

## Environmental Protection Agency

## § 86.004-21

### § 86.004-16 Prohibition of defeat devices.

(a) No new heavy-duty vehicle or heavy-duty engine shall be equipped with a defeat device.

(b) The Administrator may test or require testing on any vehicle or engine at a designated location, using driving cycles and conditions which may reasonably be expected to be encountered in normal operation and use, for the purpose of investigating a potential defeat device.

(c) [Reserved]

(d) For vehicle and engine designs designated by the Administrator to be investigated for possible defeat devices:

(1) *General.* The manufacturer must show to the satisfaction of the Administrator that the vehicle or engine design does not incorporate strategies that reduce emission control effectiveness exhibited during the Federal emissions test procedures, described in subpart N of this part, when the vehicle or engine is operated under conditions which may reasonably be expected to be encountered in normal operation and use, unless one of the specific exceptions set forth in the definition of "defeat device" in § 86.004-2 has been met.

(2) *Information submissions required.* The manufacturer will provide an explanation containing detailed information (including information which the Administrator may request to be submitted) regarding test programs, engineering evaluations, design specifications, calibrations, on-board computer algorithms, and design strategies incorporated for operation both during and outside of the Federal emission test procedure described in subpart N of this part.

[65 FR 59947, Oct. 6, 2000]

### § 86.004-21 Application for certification.

Section 86.004-21 includes text that specifies requirements that differ from § 86.094-21 or § 86.096-21. Where a paragraph in § 86.094-21 or § 86.096-21 is identical and applicable to § 86.004-21, this may be indicated by specifying the corresponding paragraph and the statement "[Reserved]. For guidance see

§ 86.094-21." or "[Reserved]. For guidance see § 86.096-21."

(a)-(b)(3) [Reserved]. For guidance see § 86.094-21.

(b)(4)(i) For light-duty vehicles and light-duty trucks, a description of the test procedures to be used to establish the evaporative emission and/or refueling emission deterioration factors, as appropriate, required to be determined and supplied in § 86.001-23(b)(2).

(b)(4)(ii)-(b)(5)(iv) [Reserved]. For guidance see § 86.094-21.

(b)(5)(v) For light-duty vehicles and applicable light-duty trucks with non-integrated refueling emission control systems, the number of continuous UDDS cycles, determined from the fuel economy on the UDDS applicable to the test vehicle of that evaporative/refueling emission family-emission control system combination, required to use a volume of fuel equal to 85% of fuel tank volume.

(6) *Participation in averaging programs—(i) Particulate averaging.* (A) If the manufacturer elects to participate in the particulate averaging program for diesel light-duty vehicles and/or diesel light-duty trucks or the particulate averaging program for heavy-duty diesel engines, the application must list the family particulate emission limit and the projected U.S. production volume of the family for the model year.

(B) The manufacturer shall choose the level of the family particulate emission limits, accurate to hundredth of a gram per mile or hundredth of a gram per brake horsepowerhour for HDEs.

(C) The manufacturer may at any time during production elect to change the level of any family particulate emission limit(s) by submitting the new limit(s) to the Administrator and by demonstrating compliance with the limit(s) as described in §§ 86.090-2 and 86.094-28(b)(5)(i).

(ii) *NO<sub>x</sub> and NO<sub>x</sub> plus NMHC averaging.* (A) If the manufacturer elects to participate in the NO<sub>x</sub> averaging program for light-duty trucks or otto-cycle HDEs or the NO<sub>x</sub> plus NMHC averaging program for diesel-cycle HDEs, the application must list the

family emission limit and the projected U.S. production volume of the family for the model year.

(B) The manufacturer shall choose the level of the family emission limits, accurate to one-tenth of a gram per mile or to one-tenth of a gram per brake horsepower-hour for HDEs.

(C) The manufacturer may at any time during production elect to change the level of any family emission limit(s) by submitting the new limits to the Administrator and by demonstrating compliance with the limit(s) as described in §§ 86.088-2 and 86.094-28(b)(5)(ii).

(b)(7) and (b)(8) [Reserved]. For guidance see § 86.094-21.

(b)(9) For each light-duty vehicle, light-duty truck, evaporative/refueling emission family or heavy-duty vehicle evaporative emission family, a description of any unique procedures required to perform evaporative and/or refueling emission tests, as applicable, (including canister working capacity, canister bed volume, and fuel temperature profile for the running loss test) for all vehicles in that evaporative and/or evaporative/refueling emission family, and a description of the method used to develop those unique procedures.

(10) For each light-duty vehicle or applicable light-duty truck evaporative/refueling emission family, or each heavy-duty vehicle evaporative emission family:

(i) Canister working capacity, according to the procedures specified in § 86.132-96(h)(1)(iv);

(ii) Canister bed volume; and

(iii) Fuel temperature profile for the running loss test, according to the procedures specified in § 86.129-94(d).

(c)-(j) [Reserved]. For guidance see § 86.094-21.

(k) and (l) [Reserved]. For guidance see § 86.096-21.

(m) For model years 2004 through 2007, within 180 days after submission of the application for certification of a heavy-duty diesel engine, the manufacturer must provide emission test results from the Load Response Test conducted according to § 86.1380-2004, including, at a minimum, test results conducted at each of the speeds identified in § 86.1380-2004. Load Response Test data submissions are not nec-

essary for carry-over engine families for which Load Response Test data has been previously submitted. In addition, upon approval of the Administrator, manufacturers may carry Load Response Test data across from one engine family to other engine families, provided that the carry-across engine families use similar emission control technology hardware which would be expected to result in the generation of similar emission data when run over the Load Response Test.

(n) Upon request from EPA, a manufacturer must provide to EPA any hardware (including scan tools), passwords, and/or documentation necessary for EPA to read, interpret, and store (in engineering units if applicable) any information broadcast by an engine's on-board computers and electronic control modules which relates in any way to emission control devices and auxiliary emission control devices, provided that such hardware, passwords, or documentation exists and is not otherwise commercially available. Passwords include any information necessary to enable generic scan tools or personal computers access to proprietary emission related information broadcast by an engine's on-board computer, if such passwords exist. This requirement includes access by EPA to any proprietary code information which may be broadcast by an engine's on-board computer and electronic control modules. Information which is confidential business information must be marked as such. Engineering units refers to the ability to read, interpret, and store information in commonly understood engineering units, for example, engine speed in revolutions per minute or per second, injection timing parameters such as start of injection in degree's before top-dead center, fueling rates in cubic centimeters per stroke, vehicle speed in miles per hour or kilometers per hour. This paragraph (n) does not restrict EPA authority to take any action authorized by section 208 of the Clean Air Act.

[62 FR 54724, Oct. 21, 1997, as amended at 65 FR 59947, Oct. 6, 2000]

#### § 86.004-25 Maintenance.

Section 86.004-25 includes text that specifies requirements that differ from