U.S. Copyright Office
Notice of Proposed Rulemaking
17 U.S.C. §1201
October 15, 2020
Joint Industry Comments
Respectfully Submitted February 8, 2021

Proposed Class 16
Computer Programs -- Copyright License Investigation

Item(s) 1. Commenter Information

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Founded in 1900, the Equipment Dealers Association (EDA) – formerly known as the North American Equipment Dealers Association (NAEDA) – is a non-profit trade organization that represents retail dealerships that are directly focused on the sale and service of agricultural, construction, industrial, forestry, outdoor power, lawn and garden, and/or turf equipment. Together with our regional partners, we work to provide essential value to our members by enhancing the dealer-manufacturer relationship and advocating for a positive legislative and regulatory environment. EDA and its Affiliates support public policy that protects consumers and enhances public safety. Consequently, the associations oppose legislation or regulations that permit the widespread release of embedded code.

Associated Equipment Distributors (AED) is the international trade association representing companies that sell, rent, service and manufacture construction, mining, farm, energy, forestry and industrial equipment. Its more than 450 distributor members, which are predominantly small-medium-sized, family-owned businesses, have over 3,500 locations, employ 120,000 workers and account for more than $51 billion of annual sales revenue of equipment and related supplies and services. AED also has 300 non-distributor members, which include equipment manufacturers and industry service providers. AED supports public policy that protects consumers and enhances public safety. Consequently, the association opposes legislation or regulations that permit the widespread release of embedded code.

EDA and AED members depend on the anti-circumvention provisions of the Digital Millennium Copyright Act (DMCA). EDA, its regional affiliates, and AED jointly submit these industry comments.

Item B. Proposed Class Addressed

Proposed Class 16: Computer Programs—Copyright License Investigation

Item C. Overview

The Notice of Proposed Rulemaking, dated October 15, 2020 ("Notice"), includes Software Freedom Conservancy ("SFC") novel class of proposed works exempted from the Section 1201(a)(1) anti-circumvention law, dubbed "Proposed Class 16: Computer Programs—Copyright License Investigation" ("Proposed Class 16"). But this proposed exemption is broader than its name would suggest. Specifically, SFC petitions for a novel exemption that would permit circumvention of technological protection measures ("TPMs") "protecting computer programs for purposes of '(a) investigating potential copyright infringement of the computer programs; and (b) making lawful use of computer programs (e.g., copying, modifying, redistributing, and updating free and open source software (FOSS)).'" Exemptions To Permit Circumvention of Access Controls on Copyrighted Works, 85 Fed. Reg. 65,293, 65,308 (Oct. 15, 2020).

Proposed Class 16 exceeds the permissible scope of an exemption in these proceedings. Section 1201(a)(1)(B) limits the scope of any anti-circumvention exemption to "***users*** of a copyrighted work which is ***in a particular class of works***, if such [users] are, or are likely to be in the succeeding 3-year period, adversely affected by virtue of such prohibition in their ability to make ***noninfringing uses of that particular class of works***[.]" (Emphasis added.) As the Copyright Office noted, this rulemaking process requires a showing of "distinct, verifiable and measurable" adverse impacts on noninfringing uses, which "cannot be hypothetical, theoretical, or speculative" and "must be real, tangible, and concrete." *Id.* (citing Commerce Committee Report at 37; Section 1201 Study at 119–21). For these reasons, "broad proposed categories such as 'fair use works' or 'educational fair use works' [are] inappropriate." *Id.* (citing 2015 Recommendation at 100 (citing 2006 Recommendation at 17–19).

Here, the Copyright Office correctly noted that Proposed Class 16 is not limited to "particular users or types of devices" or particular uses. *Id.* Indeed, as written, Proposed Class 16

sweepingly applies to an unlimited set of "users" for all "computer programs"—irrespective of any particular type of machine or device—for any "lawful uses."

