

# California Air Resources Board Certification Update

2018 Truck and Engine  
Manufacturers Association  
Compliance Workshop

April 17, 2018

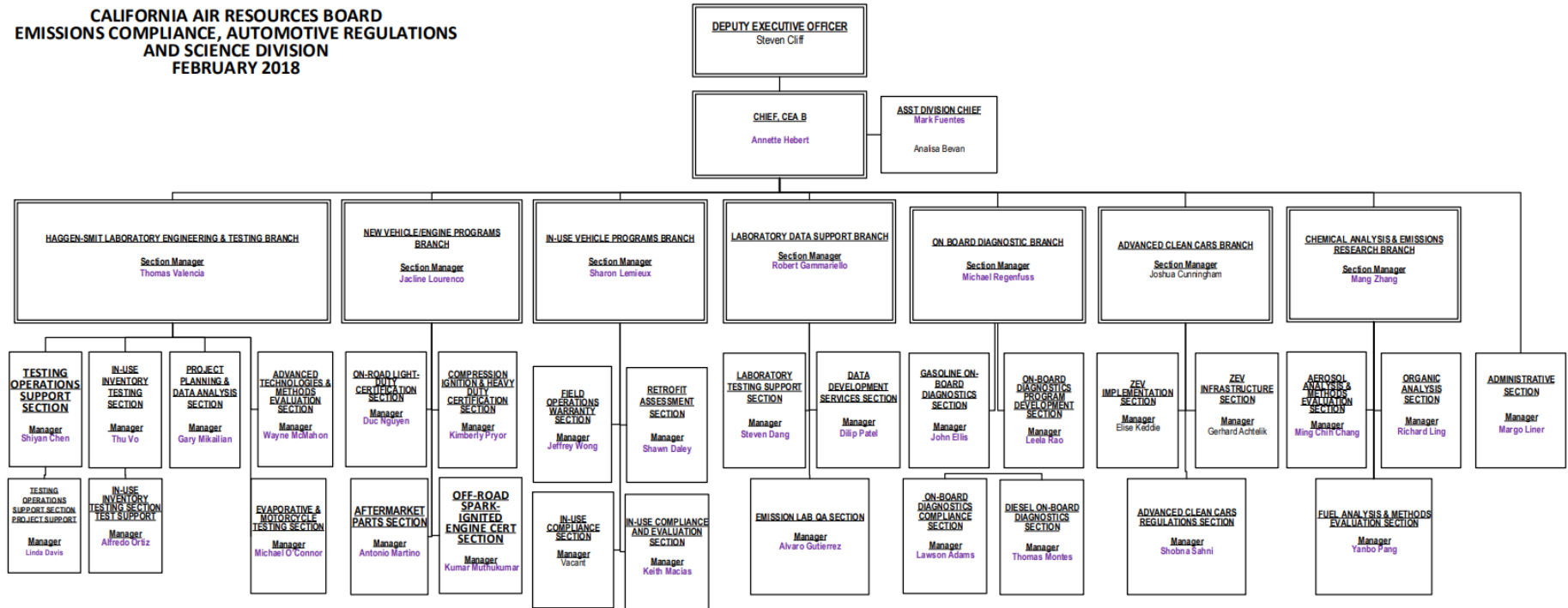


# Outline

- Organization Charts
- Certification Statistics
- DMS Update
- AECD Workgroup Update
- Compression-Ignition and Heavy-Duty Certification
- Off-Road Spark-Ignited Engine Certification
- Field Operations and Warranty Section

# ECARS Organization Chart

CALIFORNIA AIR RESOURCES BOARD  
EMISSIONS COMPLIANCE, AUTOMOTIVE REGULATIONS  
AND SCIENCE DIVISION  
FEBRUARY 2018



# NVEPB Organizational Chart

ECARS  
New Vehicle/Engine Programs  
Branch Chief  
Jackie Lourenco  
Branch Secretary  
Bonnie Garlow

