer Part #			
	Catalyst Manufacturer Part #			
	Catalytic/Active material (Pt, Pd, Rh, Ag, Ni, Ce, Zr, CoO, etc)			
	Ratio of Catalytic/Active material, in the order: Pt:Pd:Rh:Ag:Ni:Ce:Zr:CoO...			
	Loading of Catalytic/Active material (g/L)			
	Carrier/Washcoat Materials			
	Catalyst Type (honeycomb, mesh, etc.)			
	Catalyst Location (e.g., in muffler, etc.)			
	Substrate Material (ceramic, metallic, etc.)			
	Substrate Material (ceramic, metallic, etc.)			
Section 2		**Honeycomb Type**		
	Outside Container Diameter (mm)			
	Outside Container Length (mm)			
	Inside Substrate Diameter (mm)			
	Inside Substrate Length (mm)			
	Cell Density (specify units)			
		Mesh Type		
	Type of flash [illegible]			



Highway Motorcycle - Test Vehicle Information

EPA Test Order #	
Engine Family Name	
Certificate Holder Name	
Certificate Holder EPA ID	
Commercial Model Name	
Manufacturer Model Name	
Test Vehicle Engine Manufacturer	
Test Vehicle Manufacturer	
Original Certification EDV (Y/N)?	
Production Vehicle (Y/N)?	

This form is filled by:

Name	
Company	
Phone #	
E-Mail	
Date	
Signature	

Odometer reading

Certification Information: Exhaust

Constituent	CO	THC+NOX	THC	NOX	CO2
Units	(g/km)	(g/km)	(g/km)	(g/km)	(g/km)
Standard				n/a	n/a
Manufacturer Test Result					
Certification Value				n/a	n/a
Certification DF					n/a
Modified DF*					n/a
DF Type	Multiplicative				n/a

* *For use when test vehicle's mileage is different than the durability test distance.*

Test Parameters

Test Vehicle VIN or Other ID	
Engine Code	
Engine Displacement (cc)	
Make/Model Name	
Motorcycle Class	
Idle Speed (rpm)	
Drive Wheel Tire Pressure (psi)	
Equivalent Inertial Mass (EIM) (kg)	
Force Coefficient A (nt)	
Force Coefficient C (nt/(km/h)²)	
Fuel Tank Capacity	
50% Fuel Tank Capacity	

Manufacturer Start Procedures:

Coefficients are determined based on EIM, using CFR 86.529-78(b) figure F78-3

Conversion Factor 3.785 liters/gal

Transmission Type:

Shift Schedule, if applicable	Y/N
40 CFR 86.528-78 (h)(1) for Class I or Class II HMCs	
40 CFR 86.528-78 (h)(2) for Class III HMCs	
Use manufacturer shift schedule on page 2	

EPA Form # 5900-395

Shift Point (km/h)					
Upshift (gear)	1st-2nd	2nd-3rd	3rd-4th	4th-5th	5th-6th
Speed (KPH)					
Downshift (gear)	2nd-1st	3rd-2nd	4th-3rd	5th-4th	6th-5th
Speed (KPH)					

Manufacturer Specified Sec-by-Sec Shift Schedule					
Schedule Time (sec.)	Gear Shift (from - to)	Schedule Time (sec.)	Gear Shift (from - to)	Schedule Time (sec.)	Gear Shift (from - to)

Highway Motorcycle Test Information Form

COMPLIANCE TESTING AND INSPECTION PROGRAMS

Production-Line Testing

Manufacturer testing of products has indicated a compliance rate of nearly 100%, yet metrics do not show a compliance rate this high.

EPA testing has shown a compliance rate of 70% for some categories.

Additionally, given the differences in compliance rates for standard evaluation, the Agency has considered expanding the use of the regulatory mandated compliance assessment tools.

