Outline

• Organization
• Certification Statistics
• Certification Streamlining
• Certification Process
• DMS Update
• AECD Review
• Compression-Ignition and Heavy-Duty Certification
• Off-Road Spark-Ignited Engine Certification
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Volume of Executive Orders Issued in 2015 Calendar Year (CIHD+OFSEC)

- Off-Road Small SI Engines - Evap: 800
- Off-Road Small SI Engines - Exhaust: 700
- Off-Road CI Engines: 500
- On-Road Heavy-Duty Engines - Evap: 400
- SI Marine Engines: 200
- Off-Road Large SI Engines: 100
2015 Calendar Year New Application Tracking (CIHD+OFSEC)

- Applications Submitted
- Executive Orders Signed

Start of Streamlined Application Submittal


- Applications Submitted
- Executive Orders Signed

Jan.: 70
Feb.: 50
Mar.: 100
Apr.: 50
May: 100
Jun.: 150
Jul.: 200
Aug.: 250
Sep.: 400
Oct.: 350
Nov.: 200
Dec.: 400

The graph shows the number of applications submitted and executive orders signed for each month in 2015. The start of the streamlined application submittal is indicated by a red dashed line.
2015 Calendar Year Average Application Processing Times (CIHD+OFSEC)

Average Notification Time

Average EO Process Time from Date of Last Submittal

Average EO Process Time from Date of Initial Submittal
Certification Streamlining II

- Introduced in July 2015
- Received a limited amount of applications through the streamlined program
- Streamlined application categories include:
  - Carryover,
  - Partial carryover,
  - Carryover/partial carryover requiring OBD approval
2015 Calendar Year Average Executive Order Processing Times for CIHD+OFSEC (from Date of Initial Submittal)

- **Carryover Applications**: 236 applications
- **Partial Carryover Applications**: 37 applications
- **Regular Applications (excluding carryover/partial carryover applications)**: 1,744 applications

- **31 day reduction in processing time**
- **25 day reduction in processing time**
Who Can Certify?

- **Certifying Entity must:**
  - Have design control
  - Be able to implement design and assembly-line changes
  - Be able to provide access to manufacturing and test facilities
  - Be able to meet all post-certification obligations
- Typically, Engine/Equipment manufacturers
Application for Certification
• Provide all information requested from the certification checklist
  http://www.arb.ca.gov/msprog/mailouts/ecars1507/ecars1507.pdf
• Application should reflect a production-ready engine product.
• Manufacturers should submit all running changes or field fixes to ARB prior to making any changes

Post-Certification Manufacturer Reports
• Submittals required by regulations
• Used to determine compliance
• **Confirmatory Testing**
  
  • Regulations provide authority to request Confirmatory Testing (CT)
  
  • CT is required if:
    
    a) Manufacturer submits only one certification test result, AND
    
    b) Certification level is >85% of the standard
  
  • CT may be performed voluntarily by manufacturer without prior ARB notification
  
  • All tests must be reported in the certification application
• New DMS
  • Being procured for 2017
  • Request for Information issued to solicit new system proposals for evaluation

• Current DMS
  • Training is being provided on a monthly basis
  • Will continue to be used for the non database information like labels, schematics, AECDs, etc.
Recent focus on Spark-Ignited Engines (i.e. EFI models)

Disclosure and description of all AECDs is a major element of certification.

AECD reviews take time; manufacturers encouraged to start discussions early

Provide sufficient technical detail to determine whether AECD is acceptable

Describe: Entry and Exit conditions; Period and Frequency of Activation

AECDs cannot be used to mask a “frail” engine design
Compression-Ignition and Heavy-Duty Certification Section
E-Cert Update

- Design revamped to include:
  - Diesel and Otto cycle engines and vehicles
  - Carryover and Partial Carryover applications
  - Greenhouse gas certification
- Data Requirements forwarded to Systems staff
- Data Requirements to manufacturers once complete
- ARB will be asking for manufacturers to participate in the E-Cert Pilot Program
ARB is issuing EOs for engine and vehicles.
Inform vehicle customers that they must comply with CA GHG regulations – submit application and receive EO before selling.
ARB staff continues to assist manufacturers through GHG process.
Please continue to include GHG data in the ABT reports.
As a Reminder:

