STATE OF CALIFORNIA
AIR RESOURCES BOARD

Notice of Public Hearing to Consider Amendments to Reduce Emissions of Diesel Particulate Matter, And Other Pollutants From In-Use On-Road Heavy-Duty Diesel Fueled Vehicles (13CCR2025 et al)	))))	**Board Item 08-11-3 Initial Mail Out # 07-23 Notice of Public Hearing Board Hearing: December 11, 2008**

Comments of Navistar, Inc.

On August 17, 2007, the Staff of the California Air Resources Board [ARB] published proposed amendments to reduce emissions of diesel particulate matter, and other pollutants from in-use on-road heavy-duty diesel fueled vehicles (Proposed Rule 13CCR2025 et al; Board Item 08-11-3; Initial Mail-Out #07-23; July 31, 2007). The proposed amendments would require retrofitting of heavy-duty engines to reduce emissions of particulate matter [PM] and oxides of nitrogen [NOX] from in-use. The ARB Staff subsequently published a notice of the public hearing to consider the amendments, along with a detailed Staff Report dated October 14, 2008.

Navistar, Inc. [Navistar] is a leading manufacturer of new heavy-duty diesel engines and also manufactures retrofits for heavy-duty diesel engines. During the time between publication of the initial Mail-Out and the Notice of Public Hearing, Navistar and its representatives discussed with ARB Staff a number of issues relating to the proposed rules. Enclosed below are Navistar comments concerning the proposed ARB Rule (13CCR2025 et al). In addition to the comments and issues raised, Navistar proposes resolution of the problems contained within the rules through suggested regulatory language changes below.

Respectfully Submitted,

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Comments by Navistar, Inc. on Proposed Aendments to Reduce Emissions of Diesel Particulate Matter, and Other Pollutants from In-use On-road Heavy-duty Diesel Fueled Vehicles (Proposed Rule 13CCR2025 et al; Board Item 08-11-3; Initial Mail-Out #07-23; July 31, 2007)

ISSUE #1: Issues retrofitting an integrated engine/aftertreatment/vehicle design. Additionally, the Rule (2025o8) providing extra credit for heavy-duty hybrids fails to account for reduced emissions produced by a hybrid.

DISCUSSION #1: The Rule (2025c11, 2025d1, 2025d45, 2025d48, 2025d69C, 2025e6, 2025f, 2025g, 2025h) requires Model Year 2006 through 2009 engines to undergo NOX reductions (i.e., NOX BACT) at some point in time during the compliance period. Navistar specifically notes that a Navistar engine in Model Year 2006 and all of its Model Year 2007 through 2009 engines use an integrated engine and aftertreatment control system to actively regenerate the originally installed diesel particulate filter. Any modification or removal done to the originally installed aftertretament systems would alter the engine operation and, therefore, the emissions from the certified engine configuration. As such, removal or modification of Navistar's original diesel particulate filter could (1) within the warranty period, void the original manufacturer's warranty; (2) within the regulatory useful life period, change the originally certified configuration and, therefore, possibly be considered tampering and a violation under the Clean Air Act; or (3) outside the regulatory useful life period, change the underlying emissions and/or operational performance of the engine. Also, removal of an existing DPF system would result in the illumination of the required failure warning indicator (MIL) for EMD engines (see 13CCR1971) if the engine is not recalibrated.

The Rule also fails to account for the difficulty in aftertreatment and vehicle design/configuration in applying any possible NOX BACT retrofit to a vehicle that already incorporates such an integrated engine/diesel particulate design. Assuming, arguendo, that the originally installed PM aftertreatment [DPF] is unaltered on the vehicle, the NOX BACT aftertreatment would need to be installed somehwre after the DPF. There may, or will, be little available space on the vehicle to accommodate the NOX BACT device.

Additionally, the Rule fails to account for the phase-in/phase-out and early incentive (Average Banking and Trading [ABT]) provisions of the 2007 Rule (see 13CCR1956.8). As noted in USEPA's original ABT rule, the ABT program provides an incentive for the early introduction of lower emission engines and, more importantly, a direct "environmental benefit". 55FedReg30584 (7/26/1990). The phase-in/phase-out provisions between 2007 through 2009 allow for engines to be certified at a variety of emission levels. Currently, Navistar has an engine family certified at an emission level of 0.85 g/bHpHr NOX(EO A-004-0331, 8NVXH0466AGC). Under the current Rule (2025d2A and B), Navistar's 2006 engine (6NVXH06.4AGA at 1.16g/bHpHr NOX) would require NOX BACT retrofit emission reduction of over 85% to an emission level of 0.17g/bHpHr NOX, actually below the phase-in 2007 standard. It is entirely conceivable that engine manufacturers, such as Navistar, may actually introduce engines at a phase-in emission level prior to 2010. Under those situations, the Rule would require the engine emission reductions of 70% on an engine of 0.50 g/bHpHr or lower NOX, i.e. to be below a retrofitted NOX level of 0.15 g/bHpHr which is below the phase-in 2007 standard.

While certain sections of the Rule allow compliance with the PM BACT (2025d57A), the Rule does not allow use of an originally installed diesel particulate filter to demonstrate compliance with the PM Fleet Average target (2025h3B1 and App Table 1A) nor account for difficulties noted above in retrofitting such Navistar diesel particulate filter equipped

Model Year 2006 through 2009 engines. Navistar proposes that engines in model year 2006 equipped with an active regeneration diesel particulate filter and in model years 2007 through 2009 below 1.16 g/bHpHr NOX be credited with reduced emissions for compliance purposes.

