data stream information from systems or modules that do not impact emissions.

- (D) Emissions-related information means any information related to the diagnosis, service, and repair of emissions-related components. Emissions-related information includes, but is not limited to, information regarding any system, component or part of a vehicle that controls emissions and any system, component and/or part associated with the powertrain system, including, but not limited to:
- (1) The engine, the fuel system and ignition system,
- (2) Information for any system, component or part that is likely to impact emissions, such as transmission systems, and any other information specified by the Administrator to be relevant to the diagnosis and repair of an emissions-related problem; and
- (3) Any other information specified by the Administrator to be relevant for the diagnosis and repair of an emissionsrelated failure found through the inspection and maintenance program after such finding has been communicated to the affected manufacturer(s).
- (E) Emissions-related training information means any information-related training or instruction for the purpose of the diagnosis, service, and repair of emissions-related components.
- (F) Enhanced service and repair information means information which is specific for an original equipment manufacturer's brand of tools and equipment. This includes computer or anti-theft system initialization information necessary for the completion of any emissions-related repair on motor vehicles that employ integral vehicle security systems.
- (G) Equipment and tool company means a registered automotive equipment or software company either public or private that is engaged in, or plans to engage in, the manufacture of automotive scan tool reprogramming equipment or software.
- (H) Generic service and repair information means information which is not specific for an original equipment manufacturer's brand of tools and
- (I) Indirect information means any information that is not specifically contained in the service literature, but is contained in items such as tools or equipment provided to franchised dealers (or others). This includes computer or anti-theft system initialization information necessary for the completion of any emissions-related repair on motor vehicles that employ integral vehicle security systems.

- (J) Intermediary means any individual or entity, other than an original equipment manufacturer, which provides service or equipment to aftermarket service providers.
- (K) Manufacturer-franchised dealership means any service provider with which a manufacturer has a direct business relationship
- business relationship.
 (L) Third-party information provider means any individual or entity, other than an original equipment manufacturer, who consolidates manufacturer service information and makes this information available to aftermarket service providers.

(M) Third-party training provider means any individual or entity, other than an original equipment manufacturer who develops and/or delivers instructional and educational material for automotive training courses.

- (3) Information dissemination. By December 24, 2003, each manufacturer was required to provide or cause to be provided to the persons specified in paragraph (g)(2)(i) of this section and to any other interested parties a manufacturer-specific World Wide Web site containing the information specified in paragraph (g)(2)(i) of this section for 1996 and later model year vehicles which have been offered for sale; this requirement does not apply to indirect information, including the information specified in paragraphs (g)(12) through (g)(16) of this section. Upon request and approval of the Administrator, manufacturers who can demonstrate significant hardship in complying with this provision by December 26, 2003, may request an additional six months lead time to meet this requirement. Each manufacturer Web site shall:
- (i) Provide access in full-text to all of the information specified in paragraph (g)(5) of this section.
- (ii) Be updated at the same time as manufacturer-franchised dealership World Wide Web sites:
- (iii) Provide users with a description of the minimum computer hardware and software needed by the user to access that manufacturer's information (e.g., computer processor speed and operating system software). This description shall appear when users first log-on to the home page of the manufacturer Web site.
- (iv) Provide Short-Term (24 to 72 hours), Mid-Term (30 day period), and Long-Term (365 day period) Web site subscription options to any person specified in paragraph (g)(2)(i) of this section whereby the user will be able to access the site, search for the information, and purchase, view and print the information at a fair and reasonable cost as specified in

- paragraph (g)(7) of this section for each of the subscription options. In addition, for each of the subscription options, manufacturers are required to make their entire site accessible for the respective period of time and price. In other words, a manufacturer may not limit any or all of the subscription options to just one make or one model.
- (v) Allow the user to search the manufacturer Web site by various topics including but not limited to model, model year, key words or phrases, etc., while allowing ready identification of the latest vehicle calibration.

 Manufacturers who do not use model year to classify their vehicles in their service information may use an alternate vehicle delineation such as body series. Any manufacturer utilizing this flexibility shall create a cross-reference to the corresponding model year and provide this cross-reference on the manufacturer Web site home page.
- (vi) Provide accessibility using common, readily available software and shall not require the use of software, hardware, viewers, or browsers that are not readily available to the general public. Manufacturers shall also provide hyperlinks to any plug-ins, viewers or browsers (e.g., Adobe Acrobat or Netscape) needed to access the manufacturer Web site.
- (vii) Allow simple hyper-linking to the manufacturer Web site from government Web sites and automotiverelated Web sites.
- (viii) Allow access to the manufacturer Web site with no limits on the modem speed by which aftermarket service providers or other interested parties can connect to the manufacturer Web site.
- (ix) Possess sufficient server capacity to allow ready access by all users and have sufficient capacity to assure that all users may obtain needed information without undue delay.
- (x) Correct or delete broken Web links on a weekly basis.
- (xi) Allow for Web site navigation that does not require a user to return to the manufacturer home page or a search engine in order to access a different portion of the site.
- (xii) Allow users to print out any and all of the materials required to be made available on the manufacturer Web site including the ability to print it at the user's location.
- (4) Small volume provisions for information dissemination.
- (i) Manufacturers with annual sales of less than 5,000 vehicles had until June 28, 2004 to launch their individual Web sites as required by paragraph (g)(3) of this section.

(ii) Manufacturers with annual sales of less than 1,000 vehicles may, in lieu of meeting the requirement of paragraph (g)(3) of this section, request the Administrator to approve an alternative method by which the required emissions-related information can be obtained by the persons specified in paragraph (g)(2)(i) of this section.

(5) Required information. All information relevant to the diagnosis and completion of emissions-related repairs shall be posted on manufacturer Web sites. This excludes indirect information specified in paragraphs (g)(6) and (g)(12) through (g)(16) of this section. To the extent that this information does not already exist in some form for their manufacturer franchised dealerships, manufacturers are required to develop and make available the information required by this section to both their manufacturer franchised dealerships and the aftermarket. The required information includes, but is not limited to:

(i) Manuals, including subsystem and component manuals developed by a manufacturer's third party supplier that are made available to manufacturer franchised dealerships, technical service bulletins (TSBs), recall service information, diagrams, charts, and training materials. Manuals and other such service information from third party suppliers are not required to be made available in full-text on manufacturer Web sites as described in paragraph (g)(3) of this section. Rather, manufacturers must make available on the manufacturer Web site as required by paragraph (g)(3) of this section an index of the relevant information and instructions on how to order such third party information. In the alternative, a manufacturer can create a link from its Web site to the Web site(s) of the third party supplier.

(ii) OBD system information which includes, but is not limited to, the

following:

(A) A general description of the operation of each monitor, including a description of the parameter that is being monitored;

(B) A listing of all typical OBD diagnostic trouble codes associated with

each monitor;

(C) A description of the typical enabling conditions (either generic or monitor-specific) for each monitor (if equipped) to execute during vehicle operation, including, but not limited to, minimum and maximum intake air and engine coolant temperature, vehicle speed range, and time after engine startup. In addition, manufacturers shall list all monitor-specific OBD drive cycle information for all major OBD monitors

as equipped including, but not limited to, catalyst, catalyst heater, oxygen sensor, oxygen sensor heater, evaporative system, exhaust gas recirculation (EGR), secondary air, and air conditioning system. Additionally, for diesel vehicles under 14,000 pounds. GVWR which also perform misfire, fuel system and comprehensive component monitoring under specific driving conditions (i.e., non-continuous monitoring; as opposed to spark ignition engines that monitor these systems under all conditions or continuous monitoring), the manufacturer shall make available monitor-specific drive cycles. Any manufacturer who develops generic drive cycles, either in addition to, or instead of, monitor-specific drive cycles shall also make these available in full-text on manufacturer Web sites;

(D) A listing of each monitor sequence, execution frequency and typical duration;

(E) A listing of typical malfunction

thresholds for each monitor;

(F) For OBD parameters for specific vehicles that deviate from the typical parameters, the OBD description shall indicate the deviation and provide a separate listing of the typical values for those vehicles:

(G) Identification and scaling information necessary to interpret and understand data available to a generic scan tool through "mode 6," pursuant to SAE J1979 (as specified in paragraph (g)(17) of this section).

(H) Algorithms, look-up tables, or any values associated with look-up tables are not required to be made available.

(iii) Any information regarding any system, component, or part of a vehicle monitored by the OBD system that could in a failure mode cause the OBD system to illuminate the malfunction indicator light (MIL);

(iv) Any information on other systems that can effect the emission system within a multiplexed system (including how information is sent between emission-related system modules and other modules on a multiplexed bus);

(v) Manufacturer-specific emissionsrelated diagnostic trouble codes (DTCs) and any related service bulletins, trouble shooting guides, and/or repair procedures associated with these manufacturer-specific DTCs; and

(vi) Information regarding how to obtain the information needed to perform reinitialization of any vehicle computer or anti-theft system following an emissions-related repair.

(6) Anti-theft system initialization information. Computer or anti-theft system initialization information and/or related tools necessary for the proper installation of on-board computers or

necessary for the completion of any emissions-related repair on motor vehicles that employ integral vehicle security systems or the repair or replacement of any other emission-related part shall be made available at a fair and reasonable cost to the persons specified in paragraph (g)(2)(i) of this section.

(i) Except as provided under paragraph (g)(6)(ii) of this section, manufacturers must make this information available to persons specified in paragraph (g)(2)(i) of this section, such that such persons will not need any special tools or manufacturer-specific scan tools to perform the initialization. Manufacturers may make such information available through, for example, generic aftermarket tools, a pass-through device, or inexpensive manufacturer-specific cables.

(ii) A manufacturer may request Administrator approval for an alternative means to re-initialize vehicles for some or all model year vehicles through the 2007 model year by September 26, 2003. The Administrator shall approve the request only after the following conditions have been met:

(A) The manufacturer must demonstrate that the availability of such information to aftermarket service providers would significantly increase the risk of vehicle theft.

(B) The manufacturer must make available a reasonable alternative means to install or repair computers, or to otherwise repair or replace an emissionrelated part.

(C) Any alternative means proposed by a manufacturer cannot require aftermarket technicians to use a manufacturer franchised dealership to obtain information or special tools to reinitialize the anti-theft system. All information must come directly from the manufacturer or a single manufacturer-specified designee.

(D) Any alternative means proposed by a manufacturer must be available to aftermarket technicians at a fair and

reasonable price.

(E) Any alternative must be available to aftermarket technicians within twenty-four hours of the initial request.

(F) Any alternative must not require the purchase of a special tool or tools, including manufacturer-specific tools, to complete this repair. Alternatives may include lease of such tools, but only for appropriately minimal cost.

(Ğ) In lieu of leasing their manufacturer-specific tool to meet this requirement, a manufacturer may also release the necessary information to equipment and tool manufacturers for incorporation into aftermarket scan tools. Any manufacturer choosing this option must release the information to equipment and tool manufacturers within 60 days of Administrator approval. Manufacturers may also comply with this requirement using SAE J2534 (as specified in paragraph (g)(17) of this section) for some or all model years through model year 2007.

(7) Cost of required information.

(i) All information required to be made available by this section shall be made available at a fair and reasonable price. In determining whether a price is fair and reasonable, consideration may be given to relevant factors, including, but not limited to, the following:

(A) The net cost to the manufacturerfranchised dealerships for similar information obtained from manufacturers, less any discounts, rebates, or other incentive programs.

- (B) The cost to the manufacturer for preparing and distributing the information, excluding any research and development costs incurred in designing and implementing, upgrading or altering the onboard computer and its software or any other vehicle part or component. Amortized capital costs for the preparation and distribution of the information may be included.
- (C) The price charged by other manufacturers for similar information.
- (D) The price charged by manufacturers for similar information prior to the launch of manufacturer Web sites.
- (E) The ability of aftermarket technicians or shops to afford the information.
- (F) The means by which the information is distributed;
- (G) The extent to which the information is used, which includes the number of users, and frequency, duration, and volume of use.

(H) Inflation.

- (ii) By August 25, 2003, each manufacturer was required to submit to the Administrator a request for approval of their pricing structure for their Web sites and amounts to be charged for the information required to be made available under paragraphs (g)(3) and (g)(5) of this section. Subsequent to the approval of the manufacturer Web site pricing structure, manufacturers shall notify the Administrator upon the increase in price of any one or all of the subscription options of 20 percent or more above the previously-approved price, taking inflation into account.
- (A) The manufacturer shall submit a request to the Administrator that sets forth a detailed description of the pricing structure and amounts, and support for the position that the pricing structure and amounts are fair and reasonable by addressing, at a

minimum, each of the factors specified in paragraph (g)(7)(i) of this section.

