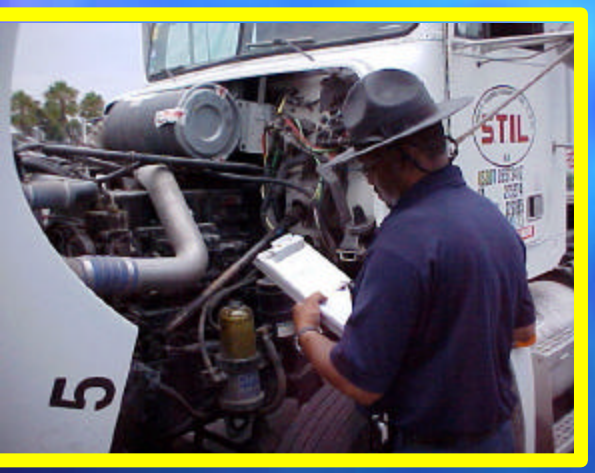
California Environmental Protection Agency
AIR RESOURCES BOARD

# Public Hearing To Consider Amendments to th Heavy-Duty Vehicle Smoke Inspection Progra (Implementation of Assembly Bill 1009)



**January 26, 2006**

**Sacramento, California**

# Overview

- Background
- Existing U.S. Standards for Heavy-Duty Engines
- AB 1009 Proposed Regulatory Amendments
- Summary and Recommendation

# Health Impacts of Diesel Exhaust

| Exhaust Constituent | Health Impact |
| --- | --- |
| Particulates | Premature Deaths<br>Cancer<br>Respiratory Disease |
| NOx & HC<br>(Ozone Precursors) | Respiratory Disease |

# AB 1009 (Pavley)

- Restricts heavy-duty vehicle emission in California to vehicles designed to meet U.S. standards
  - Engine must meet U.S. emission standards
  - Requires owners to carry proof of compliance
- Applies to Heavy-Duty Commercial Vehicles (HDCVs) >10,000 pounds used on California roads
- ARB/CHP required to develop inspection protocols to ensure compliance

# Which Vehicles Meet AB1009 Requirements?

- U.S. Standards in place since 1974
- Canadian vehicles
  - Canada has relied on U.S. standards since 1974
  - All Canadian vehicles meet U.S. standards
- Mexican vehicles
  - Mexican standards were aligned with U.S. for 1993-2003 model years
  - Prior to 1993 and after 2003 Mexican standards were less stringent

# Summary of Engines Meeting U.S. Standards

| Country | Pre-1974 | 1974-1992 | 1993-2003 | 2004+ |
|---|---|---|---|---|
| Canada | Compliant | Compliant | Compliant | Compliant |
| Mexico | Compliant | Non-Compliant | Compliant | Non-Compliant |

# Heavy-Duty Commercial Vehicle Survey

- Survey of 765 heavy-duty commercial vehicles (HDCVs) at locations in Southern California
- Approximately 1% of the HDCVs were equipped with non-U.S. certified engines
  - Percentage may increase with implementation of NAFTA
- About 30% of the HDCVs surveyed were missing the emission control label

# Regulatory Proposal

- Determine if the engine meets U.S. standards
  - Inspect label of 1974 and later vehicles
  - Included as part of existing smoke inspections
- Operation of engines that do not meet U.S. standards will be fined
- Missing engine labels must be replaced
  - Provides evidence of meeting U.S. standards
  - Allows efficient inspections

# Penalties

Engines not meeting U.S. standards will be issued a $500 civil penalty

A $300 civil penalty for missing engine labels

- Penalty waived during the first year of implementation if label is replaced within 45 days

# Cost of Compliance

- Estimated replacement costs of non-U.S. EPA compliant trucks (1% of fleet)
  - $1,500/vehicle for pre-1993 HDCVs
  - $4,500/vehicle for 2004+ HDCVs
- Estimated replacement costs of missing labels at $100/label (30% of fleet)
- Total estimated compliance cost $20 million

# Estimated Emissions Benefits

| Location | NOx (tpd) | PM (tpd) |
|---|---|---|
| Statewide | 2.9 | 0.12 |
| South Coast Air Basin | 1.1 | 0.04 |

Estimated benefits for calendar year 2006 using California EMFAC2002 and U.S. EPA MOBILE5-MX emission model

tpd = tons per day

# Cost Effectiveness

- $10.62/pound NOx and PM for pre-1993 HDCVs
- $1.09/pound NOx and PM for 2004+ HDCVs

# Implementing the Pavley Requirements

- Add “label” inspection to existing smoke inspection program.
  - 11 inspection teams performing 17,000 inspections annually
  - Inspections performed at CHP inspection facilities, border crossings, random roadside locations, and fleet facilities

  Staff will continue outreach efforts to provide compliance assistance

# Summary and Recommendation

- Staff's proposal will establish a cost-effective inspection process in compliance with AB 1009
- Prevents excess emissions from engines not designed to meet U.S. standards
- Staff recommends Board adoption of the proposed amendments