1. "Investigating potential copyright infringement"

Under Proposed Class 16's first prong, the "copyrighted works" and intended users are altogether unclear. As written, there is no limitation on the broad set of "computer programs." There is no limit on who is entitled to circumvent TPMs to conduct such investigation (*e.g.*, foreign governments, law enforcement, trade organizations, competitors, or customers). Further, there is no limitation on the circumstances that would justify such an investigation, such as a judicial or administrative order, or even reasonable suspicion of infringing use.
In its comments, SFC identifies as a non-exclusive, exemplary set of potential users "software authors and publishers, including the authors of FOSS computer programs (which are frequently incorporated in embedded computing devices in an infringing manner)[.]" *Id.* But this does not remedy any deficiency. The proposed class definition remains ambiguous as to the "copyrighted works" subject to the proposed exemption.

It is unclear whether the proponents seek to exempt circumvention of TPMs in computing devices that (a) consist solely of embedded FOSS computer programs as the "copyrighted work," and/or (b) incorporate FOSS computer programs among other non-FOSS components, both of which may be distinct copyrightable works. This is important because FOSS programs—like those subject to GPL open source licenses between the open source licensor and licensee—can properly be incorporated by the licensee into the licensee's software subject to contractually enumerated methods for making open source components available to downstream users at the election of the licensee. Thus, the proposed exemption is unnecessary, usurps the discretion provided in the license, and interferes with security measures that properly protect open source and proprietary software components alike. Further, owners of FOSS software embedded in computing devices are not "users" of copyrighted works as contemplated in the statute when they circumvent TPMs merely to investigate whether their FOSS software is embedded in third-party devices. And they certainly are not users of non-FOSS copyrighted works incorporated in the same device.

2. "Making lawful use of computer programs"

As to the second prong, the Notice correctly warns that the requested exemption exceeds the scope of the Librarian's authority and is improper to the extent that it is intended to apply to "any lawful use[.]" *Id.* In fact, this broad category of uses is much broader the other categories previously rejected, such as "fair use works" or "educational fair use works." *Id.* (citing 2015 Recommendation at 100 (citing 2006 Recommendation at 17–19).

In its comments, SFC identifies as a non-exclusive, exemplary set of potential users "individual consumers who are lawful owners of embedded computing devices and licensees of the computer programs embedded therein, and who wish to make lawful use of computer programs protected by technological protection measures (e.g. the right granted by certain FOSS licenses to install modified versions of the FOSS computer programs)." *Id*. This does nothing to specify or limit the universe of users, uses, or works as required in these proceedings. Further, because FOSS programs can properly be incorporated by third-party software producers pursuant to their license, as noted above, the proposed exemption unnecessary, interferes with licensed rights, and improperly reaches security measures that properly protect other software components.

The unlimited exemption sought in Proposed Class 16 could swallow statutory limitations and exemptions, such as the currently codified exclusion for computer programs in motorized land vehicles, as well as statutory exemptions for reverse engineering and encryption research that are subject to a number of carefully crafted qualifications. *See* 17 U.S.C. 1201(f)–(g); 37 C.F.R. 201.40(b)(9). Additionally, Proposed Class 16 jeopardizes compliance with other non-copyright laws and regulations, including environmental and safety regulations and statutory trade secret protection of the embedded software, such as for processes, methods and other techniques.

In light of these considerations, and as explained more fully below, Proposed Class 16 should be rejected. Alternatively, in the Notice, the Copyright Office required SFC and other proponents of Proposed Class 16 to "narrow or clarify the specific uses of computer programs that the proposed exemption seeks to permit," and the Office should require the same with respect to intended users and the category of works subject to this Proposed Class 16 exemption.

Item D. Technological Protection Measure(s) and Method(s) of Circumvention

TPMs will vary immensely by copyrighted work. In the case software embedded in land vehicles, for example, TPMs vary based on the vehicle, its systems, and its components, along

with the manufacturers, suppliers, and licensors who provide, design and manufacture electronic systems, software, security features, and components, or TPMs that are required to comply with applicable industry standards or applicable data security requirements, financial regulations, privacy regulations, and applicable laws.

Item E. Asserted Adverse Effects on Noninfringing Uses

1. **Factor 1: "Availability for use of copyrighted works."**

No anti-circumvention exemption is warranted because there has been no showing that users of a copyrighted work are or likely will be "adversely affected" in their ability to make noninfringing uses of a particular class of works. 17 U.S.C. 1201(a)(1)(B). As noted above, Proposed Class 16 is impermissibly unclear as to the identity of the users, the copyrighted works, and the non-infringing uses. That alone warrants rejection.