- (B) The Administrator will act upon the request within 180 days following receipt of a complete request or following receipt of any additional information requested by the Administrator.
- (C) The Administrator may decide not to approve, or to withdraw approval for a manufacturer's pricing structure and amounts based on a conclusion that this pricing structure and/or amounts are not, or are no longer, fair and reasonable, by sending written notice to the manufacturer explaining the basis for this decision.
- (D) In the case of a decision by the Administrator not to approve or to withdraw approval, the manufacturer shall within three months following notice of this decision, obtain Administrator approval for a revised pricing structure and amounts by following the approval process described in this paragraph (g)(7)(ii).

(8) Unavailable information. Any information which is not provided at a fair and reasonable price shall be considered unavailable, in violation of these regulations and section 202(m)(5) of the Clean Air Act.

(9) Third-party information providers. By December 24, 2003, manufacturers shall, for model year 2004 and later vehicles and engines, make available to third-party information providers as defined in paragraph (g)(2)(ii) of this section with whom they engage in licensing or business arrangements;

(i) The required emissions-related information as specified in paragraph

(g)(5) of this section either:

(A) Directly in electronic format such as diskette or CD-ROM using nonproprietary software, in English; or

(B) Indirectly via a Web site other than that required by paragraph (g)(3) of this section;

(ii) For any manufacturer who utilizes an automated process in their manufacturer-specific scan tool for diagnostic fault trees, the data schema, detail specifications, including category types/codes and vehicle codes, and data format/content structure of the diagnostic trouble trees.

(iii) Manufacturers can satisfy the requirement of paragraph (g)(9)(ii) of this section by making available diagnostic trouble trees on their manufacturer Web sites in full-text.

(iv) Manufacturers are not responsible for the accuracy of the information distributed by third parties. However, where manufacturers charge information intermediaries for information, whether through licensing agreements or other arrangements,

manufacturers are responsible for inaccuracies contained in the information they provide to third-party information providers.

(10) Required emissions-related training information. By December 24, 2003, for emissions-related training information, manufacturers were required to:

(i) Video tape or otherwise duplicate and make available for sale on manufacturer Web sites within 30 days after transmission any emissions-related training courses provided to manufacturer franchised dealerships via the Internet or satellite transmission;

(ii) Provide on the manufacturer Web site an index of all emissions-related training information available for purchase by aftermarket service providers for 1994 and newer vehicles. For model years subsequent to 2003, the required information must be made available for purchase within 3 months of model introduction and then must be made available at the same time it is made available to manufacturer franchised dealerships, whichever is earlier. The index shall describe the title of the course or instructional session. the cost of the video tape or duplicate, and information on how to order the item(s) from the manufacturer Web site. All of the items available must be shipped within 24 hours of the order being placed and are to be made available at a fair and reasonable price as described in paragraph (g)(7) of this section. Manufacturers unable to meet the 24 hour shipping requirement under circumstances where orders exceed supply and additional time is needed by the distributor to reproduce the item being ordered, may exceed the 24 hour shipping requirement, but in no instance can take longer than 14 days to ship the item.

(iii) Provide access to third-party training providers as defined in paragraph (g)(2)(ii) of this section all emission-related training courses transmitted via satellite or Internet offered to their manufacturer franchised dealerships. Manufacturers may not charge unreasonable up-front fees to third-party training providers for this access, but may require a royalty, percentage, or other arranged fee based on per-use enrollment/subscription basis. Manufacturers may take reasonable steps to protect any copyrighted information and are not required to provide this information to parties that do not agree to such steps.

(11) Timeliness and maintenance of information dissemination.

(i) General Requirements. Subsequent to the initial launch of the manufacturer's Web site, manufacturers

must make the information required under paragraph (g)(5) of this section available on their Web site within six months of model introduction, or at the same time it is made available to manufacturer franchised dealerships, whichever is earlier. After this sixmonth period, the information must be available and updated on the manufacturer Web site at the same time that the updated information is made available to manufacturer franchised dealerships, except as otherwise specified in this section.

(ii) Archived information. Beginning with the 1996 model year, manufacturers must maintain the required information on their Web sites in full-text as defined in paragraph (g)(5) of this section for a minimum of 15 vears after model introduction. Subsequent to this fifteen year period, manufacturers may archive the information in the manufacturer's format of choice and provide an index of the archived information on the manufacturer Web site and how it can be obtained by interested parties. Manufacturers shall index their available information with a title that adequately describes the contents of the document to which it refers. Manufacturers may allow for the ordering of information directly from their Web site, or from a Web site hyperlinked to the manufacturer Web site. In the alternative, manufacturers shall list a phone number and address where aftermarket service providers can call or write to obtain the desired information. Manufacturers must also provide the price of each item listed, as well as the price of items ordered on a subscription basis. To the extent that any additional information is added or changed for these model years, manufacturers shall update the index as appropriate. Manufacturers will be responsible for ensuring that all information, including information that is distributed through information distributors, is provided within one regular business day of receiving the order. Items that are less than 20 pages (e.g. technical service bulletins) shall be faxed, if requested, to the requestor and manufacturers are required to deliver the information overnight if requested and paid for by the ordering party. Archived information must be made available on demand and at a fair and reasonable price.

(12) Reprogramming information. (i) For model years 1996 and later, manufacturers shall make available to the persons specified in paragraph (g)(2)(i) of this section all emissionsrelated recalibration or reprogramming events (including driveability

reprogramming events that may affect emissions) in the format of its choice at the same time they are made available to manufacturer franchised dealerships. This requirement takes effect on September 25, 2003, and within 3 months of model introduction for all new model years.

(ii) For model years 1996 and later manufacturers shall provide persons specified in paragraph (g)(2)(i) of this section with an efficient and costeffective method for identifying whether the calibrations on vehicles are the latest to be issued. This requirement takes effect on September 25, 2003, and within 3 months of model introduction for all new model years.

(iii) For all 2004 and later OBD vehicles equipped with reprogramming capability, manufacturers shall comply with SAE J2534 (as specified in paragraph (g)(17) of this section). Any manufacturer who cannot comply with SAE J2534 in model year 2004 may request one year additional lead time from the Administrator.

(iv) For model years 2004 and later, manufacturers shall make available to aftermarket service providers the necessary manufacturer-specific software applications and calibrations needed to initiate pass-through reprogramming. This software shall be able to run on a standard personal computer that utilizes standard operating systems as specified in SAE J2534 (as specified in paragraph (g)(17) of this section).

(v) For model years prior to 2004, manufacturers may use SAE J2534 (as specified in paragraph (g)(17) of this section) as described above, provided they make available to the aftermarket any additional required hardware (i.e. cables). Manufacturers may not require the purchase or use of a manufacturerspecific scan tool to receive or use this additional hardware. Manufacturers must also make available the necessary manufacturer-specific software applications and calibrations needed to initiate pass-through reprogramming. Manufacturers must also make available to equipment and tool companies any information needed to develop aftermarket equivalents of the manufacturer-specific hardware.

(vi) Manufacturers may take any reasonable business precautions necessary to protect proprietary business information and are not required to provide this information to any party that does not agree to these reasonable business precautions. The requirement to make hardware available and to release the information to equipment and tool companies takes effect on September 25, 2003, and

within 3 months of model introduction for all new model years.

(vii) Manufacturers who cannot comply with paragraphs (g)(12)(v) and (g)(12)(vi) of this section shall make available to equipment and tool companies by September 25, 2003 the following information necessary for reprogramming the Electronic Control Unit (ECU):

(A) The physical hardware requirements for reprogramming events or tools (e.g. system voltage requirements, cable terminals/pins, connections such as RS232 or USB, wires, etc.).

(B) ECU data communication (e.g. serial data protocols, transmission speed or baud rate, bit timing requirements,

(C) Information on the application physical interface (API) or layers (descriptions for procedures such as connection, initialization, performing and verifying programming/download, and termination).

(D) Vehicle application information or any other related service information such as special pins and voltages for reprogramming events or additional vehicle connectors that require enablement and specifications for the enablement.

(E) Information that describes what interfaces or combinations of interfaces are used to deliver calibrations from database media (e.g. PC using CDROM to the reprogramming device e.g. scan tool or black box).

(viii) A manufacturer can propose an alternative to the requirements of paragraph (g)(12)(vii) of this section for how aftermarket service providers can reprogram an ECU. The Administrator will approve this alternative if the manufacturer demonstrates all of the following:

(A) That it cannot comply with paragraph (g)(12)(v) of this section for the vehicles subject to the alternative

(B) That a very small percentage of its vehicles in model years prior to 2004 cannot be reprogrammed with the provisions described in paragraph (g)(12)(v) of this section, or that releasing the information to tool companies would likely not result in this information being incorporated into aftermarket tools: and

(C) That aftermarket service providers will be able to reprogram promptly at a reasonable cost.

(ix) In meeting the requirements of paragraphs (g)(12)(v) through (g)(12)(vii) of this section, manufacturers may take any reasonable business precautions necessary to protect proprietary business information and are not

required to provide this information to any party that does not agree to these reasonable business precautions.

(13) Generic and enhanced information for scan tools. By September 25, 2003, manufacturers shall make available to equipment and tool companies all generic and enhanced service information including bi-directional control and data stream information as defined in paragraph (g)(2)(ii) of this section. This requirement applies for 1996 and later model year vehicles.

(i) The information required by paragraph (g)(13) of this section shall be provided electronically using common document formats to equipment and tool companies with whom they have appropriate licensing, contractual, and/ or confidentiality arrangements. To the extent that a central repository for this information (e.g. the TEK–NET library developed by the Equipment and Tool Institute) is used to warehouse this information, the Administrator shall have free unrestricted access. In addition, information required in paragraph (g)(13) of this section shall be made available to equipment and tool companies who are not otherwise members of any central repository and shall have access if the non-members have arranged for the appropriate licensing, contractual and/or confidentiality arrangements with the manufacturer and/or a central repository.

(ii) In addition to the generic and enhanced information defined in paragraph (g)(2)(ii) of this section, manufacturers shall also make available the following information necessary for developing generic diagnostic scan

tools:

(A) The physical hardware requirements for data communication (e.g. system voltage requirements, cable terminals/pins, connections such as RS232 or USB, wires, etc.),

(B) ECU data communication (e.g. serial data protocols, transmission speed or baud rate, bit timing requirements,

etc.)

(C) Information on the application physical interface (API) or layers. (i.e., processing algorithms or software design descriptions for procedures such as connection, initialization, and termination),

(D) Vehicle application information or any other related service information such as special pins and voltages or additional vehicle connectors that require enablement and specifications for the enablement.

(iii) Any manufacturer who utilizes an automated process in its manufacturerspecific scan tool for diagnostic fault trees shall make available to equipment and tool companies the data schema, detail specifications, including category types/codes and vehicle codes, and data format/content structure of the diagnostic trouble trees.

(iv) Manufacturers can satisfy the requirement of paragraph (g)(13)(iii) of this section by making available diagnostic trouble trees on their manufacturer Web sites in full-text.

- (14) Availability of manufacturerspecific scan tools. Manufacturers shall make available for sale to the persons specified in paragraph (g)(2)(i) of this section their own manufacturer-specific diagnostic tools at a fair and reasonable cost. These tools shall also be made available in a timely fashion either through the manufacturer Web site or through a manufacturer-designated intermediary. Manufacturers who develop different versions of one or more of their diagnostic tools that are used in whole or in part for emissionrelated diagnosis and repair shall insure that all emission-related diagnosis and repair information is available for sale to the aftermarket at a fair and reasonable cost. Manufacturers shall provide technical support to aftermarket service providers for the tools described in this section, either themselves or through a third party of its choice. Factors for determining fair and reasonable cost include, but are not limited to:
- (i) The net cost to the manufacturer's franchised dealerships for similar tools obtained from manufacturers, less any discounts, rebates, or other incentive

(ii) The cost to the manufacturer for preparing and distributing the tools, excluding any research and development costs;

(iii) The price charged by other manufacturers of similar sizes for similar tools;

(iv) The capabilities and functionality of the manufacturer tool;

(v) The means by which the tools are distributed;

(vi) Inflation.

- (vii) The ability of aftermarket technicians and shops to afford the tools.
- (15) Changing content of manufacturer-specific scan tools.

 Manufacturers who opt to remove nonemissions related content from their manufacturer-specific scan tools and sell them to the persons specified in paragraph (g)(2)(i) of this section shall adjust the cost of the tool accordingly lower to reflect the decreased value of the scan tool. All emissions-related content that remains in the manufacturer-specific tool shall be identical to the information that is

contained in the complete version of the manufacturer-specific tool. Any manufacturer who wishes to implement this option must request approval from the Administrator prior to the introduction of the tool into commerce.

(16) Special tools.

(i) Manufacturers who have developed special tools to extinguish the malfunction indicator light (MIL) for Model Years 1994 through 2003 shall make available the necessary information to equipment and tool companies to design a comparable generic tool. This information was required to be made available to equipment and tool companies no later than September 25, 2003.

(ii) Manufacturers are prohibited from requiring special tools to extinguish the malfunction indicator light (MIL) beginning with Model Year 2004.

- (17) Reference materials.

