Proposed Amendments to the Verification Procedure for In-Use Diesel Emission Control Strategies

August 23, 2012

California Environmental Protection Agency

Air Resources Board

Presentation Overview

- Background
- Proposed amendments
- Impacts & recommendation

Diesel Retrofit Verification Program

- Verification Procedure adopted May 2002
- Used to verify retrofits for in-use diesel engines
- Verification ensures
  - Level of emissions reductions
  - Durability and performance
  - Warranty protections

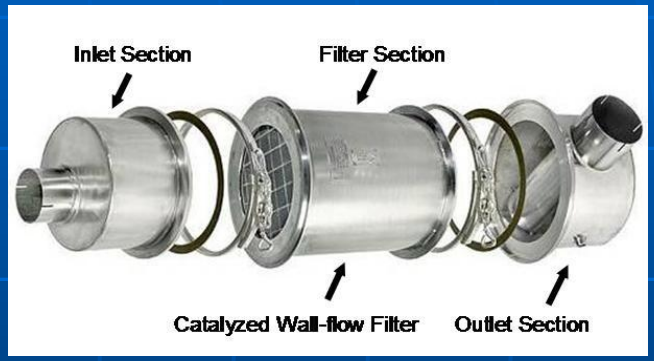
Verification Process Overview

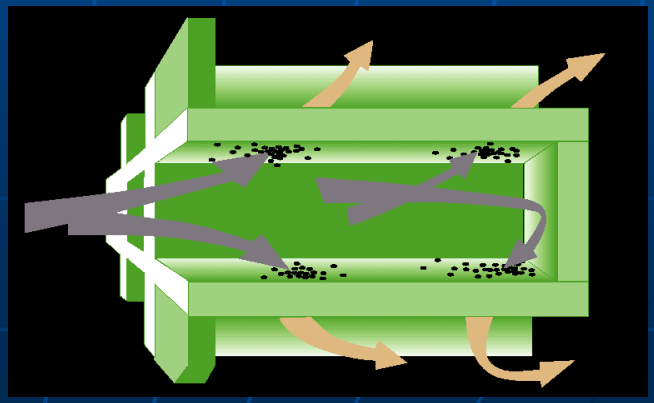
- Applicant develops “market-ready” product
- Applicant submits application
- ARB approves test plan
- Applicant conducts testing
- ARB reviews results
- Executive Order issued if all requirements met
- In-use compliance testing

Numerous Retrofits Currently Verified

- 60+ verified systems for diverse applications*
  - On-road: 25 systems
  - Off-road: 24 systems
  - Stationary: 12 systems
  - Marine: 1 system

*as of August 2, 2012





Retrofit Market Continues to Grow

- To date, about 50,000 retrofit sales
- 2012 to 2016, over 60,000 additional sales (on-road)
- Efforts to build awareness of compliance dates
  - Diesel Call Center
  - Compliance assistance
  - Gear Up for Clean Truck Month

ARB Thoroughly Evaluates All Retrofit Issues

- Appointed new Retrofit Advocate
- Field staff evaluates issues as reported
- ARB has acquired additional equipment to evaluate engines and retrofit systems

Keys to Retrofit Success

- Proper engine screening prior to device installation
- Good installation practices
- Proper end-user training
  - Responding to warning lights appropriately
  - Filter maintenance (i.e., proper ash cleaning)
  - Engine maintenance

Proposed Amendments

Overview of the Proposed Amendments

- Streamline in-use compliance requirements and reduce costs
- Add new recall provisions
- Improve end-user warranty protections
- Enhanced pre-installation compatibility assessment requirements
- Installer requirements and end-user training
- Better define application and review process

In-Use Compliance Changes will Reduce Program Costs

- Reduces amount of laboratory testing and increases sales thresholds
- Provides alternative test schedule increasing program flexibility
- Retains stringency of verification program

Changes that Protect End-Users

Recall Provisions

- Provides the Executive Officer with new recall authority
- Better protect consumers of verified devices
- Addresses issues of safety or catastrophic failure
- Supports staff's proposed changes to the In-Use Compliance requirements

Changes that Protect End-Users
Recall Provisions

- continued -

- Potential recall action based on:
  - In-use compliance failure
  - Excessive warranty claim rates
  - Operational feature failure
  - Safety issues or catastrophic failure

Changes that Clarify Warranty
Warranty Requirements

- Clarifies existing manufacturer's warranty requirements
  - Clearly defines level of coverage and supplemental warranty report trigger
- Installer warranty requirements
  - Clearly defines level of coverage
  - Requires submission of annual installation warranty report

Changes that Ensure System Works Correctly with Vehicle

Pre-Installation Compatibility Assessment

- Clarify and further define engine assessment prior to retrofit
- Requires verified device manufacturers to authorize their installers
- Specifies minimum training requirements for device end-users

Additional Changes that Improve Program Effectiveness

- Improve application and review process
- Improve applicant guidance and information
- Clarify requirements to provide additional protections to system end-users

Public Outreach

- Public workshops in El Monte
  - May 21, 2011
  - January 19, 2012
- Industry meetings
  - Manufacturers of Emission Controls Association (MECA)
  - Individual companies
- Proposal incorporates comments received

Proposed Modifications
15-Day Changes

- Clarify staff's proposal
- Facilitate warranty repairs

Impacts and Recommendation

Economic and Environmental Impacts

- Provides substantial cost reduction to applicants
  - $2.1 to $5.6 million industry wide
- Potential end-user cost savings and benefits
  - Better assessment of engines prior to retrofit
  - Better installation practices
  - Fewer in-field issues and less downtime
  - Ensures end-users properly trained

Recommendation

- Staff recommends approval of the proposed amendments