On-Road Light-Duty Certification  
Section  
Manager  
Duc Nguyen  
Staff  
Ivonne Guzman-Cicero  
Veronica Longhi  
Steven Hada  
Bill McDuffee  
Seongyup Kim  
Lucky Benedict  
Alan Leung  
Telena Vo  
Mark Campbell

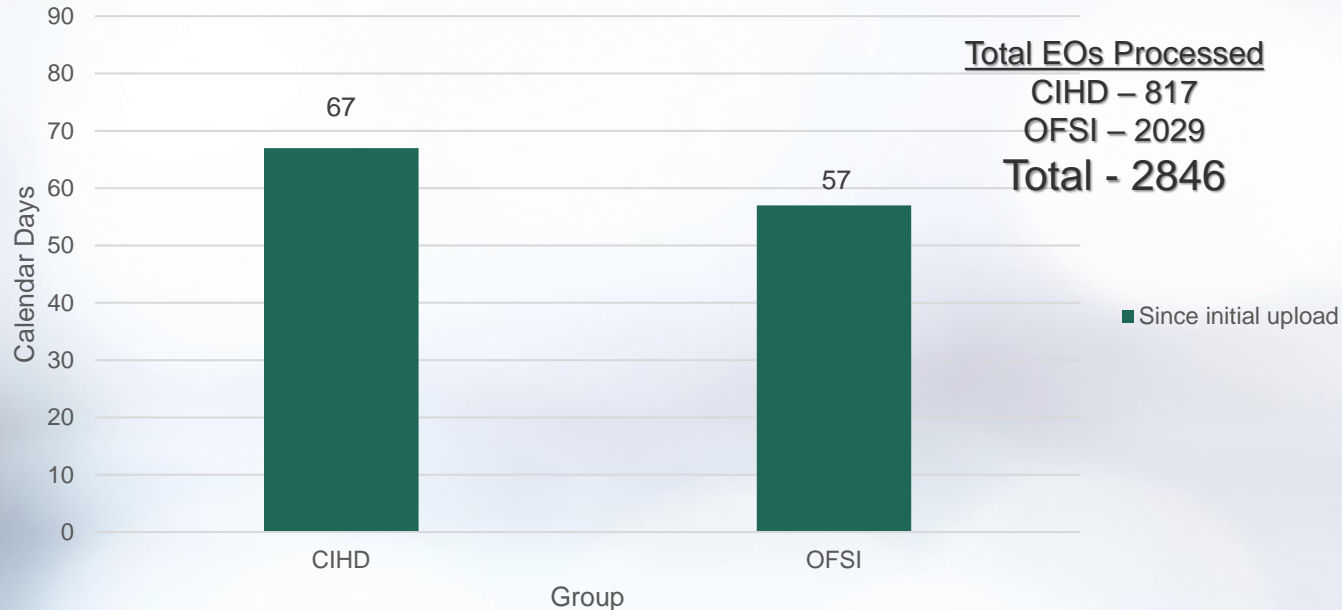
Off-Road Spark-Ignited Engine  
Certification Section  
Manager  
Kumar Muthukumar  
Staff  
Alan Chow  
Geeta Osborn  
Michael Lin  
Mohammed Desai  
Janie Han-Luu  
David Pino  
Byron Ng  
Sophia Mahmood  
Gileyn Bernal  
Alliester Lopez

Aftermarket Parts Section  
Manager  
Antonio Martino  
Staff  
Jae Do  
Rich Muradliyan  
Sidd Futaba  
Richard Carranza  
Curt Schrieber  
Jose Arguelles  
Jason Flores  
Christopher Okimoto