 Manufacturers shall conform with the following Society of Automotive Engineers (SAE) standards. These documents are incorporated by reference, see § 86.1. Anyone may inspect copies at the U.S. EPA or at the National Archives and Records Administration (NARA). For information on the availability of this material at U.S. EPA, NARA, or the standard making body directly, refer to § 86.1.
- (i) SAE J1930, Revised May 1998. For Web-based delivery of service information, manufacturers shall comply with this industry standard. This recommended practice standardizes various terms, abbreviations, and acronyms associated with on-board diagnostics.

 Manufacturers shall comply with SAE J1930 beginning with Model Year 2004.
- (ii) SAE J1979, Revised September 1997. For identification and scaling information necessary to interpret and understand data available to a generic scan tool through "mode 6," manufacturers shall comply with this industry standard. This recommended practice describes the implementation of the diagnostic test modes for emissions-related test data. Manufacturers shall comply with this industry standard beginning with Model Year 2004.
- (iii) SAE J2284–3, May 2001. For allowing ECU and equipment and tool manufacturers to satisfy the needs of multiple end users with minimum modification to a basic ECU design, manufacturers shall comply with this industry standard which establishes standard ECU physical layer, data link layer, and media design criteria. Manufacturers may comply with SAE J2284–3 beginning with model year

2003 and shall comply with SAE J2284-3 beginning with model year 2008.

(iv) SAE J2534, February 2002. For pass-through reprogramming capabilities, manufacturers shall comply with this industry standard which provides technical specifications and information that manufacturers must supply to equipment and tool companies to develop aftermarket passthrough reprogramming tools. Manufacturers shall comply with SAE J2534 beginning with model year 2004.

(18) Reporting requirements. Manufacturers shall provide to the Administrator reports on an annual basis within 30 days of the end of the calendar year and upon request of the Administrator, that describe the performance of their individual Web sites. These annual reports shall be submitted to the Administrator electronically utilizing non-proprietary software in the format as agreed to by the Administrator and the manufacturers. Manufacturers may request Administrator approval to report on parameters other than those described below if the manufacturer can demonstrate that those alternate parameters will provide sufficient and similar information for the Administrator to effectively evaluate the manufacturer Web site. These annual reports shall include, at a minimum, monthly measurements of the following parameters:

(i) Total successful requests (measured in number of files including graphic interchange formats (GIFs) and joint photographic expert group (JPEG) images, i.e., electronic images such as wiring or other diagrams or pictures). This is defined as the total successful request counts of all the files which have been requested, including pages,

graphics, etc.

(ii) Total failed requests (measured in number of files). This is defined as the total failed request counts of all the files which were requested but failed because they could not be found or were readprotected. This includes pages, graphics, etc.

(iii) Average data transferred per day (measured by bytes). This is defined as average amount of data transferred per day from one place to another.

(iv) Daily Summary (measured in number of files/pages by day of week). This is defined as the total number of requests each day of the week, over the time period given at the beginning of the report.

(v) Daily report (measured in number of files/pages by the day of the month). This is defined as how many requests there were in each day of a specific

month.

(vi) Browser Summary (measured in number of files/pages by browser type, i.e., Netscape, Internet Explorer). This is defined as the versions of a browser by vendor.

(vii) Any other information deemed necessary by the Administrator to determine the adequacy of a manufacturer Web site.

(19) Prohibited acts, liability and remedies.

(i) It is a prohibited act for any person to fail to promptly provide or cause a failure to promptly provide information as required by this paragraph (g), or to otherwise fail to comply or cause a failure to comply with any provision of this paragraph (g).

(ii) Any person who fails or causes the failure to comply with any provision of this paragraph (g) is liable for a violation of that provision. A corporation is presumed liable for any violations of this subpart that are committed by any of its subsidiaries, affiliates or parents that are substantially owned by it or substantially under its control.

(iii) Any person who violates a provision of this paragraph (g) shall be subject to a civil penalty of not more than \$32,500 per day for each violation. This maximum penalty is shown for calendar year 2004. Maximum penalty limits for later years may be set higher based on the Consumer Price Index, as specified in 40 CFR part 19. In addition, such person shall be liable for all other remedies set forth in Title II of the Clean Air Act, remedies pertaining to provisions of Title II of the Clean Air Act, or other applicable provisions of

(h) The manufacturer shall furnish or cause to be furnished to the purchaser of each new motor engine subject to the standards prescribed in § 86.004–10 or $\S 86.004-11$, as applicable, the

following:

(1) Instructions for all maintenance needed after the end of the useful life of the engine for critical emissions-related components as provided in § 86.004-25(b), including recommended practices for diagnosis, cleaning, adjustment, repair, and replacement of the component (or a statement that such component is maintenance free for the life of the engine) and instructions for accessing and responding to any emissions-related diagnostic codes that may be stored in on-board monitoring

(2) A copy of the engine rebuild provisions contained in § 86.004-40.

(i) For each new diesel-fueled engine subject to the standards prescribed in § 86.007-11, as applicable, the manufacturer shall furnish or cause to be furnished to the ultimate purchaser

a statement that "This engine must be operated only with ultra low-sulfur diesel fuel (meeting EPA specifications for highway diesel fuel, including a 15 ppm sulfur cap)."

(j) Emission control diagnostic service information for heavy-duty engines used in vehicles over 14,000 pounds gross

vehicle weight (GVW)

(1) Manufacturers of heavy-duty engines used in applications weighing more than 14,000 pounds gross vehicle weight (GVW) that are subject to the applicable OBD requirements of this subpart A are subject to the provisions of this paragraph (j) beginning in the 2010 model year. The provisions of this paragraph (j) apply only to those heavyduty engines subject to the applicable

OBD requirements.

(2) Upon Administrator approval, manufacturers of vehicles may alternatively comply with all service information and tool provisions found in § 86.1808–01 that are applicable to 2001 and subsequent model year vehicles weighing less than 14,000 pounds gross vehicle weight (GVW). Upon Administrator approval, manufacturers that produce engines for use in vehicles between 8,500 and 14,000 pounds may, for those engines, alternatively comply with all service information and tool provisions in § 86.010–38(j) that are applicable to 2010 and subsequent model year vehicles over 14,000 pounds. Implementation dates must comply with the service information provision dates applicable to engines in vehicles between 8,500 and 14,000 pounds.

(3) General Requirements (i) Manufacturers shall furnish or cause to be furnished to any person engaged in the repairing or servicing of heavy-duty engines, or the Administrator upon request, any and all information needed to make use of the on-board diagnostic system and such other information, including instructions for making emission-related diagnosis and repairs, including but not limited to service manuals, technical service bulletins, recall service information, bi-directional control information, and training information, unless such information is protected by section 208(c) as a trade secret. Manufacturers may take steps to restrict warranty and customer assurance plan information used only for the purpose of providing such manufacturer covered repairs to only those repair locations authorized by the manufacturer. No such information may be withheld under section 208(c) of the Act if that information is provided (directly or indirectly) by the manufacturer to franchised dealers, authorized service

networks, or other persons engaged in the repair, diagnosing, or servicing of heavy-duty engines.

(ii) *Definitions*. The following definitions apply for this paragraph (j):

(A) Aftermarket service provider means any individual or business engaged in the diagnosis, service, and repair of a heavy-duty engine, who is not directly affiliated with a manufacturer or manufacturer franchised dealership, or authorized service network.

(B) Authorized service network means a group of independent service and repair facilities that are recognized by engine manufacturers as being capable of performing repairs to factory specification, including warranty repair work.

(C) Bi-directional control means the capability of a diagnostic tool to send messages on the data bus that temporarily overrides the module's control over a sensor or actuator and gives control to the diagnostic tool operator. Bi-directional controls do not create permanent changes to engine or

component calibrations.

- (D) Data stream information means information (i.e., messages and parameters) originated within the engine by a module or intelligent sensors (i.e., a sensor that contains and is controlled by its own module) and transmitted between a network of modules and/or intelligent sensors connected in parallel with either one or more communication wires. The information is broadcast over the communication wires for use by the OBD system to gather information on emissions-related components or systems and from other engine modules that may impact emissions. For the purposes of this section, data stream information does not include engine calibration related information, or any data stream information from systems or modules that do not impact emissions.
- (E) Emissions-related information means any information related to the diagnosis, service, and repair of emissions-related components. Emissions-related information includes, but is not limited to, information regarding any system, component or part of an engine that controls emissions and that is part of the diagnostic strategy for an OBD monitor, but not limited to: The engine, the fuel system and ignition system; information for any system, component or part that is likely to impact emissions, and any other information specified by the Administrator to be relevant to the diagnosis and repair of an emissionsrelated problem; any other information specified by the Administrator to be

- relevant for the diagnosis and repair of an emissions-related failure found through an evaluation of vehicles in-use and after such finding has been communicated to the affected manufacturer(s).
- (F) Emissions-related training information means any information related training or instruction for the purpose of the diagnosis, service, and repair of emissions-related components.
- (G) Enhanced service and repair information means information which is specific for an original equipment manufacturer's brand of tools and equipment. This includes computer or anti-theft system initialization information necessary for the completion of any emissions-related repair on engines that employ integral security systems.
- (H) Equipment and Tool Company means a registered equipment or software company either public or private that is engaged in, or plans to engage in, the manufacture of scan tool reprogramming equipment or software.
- (I) Generic service and repair information means information which is not specific for an original equipment manufacturer's brand of tools and equipment.
- (J) Indirect information means any information that is not specifically contained in the service literature, but is contained in items such as tools or equipment provided to franchised dealers or authorized service networks (or others). This includes computer or anti-theft system initialization information necessary for the completion of any emissions-related repair on engines that employ integral security systems.
- (K) Intermediary means any individual or entity, other than an original equipment manufacturer, which provides service or equipment to aftermarket service providers.
- (L) Manufacturer franchised dealership means any service provider with which a manufacturer has a direct business relationship.
- (M) Recalibration means the process of downloading to an engine's on-board computer emissions-related revisions of on-board computer application software and calibration parameters with default configurations. Recalibration is not dependent on the use of the vehicle identification number (VIN) in determining vehicle configuration.
- (N) Reconfiguration means the process of enabling or adjusting engine features or engine parameters associated with such features to adapt a heavy-duty engine to a particular vehicle and/or application.

- (O) Third party information provider means any individual or entity, other than an original equipment manufacturer, who consolidates manufacturer service information and makes this information available to aftermarket service providers.
- (P) Third party training provider means any individual or entity, other than an original equipment manufacturer who develops and/or delivers instructional and educational material for training courses.
- (4) Information dissemination. By July 1, 2010 each manufacturer shall provide or cause to be provided to the persons specified in paragraph (j)(3)(i) of this section and to any other interested parties a manufacturer-specific World Wide Web site containing the information specified in paragraph (j)(3)(i) of this section for 2010 and later model year engines which have been certified to the OBD requirements specified in § 86.010-18 and are offered for sale; this requirement does not apply to indirect information, including the information specified in paragraphs (j)(13) through (j)(17) of this section. Upon request and approval of the Administrator, manufacturers who can demonstrate significant hardship in complying with this provision by August 27, 2009, may request an additional six months lead time to meet this requirement. Each manufacturer Web site shall:
- (i) Provide access in full-text to all of the information specified in paragraph (j)(6) of this section.
- (ii) Be updated at the same time as manufacturer franchised dealership or authorized service network World Wide Web sites.
- (iii) Provide users with a description of the minimum computer hardware and software needed by the user to access that manufacturer's information (e.g., computer processor speed and operating system software). This description shall appear when users first log-on to the home page of the manufacturer's Web site.
- (iv) Upon Administrator approval, implement a range of time periods for online access to any person specified in paragraph (j)(3)(i) of this section whereby the user will be able to access the site, search for the information, and purchase, view and print the information at a fair and reasonable cost as specified in paragraph (j)(8) of this section for each of the options. In addition, for each of the range of time periods, manufacturers are required to make their entire site accessible for the respective period of time and price. In other words, a manufacturer may not

limit Web site access to just one make or one model.

(v) Allow the user to search the manufacturer Web site by various topics including but not limited to model, model year, key words or phrases, etc., while allowing ready identification of the latest calibration. Manufacturers who do not use model year to classify their engines in their service information may use an alternate delineation such as body series. Any manufacturer utilizing this flexibility shall create a cross-reference to the corresponding model year and provide this cross-reference on the manufacturer Web site home page.

(vi) Provide accessibility using common, readily available software and shall not require the use of software, hardware, viewers, or browsers that are not readily available to the general public. Manufacturers shall also provide hyperlinks to any plug-ins, viewers or browsers (e.g. Adobe Acrobat or Netscape) needed to access the

manufacturer Web site.

(vii) Allow simple hyper-linking to the manufacturer Web site from Government Web sites and automotiverelated Web sites.

(viii) Possess sufficient server capacity to allow ready access by all users and has sufficient capacity to assure that all users may obtain needed information without undue delay.

(ix) Correct or delete any reported broken Web links on a weekly basis.

(x) Allow for Web site navigation that does not require a user to return to the manufacturer home page or a search engine in order to access a different portion of the site.