Further, contractual terms and existing statutory exemptions moot the need for Proposed Class 16. Potential users of FOSS components of embedded software will not be "adversely affected" by maintaining the prohibition on circumvention because such works are already available pursuant to the terms of open source licenses, both in a particular device and elsewhere. Previous Section 1201(a)(1) exemptions appear to address the availability of copyrighted works by limiting or conditioning the availability and scope of the exemption on need or necessity. As an initial matter, by their very nature, FOSS programs are freely available irrespective of incorporation into any particular device or program.

Further, under open source licensing terms, software producers incorporating open source programs may provide access and use in a variety of ways pursuant to the license. In other words, to the extent such programs are incorporated into a device or program, downstream users should already have the access they need. There is no need to circumvent security features (potentially in violation of end user licenses, contractual restrictions, relationships, course of dealing or business/societal norms) to gain such access.

Likewise, the statutory reverse engineering exemption of Section 1201(f) is expressly conditioned upon availability and necessity: the statutory exemption applies only to lawfully obtained computer programs "that have not previously been readily available to the person

engaged in the circumvention," and then only applies to "those elements of the computer program that are necessary to achieve interoperability of an independently created computer program with other programs" without copyright infringement of the computer program. Proposed Class 16 is an end run around these careful qualifications.

2. **Factors 2–3: "Availability for use of works for nonprofit archival, preservation, and educational purposes" and "criticism, comment, news reporting, teaching, scholarship, or research."**

Because Proposed Class 16 is unclear as to who the users are, what the copyrighted works are, and what the non-infringing uses are, there has been no showing that any archival, preservation, educational, critical, reportorial, or scholarly use is implicated. That alone warrants rejection.

To the extent that Proposed Class 16 applies to FOSS works, there is no adverse impact. That is because FOSS works, by their very nature, are otherwise freely available to users outside the context of being embedded in a particular device or program.

3. **Factor 4: Effect on the market for and value of the copyrighted works.**

To the extent that the exemption applies to FOSS works, there is no adverse impact on the market for or value of FOSS works. By their nature, FOSS works are freely available to users. Maintaining the prohibition on circumvention of TPMs as to certain implementations of FOSS works in certain devices or programs has no bearing on the market or value of such free works generally.

4. **Factor 5: Other factors, including safety, vehicle engineering, and trade secrets.**

Under Section 1201(a)(1)(C), the Copyright office may consider other factors as appropriate. The unlimited exemption sought in Proposed Class 16 could swallow statutory limitations and exemptions, such as the currently codified exemption for computer programs in motorized land vehicles, as well as statutory exemptions for reverse engineering and encryption research that are subject to several carefully crafted qualifications. *See* 17 U.S.C. 1201(f)–(g); 37 C.F.R. 201.40(b)(9). This has significant implications for safety, the complexities of vehicle

engineering, and interference with the limitations of statutory exemptions and rights under the federal Defend Trade Secrets Act. All of these considerations weigh against Proposed Class 16.

a. Safety

Permitting broad circumvention of TPMs as provided in Proposed Class 16 would interfere with other statutory and regulatory exemptions, as well as other applicable laws.

For example, in the language of the current motorized vehicle exemption, the Copyright Office qualified the scope of exempted circumvention to avoid interference with other laws and government regulations to "where such circumvention does not constitute a violation of applicable law, including without limitation regulations promulgated by the Department of Transportation or the Environmental Protection Agency, and is not accomplished for the purpose of gaining unauthorized access to other copyright works." 37 C.F.R. 201.40(b)(9). The broad circumvention sought in Proposed Class 16 could interfere with the requirements imposed by the EPA. (See Exhibit A). As explained above, EPA restrictions on tampering require security measures (e.g., TPMs) to prevent tampering with emission controls. The same security measures may protect copyrightable expression of embedded software and against tampering with emissions controls. Further, although the Department of Transportation and the NHTSA regulate the safety and security of on-road vehicles, both on-road vehicle and off-road vehicle manufacturers and suppliers are subject to voluntary, self-regulation, such as adoption of industry practices and standards that can form part of the manufacturer's original equipment specifications for a respective vehicle.

