Emissions Durability Rule Implementation:
Overview of Requirements and Process for New Emissions Durability Demonstration

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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)
  - IUPV, 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.