



# **New Verify Module: Reporting A/C and Off-Cycle GHG Credits**

Light-Duty Manufacturer Webinar  
April 27, 2017



# Agenda

- Introduction
- What is the new module?
- Why are we doing this?
- Important dates and information
- Demonstration
- Q & A



# What is this new module?

- A means to electronically submit Air Conditioning and Off-Cycle data for the purpose of calculating GHG credits
- Available via the EPA Central Data Exchange (CDX)
  - >> Light-Duty Vehicle & Truck Home >> Fuel Economy >> Manage Compliance Report Dataset
- Collects data on Air Conditioning and Off-Cycle credits:
  - A/C efficiency
  - A/C leakage
  - Off-cycle “menu”
  - Non-menu technologies: 5-cycle and alternative public process
- Calculates A/C and Off-Cycle credits
  - Grams per mile, where required (e.g., A/C leakage, active aerodynamics)
  - Megagrams
  - By fleet (Cars & Trucks)



# Why are we doing this now?

- Manufacturers and EPA now have 5 years of experience with the GHG program
- While there is now some stability in the program and understanding of reporting requirements, EPA receives annual GHG reports in a variety of formats and presentation styles.
- We want the new system to achieve the following:
  - Create consistency in the calculations and validation of the results, reducing the potential for errors
  - Streamline the process for manufacturers and for EPA while collecting the information required for annual GHG reporting
  - Give confidence that all calculations are being applied correctly, equally, fairly



## How does it work?

- Create a “report” for a model year (e.g., 2016)
- Select what you want to report
  - Cars and/or trucks
  - A/C and/or Off-Cycle credit data
- Step through menus and sections to apply credits to *model types*
- Select “Review & Submit” to finish
- There’s also a batch upload option



## Important Dates & Information

- Deployment of this module will be May 5, 2017
- Required for use for 2017 model year reporting (credit reports due May 1, 2018)
- Data requirements, schema, and this presentation will be posted at:
  - <https://www.epa.gov/vehicle-and-engine-certification/compliance-reporting-light-duty-passenger-cars-and-trucks>
- Questions:
  - Rob French ([french.roberts@epa.gov](mailto:french.roberts@epa.gov))



# Module Demonstration



# CDX Central Data Exchange

MyCDX

Inbox

My Profile

Submission History

## Services

Manage

Status	Program Service Name	Role
	VERIFY: Vehicles and Engines Compliance Information System	<a href="#">EPA Reviewer</a>
	VERIFY: Vehicles and Engines Compliance Information System	<a href="#">Light-Duty</a>
	VERIFY: Vehicles and Engines Compliance Information System	<a href="#">Maintain Manufacturer Information</a>
	VERIFY: Vehicles and Engines Compliance Information System	<a href="#">Upload Compliance Documents</a>
	VERIFY: Vehicles and Engines Compliance Information System	<a href="#">View Manufacturer Information</a>
	Verify-RFC: Request an Engine, Vehicle or Component Certificate of Conformity (CROMERR)	<a href="#">CROMERR Signer</a>

Log on to EPA CDX



Add Program Service

Manage Your Program Services





## Choose "Fuel Economy" from LD Vehicle & Truck Home



About CDX  
MyCDX  
Inbox  
Change Password  
Frequently Asked  
Questions  
Help & Support  
CDX Home  
Terms & Conditions  
Logout

**U.S. Environmental Protection Agency**

### Verify: Engine and Vehicle Compliance System

Logged in as, RWFRENCHJR. Manufacturer: U.S. EPA Office of Transportation and Air Quality - EPA ([Logout](#))

[MyCDX](#) > Light-Duty Vehicle & Truck

#### Light-Duty Vehicle & Truck Home

- [Vehicles, Fuel Properties and Tests](#)
- [Confirmatory Test](#)
- [Certification](#)
- [Fuel Economy](#)
- [In-Use Verification Program \(IUV\)](#)



Note: Your session will time out after 60 minutes. Any data that has not been saved to your local workstation will be lost. Please save your data periodically to prevent any data loss.