- Manufacturers are encouraged to certify to ARB’s Optional Low NOx Standards
  - Three standard levels:
    - 0.10 g/bhp-hr
    - 0.05 g/bhp-hr
    - 0.02 g/bhp-hr
- ARB’s new Innovative Technology Regulation (ITR) will go to the Board in September.
- Manufacturers will be able to use ITR provisions starting in 2017
Certification Focus Areas
Staff Will Be Reviewing Adjustable Parameters

- ARB is checking hardware with adjustable parameters - emissions related components under §86.094-21 and §1039.205
- Staff is reviewing the tamper resistance hardware on engines
- Manufacturers will be asked to send ARB hardware for review if:
  - No existing approval from ARB, or
  - Current approval is more than 5 years old
- Please coordinate with your certification representative
• Production reports needed for:
  • Certified engines, and
  • Flex engines (TPEM)
• Production reports due 45 days from the end of model year (§1039.250(a)).
• Manufacturers late ➔ No Extensions
• As of today 92% of the reports have been received
Paul Adnani of the CIHD Section is the ARB lead staff for Service Information Rule.
Annual website performance reports are due within 30 days of the end of calendar year.
Reports should be directed to the attention of Paul Adnani.
Websites look good – However not all On-Road manufacturers are submitting timely updates.
Off-Road Spark-Ignited Engine Certification Section
SSIE Evaporative Emissions Validation Studies

- Required by 13 CCR 2754.2
- Model years 2008-2010 and 2013-2015
- 15 design-based and 3 performance-based units in 2008 and 2013
- 5 design-based and 1 performance-based in other model years
- Three, 24-hour diurnal tests per unit
- Executive Officer determines whether certification options are meeting ARB’s emission reduction goals
SSIE Validation Study Results

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• Formation of government/industry SSIE working group
• Metal and coextruded multilayer fuel tank certification for MY 2017 (Design-based certification)
• CE10 (ASTM Fuel C + 10% Ethanol) test fuel not allowed for fuel tanks
• Implementation of best practices when designing evaporative emission control systems
Applicable to SSIE & LSIE < 1 Liter

Permeation testing required for metal and coextruded multilayer tanks

Permeation test data or an evaporative component Executive Order number to be submitted with evaporative certification application

Mail-Out ML 15-01 outlines the testing requirements.

[Link to Mail-Out ML 15-01](http://www.arb.ca.gov/msprog/mailouts/ml1501/ml1501.pdf)
• New certification test fuel requirement (LEV III) for gasoline engines starting 2020 MY
• Applies to off-road categories for SSIE and LSIE. 40 CFR 1065.701(a) (California Version)
• Production-line testing must use same fuel as certification test fuel
• New Deterioration Factor (DF) testing required for engines certified with LEV III fuel
• Current DFs not representative of new engines
• DFs cannot be carried over to 2020+ MY engine families
• Manufacturers encouraged to coordinate with ARB and EPA to use same DF test data
• Manufacturers may utilize DF Carry-Across from worst case engine families to others
• Provide technical justification for DF carry-across
Confirmatory Testing At ARB

- Confirmatory testing in El Monte to be restarted in 2016
- Target engine families identified using, but not limited to:
  - Certification data
  - Production-Line Testing (PLT) data
- Request manufacturers send certification test engine(s)
- Check if part numbers on certification engine match with application
- Conduct emissions testing to check compliance
Quarterly PLT report (SSIE, LSIE) helps to identify:
- Engine emission failures
- Non-compliant engine families
- Production and quality control issues
- Candidates for Title 13 testing

End-of-year Averaging, Banking and Trading report (SSIE)
- Check compliance with corporate average plan
- Verify number of credits generated and/or used by manufacturers
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Questions