§ 86.207–94  Exhaust gas sampling system; gasoline-fueled vehicles.

The provisions of §86.109–90 apply to this subpart.

§ 86.210–08  Exhaust gas sampling system; Diesel-cycle vehicles not requiring particulate emissions measurements.

(a) General applicability. The exhaust gas sampling system requirements of §86.109–94 (which apply to Otto-cycle vehicles), also apply to diesel vehicles that are not required to undergo particulate measurement as allowed under §600.111–08(e) of this chapter, except that heated flame ionization detector (HFID), probe, sample lines and filters are required as described as follows:

(1) Petroleum-fueled diesel-cycle vehicles require a heated flame ionization detector (HFID) (375±20°F (191±11°C)) sample for total hydrocarbon (THC) analysis. The HFID sample must be taken directly from the diluted exhaust stream through a heated probe and continuously integrated measurement of diluted THC is required. Unless compensation for varying mass flow is made, a constant mass flow system must be used to ensure a proportional THC measurement.

(2) For natural gas-fueled and liquidified petroleum gas-fueled diesel vehicles either a heated flame ionization detector (HFID) [375±20°F (191±11°C)] or a non-heated flame ionization detector may be used for hydrocarbon analysis.

(3) Other sampling systems may be used if shown to yield equivalent or superior results and if approved in advance by the Administrator.

(b) Component description. The components necessary for petroleum-fueled diesel vehicle exhaust sampling shall meet the following requirements:

(1) The PDP system shall conform to all of the requirements listed for the exhaust gas PDP-CVS (§86.109–94(a)(3)).

(2) The CFV-CVS sample system shall conform to all of the requirements listed for the exhaust gas EFC sample system (§86.109–94(a)(5)).

(3) The THC probe (when the THC probe is required) shall be:

(i) Installed at a point where the dilution air and exhaust are well mixed.

(ii) Heated and insulated over the entire length to maintain a 375±20°F (191±11°C) wall temperature.

(iii) 0.19 in. (0.48 cm) minimum inside diameter.

(iv) It is intended that the THC probe be free from cold spots (i.e., free from spots where the probe wall temperature is less than 375°F). This will be determined by a temperature sensor located on a section of the probe wall outside of the walls of the sampling system. The temperature sensor shall be insulated from any heating elements on the probe. The sensor shall have an accuracy and precision of ±2°F (1.1°C).

(5) The dilute exhaust gas flowing in the THC sample system shall be:

(i) At 375°F±10°F (191°C±6°C) immediately before the heated filter. This will be determined by a temperature sensor located immediately upstream of the filter. The sensor shall have an accuracy and precision of ±2°F (1.1°C).