



EPA's Light-duty In-use Compliance Program

EPA

Office of Air and Radiation

Office of Transportation and Air Quality

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History



- Over 50 million vehicles recalled since 1972
- Highest rates: 35% of production in 70's and 80's
 - When emission control technology new
- Now about 10% of production voluntarily recalled per year

Program Goals



- Vehicles are designed and built which meet standards in-use
- Ensure emissions compliance over useful life of vehicle (100,000 - 120,000 miles)
- Find and Remedy Problems Early
- Fully successful in-use compliance program:
 - No recalls due to emission non-compliance
 - Collects adequate data to verify the success

Legal Authority



- Clean air act
 - Sec. 202 emission standards & OBD requirements
 - Sec. 207 remedy for non-conformity
 - Sec. 208 manufacturer testing

- 40 CFR 85 subpart S
 - Recall regulations

- 40 CFR 85 subpart T
 - Emission defect reporting requirements

- 40 CFR 86 subpart S
 - General compliance provisions
 - In-use verification program

In-use Program Highlights



- EPA testing - annually
 - 33 classes, 109 vehicles, 130 tests
- Optimized to test smaller sample sizes that target suspected noncompliance vehicles
- Partnership with CARB
 - Share information
 - Steering Team
- 2 million vehicles recalled in year 2000

Recent Program Changes



- Transition to NVFEL in Ann Arbor
- Integration certification and in-use programs
- Leverage information and resources
- Class targeting
- Testing efficiencies
- All classes now subjected to evap testing



Testing Sources

- EPA testing
- Manufacturer testing
- IUVP - 2003 CY
- I/M testing
- CARB testing
- Other sources

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Light-duty In-use Process

Information Review



- Defect reports
- Voluntary emission recall reports
- I/M data
- Technical service bulletins
- Warranty information
- Quarterly reports
- NHTSA
- CARB
- Consumers

Class Selection



- Demonstrated problems (defect reports, OBD problems, service bulletins, etc.)
- Other data indicating problems (past history, reality check or CAP 2000 data, certification, CARB information, end of line data, I/M information, etc.)
- New standards and/or technology that increase the risk of non-compliance
- Random selections
- Fleet coverage

EPA Laboratory Testing



- Vehicle procurement
- Vehicle inspection
- Vehicle maintenance
- OBD testing
- FTP & EVAP testing
- Fuel Economy testing
- ROVER testing



Test Process

- Vehicle procurement
- Vehicle inspection
- In-use maintenance



Testing

- FTP
- HWFE
- Evaporative
- OBD





OBD Evaluations

- OBD readiness codes
- Evap and fuel cap failure
- Catalyst failure
- Oxygen sensor failure
- In case of vehicle failure, use OBD and/or ROVER to evaluate cause of failure

Types of Remedies



- Ordered recall
- Influenced recall
- Voluntary recall
- Service campaign
- Running change
- Field fix



Results

- 2 million vehicles recalled in 2000
- Various problems fixed
 - Oxygen sensors
 - OBD
 - Calibrations
 - Computer
 - Catalyst
 - Evaporative
 - Exhaust manifold
 - ORVR
 - Fueling
 - EGR
 - Fuel tank
 - Air pump
 - Fuel injection



Cleaner Air

- Avoids non-compliance
- Find and remedy problems early
- Pollution prevention
- Achieve clean air benefits anticipated by our regulations
- Light-duty component still the highest contributor to emissions

Outlook



- More OBD investigations
- Manufacturer in-use testing
- Fuel-economy in-use data
- Expanded in-use cooperation with CARB
- Expanded on-road emission data collection with ROVER type devices