**OMB# 2060-0104**

**You are in an encrypted secure session.**

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## U.S. Environmental Protection Agency

### Verify: Engine and Vehicle Compliance System

Logged in as, RWFRENCHJR. Manufacturer: U.S. EPA Office of Transportation and Air Quality - EPA ([Logout](#))  
[MyCDX](#) > [Light-Duty Vehicle & Truck](#) > Fuel Economy Home



#### Fuel Economy

- FE Label

- [Start New Dataset](#)
- [Open Existing Dataset](#)
- [Submit Batch Dataset](#)
- [Request Dataset Report](#)

- Road Load

- [Start New Dataset](#)
- [Open Existing Dataset](#)
- [Submit Batch Dataset](#)
- [Request Dataset Report](#)
- [Delete Road Load Dataset](#)

- Footprint

- [Start New Dataset](#)
- [Open Existing Dataset](#)
- [Submit Batch Dataset](#)
- [Request Dataset Report](#)
- [Delete All Footprints for a Carline](#)

- CAFE/GHG

- [Start New Dataset](#)
- [Open Existing Dataset](#)
- [Submit Batch Dataset](#)
- [Request Dataset Report](#)
- [Update CAFE/GHG Final Status Indicator](#)

- **Air Conditioning/Off-Cycle Credits**

- [Manage Compliance Report Dataset](#)





# Create a new report

My CDX CDX Inbox Welcome, Roberts French! Manufacturer Code: EPA [Logout](#)

[MyCDX](#) / [Light-Duty Vehicle & Truck](#) / [FE Home](#) / [Air Conditioning/Off-Cycle Credits Report](#)

[Pending Submissions](#) [Submission History](#)

**Pending Submissions**

[Create Report](#) Results per page 10 ▾

<input type="checkbox"/>	Report Name	Report Type	Industry	Status	Last Modified Date	Last Modified By
This table has no data.						

[Delete](#) Showing 0 records



# Creating a new report

Report Setup

Model Year: Choose...  
Report Type: Choose...  
Industry: Choose...

2016  
2015  
2014  
2013  
2012

Cancel Create Report

Report Setup

Model Year: 2016  
Report Type: Choose...  
Industry: Choose...

Choose...  
Greenhouse Gas

Cancel Create Report

Report Setup

Model Year: 2016  
Report Type: Greenhouse Gas  
Industry: Light-Duty

Choose...  
Light-Duty

Cancel Create Report



MyCDX / Light-Duty Vehicle & Truck / FE Home / Air Conditioning/Off-Cycle Credits Report **Report Summary**

### Report Information and Credit Types

#### Light-Duty Greenhouse Gas Report

Model Year: 2016

Status: In Progress

[Review & Submit](#)

#### Report Content \*

A/C Systems

Cars

Trucks

Off-Cycle

Cars

Trucks

[Update](#)

[A/C System Credits](#)

[Off-Cycle Credits](#)

Cars

#### Credit Summary

Total Production Volume Generating A/C Efficiency Credits

0

Total Production Volume Generating A/C Leakage Credits

0

Total A/C Efficiency Credits for the Model Year

0 megagrams

Total A/C Leakage Credits for the Model Year

0 megagrams

Vehicle Lifetime Miles

195,264



## A/C System - Cars - Add System Information

### A/C System Information

A/C System Identifier \*

AC-1

Refrigerant \*

HFC-134a

A/C Drive System \*

Belt-driven

Credits Claimed \*

A/C Efficiency, A/C Leakage

### A/C Efficiency Credit Information

A/C Efficiency Technologies \*

Default to Recirculated with Feedback Sensor, Reduced Reheat with Fixed-Displa

Test Used for Validation \*

A/C Idle Test

Calculated A/C Efficiency Credit Benefit

4.3 gpm

Idle Test Threshold \*

14.9 grams/minute

CO2 Emissions \*

11

grams/mile

Defining an A/C system

### A/C Leakage Credit Information

Global Warming Potential

1430

Annual System Leakage \*

9

grams/year

Calculated A/C Leakage Credit Benefit

5.8 gpm



# Model type information for an A/C system

Model Type Information

[Add Model Type](#) Results per page 10 ▼

<input type="checkbox"/>	Model Type Index	Division	Carline Name	Engine	Drive	Transmission	Production Volume	Generating Credits
<input type="checkbox"/>	EPA100	SAGINAW	AERO	2.2L NA, G	R	SA8		3,293
<input type="checkbox"/>	EPA113	SAGINAW	AWESOME	2.0L NA, G	A	SA8		3,031
<input type="checkbox"/>	EPA129	MANISTEE	CINEREOUS	3.0L NA, G	R	SA8		4,061
<input type="checkbox"/>	EPA146	ALPENA	DESERT AWD	4.4L NA, G	A	SA8		1,704

[Remove](#) Showing 4 records

[Cancel](#) [Save and Return](#)





