



Emissions Durability

Rule Implementation:

*Overview of Requirements and Process for
New Emissions Durability Demonstration*

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EPA-Industry Meeting

May 17, 2006



OVERVIEW

- Durability Rule Objective
- Process for MY2008
- Emissions Durability Aging Methods
- Required Documentation
- Demonstration Requirements/Criteria
- Equivalency Factors (EFs)
- Contact Information



The Durability Objective

“The durability program must predict an expected in-use emission deterioration rate and emission level that effectively represents a significant majority of the distribution of emission levels and deterioration in actual use over the full and intermediate useful life of candidate in-use vehicles of each vehicle design which uses the durability program.”

[40 CFR §86.1823-08 (January 17, 2006)]



Process for MY 2008

- Meet with EPA in advance of certification
 - Include overview presentation and durability package for EPA review and approval for a customized standard road/bench cycle or an alternative road/bench cycle
- Follow-up Q&A (if necessary)
- EPA approval of durability procedures



Emissions Durability Aging Methods

- Whole-vehicle using the Standard Road Cycle (SRC) [Part 86, Appendix V]
- Bench aging using the Standard Bench Cycle (SBC) [Part 86, Appendix VII]
- Customized SRC/SBC
- Alternative Road Cycle (ARC) or Bench Cycle (ABC)

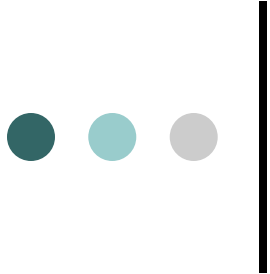


**Require EPA
review/approval**



What Documentation Is Required?

- Using the SRC/SBC:
 - A written statement to EPA identifying compliance with the SRC/SBC
 - Durability groups/models covered by SRC/SBC
 - Evaporative and refueling emissions durability process



What Documentation Is Required?

- Using a customized SRC/SBC or an ARC/ABC:
 - Overview presentation
 - Detailed durability package
 - Request for EPA approval
 - Demonstration requirements/criteria (next slides)
 - Further details to be described in a future manufacturer guidance letter
 - Evaporative and refueling emissions durability process



Demonstration Requirements and Criteria for a Customized SRC/SBC

- For a Customized SRC:
 - Customized Mileage
 - Fuel modifications
 - In-use FTP emission data representative of covered designs/models (20-30 vehicles)
 - IUVP, CAP 2000 “reality check,” or other sources
 - Equivalency factor(s)
 - SRC aging time / Customized SRC aging time
 - Covered durability groups and grouping rationale

- For a Customized SBC:
 - Lower control temperature, modified fuel and different calculation factors for bench aging time
 - Covered durability groups and grouping rationale



Demonstration Requirements and Criteria for an ARC/ABC

- Must demonstrate how the ARC/ABC achieves the durability program objective
- For an ARC:
 - In-use FTP emission data representative of covered designs/models (20-30 vehicles)
 - IUVP, CAP 2000 “reality check,” or other sources
 - Equivalency factor(s)
 - SRC aging time / ARC aging time
 - Covered durability groups and grouping rationale
- For an ABC:
 - Lower control temperature, modified fuel and different calculation factors for bench aging time
 - Covered durability groups and grouping rationale



Equivalency Factors (EFs)

- Required for Customized SRC and Alternative Road Cycle (ARC)
- Provide an EF for each test group or an EF for combined test groups for EPA approval
- Combined EFs based on:
 - Highest EF; or
 - 75th percentile or greater EF



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Corrections from May 17th EPA Industry Meeting Presentation

- Slide #2: last bullet should read “Contact Information.”
- Slides #8 and #9: Removed “Equivalency Factors” under criteria for Customized SBC and ABC, respectively.
- Slide #9: Removed the word “Customized” before ARC and ABC.