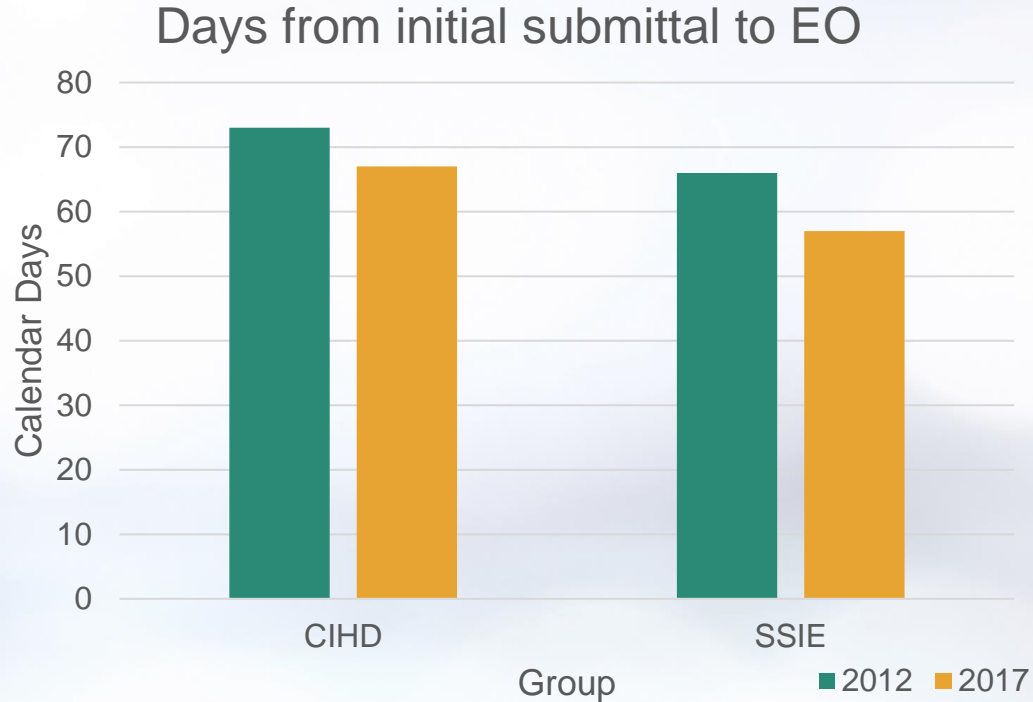
Compression Ignition and Heavy  
Duty Certification Section  
Manager  
Kimberly Pryor  
Staff  
James Pang  
Tsatsu Nukunya  
Zachary Evans  
Babak Pazokifard  
Mel Capistrano  
Michael Pham  
Elena Florea  
Simeon Haynes  
Ihor Tuk

# CY 2017 Average Number of Processing Days

Days from initial submission to EO



# Average Processing 2012 vs 2017



# Document Management System (DMS)

- New DMS product has been chosen
- Currently working with vendor to set up system requirements
- CARB will be asking for manufacturers to participate in the New DMS Pilot Program
- The current DMS will continue to be used while the new system is configured
- Current DMS training is being provided on a monthly basis

# AECD WORKGROUP

- Initial Kick-off meeting held in March 2017
- Agencies and manufacturers have participated in many conference calls by category
- Certain categories have drafted new formats
- Agencies are reviewing the new ideas and will be working on updating formats for each category



# AECD Workgroup Summary

## Key items discussed during meetings

- Manufacturers were responsive and understood the necessity of supplying accurate information
- Workgroup participants discussed how to submit base engine information
- Disclosure and description of all AECDs is a major element of certification.
- AECD reviews take time - start early

# COMPRESSION-IGNITION AND HEAVY-DUTY CERTIFICATION SECTION

# CIHD E-Cert Status Data Requirements

- Engine manufacturers have provided good comments and discussion in workgroup teleconferences.
- A revision will be published in mid-April reflecting manufacturers' questions, comments, and workgroup discussions.
- Comments and feedback on the revision requested by mid-May.
- A follow-up workgroup meeting will be scheduled to discuss any critical concerns.
- A final draft will be published by the end of May that will finalize any further changes.