(xi) Allow users to print out any and all of the materials required to be made available on the manufacturers Web site that can be reasonably printed on a standard printer, including the ability to print it at the user's location.

(5) Small volume provisions for information dissemination.

(i) Manufacturers with total annual sales of less than 5,000 engines shall have until July 1, 2011 to launch their individual Web sites as required by paragraph (j)(4) of this section.

(ii) Manufacturers with total annual sales of less than 1,000 engines may, in lieu of meeting the requirement of paragraph (j)(4) of this section, request the Administrator to approve an alternative method by which the required emissions-related information can be obtained by the persons specified in paragraph (j)(3)(i) of this section.

(6) Required information. All information relevant to the diagnosis and completion of emissions-related repairs shall be posted on manufacturer

Web sites. This excludes indirect information specified in paragraphs (j)(7) and (j)(13) through (j)(17) of this section. To the extent that this information does not already exist in some form for their manufacturer franchised dealerships or authorized service networks, manufacturers are required to develop and make available the information required by this section to both their manufacturer franchised dealerships or authorized service networks and the aftermarket. The required information includes, but is not limited to:

(i) Manuals, including subsystem and component manuals developed by a manufacturer's third party supplier that are made available to manufacturer franchised dealerships or authorized service networks, technical service bulletins (TSBs), recall service information, diagrams, charts, and training materials. Informal recall service information such as engineering notes and/or sketches are not required to be made available as long as this information is not made available to manufacturer franchised dealerships or authorized service networks in the form of manuals. Manuals and other such service information from third party suppliers are not required to be made available in full-text on manufacturer Web sites as described in paragraph (i)(4) of this section. Rather, manufacturers must make available on the manufacturer Web site as required by paragraph (j)(4) of this section an index of the relevant information and instructions on how to order such information. In the alternate, a manufacturer can create a link from its Web site to the Web site(s) of the third party supplier.

(ii) OBD system information which includes, but is not limited to, the

following:

(A) A general description of the operation of each monitor, including a description of the parameter that is being monitored;

(B) A listing of all typical OBD diagnostic trouble codes associated with each monitor:

(C) A description of the typical enabling conditions (either generic or monitor-specific) for each monitor (if equipped) to execute during engine operation, including, but not limited to, minimum and maximum intake air and engine coolant temperature, speed range, and time after engine startup. In addition, manufacturers shall list all monitor-specific OBD drive cycle information for all major OBD monitors as equipped including, but not limited to, catalyst, catalyst heater, oxygen sensor, oxygen sensor heater,

evaporative system, exhaust gas recirculation (EGR), secondary air, and air conditioning system. Additionally, for diesel engines which also perform misfire, fuel system and comprehensive component monitoring under specific driving conditions (i.e., non-continuous monitoring; as opposed to spark ignition engines that monitor these systems under all conditions or continuous monitoring), the manufacturer shall make available monitor-specific drive cycles for these monitors. Any manufacturer who develops generic drive cycles, either in addition to, or instead of, monitor-specific drive cycles shall also make these available in fulltext on manufacturer Web sites:

(D) A listing of each monitor sequence, execution frequency and

typical duration;

(E) A listing of typical malfunction

thresholds for each monitor;

(F) For OBD parameters for specific engines that deviate from the typical parameters, the OBD description shall indicate the deviation and provide a separate listing of the typical values for those engines;

(G) Identification and scaling information necessary to interpret and understand data available through Diagnostic Message 8 pursuant to SAE J1939–73 (as specified in paragraph (j)(17) of this section), or through Service/Mode \$06 pursuant to SAE J1979 (as specified in paragraph (j)(17) of this section).

(H) Algorithms, look-up tables, or any values associated with look-up tables are not required to be made available.

(iii) Any information regarding any system, component, or part of a engine monitored by the OBD system that could in a failure mode cause the OBD system to illuminate the malfunction indicator light (MIL);

(iv) Manufacturer-specific emissionsrelated diagnostic trouble codes (DTCs) and any related service bulletins, troubleshooting guides, and/or repair procedures associated with these manufacturer-specific DTCs; and

(v) Information regarding how to obtain the information needed to perform reinitialization of any computer or anti-theft system following an

emissions-related repair.

(7) Anti-theft System Initialization *Information.* Computer or anti-theft system initialization information and/or related tools necessary for the proper installation of on-board computers or necessary for the completion of any emissions-related repair on engines that employ integral security systems or the repair or replacement of any other emission-related part shall be made available at a fair and reasonable cost to

the persons specified in paragraph (j)(3)(i) of this section.

- (i) Except as provided under paragraph (j)(7)(ii) of this section, manufacturers must make this information available to persons specified in paragraph (j)(3)(i) of this section, such that such persons will not need any special tools or manufacturer-specific scan tools to perform the initialization. Manufacturers may make such information available through, for example, generic aftermarket tools, a pass-through device, or inexpensive manufacturer specific cables.
- (ii) A manufacturer may request Administrator approval for an alternative means to re-initialize engines for some or all model years through the 2013 model year by July 27, 2009. The Administrator shall approve the request only after the following conditions have been met:
- (A) The manufacturer must demonstrate that the availability of such information to aftermarket service providers would significantly increase the risk of theft.
- (B) The manufacturer must make available a reasonable alternative means to install or repair computers, or to otherwise repair or replace an emissionrelated part.
- (C) Any alternative means proposed by a manufacturer cannot require aftermarket technicians to use a manufacturer franchised dealership or authorized service networks to obtain information or special tools to reinitialize the anti-theft system. All information must come directly from the manufacturer or a single manufacturer-specified designee.
- (D) Any alternative means proposed by a manufacturer must be available to aftermarket technicians at a fair and reasonable price.
- (E) Any alternative must be available to aftermarket technicians within twenty-four hours of the initial request.
- (F) Any alternative must not require the purchase of a special tool or tools, including manufacturer-specific tools, to complete this repair. Alternatives may include lease of such tools, but only for appropriately minimal cost.
- (G) In lieu of leasing their manufacturer-specific tool to meet this requirement, a manufacturer may also choose to release the necessary information to equipment and tool manufacturers for incorporation into aftermarket scan tools. Any manufacturer choosing this option must release the information to equipment and tool manufacturers within 60 days of Administrator approval.
 - (8) Cost of required information.

- (i) All information required to be made available by this section, shall be made available at a fair and reasonable price. In determining whether a price is fair and reasonable, consideration may be given to relevant factors, including, but not limited to, the following:
- (A) The net cost to the manufacturer franchised dealerships or authorized service networks for similar information obtained from manufacturers, less any discounts, rebates, or other incentive programs:
- (B) The cost to the manufacturer for preparing and distributing the information, excluding any research and development costs incurred in designing and implementing, upgrading or altering the onboard computer and its software or any other engine part or component. Amortized capital costs for the preparation and distribution of the information may be included;
- (C) The price charged by other manufacturers for similar information;
- (D) The price charged by manufacturers for similar information prior to the launch of manufacturer Web sites:
- (E) The ability of the average aftermarket technician or shop to afford the information:
- (F) The means by which the information is distributed;
- (G) The extent to which the information is used, which includes the number of users, and frequency, duration, and volume of use; and
 - (H) Inflation.
- (ii) Manufacturers must submit to EPA a request for approval of their pricing structure for their Web sites and amounts to be charged for the information required to be made available under paragraphs (j)(4) and (j)(6) of this section at least 180 days in advance of the launch of the web site. Subsequent to the approval of the manufacturer Web site pricing structure, manufacturers shall notify EPA upon the increase in price of any one or all of the subscription options of 20 percent or more above the previously approved price, taking inflation into account.
- (A) The manufacturer shall submit a request to EPA that sets forth a detailed description of the pricing structure and amounts, and support for the position that the pricing structure and amounts are fair and reasonable by addressing, at a minimum, each of the factors specified in paragraph (j)(8)(i) of this section.
- (B) EPA will act upon on the request within 180 days following receipt of a complete request or following receipt of any additional information requested by EPA.
- (C) EPA may decide not to approve, or to withdraw approval for a

- manufacturer's pricing structure and amounts based on a conclusion that this pricing structure and/or amounts are not, or are no longer, fair and reasonable, by sending written notice to the manufacturer explaining the basis for this decision.
- (D) In the case of a decision by EPA not to approve or to withdraw approval, the manufacturer shall within three months following notice of this decision, obtain EPA approval for a revised pricing structure and amounts by following the approval process described in this paragraph.
- (9) Unavailable information. Any information which is not provided at a fair and reasonable price shall be considered unavailable, in violation of these regulations and section 202(m)(5) of the Clean Air Act.
- (10) Third party information providers. (i) By January 1, 2011 manufacturers shall, for model year 2010 and later engines, make available to third-party information providers as defined in paragraph (j)(3)(ii) of this section with whom they may wish to engage in licensing or business arrangements, the required emissions-related information as specified in paragraph (j)(6) of this section either:
- (A) Directly in electronic format such as diskette or CD-ROM using nonproprietary software, in English; or
- (B) Indirectly via a Web site other than that required by paragraph (j)(4) of this section
- (ii) Manufacturers are not responsible for the accuracy of the information distributed by third parties. However, where manufacturers charge information intermediaries for information, whether through licensing agreements or other arrangements, manufacturers are responsible for inaccuracies contained in the information they provide to third party information providers.
- (11) Required emissions-related training information. By January 1, 2011, for emissions-related training information, manufacturers shall:
- (i) Video tape or otherwise duplicate and make available for sale on manufacturer Web sites within 30 days after transmission any emissions-related training courses provided to manufacturer franchised dealerships or authorized service networks via the Internet or satellite transmission.

 Manufacturers shall not be required to duplicate transmitted emissions-related training courses if anyone engaged in the repairing or servicing of heavy-duty engines has the opportunity to receive the Internet or satellite transmission, even if there is a cost associated with

the equipment required to receive the transmission;

(ii) Provide on the manufacturer Web site an index of all emissions-related training information available for purchase by aftermarket service providers for 2010 and newer engines. The required information must be made available for purchase within 3 months of model introduction and then must be made available at the same time it is made available to manufacturer franchised dealerships or authorized service networks, whichever is earlier. The index shall describe the title of the course or instructional session, the cost of the video tape or duplicate, and information on how to order the item(s) from the manufacturer Web site. All of the items available must be shipped within 3 business day of the order being placed and are to made available at a fair and reasonable price as described in paragraph (j)(8) of this section. Manufacturers unable to meet the 3 business day shipping requirement under circumstances where orders exceed supply and additional time is needed by the distributor to reproduce the item being ordered, may exceed the 3 business day shipping requirement, but in no instance can take longer than 14 days to ship the item.

(12) Timeliness and maintenance of

information dissemination.

(i) Subsequent to the initial launch of the manufacturer's Web site, manufacturers must make the information required under paragraph (j)(6) of this section available on their Web site within six months of model introduction, or at the same time it is made available to manufacturer franchised dealerships or authorized service networks, whichever is earlier. After this six month period, the information must be available and updated on the manufacturer Web site at the same time that the updated information is made available to manufacturer franchised dealerships or authorized service networks, except as otherwise specified in this section.

(ii) Archived information. Manufacturers must maintain the required information on their Web sites in full-text as defined in paragraph (j)(6) of this section for a minimum of 15 years after model introduction. Subsequent to this fifteen year period, manufacturers may archive the information in the manufacturer's format of choice and provide an index of the archived information on the manufacturer Web site and how it can be obtained by interested parties. Manufacturers shall index their available information with a title that adequately describes the contents of the

document to which it refers. Manufacturers may allow for the ordering of information directly from their Web site, or from a Web site hyperlinked to the manufacturer Web site. In the alternate, manufacturers shall list a phone number and address where aftermarket service providers can call or write to obtain the desired information. Manufacturers must also provide the price of each item listed, as well as the price of items ordered on a subscription basis. To the extent that any additional information is added or changed for these model years, manufacturers shall update the index as appropriate. Manufacturers will be responsible for ensuring that their information distributors do so within one regular business day of receiving the order. Items that are less than 20 pages (e.g. technical service bulletins) shall be faxed to the requestor and distributors are required to deliver the information overnight if requested and paid for by the ordering party. Archived information must be made available on demand and at a fair and reasonable price.

(13) Recalibration Information.

(i) Manufacturers shall make available to the persons specified in paragraph (j)(3)(i) of this section all emissions-related recalibration or reprogramming events (including driveability reprogramming events that may affect emissions) in the format of their choice at the same time they are made available to manufacturer franchised dealerships or authorized service networks. This requirement applies on July 1, 2013.

(ii) Manufacturers shall provide persons specified in paragraph (j)(3)(i) of this section with an efficient and cost-effective method for identifying whether the calibrations on engines are the latest to be issued. This requirement

applies on July 1, 2013.

(iii) For all 2013 and later OBD engines equipped with reprogramming capability, manufacturers shall comply with either SAE J2534–1 (as specified in paragraph (j)(17) of this section), or the Technology and Maintenance Council's (TMC) Recommended Practice TMC RP 1210B (as specified in paragraph (j)(17) of this section).

