

and Later Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles and Engines (OBD II), California Mail Out #95-34, September 26, 1995, excluding paragraphs (d), (m)(4), and (m)(5).

(g) State of California; Air Resources Board: California Motor Vehicle Emission Control Label Specifications, adopted March 1, 1978, amended June 24, 1996, excluding paragraphs 2(b), 3.5, and 10.

[62 FR 31264, June 6, 1997]

APPENDIX XIV TO PART 86—DETERMINATION OF ACCEPTABLE DURABILITY TEST SCHEDULE FOR LIGHT-DUTY VEHICLES AND LIGHT LIGHT-DUTY TRUCKS CERTIFYING TO THE PROVISIONS OF PART 86, SUBPART R

A manufacturer may determine mileage test intervals for durability-data vehicles subject to the conditions specified in §86.1726. The following procedure shall be used to determine if the schedule is acceptable to the Administrator:

1. Select exhaust system mileage test points and maintenance mileage test points for proposed (prop) schedule.

2. Calculate the sums of the squares corrected to the mean of the system mileages at the proposed test points:

$$A_{prop} = [\sum(X_p)^2 - ((\sum X_p)^2 / N_p)]_{prop}$$

Where:

X_p = Individual mileages at which the vehicle will be tested.

N_p = Total number of tests (including before and after maintenance tests).

(Subscript “p” refers to proposed test schedule).

3. Determine exhaust system mileage test points and maintenance mileage test points based on testing at five thousand mile intervals from 5,000 miles through the final testing point and maintenance mileage test points selected for the proposed schedule in step 1 of this appendix. This schedule will be designated as the standard (std) test schedule.

4. Calculate the sums of squares corrected to the mean of the standard schedule:

$$B_{std} = [\sum(X_s)^2 - ((\sum X_s)^2 / N_s)]_{std}$$

Where:

X_s = Individual mileages at which the vehicle will be tested.

N_s = Total number of tests (including before and after maintenance).

(Subscript “s” refers to standard test schedule).

5. Refer to table I and determine t_p at (N_p - 2)_{prop} degrees of freedom and t_s at (N_s - 2)_{std}.

6. If (A_{prop})^{1/2} ≥ t_p/t_s × (B_{std})^{1/2} the proposed plan is acceptable.

TABLE I TO APPENDIX XIV

Degrees of freedom (N-2)	t
1	6.314
2	2.920
3	2.353
4	2.132
5	2.015
6	1.943
7	1.895
8	1.860
9	1.833
10	1.812
11	1.796
12	1.782
13	1.771
14	1.761
15	1.753
16	1.746
17	1.740
18	1.734
19	1.729
20	1.725
21	1.721
22	1.717
23	1.714
24	1.711
25	1.708

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APPENDIX XV TO PART 86—PROCEDURE FOR DETERMINING AN ACCEPTABLE EXHAUST REGENERATION DURABILITY-DATA TEST SCHEDULE FOR DIESEL CYCLE VEHICLES EQUIPPED WITH PERIODICALLY REGENERATING TRAP OXIDIZER SYSTEMS CERTIFYING TO THE PROVISIONS OF PART 86, SUBPART R

1. Select exhaust system mileage test points for proposed (prop) schedule.

2. Calculate the sums of the squares corrected to the mean of the system mileages at the proposed test points:

$$A_{prop} = [\sum(X_p)^2 - ((\sum X_p)^2 / N_p)]_{prop}$$

Where:

X_p = Individual mileages at which the vehicle will be tested.

N_p = Total number of tests (including before and after maintenance tests).

(Subscript “p” refers to proposed test schedule).

3. The exhaust system mileage tests points at 5,000, 25,000, 50,000, 75,000, and 100,000 miles will be designated as the standard (std) test schedule.

4. Calculate the sums of square corrected to the mean of the standard tests schedule:

$$B_{std} = [\sum(X_s)^2 - ((\sum X_s)^2 / N_s)]_{std}$$

Where:

X_s = Individual mileages at which the vehicle will be tested.

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N_s = Total number of regeneration emission tests.

(Subscript "s" refers to standard test schedule)

5. Refer to table I and determine t_p at $(N_p - 2)_{prop}$ degrees of freedom and t_s at $(N_s - 2)_{std}$ degrees of freedom.

