

(3) A mixture containing 50% gasoline or diesel and 50% methanol by volume, applicable during model years 1993 through 1995; or

(4) In lieu of testing using the mixture containing 50% gasoline or diesel and 50% methanol by volume, the manufacturer must provide a written statement attesting that the equal or superior energy efficiency is attained while using the 50% gasoline or diesel and 50% methanol mixture compared to using gasoline.

[59 FR 39652, Aug. 3, 1994, as amended at 64 FR 23975, May 4, 1999]

**§ 600.112-08 Exhaust sample analysis.**

The exhaust sample analysis must be performed according to §86.140, or §86.240 of this chapter, as applicable.

[71 FR 77935, Dec. 27, 2006]

**§ 600.112-78 Exhaust sample analysis.**

The exhaust sample analysis must be performed according to §86.140 of this chapter.

**§ 600.113-08 Fuel economy calculations for FTP, HFET, US06, SC03 and cold temperature FTP tests.**

The Administrator will use the calculation procedure set forth in this paragraph for all official EPA testing of vehicles fueled with gasoline, diesel, alcohol-based or natural gas fuel. The calculations of the weighted fuel economy values require input of the weighted grams/mile values for total hydrocarbons (HC), carbon monoxide (CO), and carbon dioxide (CO<sub>2</sub>); and, additionally for methanol-fueled automobiles, methanol (CH<sub>3</sub>OH) and formaldehyde (HCHO); and additionally for natural gas-fueled vehicles non-methane hydrocarbons (NMHC) and methane (CH<sub>4</sub>) for the FTP, HFET, US06, SC03 and cold temperature FTP tests. Additionally, the specific gravity, carbon weight fraction and net heating value of the test fuel must be determined. The FTP, HFET, US06, SC03 and cold temperature FTP fuel economy values shall be calculated as specified in this section. An example appears in Appendix II of this part.

(a) Calculate the FTP fuel economy.

(1) Calculate the weighted grams/mile values for the FTP test for HC, CO

and CO<sub>2</sub>; and, additionally for methanol-fueled automobiles, CH<sub>3</sub>OH and HCHO; and additionally for natural gas-fueled automobiles NMHC and CH<sub>4</sub> as specified in §86.144 of this chapter. Measure and record the test fuel's properties as specified in paragraph (f) of this section.

(2) Calculate separately the grams/mile values for the cold transient phase, stabilized phase and hot transient phase of the FTP test. For vehicles with more than one source of propulsion energy, one of which is a rechargeable energy storage system, or vehicles with special features that the Administrator determines may have a rechargeable energy source, whose charge can vary during the test, calculate separately the grams/mile values for the cold transient phase, stabilized phase, hot transient phase and hot stabilized phase of the FTP test.

(b) Calculate the HFET fuel economy.

(1) Calculate the mass values for the highway fuel economy test for HC, CO and CO<sub>2</sub>, and where applicable CH<sub>3</sub>OH, HCHO, NMHC and CH<sub>4</sub> as specified in §86.144(b) of this chapter. Measure and record the test fuel's properties as specified in paragraph (f) of this section.

(2) Calculate the grams/mile values for the highway fuel economy test for HC, CO and CO<sub>2</sub>, and where applicable CH<sub>3</sub>OH, HCHO, NMHC and CH<sub>4</sub> by dividing the mass values obtained in paragraph (b)(1) of this section, by the actual distance traveled, measured in miles, as specified in §86.135(h) of this chapter.

(c) Calculate the cold temperature FTP fuel economy.

(1) Calculate the weighted grams/mile values for the cold temperature FTP test for HC, CO and CO<sub>2</sub>; and, additionally for methanol-fueled automobiles, CH<sub>3</sub>OH and HCHO; and additionally for natural gas-fueled automobiles NMHC and CH<sub>4</sub> as specified in §86.244 of this chapter. For 2008 through 2010 diesel-fueled vehicles, HC measurement is optional.

(2) Calculate separately the grams/mile values for the cold transient phase, stabilized phase and hot transient phase of the cold temperature FTP test in §86.244 of this chapter.