# CIHD E-Cert Status

## Rollout Timeline

- E-Cert framework and how certification practices are incorporated into the system will be published after the final draft of the Data Requirements.
- Electronic versions of the Lookup Tables and the XML schema will be published.
- A tool for data entry will be developed by ARB for manufacturer use.
- A voluntary pilot testing phase will precede general use.
- E-Cert may be used during the 2019 model year.

# California GHG Phase 2: Largely Harmonizes with the National Program

- U.S. EPA's Phase 2 standards
  - Same structure and stringency levels
  - Same timing (except CA trailer standards take effect in model year 2020)
  - Would allow CARB to certify engines/vehicles and enforce Phase 2 in California
- Some distinctions to credit, labeling, and rule flexibility provisions
- California Phase 2 includes Trailer and Glider requirements that U.S. EPA is “revisiting”
  - California Phase 2 trailer certification requirements start with 2020 MY trailers sold in California
  - Glider vehicle's sold in California required to meet GHG and criteria pollutant standards corresponding to vehicle's date of manufacture

# Transitional Program for Equipment Manufacturers (TPEM)

- Key Reminders for Engine Manufacturers
- Annual request for certification of flexibility engines must be submitted prior to production.
- Ensure that equipment manufacturer request is within their engine's flexibility usage period
- Statement that ABT credits are available to offset engines with FELs exceeding the applicable standards.
- End of Year Production Reports are due 45 days after the end of each model year

# Optional TPEM Pathway

## Technical Hardships

- Equipment manufacturers may request additional flexibility allowances due to extreme and unusual circumstances meeting Tier 4 standards.
- Equipment manufacturers must request and receive approval by CARB in advance.
- CARB has received no technical hardship requests

# CERTIFICATION FOCUS AREAS



# 2018 CY Areas of Review

- DPF Regeneration
  - Infrequent Regeneration Factors (IRAFs) Calculations
  - DPF regeneration during deterioration factor (DF) and exhaust testing
- Selective Catalytic Reduction (SCR)
  - Adaptive or Dual Dosing strategies
  - Aging factors

# 2018 CY FOCUS AREAS

Service Information Rule  
(SIR)

# SIR Website Requirements

- Manufacturers shall establish and maintain an internet website to make service information available for purchase
- Provide, at a minimum, e-mail access for communication with a designated contact person(s).
- Provide CARB free access to website (provide username and password) and update accordingly
- Manufactures with annual California sales less than 300, have option to propose an alternative reasonable business means to provide information

# Reporting Requirements

## Manufacturers' Annual Report Must:

- Indicate that service information is available for purchase via internet and that the website meets the requirements specified in 13 CCR 1969 (f) 2
- Indicate the performance and effectiveness of the website (e.g. successful requests, frequency of use, number of subscriptions purchased etc.)
- Include the pricing structure for online access

# Submission of Reports

- Reports should be submitted annually within 30 days of the end of the calendar year into DMS

# Manufacturers Not Meeting SIR Requirements

Manufacturers will be receiving notices:

- Certain manufacturers are not submitting reports
- Certain manufacturers are not submitting reports into DMS
- Certain manufacturers are missing website information

# **SMALL SPARK-IGNITED ENGINES (SSIE)**

# SSIE Evaporative Regulations

## Amendments to Evaporative Regulations

### Title 13 CCR 2750 et seq.

- California Air Resources Board adopted amendments on November 17, 2016
- Amendments effective as of January 1, 2018
- Updated regulatory documents posted on SSIE certification website:
  - <https://www.arb.ca.gov/msprog/offroad/sore/sorectp/sorectp.htm>



# New 2018+ MY SSIE Evaporative Reporting Requirements CCR Title 13 2761

- Annual Production Volume Report
  - End-of-year report due within 90 days of the end of the model year
  - Final report due within 270 days of the end of the model year
- Must report production volume for each equipment type by engine family and fuel tank volume within each evaporative family for the model year
- May estimate California production volume through market analysis (Title 13 CCR 2752(22))
- CARB staff to incorporate comments from EMA and OPEI into template