Generally, heavy-duty hybrid vehicles have lower emissions than the non-hybrid counterpart. This is readily apparent through the fuel economy savings produced by hybrids. However, for model years 2007 through 2009, hybrids fail to benefit from these emission reductions. Navistar proposes that the Rule promote hybrid introduction and provide any benefit throughout the hybrids operational life.

PROPOSED RESOLUTION #1: Navistar proposes that ARB allow any diesel particulate filter equipped engine to be 2010 NOX BACT equivalent as follows:

2025d1B .....by more than 70 percent; or

2025d1C Any 2007 and newer model year engine equipped with a diesel particulate filter; or

2025d1D Any 2006 and newer model year engine equipped with an original engine manufacturer's diesel particulate filter that uses an active regeneration; or

2025d1E Any Hybrid Vehicle, as designated by 2025o8.

2025h2B EF(MHD) = The NOX emission factor as defined in Appendix A for each medium heavy duty (MHD) vehicle subject to the NOX requirements, or adjusted as applicable, according to paragraphs 1. through 4. below.

2025h2B1 ... that are verified; or

2025h2B2 The fleet owner may exclude any 2010 Model Year NOx Emissions Equivalent engines from the fleet average calculation for any compliance year; or

2025h2B3 For any 2006 and newer model year engine equipped with an original engine manufacturer's diesel particulate filter that uses an active regeneration, use a NOX emission factor of 2.0; or

2025h2B4 For any 2007 and newer model year engine equipped with an original engine manufacturer's diesel particulate filter and is at a NOX FEL or below of 1.16g/bHpHr, use a NOX emission factor of 1.5.

2025o8B ... the fleet shall receive a credit that double counts the number of hybrid vehicles ...

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ISSUE #2: The Rule (2025d34, 2025q7) fails to provide original engine and/or vehicle manufacturer an opportunity to determine the applicability of its original equipment warranty. Separately, the acceptance of a VDECS only 10 months prior to a compliance date may not provide enough time to properly produce, evaluate, and install an appropriate VDECS.

DISCUSSION #2: The Rule (2025d34) provides that the retrofit manufacturer and dealer/installer will determine the applicability of the original equipment manufacturer's warranty. However, only the original equipment manufacturer can make that determination (13CCR2035 et al). Moreover, an original engine/vehicle manufacturer does not make determinations that an aftermarket part (such as a VDECS) would void a warranty PRIOR to its installation. In fact, the warranty regulations and federal caselaw prohibit an original equipment manufacturer from voiding a warranty just because an aftermarket part was placed onto an engine (see Specialty Equip. Mkt. Ass'n v. Ruckelshaus, 720 F.2d 124, 133-34 (D.C. Cir. 1983). The applicability of warranty is determined at the time of a failure of the equipment and, if the failure can be attributed to the aftermarket part (i.e., VDECS), the warranty can be voided.

Additionally, the Rule (2025d34) only provides 10 months prior to a compliance date to ensure that the VDECS will be (1) evaluated on the actual vehicle application and route to ensure proper operation pursuant to the VDECS Executive Order (e.g., temperature and time requirements); (2) manufactured; and (3) installed onto the vehicle (and in the case of School Busses, (4a) approved by the vehicle manufacturer or (4b) separately tested for safety with (5) state inspection approval) by the compliance date. Navistar does not believe the 10 months is enough time to make that determination, receive appropriate approvals, and install the necessary equipment.

PROPOSED RESOLUTION #2: Navistar proposes the following language to clarify this section:

2025d34 ... for a specific engine 18 months prior to the compliance date.

ISSUE #3: COMPLIANCE PATH CHOICE

DISCUSSION #3: The Rule (2025f, 2025g, and 2025h) is not clear as to whether a fleet can change between compliance paths during the compliance periods. Other rules (such as the Transit Fleet rules) were originally designed to lock in the fleet's compliance choice path. At this time, retrofit technologies that meet NOX and/or PM BACT requirements or engine replacements are not available for all engine and/or vehicle designs.

PROPOSED RESOLUTION #3: Because of the uncertainty of available designs and replacement costs, Navistar proposes that ARB allow a fleet to freely change between compliance paths to ensure the greatest compliance flexibility by the rule.

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ISSUE #4: The Rule (2025j3) regulating school buses appears to require installation of *the highest level VDECS available to be used on any engine*, regardless of whether that VDECS is actually approved for that engine

DISCUSSION #4: The Rule (2025j3) apparently requires the installation of the highest level VDECS available on an engine, regardless of whether the VDECS is actually approved for that engine. Navistar notes that a VDECS can only be placed on an approved engine, and not on any engine. Navistar believes that ARB intended to require a level 3 VDECS to be installed on the school bus by 2014 and that, if a level 3 VDECS could not be installed on that school bus, that the engine must replaced by 2018 with an engine that could have a level 3 VDECS installed.

PROPOSED RESOLUTION #4: Navistar proposes the following language to clarify this section:

2025j3 By January 1, 2014, all diesel-fueled school buses shall be retrofit with an applicable level 3 VDECS, regardless of the compliance option chosen. Engines equipped with a diesel particulate filter by the engine manufacturer as original equipment are considered in compliance with this requirement.

2025j5 If a school bus engine cannot be retrofit with a level 3 VDECS under 2025j3, that engine shall be replaced, as may be possible, with an engine that can be retrofit with a level 3 VDECS by January 1, 2018. This school bus may be exempted from the compliance method calculation described in 2025j2.