A/C System Credits

Off-Cycle Credits

# A/C system summary

▼ Cars

## Credit Summary

Total Production Volume Generating A/C Efficiency Credits

14,089

Total A/C Efficiency Credits for the Model Year

11,908 megagrams

Vehicle Lifetime Miles

195,264

Total Production Volume Generating A/C Leakage Credits

14,262

Total A/C Leakage Credits for the Model Year

15,524 megagrams

## A/C System Summary

Add A/C System

Results per page 10 ▼

<input type="checkbox"/>	A/C System Identifier	Refrigerant	A/C Drive System	Production Volume Generating Credits	A/C Efficiency Credit Benefit (g/mi)	A/C Efficiency Credits (Mg)	A/C Leakage Credit Benefit (g/mi)	A/C Leakage Credits (Mg)
<input type="checkbox"/>	AC-1	HFC-134a	Belt-driven	12,089	4.3	10,150.350	5.8	13,691.170
<input type="checkbox"/>	AC-2	HFC-134a	Belt-driven	2,000	4.5	1,757.376	3.5	1,366.848
<input type="checkbox"/>	AC-3	HFO-1234yf	Belt-driven	173	0.0	0.000	13.8	466.173

Delete

Showing 3 records





# A/C system model type summary

## Model Type Summary

Results per page

Model Type Index	Division	Carline Name	Engine	Drive	Transmission	Production Volume Generating Credits	Total Production Volume	A/C Efficiency Credits (Mg)	A/C Leakage Credits (Mg)
EPA100	SAGINAW	AERO	2.2L NA, G	R	SA8	5,293	5,293	4,522.295	5,096.273
EPA102	SAGINAW	ALABASTER	2.2L NA, G	R	SA8	173	173	0.000	466.173
EPA113	SAGINAW	AWESOME	2.0L NA, G	A	SA8	3,031	3,031	2,544.934	3,432.702
EPA129	MANISTEE	CINEREOUS	3.0L NA, G	R	SA8	4,061	4,061	3,409.759	4,599.209
EPA146	ALPENA	DESERT AWD	4.4L NA, G	A	SA8	1,704	1,704	1,430.738	1,929.833



# Off-cycle model type information

## Model Type Information

Model Type \*

SAGINAW / AUBURN / 2.0L NA, D / R / SA8

Total Model Type Production Volume

4,000

## Off-Cycle Technology

Engine Idle Start-Stop

Remove

Equipped with an Electric Heater Circulation System or Similar Technology? \*

Yes

Credit Benefit

2.5 gpm

Production Volume \*

4000

Total Credits

1952.64 megagrams

Waste Heat Recovery

Remove

Electrical Load Reduction of the Waste Heat Recovery System \*

100

watts

Credit Benefit

0.7 gpm

Production Volume \*

4000

Total Credits

546.739 megagrams



# Off-cycle thermal technology credits example

Thermal Control Technologies Remove

Combination Name \*  
All

Credit Benefit: 2.9 gpm      Production Volume \*  
3031      Total Credits: 1716.351 megagrams

Thermal Control Technology \*  
Passive Cabin Ventilation, Glass or Glazing ▾

Glass or Glazing: Windows

Total Glass Area of Vehicle \*  
6 square meters

Add Window

<input type="checkbox"/>	Window Type	Glass Area (square meters)	Measured Solar Transmittance	Window Credit Benefit (gpm)
<input type="checkbox"/>	Side-Front	2	45	2.259
<input type="checkbox"/>	Windshield	2	60	0.266

Delete      Showing 2 records

Add Combination



# Off-cycle credit summary

A/C System Credits

Off-Cycle Credits

▼ Cars

## Credit Summary

Total Off-Cycle Credits for the Model Year

7,178 megagrams

Vehicle Lifetime Miles

195,264

## Off-Cycle Technology Summary

Off-Cycle Technology	Production Volume Generating Credits	Off-Cycle Credits (Mg)
Active Aerodynamic Improvements	459	62.738
Active Engine Warm-Up	459	134.439
Active Transmission Warm-Up	459	134.439
Engine Idle Start-Stop	4,459	2,087.079
High Efficiency Exterior Lights	459	45.965
Non-Menu Technologies	3,490	749.619
Solar Panels	1,959	1,482.873
Thermal Control Technologies	3,490	1,934.461
Waste Heat Recovery	4,000	546.739



# Off-cycle model type summary

## Model Type Summary

Add Model Type

Results per page 10 ▼

<input type="checkbox"/>	Model Type Index ↑↓	Division ↑↓	Carline Name ↓↑	Engine ↑↓	Drive ↑↓	Transmission ↑↓	Total Production Volume ↑↓	Off-Cycle Credits (Mg) ↑↓
<input type="checkbox"/>	EPA108	SAGINAW	AUBURN	2.0L NA, D	R	SA8	4,000	3,641.673
<input type="checkbox"/>	EPA113	SAGINAW	AWESOME	2.0L NA, G	A	SA8	3,031	2,367.381
<input type="checkbox"/>	EPA144	ALPENA	DESERT	4.4L NA, G	R	SA8	459	1,169.298

Delete

Showing 3 records