6. If $(A_{prop})^{1/2} \geq t_p / t_s \times (B_{std})^{1/2}$ the proposed plan is acceptable.

TABLE I TO APPENDIX XV

Degrees of freedom (N-2)	t
1	6.314
2	2.920
3	2.353
4	2.132
5	2.015
6	1.943
7	1.895
8	1.860
9	1.833
10	1.812
11	1.796
12	1.782
13	1.771
14	1.761
15	1.753

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APPENDIX XVI TO PART 86—POLLUTANT MASS EMISSIONS CALCULATION PROCEDURE FOR GASEOUS-FUELED VEHICLES AND FOR VEHICLES EQUIPPED WITH PERIODICALLY REGENERATING TRAP OXIDIZER SYSTEMS CERTIFYING TO THE PROVISIONS OF PART 86, SUBPART R

(a) Gaseous-Fueled Vehicle Pollutant Mass Emission Calculation Procedure.

(1) For all TLEVs, LEVs, and ULEVs, the calculation procedures specified in Chapter 5 of the California Regulatory Requirements Applicable to the National Low Emission Vehicle Program (October, 1996) shall apply. These procedures are incorporated by reference (see §86.1).

(b) Pollutant Mass Emissions Calculation Procedure for Vehicles Equipped with Periodically Regenerating Trap Oxidizer Systems.

(1) Exhaust Emissions. (i) The provisions of §86.1777 apply to vehicles equipped with periodically regenerating trap oxidizer systems, except that the following shall apply instead of the requirements in §86.144-94(a):

(ii) The final reported test results shall be computed by the use of the following formula:

(iii) For light-duty vehicles and light-duty trucks:

$$Y_{wm} = 0.43 ((Yct + Ys) / (Dct + Ds)) + 0.57 ((Yht + Ys) / (Dht + Ds)).$$

(iv) For purposes of adjusting emissions for regeneration:

$$Re = ((Yr1 - Yct) + (Yr2 - Ys) + (Yr3 - Yht)) / (Dct + Ds + Dht).$$

$$Yr = Ywm + Re.$$

Where:

Ywm = Weighted mass emissions of each pollutant, i.e., HC, CO, NO_x or CO, in grams per vehicle mile.

Yct = Mass emissions as calculated from the "transient" phase of the cold start test, in grams per test phase.

Yht = Mass emissions as calculated from the "transient" phase of the hot start test in grams per test phase.

Ys = Mass emissions as calculated from the "stabilized" phase of the cold start test, in grams per test phase.

Dct = The measured driving distance from the "transient" phase of the cold start test, in miles.

Dht = The measured distance from the "transient" phase of the hot start test, in miles.

Ds = The measured driving distance from the "stabilized" phase of the cold start test, in miles.

Yr = Regeneration emission test.

Re = Mass emissions of each pollutant attributable to regeneration in grams per mile.

Yr1 = Mass emissions, during a regeneration emission test, as calculated from the "transient" phase of the cold start test, in grams per test phase.

Yr2 = Mass emissions, during a regeneration emission test, as calculated from the "stabilized" phase of the cold start test, in grams per test phase.

Yr3 = Mass emissions, during a regeneration emission test, as calculated from the "transient" phase of the hot start test in grams per test phase.

(2) Particulate Emissions. (i) The provisions of §86.1778 apply to vehicles equipped with periodically regenerating trap oxidizer systems, except that the following shall apply instead of the requirements §86.145-82(a):

(ii) The final reported test results for the mass particulate (Mp) in grams/mile shall be computed as follows.

(iii) For purposes of adjusting emissions for regeneration:

$$Mp = 0.43(Mp1 + Mp2) / (Dct + Ds) + 0.57 (Mp3 + Mp2) / (Dht + Ds)$$

$$Re = ((Mpr1 - Mp1) + (Mpr2 - Mp2) + (Mpr3 - Mp3)) / (Dct + Ds + Dht)$$

$$Mpr = Mp + Re$$

Where:

(1) Mp1 = Mass of particulate determined from the "transient" phase of the cold start test, in grams per test phase. (See §86.110-94(d)(1) for determination.)