(iv) For model years 2013 and later, manufacturers shall make available to aftermarket service providers the necessary manufacturer-specific software applications and calibrations needed to initiate pass-through reprogramming. This software shall be able to run on a standard personal computer that utilizes standard operating systems as specified in either SAE J2534–1 (as specified in paragraph (j)(17) of this section) or TMC RP 1210B

(as specified in paragraph (j)(17) of this section).

(v) Manufacturers may take any reasonable business precautions necessary to protect proprietary business information and are not required to provide this information to any party that does not agree to these reasonable business precautions. The requirements to make hardware available and to release the information to equipment and tool companies apply on July 1, 2013, and within 3 months of model introduction for all new model years.

(14) Generic and enhanced information for scan tools. By July 1, 2013, manufacturers shall make available to equipment and tool companies all generic and enhanced service information including bidirectional control and data stream information as defined in paragraph (j)(3(ii) of this section. This requirement applies for 2013 and later model year

engines.

(i) The information required by this paragraph (j)(14) shall be provided electronically using common document formats to equipment and tool companies with whom they have appropriate licensing, contractual, and/ or confidentiality arrangements. To the extent that a central repository for this information (e.g. the TEK-NET library developed by the Equipment and Tool Institute) is used to warehouse this information, the Administrator shall have free unrestricted access. In addition, information required by this paragraph (j)(14) shall be made available to equipment and tool companies who are not otherwise members of any central repository and shall have access if the non-members have arranged for the appropriate licensing, contractual and/or confidentiality arrangements with the manufacturer and/or a central repository.

(ii) In addition to the generic and enhanced information defined in paragraph (j)(3)(ii) of this section, manufacturers shall also make available the following information necessary for developing generic diagnostic scan

tools:

(A) The physical hardware requirements for data communication (e.g., system voltage requirements, cable terminals/pins, connections such as RS232 or USB, wires, etc.),

(B) Electronic Control Unit (ECU) data communication (e.g., serial data protocols, transmission speed or baud rate, bit timing requirements, etc.),

(C) Information on the application physical interface (API) or layers. (i.e., processing algorithms or software design descriptions for procedures such as connection, initialization, and termination),

- (D) Engine application information or any other related service information such as special pins and voltages or additional connectors that require enablement and specifications for the enablement.
- (iii) Any manufacturer who utilizes an automated process in their manufacturer-specific scan tool for diagnostic fault trees shall make available to equipment and tool companies the data schema, detail specifications, including category types/codes and codes, and data format/content structure of the diagnostic trouble trees.

(iv) Manufacturers can satisfy the requirement of paragraph (j)(14)(iii) of this section by making available diagnostic trouble trees on their manufacturer Web sites in full-text.

- (v) Manufacturers shall make all required information available to the requesting equipment and tool company within 14 days after the request to purchase has been made unless the manufacturer requests Administrator approval to refuse to disclose such information to the requesting company or requests Administrator approval for additional time to comply. After receipt of a request and consultation with the affected parties, the Administrator shall either grant or refuse the petition based on the evidence submitted during the consultation process:
- (A) If the evidence demonstrates that the engine manufacturer has a reasonably based belief that the requesting equipment and tool company could not produce safe and functionally accurate tools that would not cause damage to the engine, the petition for non-disclosure will be granted. Engine manufacturers are not required to provide data stream and bi-directional control information that would permit an equipment and tool company's products to modify an EPA-certified engine or transmission configuration.
- (B) If the evidence does not demonstrate that the engine manufacturer has a reasonably-based belief that the requesting equipment and tool company could not produce safe and functionally accurate tools that would not cause damage to the engine, the petition for non-disclosure will be denied and the engine manufacturer, as applicable, shall make the requested information available to the requesting equipment and tool company within 2 days of the denial.
- (vi) If the manufacturer submits a request for Administrator approval for additional time, and satisfactorily demonstrates to the Administrator that

the engine manufacturer is able to comply but requires additional time within which to do so, the Administrator shall grant the request and provide additional time to fully and expeditiously comply.

(vii) Manufacturers may require that tools using information covered under paragraph (j)(14) of this section comply with the Component Identifier message specified in SAE J1939–71 (as specified in paragraph (j)(17) of this section) as Parameter Group Number (PGN) 65249 (including the message parameter's make, model, and serial number) and the SAE J1939–81 (as specified in paragraph (j)(17) of this section) Address Claim PGN.

(viii) Manufacturers are not required to make available to equipment and tool companies any information related to reconfiguration capabilities or any other information that would make permanent changes to existing engine configurations.

(15) Availability of manufacturerspecific scan tools. (i) Manufacturers shall make available for sale to the persons specified in paragraph (j)(3)(i) of this section their own manufacturerspecific diagnostic tools at a fair and reasonable cost. These tools shall also be made available in a timely fashion either through the manufacturer Web site or through a manufacturerdesignated intermediary. Upon Administrator approval, manufacturers will not be required to make available manufacturer-specific tools with reconfiguration capabilities if they can demonstrate to the satisfaction of the Administrator that these tools are not essential to the completion of an emissions-related repair, such as recalibration. As a condition of purchase, manufacturers may request that the purchaser take all necessary training offered by the engine manufacturer. Any required training materials and classes must comply with the following:

(A) Similar training must be required by the engine manufacturer for the use of the same tool by its franchised dealerships or authorized service networks;

(B) The training must be substantially similar to such training in terms of material covered and the length of training;

(C) The training must be made available within six months after a tool request has been made;

(D) The training must be made available at a fair and reasonable price.

(ii) Manufacturers shall ship purchased tools in a timely manner after a request and training, if any, has been completed. Any required training materials and classes must be made available at a fair and reasonable price. Manufacturers who develop different versions of one or more of their diagnostic tools that are used in whole or in part for emission-related diagnosis and repair shall also insure that all emission-related diagnosis and repair information is available for sale to the aftermarket at a fair and reasonable cost. Factors for determining fair and reasonable cost include, but are not limited to:

(A) The net cost to the manufacturer's franchised dealerships or authorized service network for similar tools obtained from manufacturers, less any discounts, rebates, or other incentive programs;

(B) The cost to the manufacturer for preparing and distributing the tools, excluding any research and development costs:

(C) The price charged by other manufacturers of similar sizes for similar tools;

(D) The capabilities and functionality of the manufacturer tool;

(E) The means by which the tools are distributed;

(F) Inflation;

(G) The ability of aftermarket technicians and shops to afford the tools.

Manufacturers shall provide technical support to aftermarket service providers for the tools described in this section, either themselves or through a thirdparty of their choice.

(16) Changing content of manufacturer-specific scan tools. Manufacturers who opt to remove nonemissions related content from their manufacturer-specific scan tools and sell them to the persons specified in paragraph (j)(3)(i) of this section shall adjust the cost of the tool accordingly lower to reflect the decreased value of the scan tool. All emissions-related content that remains in the manufacturer-specific tool shall be identical to the information that is contained in the complete version of the manufacturer-specific tool. Any manufacturer who wishes to implement this option must request approval from the Administrator prior to the introduction of the tool into commerce.

(17) Reference Materials.

Manufacturers shall conform with the following industry standards. These documents are incorporated by reference in § 86.1. Anyone may inspect copies at the U.S. EPA or at the National Archives and Records Administration (NARA). For information on the availability of this material at U.S. EPA, NARA, or the standard making bodies directly, refer to § 86.1.

(i) SAE J1939-71, Revised January 2008. For providing a means for the application processes to access the OSI environment, manufacturers shall comply with this industry standard.

(ii) SAE J1939–73, Revised September 2006. For identification and scaling information necessary to interpret and understand data available through Diagnostic Message 8, manufacturers shall comply with this industry standard. In the alternate, manufacturers may comply with Service/Mode \$06 pursuant to SAE J1979, Revised May 2007. These recommended practices describe the implementation of diagnostic test modes for emissions related test data. Manufacturers shall comply with either SAE J1939-73 or SAE J1979 beginning with Model Year 2013

(iii) SAE J1939-81, Revised May 2003. For management of source addresses and the association of those address with an actual function and with the detection and reporting of network realized errors, manufacturers shall comply with this industry standard.

(iv) SAE J2403, Revised August 2007. For Web-based delivery of service information, manufacturers shall comply with this industry standard which standardizes various terms, abbreviations, and acronyms associated with on-board diagnostics. Manufacturers shall comply with SAE J2403 beginning with the Model Year 2013.

- (v) TMC RP 1210B, Revised June 2007. For pass-thru reprogramming capabilities, manufacturers shall comply with Technology and Maintenance Council's (TMC) Recommended Practice TMC RP 1210B. In the alternate, manufacturers may comply with SAE J2534-1, Revised December 2004. These recommended practices provide technical specifications and information that manufacturers must supply to equipment and tool companies to develop aftermarket pass-thru reprogramming tools. Manufacturers shall comply with either TMC RP 1210B or SAE J2534–1 beginning with Model Year 2013.
- (18) Reporting Requirements. Performance reports that adequately demonstrate that each manufacturers website meets the information requirements outlined in paragraphs (j)(6)(i) through (j)(6)(vi) of this section shall be submitted to the Administrator annually or upon request by the Administrator. These reports shall indicate the performance and effectiveness of the websites by using commonly used Internet statistics (e.g., successful requests, frequency of use, number of subscriptions purchased,

- etc.). Manufacturers shall provide to the Administrator reports on an annual basis within 30 days of the end of the calendar year. These annual reports shall be submitted to the Administrator electronically utilizing non-proprietary software in the format as agreed to by the Administrator and the manufacturers.
- (19) Prohibited Acts, Liability and
- (i) It is a prohibited act for any person to fail to promptly provide or cause a failure to promptly provide information as required by this paragraph (j), or to otherwise fail to comply or cause a failure to comply with any provision of this subsection.
- (ii) Any person who fails or causes the failure to comply with any provision of this paragraph (j) is liable for a violation of that provision. A corporation is presumed liable for any violations of this subpart that are committed by any of its subsidiaries, affiliates or parents that are substantially owned by it or substantially under its control.
- (iii) Any person who violates a provision of this paragraph (j) shall be subject to a civil penalty of not more than \$ 31,500 per day for each violation. This maximum penalty is shown for calendar year 2002. Maximum penalty limits for later years may be set higher based on the Consumer Price Index, as specified in 40 CFR part 19. In addition, such person shall be liable for all other remedies set forth in Title II of the Clean Air Act, remedies pertaining to provisions of Title II of the Clean Air Act, or other applicable provisions of
- (iv) Manufacturers will not have any emissions warranty, in-use compliance, defect reporting or recall liability for service on a heavy-duty engine that is not undertaken by the manufacturer, for any damage caused by their own tools in the hands of independent service providers, or for the use and misuse of third party tools.
- 8. Section 86.1806-05 is amended by revising the section heading, paragraphs (a)(3), (h) introductory text, (h)(1)(v), (h)(1)(vii), (i), and (j) and adding new paragraphs (h)(2)(iv), (n) and (o) to read as follows:

§ 86.1806-05 On-board diagnostics for vehicles less than or equal to 14,000 pounds GVWR.

(a) * * *

(3) An OBD system demonstrated to fully meet the requirements in, through model year 2006, § 86.004-17 and, for model years 2007 and later, § 86.007-17 may be used to meet the requirements of this section, provided that such an OBD system also incorporates

appropriate transmission diagnostics as may be required under this section, and provided that the Administrator finds that a manufacturer's decision to use the flexibility in this paragraph (a)(3) is based on good engineering judgement.

(h) The following documents are incorporated by reference, see § 86.1. Anyone may inspect copies at the U.S. EPA or at the National Archives and Records Administration (NARA). For information on the availability of this material at U.S. EPA, NARA, or the standard making bodies directly, refer to § 86.1.

(1) * * *

(v) SAE J1930, Revised April 2002. All acronyms, definitions and abbreviations shall be formatted according to this industry standard. Alternatively, manufacturers may use SAE J2403, Revised August 2007.

(vii) As an alternative to the above standards, heavy-duty vehicles may conform to the specifications of these SAE standards: SAE J1939-11, Revised October 1999; SAE J1939-13, July 1999; SAE J1939-21, Revised April 2001; SAE J1939–31, Revised December 1997; SAE J1939–71, Revised August 2002; SAE J1939-73, Revised June 2001; SAE J1939–81, July 1997. (2) * * *

(iv) ISO 15765-4:2005(E), January 15, 2005. Beginning with the 2008 model vear and beyond, this industry standard shall be the only acceptable protocol used for standardized on-board to offboard communications for vehicles below 8500 pounds. For vehicles 8500 to 14000 pounds, either this ISO industry standard or the SAE standards listed in paragraph (h)(1)(vii) of this section shall be the only acceptable protocols used for standardized onboard to off-board communications.