EPA Compliance Inspection Programs

You may receive a test or inspection order from EPA under one of the following programs:

- Production testing (40 CFR 86.415-78; 40 CFR 1068.27)
- Selective Enforcement Audit (SEA)-- Recreational Vehicles; 40 CFR 1068 Subpart E
- EPA audits and inspections (40 CFR 86.441-78; 40 CFR 1068.20)
  - You may receive an inspection order from EPA to inspect your products, laboratory,testing, manufacturing processes, or records;
    - Check to see if products conform to what was represented in your cert application
    - Ensure laboratory equipment and procedures conform to regulatory requirements
    - Ensure than mandatory records are maintained and consistent to information being reported to EPA

EPA may evaluate in-use performance of products to determine whether they conform during useful life (CAA 207)

In-Use Emission Performance Evaluation

- Goal: use Portable Emission Measurement Systems (PEMS) as critical components to broadening our data sets

- Evaluation stage:
  - Collect “emission signature” during regulatory test
  - Also collect emission signature during normal operation (real world, *in-situ)*
  - Tests considered: FTP, US06, dyno on-road-simulation, on-road/real world
  - Identify noncompliant results in-use

- Using an Emission Signature Device
  - Screening testing
  - Focused on identifying gross emission differences in the real world

Compliance Oversight of Test Data

- Working with independent contract labs through round robin test programs, we have seen improvements in the quality of reporting and test tracking
- Cooperation with other regulatory agencies such as Environment and Climate Change Canada and California's Air Resources Board, we have been able to broaden the North American compliance network through cooperative testing and information sharing
- Working with 3rd Party Laboratories inside and outside the United States we are better able to identify anomalies in reported test data
- EPA has expanded its audit rates of engine and vehicle manufacturers domestically and internationally

Other Testing and Compliance Items

- Top speed tampering-- If the vehicle has a governor that may be removed or adjusted, then it is considered an adjustable parameter, and the vehicle must be tested and operated in its worst case setting.

- Exhaust leaks– EPA will reject a test vehicle with exhaust leaks. Additionally, if leaks occur during a vehicle's warranty period, repairs must be covered under the manufacturer's warranty. EPA will be testing vehicles in-use performance, including screening for fugitive emissions (bypassing catalyst)

- Maintain emission data vehicles– prepare for storage or winterize EDV's if they will be stationary for extended time periods. EPA may request a confirmatory test during any carryover period.

ENFORCEMENT ACTION UPDATES

The Clean Air Act

- The Clean Air Act (CAA) was enacted by Congress in 1970, and amended in 1977 and 1990.
- Title II of the CAA – Mobile Source Provisions
  - "On-highway" (motor vehicles and motor vehicle engines) and "nonroad" (both nonroad vehicles and nonroad engines) are regulated.
  - "Motor Vehicle" includes all cars, trucks, motorcycles
  - "Nonroad" includes construction equipment, lawn and garden, generators, marine, locomotive, recreational vehicles
- CAA § 203 contains the following prohibitions (among others) for which EPA may seek injunctive relief and a penalty.

CAA Title II Prohibitions: Defeat Devices

- The following acts and the causing thereof are prohibited –
  - For any person to manufacture or sell, or offer to sell, or install, a part or component for a motor vehicle, where
    - A principle effect of the part or component is to bypass, defeat, or render inoperative any emission control device, and
    - The person knows or should know that such part or component is being offered for sale or installed for such use or put to such use.

CAA § 203(a)(3)(B), 42 U.S.C. § 7522(a)(3)(B).

CAA Title II Prohibitions: Tampering

- The following acts and the causing thereof are prohibited –
  - For anyone to remove or render inoperative an emission control component on a certified motor vehicle or engine prior to sale or delivery to ultimate purchaser, or
  - For anyone to knowingly remove or render inoperative any emission control component on a certified motor vehicle or engine after sale and delivery to the ultimate purchaser.

CAA § 203(a)(3)(A), 42 U.S.C. § 7522(a)(3)(A).

Additional Enforcement Issues

- Uncertified products
- Misbuilds– production vehicles not materially similar to representation in cert application
- Labeling violations
- Compliance reporting (end-of-year-sales)

SUMMARY

- The Gasoline Engine Compliance Center is partnering with other agencies to ensure we have a robust compliance presence in North America
- We are working with the industry and other domestic and nondomestic stakeholders to ensure the accuracy of data, reports, and other information submitted to EPA
- EPA wishes to inspire confidence that there is a level playing field for all market participants, and to reward the good faith efforts of diligent manufacturers and associated stakeholders
- We continue to expand our real-world presence to ensure that the full measure of air quality benefits that were intended by regulations are in fact delivered to the American public as well as our North American partners

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