
40 C.F.R. § 1065.15

Overview of procedures for laboratory and field testing.

This section outlines the procedures to test engines that are subject to emission standards.

(a) In the standard-setting part, we set brake-specific emission standards in g/(kW · hr) (or g/(hp · hr)), for the following constituents:

(1) Total oxides of nitrogen, NO_x.

(2) Hydrocarbon, HC, which may be expressed in the following ways:

(i) Total hydrocarbon, THC.

(ii) Nonmethane hydrocarbon, NMHC, which results from subtracting methane, CH₄, from THC.

(iii) Nonmethane-nonethane hydrocarbon, NMNEHC, which results from subtracting methane, CH₄, and ethane, C₂H₆, from THC.

(iv) Total hydrocarbon-equivalent, THCE, which results from adjusting THC mathematically to be equivalent on a carbon-mass basis.

(v) Nonmethane hydrocarbon-equivalent, NMHCE, which results from adjusting NMHC mathematically to be equivalent on a carbon-mass basis.

(3) Particulate matter, PM.

(4) Carbon monoxide, CO.

(5) Carbon dioxide, CO₂.

(6) Methane, CH₄.

(7) Nitrous oxide, N₂O.

(b) Note that some engines are not subject to standards for all the emission constituents identified in paragraph (a) of this section. Note also that the standard-setting part may include standards for pollutants not listed in paragraph (a) of this section.

(c) We generally set brake-specific emission standards over test intervals and/or duty cycles, as follows:

(1) *Engine operation.* Testing may involve measuring emissions and work in a laboratory-type environment or in the field, as described in paragraph (f) of this section. For most laboratory testing, the engine is operated over one or more duty cycles specified in the standard-setting part. However, laboratory testing may also

include non-duty cycle testing (such as simulation of field testing in a laboratory). For field testing, the engine is operated under normal in-use operation. The standard-setting part specifies how test intervals are defined for field testing. Refer to the definitions of “duty cycle” and “test interval” in § 1065.1001. Note that a single duty cycle may have multiple test intervals and require weighting of results from multiple test intervals to calculate a composite brake-specific emissions value to compare to the standard.

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