(i) Deficiencies and alternative fueled vehicles. Upon application by the manufacturer, the Administrator may accept an OBD system as compliant even though specific requirements are not fully met. Such compliances without meeting specific requirements, or deficiencies, will be granted only if compliance would be infeasible or unreasonable considering such factors as, but not limited to: Technical feasibility of the given monitor and lead time and production cycles including phase-in or phase-out of vehicle designs and programmed upgrades of computers. Unmet requirements should not be carried over from the previous model year except where unreasonable hardware or software modifications would be necessary to correct the

deficiency, and the manufacturer has demonstrated an acceptable level of effort toward compliance as determined by the Administrator. Furthermore, EPA will not accept any deficiency requests that include the complete lack of a major diagnostic monitor ("major" diagnostic monitors being those for exhaust aftertreatment devices, oxygen sensor, air-fuel ratio sensor, NO_X sensor, engine misfire, evaporative leaks, and diesel EGR, if equipped), with the possible exception of the special provisions for alternative fueled engines. For alternative fueled vehicles (e.g., natural gas, liquefied petroleum gas, methanol, ethanol), manufacturers may request the Administrator to waive specific monitoring requirements of this section for which monitoring may not be reliable with respect to the use of the alternative fuel. At a minimum, alternative fuel engines must be equipped with an OBD system meeting OBD requirements to the extent feasible as approved by the Administrator.

(j) California OBDII compliance option. Through the 2006 model year, for light-duty vehicles, light-duty trucks, and heavy-duty vehicles weighing 14,000 pounds GVWR or less, demonstration of compliance with California OBDII requirements (Title 13 California Code of Regulations § 1968.2 (13 CCR 1968.2)), as modified, approved and filed on April 21, 2003 (incorporated by reference, see § 86.1), shall satisfy the requirements of this section, except that compliance with 13 CCR 1968.2(e)(4.2.2)(C), pertaining to 0.02 inch evaporative leak detection, and 13 CCR 1968.2(d)(1.4), pertaining to tampering protection, are not required to satisfy the requirements of this section. Also, the deficiency provisions of 13 CCR 1968.2(i) do not apply. In addition, demonstration of compliance with 13 CCR 1968.2(e)(16.2.1)(C), to the extent it applies to the verification of proper alignment between the camshaft and crankshaft, applies only to vehicles equipped with variable valve timing. Beginning with the 2007 model year, for light-duty vehicles, light-duty trucks, and heavy-duty vehicles weighing 14,000 pounds GVWR or less, demonstration of compliance with California OBD II requirements (Title 13 California Code of Regulations § 1968.2 (13 CCR 1968.2)), approved on November 9, 2007 (incorporated by reference, see § 86.1), shall satisfy the requirements of this section, except that compliance with 13 CCR 1968.2(e)(4.2.2)(C), pertaining to 0.02 inch evaporative leak detection, and 13 CCR 1968.2(d)(1.4), pertaining to tampering protection, are not required

to satisfy the requirements of this section. Also, the deficiency provisions of 13 CCR 1968.2(k) do not apply. In addition, demonstration of compliance with 13 CCR 1968.2(e)(15.2.1)(C), to the extent it applies to the verification of proper alignment between the camshaft and crankshaft, applies only to vehicles equipped with variable valve timing. For all model years, the deficiency provisions of paragraph (i) of this section and the evaporative leak detection requirement of paragraph (b)(4) of this section, if applicable, apply to manufacturers selecting this paragraph for demonstrating compliance.

* * * * *

- (n) For 2007 and later model year diesel complete heavy-duty vehicles, in lieu of the malfunction descriptions of paragraph (b) of this section, the malfunction descriptions of this paragraph (n) shall apply. The OBD system must detect and identify malfunctions in all monitored emissionrelated powertrain systems or components according to the following malfunction definitions as measured and calculated in accordance with test procedures set forth in subpart B of this part (chassis-based test procedures), excluding those test procedures defined as "Supplemental" test procedures in § 86.004-2 and codified in §§ 86.158, 86.159, and 86.160.
- (1) Catalysts and diesel particulate filters (DPF).
- (i) If equipped, reduction catalyst deterioration or malfunction before it results in exhaust emissions exceeding, for model years 2007 through 2009, 4 times the applicable NO_X standard and, for model years 2010 through 2012, the applicable NO_X standard+0.6 g/mi and, for model years 2013 and later, the applicable NO_X standard+0.3 g/mi. Further, if equipped, oxidation catalyst (not to include the DPF), deterioration or malfunction before it results in exhaust NMHC emissions exceeding, for 2010 through 2012 model years, 2.5 times the applicable NMHC standard and, for 2013 and later model years, 2 times the applicable NMHC standard. Monitoring of oxidation catalysts is not required through the 2009 model year. These catalyst monitoring need not be done if the manufacturer can demonstrate that deterioration or malfunction of the system will not result in exceedance of the threshold. As an alternative to the oxidation catalyst monitoring requirement, the monitor can be designed to detect oxidation catalyst deterioration or malfunction before it results in an inability to achieve a temperature rise of

100 degrees C, or to reach the necessary DPF regeneration temperature, within 60 seconds of initiating an active DPF regeneration. Further, oxidation catalyst deterioration or malfunction when the DOC is unable to sustain the necessary regeneration temperature for the duration of the regeneration event. The OBD or control system must abort the regeneration if the regeneration temperature has not been reached within five minutes of initiating an active regeneration event, and if the regeneration temperature cannot be sustained for the duration of the regeneration event.

- (ii) If equipped with a DPF, for all model years, catastrophic failure of the device must be detected. Any DPF whose complete failure results in exhaust emissions exceeding 1.5 times the applicable PM standard or family emissions limit (FEL) must be monitored for such catastrophic failure. This monitoring need not be done if the manufacturer can demonstrate that a catastrophic failure of the system will not result in exceedance of the threshold. Further, if equipped with a DPF, the OBD system shall detect DPF deterioration or malfunction before it results in exhaust emissions exceeding, for 2010 through 2012 model years, 4 times the applicable PM standard and, for 2013 and later model years, the applicable PM standard +0.04 g/mi.
- (2) Engine misfire. Lack of cylinder combustion must be detected.
- (3) Exhaust gas sensors.
 (i) Oxygen sensors and air-fuel ratio sensors downstream of aftertreatment devices. If equipped, sensor deterioration or malfunction resulting in exhaust emissions exceeding any of the following levels: for 2007 through 2009

model years, 4 times the applicable PM standard, or 3 times the applicable NO_X standard, or 2.5 times the applicable NMHC standard and, for 2010 through 2012 model years, 4 times the applicable PM standard, or the applicable NO_X standard+0.3 g/mi, or 2.5 times the applicable NMHC standard and, for 2013 and later model years, the applicable PM standard+0.04 g/mi, or the applicable NO_X standard+0.3 g/mi,

or 2 times the applicable NMHC standard.

(ii) Oxygen sensors and air-fuel ratio sensors upstream of aftertreatment devices. If equipped, sensor deterioration or malfunction resulting in exhaust emissions exceeding any of the following levels: for 2007 through 2009 model years, 4 times the applicable PM standard, or 3 times the applicable NOx standard, or 2.5 times the applicable NMHC standard, or 2.5 times the applicable CO standard and, for 2010

through 2012 model years, the applicable PM standard+0.02 g/mi, or the applicable NO_X standard+0.3 g/mi, or 2.5 times the applicable NMHC standard, or 2.5 times the applicable CO standard and, for 2013 and later model years, the applicable PM standard+0.02 g/mi, or the applicable NO_X standard+0.3 g/mi, or 2 times the applicable NMHC standard, or 2 times the applicable CO standard.

(iii) NO_X sensors. If equipped, sensor deterioration or malfunction resulting in exhaust emissions exceeding any of the following levels: for 2007 through 2009 model years, 5 times the applicable PM standard, or 4 times the applicable NO_X standard and, for 2010 through 2012 model years, 4 times the applicable PM standard, or the applicable NO_X standard+0.6 g/mi and, for 2013 and later model years, the applicable PM standard+0.04 g/mi, or the applicable NO_x standard+0.3 g/mi.

(4) [Reserved.]

(5) Other emission control systems and components. Any deterioration or malfunction occurring in an engine system or component directly intended to control emissions, including but not necessarily limited to, the exhaust gas recirculation (EGR) system, if equipped, and the fuel control system, singularly resulting in exhaust emissions exceeding any of the following levels: For 2007 through 2009 model years, 4 times the applicable PM standard, or 3 times the applicable NO_X standard, or 2.5 times the applicable NMHC standard, or 2.5 times the applicable CO standard and, for 2010 through 2012 model years, 4 times the applicable PM standard, or the applicable NO_X standard+0.3 g/mi, or 2.5 times the applicable NMHC standard, or 2.5 times the applicable CO standard and, for 2013 and later model years, the applicable PM standard+0.02 g/mi, or the applicable NO_X standard+0.3 g/mi, or 2 times the applicable NMHC standard, or 2 times the applicable CO standard. A functional check, as described in paragraph (n)(6) of this section, may satisfy the requirements of this paragraph (n)(5) provided the manufacturer can demonstrate that a malfunction would not cause emissions to exceed the applicable levels. This demonstration is subject to Administrator approval. For engines equipped with crankcase ventilation (CV), monitoring of the CV system is not necessary provided the manufacturer can demonstrate to the Administrator's satisfaction that the CV system is unlikely to fail.

(6) Other emission-related powertrain components. Any other deterioration or malfunction occurring in an electronic

emission-related powertrain system or component not otherwise described in paragraphs (n)(1) through (n)(5) of this section that either provides input to or receives commands from the on-board computer and has a measurable impact on emissions; monitoring of components required by this paragraph (n)(6) must be satisfied by employing electrical circuit continuity checks and rationality checks for computer input components (input values within manufacturer specified ranges based on other available operating parameters), and functionality checks for computer output components (proper functional response to computer commands) except that the Administrator may waive such a rationality or functionality check where the manufacturer has demonstrated infeasibility. Malfunctions are defined as a failure of the system or component to meet the electrical circuit continuity checks or the rationality or functionality checks.

(7) Performance of OBD functions. Any sensor or other component deterioration or malfunction which renders that sensor or component incapable of performing its function as part of the OBD system must be detected and identified on engines so equipped.

(o) For 2007 and later model year diesel complete heavy-duty vehicles, in lieu of the certification provisions of paragraph (k) of this section, the certification provisions of this paragraph (o) shall apply. For test groups required to have an OBD system, certification will not be granted if, for any test vehicle approved by the Administrator in consultation with the manufacturer, the malfunction indicator light does not illuminate under any of the following circumstances, unless the manufacturer can demonstrate that any identified OBD problems discovered during the Administrator's evaluation will be corrected on production vehicles.

(1)(i) If monitored for emissions performance—a reduction catalyst is replaced with a deteriorated or defective catalyst, or an electronic simulation of such, resulting in exhaust emissions exceeding, for 2007 through 2009 model years, 4 times the applicable NO_X standard and, for 2010 through 2012 model years, the applicable NO_X standard+0.6 g/mi and, for 2013 and later model years, the applicable NO_X standard+0.3 g/mi. Also if monitored for emissions performance-an oxidation catalyst (not to include the DPF) is replaced with a deteriorated or defective catalyst, or an electronic simulation of such, resulting in exhaust NMHC emissions exceeding, for 2010 through 2012 model years, 2.5 times the

applicable NMHC standard and, for 2013 and later model years, 2 times the applicable NMHC standard. If monitored for exotherm performance for 2010 and later model years, an oxidation catalsyt is replaced with a deteriorated or defective catalyst, or an electronic simulation of such, resulting in an inability to achieve a 100 degree C temperature rise, or the necessary regeneration temperature, within 60 seconds of initiating a DPF regeneration.

(ii) If monitored for performance—a DPF is replaced with a DPF that has catastrophically failed, or an electronic simulation of such. Further, a DPF is replaced with a deteriorated or defective DPF, or an electronic simulation of such, resulting in exhaust PM emissions exceeding, for 2010 through 2012 model years, 4 times the applicable PM standard and, for 2013 and later model years, the applicable PM standard+0.04 g/mi.

(2) An engine misfire condition is induced and is not detected.

(3)(i) If so equipped, any oxygen sensor or air-fuel ratio sensor located downstream of aftertreatment devices is replaced with a deteriorated or defective sensor, or an electronic simulation of such, resulting in exhaust emissions exceeding any of the following levels: for 2007 through 2009 model years, 4 times the applicable PM standard, or 3 times the applicable NO_X standard, or 2.5 times the applicable NMHC standard and, for 2010 through 2012 model years, 4 times the applicable PM standard, or the applicable NO_X standard+0.3 g/mi, or 2.5 times the applicable NMHC standard and, for 2013 and later model years, the applicable PM standard+0.04 g/mi, or the applicable NO_X standard+0.3 g/mi, or 2 times the applicable NMHC standard.

