John Deere Power Systems
P.O. Box 8000, Waterloo, IA USA 50704-8000
Phone: 319-290-3580
E-mail: GreuelJustinG@JohnDeere.com

Justin G. Greuel
Manager, Product Safety & Compliance
John Deere Power Systems

SUBMITTED VIA E-MAIL (*bunker.byron@epa.gov*)

June 3, 2025

Mr. Byron Bunker
Director, Compliance Division
Office of Transportation and Air Quality
Office of Air and Radiation
United States Environmental Protection Agency
2000 Traverwood Drive
Ann Arbor, Michigan 48105

RE: Deere & Company's Request for Review and Guidance

Dear Byron:

On behalf of Deere & Company ("Deere"), I'm submitting this letter to respectfully request that the Environmental Protection Agency ("EPA") review and approve of Deere potentially providing customers and independent repair technicians the capability to reset engine emission final inducements. If EPA approves of Deere providing this capability to customers and independent repair technicians, then Deere also respectfully requests that EPA issue updated guidance on this topic. Deere has invested significant resources to expand the capabilities of its diagnostic and repair solutions, and it seeks to further increase customers' and independent repair technicians' repair capabilities through this request for approval.

I. Deere's Proposal

Deere is developing enhanced equipment service solutions that will be available for licensed use by authorized Deere dealers, end-customers, and independent repair technicians. These latest additions to Deere's suite of digital solutions will offer more comprehensive capability for diagnosing and repairing equipment while ensuring machine reliability, safety, and compliance. Separately, Deere is also developing next generation engine controllers for future engine models that can interface with non-Deere service tools to similarly offer more comprehensive diagnostic and repair capability to customers and independent repair technicians.

The capability Deere proposes to enable for customers and independent repair technicians is the engine final inducement reset feature for selective catalytic reduction ("SCR") emission controls. This feature is sometimes referred to as "inducement override." Its purpose is to restore full power to (or "unbrick") an engine that has reached a final inducement stage for a fault that cannot self-heal. At the final inducement stage (typically, this means idle), the engine may not generate enough exhaust heat for these self-healing conditions to happen, and thus, the engine is stuck or "bricked" in final inducement stage until the final inducement is reset.

II. EPA's Current Regulatory Requirements and Guidance

Current EPA regulatory requirements and guidance prohibit nonroad diesel engine manufacturers from providing customers and independent repair technicians with the inducement override capability through generally available tools. For example, as part of a 2010 joint SCR Workshop presented by EPA and the California Air Resources Board ("CARB"), EPA and CARB stated that the "[u]se of generic scan tool[s] to clear inducement [is] not acceptable[.]"[1] Similarly, when requesting public comments in 2011 on draft guidance on EPA's certification requirements for heavy-duty diesel engines using SCR technology, EPA noted that "[m]anufacturers are also improving their diagnostics software to ensure that SCR-related inducements cannot be reset or erased by diagnostic scan tools available to the general public or by disconnecting components in the field."[2]

Additionally, in the 2014 certification guidance to manufacturers of nonroad diesel engines equipped with SCR emission controls, EPA stated that "[o]nce it becomes necessary to implement final inducement, the functioning of the equipment should be reduced to a level at which it cannot accomplish the work it is designed to perform and service intervention becomes absolutely necessary."[3] Further, in this same guidance, EPA provided the following response to answer manufacturers' "question of whether a limited (or unlimited) number of restarts can occur with full or partial power available to perform work after final inducement has been applied to allow for fault diagnosis and repair (e.g., self-healing of faults after a repair action) or moving of the equipment":

> While [EPA] agree[s] that time with full or partial power available to perform work should be allowed for these purposes, EPA has already allowed continued operation of the equipment with full engine power for four hours after a fault has been detected. We allowed for this time so that operators could safely correct the problem before experiencing final inducement. . . .
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> To ensure all manufacturers will be employing the same restart strategy, and to allow time to redesign software to limit full power restarts, manufacturers may continue to present strategies for certification through the 2015 model year that include full power restarts after final inducement. . . . In 2016 and subsequent model years, it is unlikely that EPA would find an inducement to be an adequate inhibition to adjustment if full power restarts are allowed following final inducement.[4]

EPA guidance for nonroad SCR certification issued in 2011 provided that the regulatory context requiring inducement includes the adjustable parameters provision under 40 C.F.R. § 1039.115(e), among other regulations.[5] Further, EPA has advised that "[t]he provisions governing adjustable parameters are of particular relevance for the certification of diesel

