

conditioning systems with automatic temperature controls are finished with the test after this 600 second idle period. Manually controlled air conditioning systems must complete one additional idle period as described in paragraph (d)(6) of this section.

(6) This paragraph (d)(6) applies only to manually controlled air conditioning systems. Within 60 seconds after completing the measurement described in paragraph (d)(5) of this section, leave the vehicle's air conditioning system on and set as described in paragraph (d)(5) of this section but set the fan speed to the lowest setting that continues to provide air flow. Recirculation shall be turned off except that if the system defaults to a recirculation mode when set to maximum cooling and maintains recirculation with the low fan speed, then recirculation shall continue to be enabled. After the fan speed has been set, continue idling the vehicle while measuring and recording the continuous CO₂ concentration for a total of 600 seconds as described in paragraph (d)(4) of this section.

(e) *Calculations.* (1) For the measurement with no air conditioning operation, calculate the CO₂ emissions (in grams per minute) by dividing the total mass of CO₂ from paragraph (d)(4) of this section by 10.0 (the duration in minutes for which CO₂ is measured). Round this result to the nearest tenth of a gram per minute.

(2)(1) For the measurement with air conditioning in operation for automatic air conditioning systems, calculate the CO₂ emissions (in grams per minute) by dividing the total mass of CO₂ from paragraph (d)(5) of this section by 10.0. Round this result to the nearest tenth of a gram per minute.

(ii) For the measurement with air conditioning in operation for manually controlled air conditioning systems, calculate the CO₂ emissions (in grams per minute) by summing the total mass of CO₂ from paragraphs (d)(5) and (d)(6) of this section and dividing by 20.0. Round this result to the nearest tenth of a gram per minute.

(3) Calculate the increased CO₂ emissions due to air conditioning (in grams per minute) by subtracting the results of paragraph (e)(1) of this section from

the results of paragraph (e)(2)(i) or (ii) of this section, whichever is applicable.

(f) The Administrator may prescribe procedures other than those in this section for air conditioning systems and/or vehicles that may not be susceptible to satisfactory testing by the procedures and methods in this section. For example, the Administrator may prescribe alternative air conditioning system settings for systems with controls that are not able to meet the requirements in this section.

[75 FR 25680, May 7, 2010, as amended at 76 FR 39521, July 6, 2011; 77 FR 63152, Oct. 15, 2012]

§ 86.166–12 [Reserved]

Subpart C—Emission Regulations for 1994 and Later Model Year Gasoline-Fueled New Light-Duty Vehicles, New Light-Duty Trucks and New Medium-Duty Passenger Vehicles; Cold Temperature Test Procedures

SOURCE: 79 FR 23698, Apr. 28, 2014, unless otherwise noted.

§ 86.201 General applicability.

(a) Vehicles are subject to cold temperature testing requirements as described in subpart S of this part and 40 CFR part 600. Perform testing to measure CO and NMHC emissions and determine fuel economy as described in 40 CFR part 1066; see especially 40 CFR 1066.710.

(b) Perform intermediate temperature testing as follows:

(1) For testing during ambient temperatures of less than 50 °F (10 °C), perform testing as described in 40 CFR part 1066, subpart H.

(2) For testing at temperatures of 50 °F (10 °C) or higher, perform FTP testing as described in 40 CFR part 1066.

(c) Through model year 2021, manufacturers may certify vehicles based on data collected according to previously published cold temperature and intermediate temperature testing procedures. In addition, we may approve the use of previously published cold temperature and intermediate temperature testing procedures for later model

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years as an alternative procedure under 40 CFR 1066.10(c).

(d) Section 86.213 describes special provisions related to test fuel specifications.

§ 86.213 Fuel specifications.

(a) *Gasoline.* Use a gasoline test fuel with ethanol (low-level blend only) or without ethanol as follows:

(1) You must certify using service accumulation fuel and E10 test fuel as specified in § 86.113 for any vehicles required to use a low-level ethanol-gasoline

blend test fuel for measuring exhaust emissions. You may use this test fuel any time earlier than we specify.

(2) You may use the test fuel specified in this paragraph (a)(2) for vehicles that are not yet subject to exhaust testing with an ethanol-blend test fuel under § 86.113. Manufacturers may certify based on this fuel using carryover data until testing with the ethanol-blend test fuel is required. The following specifications apply for gasoline test fuel without ethanol:

TABLE 1 OF § 86.213—COLD TEMPERATURE TEST FUEL SPECIFICATIONS FOR GASOLINE WITHOUT ETHANOL

Item	Regular	Premium	Reference procedure ¹
(RON+MON)/2 ²	87.8±0.3	92.3±0.5	ASTM D2699
Sensitivity ³	7.5	7.5	ASTM D2700
Distillation Range (°F):			
Evaporated initial boiling point	76–96	76–96	ASTM D86
10% evaporated	98–118	105–125	
50% evaporated	179–214	195–225	
90% evaporated	316–346	316–346	
Evaporated final boiling point	413 Maximum	413 Maximum	
Hydrocarbon composition (vol %):			
Olefins	12.5±0.5	10.5±0.5	ASTM D1319
Aromatics	26.4±4.0	32.0±4.0	
Saturates	Remainder	Remainder	
Lead, g/gallon	0.01, Maximum	0.01, Maximum	ASTM D3237
Phosphorous, g/gallon	0.005 Maximum	0.005 Maximum	ASTM D3231
Total sulfur, wt. % ³	0.0015–0.008	0.0015–0.008	ASTM D2622
RVP, psi	11.5±0.3	11.5±0.3	ASTM D5191

¹ ASTM procedures are incorporated by reference in § 86.1.
² Octane specifications are optional for manufacturer testing. The premium fuel specifications apply for vehicles designed to use high-octane premium fuel.
³ Sulfur concentration will not exceed 0.0045 weight percent for EPA testing.

(3) Manufacturers may use the E0 gasoline test fuel specified in § 86.113 for certification instead of the fuel specified in paragraph (a)(2) of this section, as long as the change in test fuel does not cause cold temperature NMHC, CO, or CO₂ emissions to decrease; manufacturers must keep records documenting these emission effects and make them available to EPA upon request.

(4) We may approve alternate fuel specifications that are substantially equivalent to those in paragraph (a)(2) of this section for a manufacturer's testing.

(b) *Diesel fuel.* Diesel fuel for testing under this subpart must meet the specifications for low-temperature test fuel in 40 CFR 1065.703.

Subpart E—Emission Regulations for 1978 and Later New Motorcycles, General Provisions

SOURCE: 42 FR 1126, Jan. 5, 1977, unless otherwise noted.

§ 86.401–2006 General applicability.

This subpart applies to 1978 and later model year, new, gasoline-fueled motorcycles built after December 31, 1977, and to 1990 and later model year, new methanol-fueled motorcycles built after December 31, 1989 and to 1997 and later model year, new natural gas-fueled and liquefied petroleum gas-fueled motorcycles built after December 31, 1996 and to 2006 and later model year new motorcycles, regardless of fuel.

[69 FR 2435, Jan. 15, 2004]

Subpart D [Reserved]