(ii) If so equipped, any oxygen sensor or air-fuel ratio sensor located upstream of aftertreatment devices is replaced with a deteriorated or defective sensor, or an electronic simulation of such, resulting in exhaust emissions exceeding any of the following levels: for 2007 through 2009 model years, 4 times the applicable PM standard, or 3 times the applicable NOx standard, or 2.5 times the applicable NMHC standard, or 2.5 times the applicable CO standard and, for 2010 through 2012 model years, the applicable PM standard+0.02 g/mi, or the applicable NO_X standard+0.3 g/mi, or 2.5 times the applicable NMHC standard, or 2.5 times the applicable CO standard and, for 2013 and later model years, the applicable PM standard+0.02 g/mi, or the applicable NO_X standard+0.3 g/mi, or 2 times the applicable NMHC

standard, or 2 times the applicable CO standard.

- (iii) If so equipped, any NO_X sensor is replaced with a deteriorated or defective sensor, or an electronic simulation of such, resulting in exhaust emissions exceeding any of the following levels: for 2007 through 2009 model years, 5 times the applicable PM standard, or 4 times the applicable NO_X standard and, for 2010 through 2012 model years, 4 times the applicable PM standard, or the applicable NO_X standard+0.6 g/mi and, for 2013 and later model years, the applicable PM standard+0.04 g/mi, or the applicable NO_X standard+0.3 g/mi.
 - (4) [Reserved.]
- (5) A malfunction condition is induced in any emission-related engine system or component, including but not necessarily limited to, the exhaust gas recirculation (EGR) system, if equipped, and the fuel control system, singularly resulting in exhaust emissions exceeding any of the following levels: for 2007 through 2009 model years, 4 times the applicable PM standard or 3 times the applicable NO_X standard, or 2.5 times the applicable NMHC standard, or 2.5 times the applicable CO standard and, for 2010 through 2012 model years, 4 times the applicable PM standard, or the applicable NO_X standard+0.3 g/mi, or 2.5 times the applicable NMHC standard, or 2.5 times the applicable CO standard and, for 2013 and later model years, the applicable PM standard+0.02 g/mi, or the applicable NO_X standard+0.3 g/mi, or 2 times the applicable NMHC standard, or 2 times the applicable CO standard.

- (6) A malfunction condition is induced in an electronic emissionrelated powertrain system or component not otherwise described in this paragraph (o) that either provides input to or receives commands from the onboard computer resulting in a measurable impact on emissions.
- 9. Section 86.1863-07 is amended by revising paragraphs (b) and (c) to read as follows.

§ 86.1863-07 Optional chassis certification for diesel vehicles.

(b) For OBD, diesel vehicles optionally certified under this section are subject to the OBD requirements of § 86.1806–05 and superseding sections.

(c) Diesel vehicles optionally certified under this section may be tested using the test fuels, sampling systems, or analytical systems specified for diesel engines in Subpart N of this part or in 40 CFR part 1065.

PART 89—CONTROL OF EMISSIONS FROM NEW AND IN-USE NONROAD **COMPRESSION-IGNITION ENGINES**

■ 10. The authority citation for part 89 continues to read as follows:

Authority: 42 U.S.C. 7401-7671q.

Subpart A—[Amended]

■ 11. Section 89.1 is amended by revising paragraph (b)(5) to read as follows:

(5) Hobby engines. This part does not apply for engines installed in reducedscale models of vehicles that are not capable of transporting a person.

PART 90—CONTROL OF EMISSIONS FROM NONROAD SPARK-IGNITION **ENGINES AT OR BELOW 19 KILOWATTS**

■ 12. The authority citation for part 90 continues to read as follows:

Authority: 42 U.S.C. 7401-7671q.

Subpart G—[Amended]

■ 13. Section 90.611 is revised to read as follows:

§ 90.611 Importation for purposes other than resale.

The provisions of 40 CFR 1054.630 apply for importation of nonconforming engines for personal use.

PART 1027—FEES FOR ENGINE, **VEHICLE, AND EQUIPMENT COMPLIANCE PROGRAMS**

■ 14. The authority citation for part 1027 continues to read as follows:

Authority: 42 U.S.C. 7401-7671q.

■ 15. Section 1027.105 is amended by revising the equation in paragraph (c)(1)(i) and the equation in paragraph (c)(1)(ii) to read as follows.

§ 1027.105 How much are the fees?

(c) * * *

(1) * * *

Certificate Fee_{CY} =
$$\left[\left(\text{Op +L} \cdot \frac{\text{CPI}_{\text{CY-2}}}{\text{CPI}_{2006}} \right) \right] \cdot \frac{1.169}{\left[\left(\text{cert} \#_{\text{MY-2}} + \text{cert} \#_{\text{MY-3}} \right) \cdot 0.5 \right]}$$

(ii) * * *

$$Certificate Fee_{CY} = \left[\left((Op + L) \cdot \frac{CPI_{CY-2}}{CPI_{2002}} \right) \right] \cdot \frac{1.169}{\left[\left(cert\#_{MY-2} + cert\#_{MY-3} \right) \cdot 0.5 \right]}$$

Authority: 42 U.S.C. 7401-7671q.

PART 1033—CONTROL OF EMISSIONS Subpart B—[Amended] FROM LOCOMOTIVES

■ 16. The authority citation for part 1033 continues to read as follows:

■ 17. Section 1033.150 is amended by revising Table 1 in paragraph (f) to read as follows.

§ 1033.150 Interim provisions.

(f) * * *

TABLE 1 TO § 1033.150—IN-USE ADJUSTMENTS FOR TIER 4 LOCOMOTIVES

| | In-use adjustments (g/bhp-hr) | | |
|---|--|--|--|
| Fraction of useful life already used | For model year 2017 and earlier Tier 4 NO _X standards | For model year 2017 and earlier Tier 4 PM standards | |
| 0 < MW-hrs ≤ 50% of UL 50 < MW-hrs ≤ 75% of UL MW-hrs > 75% of UL | 0.7 1.0 1.3 | 0.01 0.01 0.01 | |

Subpart F—[Amended]

■ 18. Section 1033.515 is amended by revising paragraph (c)(5) to read as follows.

§ 1033.515 Discrete-mode steady-state emission tests of locomotives and locomotive engines.

* * * * *

(5) Begin proportional sampling of PM emissions at the beginning of each sampling period and terminate sampling within \pm 5 seconds of the specified time in each test mode. If the PM sample is not sufficiently large, take one of the following actions consistent with good engineering judgment:

(i) Extend the sampling period up to a maximum of 15 minutes.

(ii) Group the modes in the same manner as the phases of the ramped modal cycle and use three different dilution settings for the groups. Use one setting for both idle modes, one for dynamic brake through notch 5, and one for notches 6 through 8. For each group, ensure that the mode with the highest exhaust flow (typically normal idle,

notch 5, and notch 8) meets the criteria for minimum dilution ratio in 40 CFR part 1065.

* * * * *

■ 19. Section 1033.520 is amended by removing Tables 1 and 2 in paragraph (e)(7), and adding a new paragraph (g) to read as follows:

§ 1033.520 Alternative ramped modal cycles.

* * * * *

(g) The following tables define applicable ramped modal cycles for line-haul and switch locomotives:

TABLE 1 TO § 1033.520—LINE-HAUL LOCOMOTIVE RAMPED MODAL CYCLE

| · · | | | | | | |
|---------------------|------------------|----------------------------|---|--|--|--|
| RMC test phase | Weighting factor | RMC mode | Time in mode (seconds) | Notch setting | | |
| Pre-test idle | NA | NA | 600 to 900 | Lowest idle setting ¹ | | |
| Phase 1 (Idle test) | 0.380 | A B | 600 600 | Low Idle. ² Normal Idle. | | |
| Phase Transition | | | | | | |
| Phase 2 | 0.389 | C 1 2 3 4 5 | 1000 520 520 416 352 304 | | | |
| | Phas | se Transi | tion | | | |
| Phase 3 | 0.231 | 6 7 8 | 144 111 600 | Notch 6. Notch 7. Notch 8. | | |

¹ See paragraph (d) of this section for alternate pre-test provisions.

²Operate at normal idle for modes A and B if not equipped with multiple idle settings. ³Operate at normal idle if not equipped with a dynamic brake.

TABLE 2 TO § 1033.520—SWITCH LOCOMOTIVE RAMPED MODAL CYCLE

| RMC test phase | Weighting factor | RMC mode | Time in mode (seconds) | Notch setting |
|---------------------|------------------|-----------------------|---------------------------------|--|
| Pre-test idle | NA | NA | 600 to 900 | Lowest idle setting ¹ |
| Phase 1 (Idle test) | 0.598 | A B | 600 600 | Low Idle. ² Normal Idle. |
| | Phas | se Transi | tion | |
| Phase 2 | 0.377 | 1 2 3 4 5 | 868 861 406 252 252 | Notch 1. Notch 2. Notch 3. Notch 4. Notch 5. |
| | Phas | se Transi | tion | |
| Phase 3 | 0.025 | 6 7 8 | 1080 144 576 | Notch 6. Notch 7. Notch 8. |

¹ See paragraph (d) of this section for alternate pre-test provisions.

Subpart G—[Amended]

■ 20. Section 1033.640 is amended by revising paragraph (a)(2) to read as follows.

§ 1033.640 Provisions for repowered and refurbished locomotives.

- (a) * * *
- (2) Refurbished locomotives are locomotives that contain more unused parts than previously used parts. As described in this section, a locomotive containing more unused parts than previously used parts may be deemed to be either remanufactured or freshly manufactured, depending on the total amount of unused parts on the locomotive. Note that § 1033.901 defines refurbishment of a pre-1973 locomotive to be an upgrade of the locomotive. *
- 21. Section 1033.645 is amended by revising paragraph (a) to read as follows.

§ 1033.645 Non-OEM component certification program.

- (a) Applicability. This section applies only for components that are commonly replaced during remanufacturing. It does not apply for other types of components that are replaced during a locomotive's useful life, but not typically replaced during remanufacture. Certified components may be used for remanufacturing or other maintenance.
- (1) The following components are eligible for approval under this section:
 - (i) Cylinder liners.
 - (ií) Pistons.
 - (iii) Piston rings.
 - (iv) Heads
 - (v) Fuel injectors. (vi) Turbochargers
 - (vii) Aftercoolers and intercoolers.
- (2) Catalysts and electronic controls are not eligible for approval under this section.

(3) We may determine that other types of components can be certified under this section, consistent with good engineering judgment.

PART 1042—CONTROL OF EMISSIONS FROM NEW AND IN-USE MARINE **COMPRESSION-IGNITION ENGINES AND VESSELS**

■ 22. The authority citation for part 1042 continues to read as follows:

Authority: 42 U.S.C. 7401-7671q.

Subpart B—[Amended]

■ 23. Section 1042.101 is amended by revising Table 1 in paragraph (a)(3) to read as follows:

§ 1042.101 Exhaust emission standards.

(a) * * *

(3) * * *

TABLE 1 TO § 1042.101—TIER 3 STANDARDS FOR CATEGORY 1 ENGINES BELOW 3700 KWA

| Power density and application | Displacement (L/cyl) | Maximum engine power | Model year | PM (g/kW-hr) | NO _X + HC (g/kW-hr) ^b |
|--------------------------------------|----------------------|----------------------|------------|-----------------|--|
| All | disp. < 0.9 | kW < 19 | 2009+ | 0.40 | 7.5 |
| | | 19 ≤ kW < 75 | 2009–2013 | 0.30 | 7.5 |
| | | | 2014+ | 0.30 | 4.7 |
| Commercial engines with kW/L < 35 b. | disp. < 0.9 | kW ≥ 75 | 2012+ | 0.14 | 5.4 |
| | 0.9 ≤ disp. < 1.2 | all | 2013+ | 0.12 | 5.4 |
| | 1.2 ≤ disp. < 2.5 | kW < 600 | 2014–2017 | 0.11 | 5.6 |
| | • | | 2018+ | 0.10 | 5.6 |
| | | kW ≥ 600 | 2014+ | 0.11 | 5.6 |
| | 2.5 ≤ disp. < 3.5 | kW < 600 | 2013–2017 | 0.11 | 5.6 |
| | · | | 2018+ | 0.10 | 5.6 |
| | | kW ≥ 600 | 2013+ | 0.11 | 5.6 |
| | 3.5 ≤ disp. < 7.0 | kW < 600 | 2012–2017 | 0.11 | 5.8 |
| | | | 2018+ | 0.10 | 5.8 |
| | | kW ≥ 600 | 2012+ | 0.11 | 5.8 |

²Operate at normal idle for modes A and B if not equipped with multiple idle settings.