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[1] EPA & CARB, Selective Catalytic Reduction Workshop, at 25 (July 20, 2010).
[2] EPA, Control of Emissions From New Highway Vehicles and Engines; Guidance on EPA's Certification Requirements for Heavy-Duty Diesel Engines Using Selective Catalytic Reduction Technology, 76 Fed. Reg. 32886, 32893 (June 7, 2011).
[3] EPA, Certification of Nonroad Diesel Engines Equipped with SCR Emission Controls, CD-14-10 (HDNR), at 6 (May 12, 2014).
[4] *Id*. at 7-8 (internal footnote omitted).
[5] EPA, Nonroad SCR Certification Webinar Presentation, at 22 (July 26, 2011).

engines using SCR technology to comply with . . . NOX emission standards."[6] When applying for certification, manufacturers must "[d]escribe all adjustable operating parameters,"[7] including "the limits or stops used to limit adjustable ranges,"[8] so that EPA may judge the adequacy of the given manufacturer's compliance strategy. Inducements are one such limit on operating parameters' adjustable ranges.[9] And, as noted above, whether enabled through an engine controller or the command of a service tool, "it is unlikely that EPA would find an inducement to be an adequate inhibition to adjustment if full power restarts are allowed following final inducement."[10]

Pursuant to EPA's above-referenced regulations and guidance, Deere has and continues to take seriously the potential for misuse of the inducement override capability. To comply with EPA's regulations and guidance, Deere currently does not make available to the general public a tool or engine controller that allows the full reset of a final inducement condition in order to abide by EPA's requirements.

III. Deere's Request for Review and Approval

Deere remains committed to compliance. The Company has longstanding, comprehensive processes in place to ensure emissions compliance. These processes include relying upon EPA guidance and policies to deliver compliant products. Deere recognizes that EPA may be considering changing its offroad guidance, similar to the change EPA recently made within the heavy-duty on-highway ("HDOH") sector, where EPA promulgated new regulatory provisions allowing the use of generic scan tools to clear inducements.[11] With Deere's upcoming release of enhanced service solutions and engine controllers, Deere seeks written approval from EPA by July 3, 2025, to allow customers and independent repair technicians access to the previously-restricted capability of inducement override.

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[6] EPA, Certification of Nonroad Diesel Engines Equipped with SCR Emission Controls, CD-14-10 (HDNR), at 2 (May 12, 2014).

[7] 40 C.F.R. § 1039.205(s).

[8] 40 C.F.R. § 1039.205(s)(1).

[9] *See*, *e.g.*, 40 C.F.R § 1068.50(b)(2); EPA, Certification of Nonroad Diesel Engines Equipped with SCR Emission Controls, CD-14-10 (HDNR), at 3 (May 12, 2014) ("In our July 2011 presentation, we provided the example of an engine design that incorporates the ability to detect DEF quality and activate engine or equipment-based performance inducements in a timely manner as one that could represent an adequate restraint on adjustability.").

[10] EPA, Certification of Nonroad Diesel Engines Equipped with SCR Emission Controls, CD-14-10 (HDNR), at 8 (May 12, 2014).

[11] In 2023, EPA changed its guidance to allow the use of generic scan tools to clear inducements within the HDOH sector. In EPA's 2023 rulemaking promulgating new standards for HDOH engines and vehicles, EPA acknowledged its then-existing guidance that prohibited the use of generic scan tools to clear final inducement for HDOH, and promulgated new regulatory provisions requiring HDOH manufacturers to allow use of generic scan tools to clear inducements. EPA, Final Rule, *Control of Air Pollution from New Motor Vehicles: Heavy-Duty Engine and Vehicle Standards*, 88 Fed. Reg. 4296, 4377, 4379 (Jan. 24, 2023) (hereafter "HDOH Rule") ("The regulatory provisions also include changes compared to existing inducement guidance . . . . The inducement requirements included in this final rule supersede the existing guidance . . . . EPA is also requiring that generic scan tools be able to remove an inducement condition after a successful repair. . . . Use of a generic scan tool to clear inducements would allow owners who repair vehicles outside of commercial facilities to complete the repair without delay . . . ."). *See also* 40 C.F.R. § 1036.111(e)(2). While the HDOH Rule changed direction on the use of generic scan tools, the HDOH Rule applies to the HDOH sector, i.e., it does not apply to the nonroad sector. EPA has not made the same change to its guidance for the offroad sector.

If EPA approves of Deere providing this capability to customers and independent repair technicians, then Deere also respectfully requests that EPA issue updated guidance on this topic for the offroad sector (like EPA did in the HDOH Rule).

Deere welcomes the opportunity to discuss this issue with EPA in greater detail. Meanwhile, if you have any questions or concerns, please let me know.

Sincerely,

Justin G. Greuel
Manager, Product Compliance & Safety