# SSIE Evaporative Regulations

## Amendments to Warranty Statement

### Title 13 CCR 2764, Verbatim Portion

- Must use updated verbatim warranty statement language for 2018 and later MYs.
- Evaporative emission warranty parts list has been revised.
- Warranty statement must include list of all evaporative emission related parts
- Parts list for less than 80cc equipment must include both fuel tank and fuel lines

# Sunseting Evaporative Exemptions

## CCR Title 13 2766

- Exemptions available through the 2019 MY only
  - Small Production Volume Tank (less than 400 units)
  - Low Permeation Tank (less than 80cc)
- Starting in 2020 MY, manufacturers must use only EO'd fuel tanks to meet applicable permeation requirements.

# LARGE SPARK-IGNITED ENGINES (LSI)

# 2020 and Later MY LSI Certification Fuel Requirements (Greater than 1 Liter)

- Starting 2020 MY, the certification fuel will be LEV III gasoline (California E10) or equivalent renewable fuel blend
- New zero-hour certification testing required using LEV III gasoline fuel
- Production-line testing must also be conducted using LEV III gasoline

# 2020 and Later MY LSI Deterioration Factor (DF) Testing (Greater than 1 Liter)

Mfrs asked if they may carry over current DFs to 2020 and later MYs?

- Yes, current DFs may be carried over (upon approval) if the following criteria are met:
  - DFs were developed using fuel with 10% ethanol content for service accumulation (Must provide supporting documentation)
  - No design changes to the engine family that affect emissions (i.e. calibration, catalyst, etc.) and no new worst-case engine configuration added
- Otherwise, new DF testing will be required

# **IN-USE COMPLIANCE, WARRANTY AND HD TECHNOLOGY ADVOCATE PROGRAMS**

# CARB In-Use Compliance Program

- Heavy Duty In-Use Testing (HDIUT)
  - CARB will be issuing a separate test order letter (will mimic EPA's)
  - OEMs must notify CARB and obtain approval for any deviations from HDIUT requirements or test order letter
  - CARB must be notified of any HDIUT Phase I failures. CARB staff must approve Phase II plans.
  - CARB may audit manufacturer HDIUT testing
- Heavy Duty In-Use Compliance Program
  - CARB is conducting in-use compliance testing using the NTE protocol
  - Manufacturers will be notified when an engine family is selected and welcomes OEMs participation
- HD Lab Audits
  - CARB is planning on conducting manufacturer lab audit to ensure that data generated for cert, OBD and/or MST meets 40 CFR



# CARB Warranty Program

- Warranty reporting will be scrutinized more thoroughly for completeness and accuracy.
  - Emission Information Reports must include emissions test data.
- Manufacturers shall be expected to take corrective action when failure rates exceed the corrective action threshold of 4% or 50 failures, whichever is greater
  - Recall for primary emission control components and computers
  - Extended warranties for other emission control components
- Corrective action must apply to all vehicle owners. Secret warranties are unacceptable.
- Warranty staff works closely with Certification, OBD and In-use
  - Appropriateness of carryover applications with high failure rates will be scrutinized as they demonstrate a lack of durability.
  - Engine families with high warranty failure rates will be candidates for in-use compliance testing

# HD Advocate: Ensuring Successful Deployment of HD Technology

- OEMs must communicate maintenance and needed operational practices on an application specific basis end-user (includes chassis builder and fleets)
- Training (on-line or other) should be offered to fleets
  - Opacity to check health of engine and filter
  - Track oil usage, any changes can signal injector, turbo seal, oil ring, etc. repairs needed
  - Excessive oil consumption will negatively impact PM filter causing frequent regens. Temperature spikes prematurely deteriorate the SCR and other components.
- Owner's manual must contain necessary information to prevent major emission control system failures:
  - DEF solution (correct concentration? Stored properly?)
  - Proper DPF cleaning process
  - What practices are prohibited
  - Idling and cold temperature operation
  - How to obtain warranty service

# Contact Information

## Compression-Ignition and Heavy-Duty Certification Section

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? QUESTIONS ?