TABLE 1 TO § 1042.101—TIER 3 STANDARDS FOR CATEGORY 1 ENGINES BELOW 3700 KW A—Continued

| Power density and application | Displacement (L/cyl) | Maximum engine power | Model year | PM (g/kW-hr) | NO _X + HC (g/kW-hr) ^b |
|---|----------------------|-------------------------|------------|-----------------|--|
| Commercial engines with kW/L > 35 and all recreational engines b. | disp. < 0.9 | kW ≥ 75 | 2012+ | 0.15 | 5.8 |
| 3 | 0.9 ≤ disp. < 1.2 | | 2013+ | 0.14 | 5.8 |
| | 1.2 ≤ disp. < 2.5 | | 2014+ | 0.12 | 5.8 |
| | 2.5 ≤ disp. < 3.5 | | 2013+ | 0.12 | 5.8 |
| | 3.5 ≤ disp. < 7.0 | | 2012+ | 0.11 | 5.8 |

a No Tier 3 standards apply for commercial Category 1 engines at or above 3700 kW. See § 1042.1(c) and paragraph (a)(6) of this section for

the standards that apply for these engines.

^b The applicable NO_X + HC standards specified for Tier 2 engines in Appendix I of this part continue to apply instead of the values noted in the table for commercial engines at or above 2000 kW. FELs for these engines may not be higher than the Tier 1 NO_X standard specified in Appendix I of this part.

Subpart G—[Amended]

■ 24. Section 1042.635 is amended by revising paragraphs (a) and (b) and removing and reserving paragraph (c) to read as follows:

§ 1042.635 National security exemption.

- (a) An engine is exempt without a request if it will be used or owned by an agency of the federal government responsible for national defense, where the vessel in which it is installed has armor, permanently attached weaponry, specialized electronic warfare systems, unique stealth performance requirements, and/or unique combat maneuverability requirements. This applies to both remanufactured and freshly manufactured marine engines.
- (b) Manufacturers may request a national security exemption for engines not meeting the conditions of paragraph (a) of this section, as long as the request is endorsed by an agency of the federal government responsible for national defense. Agencies of the federal government responsible for national defense may request exemptions for remanufactured engines. In your request, explain why you need the exemption.

(c) [Reserved].

* * * *

Subpart I—[Amended]

■ 25. Section 1042.850 is amended by adding paragraph (d) to read as follows:

§ 1042.850 Exemptions and hardship relief.

* * * * *

(d) Other exemptions specified in subpart G of this part and 40 CFR part 1068, subparts C and D also apply to remanufactured engines. For example, the national security exemption applies to remanufactured engines as described in § 1042.635.

PART 1048—CONTROL OF EMISSIONS FROM NEW, LARGE NONROAD SPARK-IGNITION ENGINES

■ 26. The authority citation for part 1048 continues to read as follows:

Authority: 42 U.S.C. 7401-7671q.

Subpart A—[Amended]

■ 27. Section 1048.15 is amended by revising paragraph (a) to read as follows:

§ 1048.15 Do any other regulation parts apply to me?

(a) Part 1060 of this chapter describes standards and procedures for controlling evaporative emissions from engines fueled by gasoline or other volatile liquid fuels and the associated fuel systems. These requirements apply to engine manufacturers as specified in this part 1048. Part 1060 applies optionally for equipment manufacturers and fuel-system component manufacturers for certifying their products.

Subpart I—[Amended]

■ 28. Section 1048.801 is amended by revising the definition for "Constant-speed engine" to read as follows:

§ 1048.801 What definitions apply to this part?

Constant-speed engine means an engine that is certified only for constant-speed operation. This may include engines that allow the operator to adjust the set point for fixing the appropriate governed speed. See subparts B and C of this part for specific provisions related to certifying engines only for constant-speed operation. Engines whose constant-speed governor function

is removed or disabled are no longer constant-speed engines.

* * * * *

PART 1054—CONTROL OF EMISSIONS FROM NEW, SMALL NONROAD SPARK-IGNITION ENGINES AND EQUIPMENT

■ 29. The authority citation for part 1054 continues to read as follows:

Authority: 42 U.S.C. 7401-7671q.

Subpart G—[Amended]

■ 30. Section 1054.690 is amended by revising paragraph (a) to read as follows:

§ 1054.690 What bond requirements apply for certified engines?

(a) Before introducing certified engines into U.S. commerce, you must post a bond to cover any potential compliance or enforcement actions under the Clean Air Act unless you demonstrate to us in your application for certification that you are able to meet any potential compliance- or enforcement-related obligations, as described in this section. See paragraph (j) of this section for the requirements related to importing engines that have been certified by someone else. Note that you might also post bond under this section to meet your obligations under § 1054.120.

PART 1060—CONTROL OF EVAPORATIVE EMISSIONS FROM NEW AND IN-USE NONROAD AND STATIONARY EQUIPMENT

■ 31. The authority citation for part 1060 continues to read as follows:

Authority: 42 U.S.C. 7401-7671q.

Subpart B—[Amended]

■ 32. Section 1060.102 is amended by revising paragraph (d)(1) to read as follows:

§ 1060.102 What permeation emission control requirements apply for fuel lines?

* * * * * (d) * * *

*

- (1) EPA Low-Emission Fuel Lines must have permeation emissions at or below 10 g/m²/day when measured according to the test procedure described in \S 1060.510. Fuel lines that comply with this emission standard are deemed to comply with all the emission standards specified in this section.
- 33. Section 1060.103 is amended by revising paragraph (d) to read as follows:

§ 1060.103 What permeation emission control requirements apply for fuel tanks?

(d) For purposes of this part, fuel tanks do not include fuel lines that are

subject to § 1060.102, petcocks designed for draining fuel, grommets used with fuel lines, or grommets used with other hose or tubing excluded from the definition of "fuel line." Fuel tanks include other fittings (such as fuel caps, gaskets, and O-rings) that are directly mounted to the fuel tank.

■ 34. Section 1060.105 is amended by revising paragraph (c)(2) to read as follows:

§ 1060.105 What diurnal requirements apply for equipment?

(c) * * *

(2) They must remain sealed up to a positive pressure of 24.5 kPa (3.5 psig); however, they may contain air inlets that open when there is a vacuum pressure inside the tank. Such fuel tanks

may not contain air outlets that vent to the atmosphere at pressures below 34.5 kPa (5.0 psig).

Subpart F—[Amended]

■ 35. Section 1060.501 is amended by revising paragraph (e) to read as follows:

$\S\,1060.501\quad \text{General testing provisions}.$

(e) Accuracy and precision of mass balances must be sufficient to ensure accuracy and precision of two percent or better for emission measurements for products at the maximum level allowed by the standard. The readability of the display may not be coarser than half of the required accuracy and precision. Examples are shown in the following table for a digital readout:

| | Example #1 | Example #2 | Example #3 |
|----------------------|---|--|--|
| Applicable standard | 1.15 m ² 14.0 days 24.15 g | 0.47 m ² 14.0 days 9.87 g | 0.015 m ² . 14.1 days. 3.173 g. |
| Required readability | 0.1 g or better | 0.1 g or better | 0.01 g or better. |

■ 36. Section 1060.510 is revised to read as follows:

§ 1060.510 How do I test EPA Low-Emission Fuel Lines for permeation emissions?

For EPA Low-Emission Fuel Lines, measure emissions according to SAE J2260, which is incorporated by reference in § 1060.810.

■ 37. Section 1060.515 is amended by revising paragraphs (a)(1) and (c) to read as follows:

§ 1060.515 How do I test EPA Nonroad Fuel Lines and EPA Cold-Weather Fuel Lines for permeation emissions?

* * * * * (a) * * * (1) For EPA Nonroad Fuel Lines, use Fuel CE10, which is Fuel C as specified in ASTM D471 (incorporated by reference in § 1060.810) blended with ethanol such that the blended fuel has 10.0 ± 1.0 percent ethanol by volume.

* * * * * *

(c) Measure fuel line permeation
emissions using the equipment and
procedures for weight-loss testing
specified in SAE J30 or SAE J1527
(incorporated by reference in
§ 1060.810). Start the measurement
procedure within 8 hours after draining
and refilling the fuel line. Perform the
emission test over a sampling period of
14 days.

* * * * *

PART 1065—ENGINE-TESTING PROCEDURES

■ 38. The authority citation for part 1065 continues to read as follows:

Authority: 42 U.S.C. 7401–7671q.

Subpart G—[Amended]

■ 39. Section 1065.672 is amended by revising paragraph (d)(2) to read as follows:

§ 1065.672 Drift correction.

* * * * *

(d) * * *

(2) Correct for drift using the following equation:

$$x_{\text{idriftcorrected}} = x_{\text{refzero}} + \left(x_{\text{refspan}} - x_{\text{refzero}}\right) \cdot \frac{2x_{\text{i}} - \left(x_{\text{prezero}} + x_{\text{postzero}}\right)}{\left(x_{\text{prespan}} + x_{\text{postspan}}\right) - \left(x_{\text{prezero}} + x_{\text{postzero}}\right)}$$

Eq. 1065.672-1

Where:

 $x_{\text{idriftcorrected}}$ = concentration corrected for drift.

 x_{refzero} = reference concentration of the zero gas, which is usually zero unless known to be otherwise.

 x_{refspan} = reference concentration of the span gas.

 x_{prespan} = pre-test interval gas analyzer response to the span gas concentration.

 $x_{
m postspan}$ = post-test interval gas analyzer response to the span gas concentration.

 x_i or \bar{x} = concentration recorded during test, before drift correction.

 x_{prezero} = pre-test interval gas analyzer response to the zero gas concentration.

x_{postzero} = post-test interval gas analyzer response to the zero gas concentration.

Example:

 $x_{\text{refzero}} = 0 \ \mu \text{mol/mol}$ $x_{\text{refspan}} = 1800.0 \ \mu \text{mol/mol}$

 $x_{\text{refspan}} = 1800.0 \, \mu \text{mol/mol}$ $x_{\text{prespan}} = 1800.5 \, \mu \text{mol/mol}$

 $x_{\text{postspan}} = 1600.3 \, \mu \text{mol/mol}$ $x_{\text{postspan}} = 1695.8 \, \mu \text{mol/mol}$

 x_i or $\bar{x} = 435.5 \,\mu\text{mol/mol}$

 $x_{\text{prezero}} = 0.6 \, \mu \text{mol/mol}$

 $x_{\text{postzero}} = -5.2 \,\mu\text{mol/mol}$

$$x_{\text{idriftcorrected}} = 0 + (1800.0 - 0) \cdot \frac{2 \cdot 435.5 - (0.6 + (-5.2))}{(1800.5 + 1695.8) - (0.6 + (-5.2))}$$

 $x_{\text{idriftcorrected}} = 450.2 \, \mu \text{mol/mol}$

Subpart K—[Amended]

■ 40. Section 1065.1001 is amended by revising the definition for "Constant-speed operation" to read as follows:

§ 1065.1001 Definitions.

* * * * * *

Constant-speed operation means engine operation with a governor that automatically controls the operator demand to maintain engine speed, even under changing load. Governors do not always maintain speed exactly constant. Typically speed can decrease (0.1 to 10) % below the speed at zero load, such that the minimum speed occurs near the engine's point of maximum power. (Note: An engine with an adjustable governor setting may be considered to operate at constant speed, subject to our approval. For such engines, the governor setting is considered an adjustable parameter.)

PART 1068—GENERAL COMPLIANCE PROVISIONS FOR NONROAD PROGRAMS

■ 41. The authority citation for part 1068 continues to read as follows: **Authority**: 42 U.S.C. 7401–7671q.

Subpart C—[Amended]

■ 42. Section 1068.201 is amended by revising paragraph (h) to read as follows:

§ 1068.201 Does EPA exempt or exclude any engines/equipment from the prohibited acts?

* * * * *

- (h) You may ask us to modify the administrative requirements for the exemptions described in this subpart or in subpart D of this part. We may approve your request if we determine that such approval is consistent with the intent of this part. For example, waivable administrative requirements might include some reporting requirements, but would not include any eligibility requirements or use restrictions.
- 43. Section 1068.225 is amended by revising paragraphs (a) and (b) and removing and reserving paragraph (c) to read as follows:

§ 1068.225 What are the provisions for exempting engines/equipment for national security?

- (a) An engine/equipment is exempt without a request if it will be used or owned by an agency of the federal government responsible for national defense, where the equipment in which it is installed has armor, permanently attached weaponry, or other substantial features typical of military combat.
- (b) Manufacturers may request a national security exemption for engines/equipment not meeting the conditions of paragraph (b) of this section as long as the request is endorsed by an agency of the federal government responsible for national defense. In your request, explain why you need the exemption.

(c) [Reserved].

Subpart D—[Amended]

- 44. Section 1068.325 is amended as follows:
- a. By revising paragraph (g).
- b. By redesignating paragraph (i) as paragraph (j).
- c. By adding and reserving paragraph (i).

§ 1068.325 What are the temporary exemptions for imported engines/ equipment?

* * * * *

(g) You may import an engine if another company already has a certificate of conformity and will be modifying the engine to be in its final, certified configuration under the provisions of § 1068.262. You may also import a partially complete engine by shipping it from one of your facilities to another under the provisions of § 1068.260(c). If you are importing a used engine that becomes new as a result of importation, you must meet all the requirements that apply to original engine manufacturers under § 1068.262.

(i) [Reserved]
* * * * *

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