b. Complexities of Vehicle Engineering

Permitting broad circumvention of TPMs as provided in Proposed Class 16 would also present difficulties with respect to the complex nature of vehicle engineering. The engineering of vehicle components, systems, and embedded software requires sufficient funding for development, design and testing; extensive software and equipment; and experienced engineering staff, among other things. Teams of engineers may use modeling, software simulations, hardware-in-loop testing, integration and system design, and other appropriate testing and quality control to provide reliable and safe vehicles that incorporate embedded software. For example, some manufacturers may adopt ISO 26262 "Road vehicles-Functional Safety" for corresponding vehicles in accordance with industry practices. Different software engineering practices can be applied to the factory automation setting, rather than vehicle design; functional safety under the

generic standard IEC 61508 can be applied as general concept for software engineering. Valeriy Vytakin, *Software Engineering in Industrial Automation: State-of-Art Review*, IEEE Transactions on Industrial Informatics, Vol. 9, No. 3 (Aug. 2013) at pp. 1234–49. There are limitations of current safety standards that may be applied to automated or driverless transportation system, such as ISO 26262, SAE J3061, and ISO/PAS 11281. Krzysztof Czarnecki, *Requirements Engineering in the Age of Societal-Scale Cyber-Physical Systems: The Case of Automated Driving*, 2018 IEEE 26th International Requirements Engineering Conference, at pp. 3–4. The safety and engineering considerations for aircraft control can be more complex than for ground based vehicles. *See* https://spectrum.ieee.org/aerospace/aviation/how-the-boeing-737-max-disaster-looks-to-a-software-developer

To the extent that Proposed Class 16 seeks circumvention for an unlimited class of uses, including modification in ways that do not conform to the manufacturer's original equipment specifications and engineering practices, safety concerns arise. This creates a tension between the proper public policies of the Copyright Office and Department of Commerce. Likewise, to the extent that recommended modifications (e.g., safety updates) by the original equipment manufacturer are not followed or broad exemptions to circumvention are approved, safety concerns can arise.

c. Interference with the Statutory Reverse Engineering and Encryption Exemptions, and Federal Trade Secret Rights.

Any exemption to the anti-circumvention law should be consistent with the statutory limitation on reverse engineering, and not impair rights under federal trade secret law.

The proposed expansions that some petitioners seek in connection with Proposed Class 16 are an end-run around the statutory reverse engineering and encryption limitations in Section 1201(f)–(g). For example, a broad exemption to permit circumvention for the purposes of unbounded “investigation” or modifying embedded software is generally not authorized under any end-user license that covers embedded software of the vehicle. To modify the object code version of the software, reverse engineering is generally required to convert or decompile the object code version of the software into source code. Any proposed exemption should not exceed the limitations of the statutory reverse engineering exemption embodied in Section 1201(f).

Further, the exemptions sought in Proposed Class 16 would tend to frustrate federal trade secret rights. To prevail in a federal trade secret claim under the Defend Trade Secrets Act, a party needs to show it took reasonable measures to keep the information secret, which would ordinarily include the same type of reasonable security measures (e.g., technological protection measures that apply under the DMCA, and the information was misappropriated (e.g., improperly reverse engineered) by the defendant. 18 U.S.C. 1836; *see Philips Med. Sys. Nederland B.V. v. TEC Holdings, Inc.*, No. 1:17-cv-02864, 2018 WL 2009430 (N.D. Ga. 2018). Similarly, in the EU under the Trade Secret Directive, EU 2016/943, a trade secret must be "subject to reasonable steps under the circumstances, by the person lawfully in control of the information to keep it secret." The triennial rulemaking tends to frustrate the intellectual property owner's security measures (e.g., TPMs) that protect embedded software that is subject to both copyright and trade security protection.

Proposed Class 16 arms trade-secret misappropriators with an excuse to circumvent security features that protect both open source and proprietary software on the ostensible basis that there may be FOSS software embedded in a device or program. This would potentially violate license terms and confidentiality restrictions, including those otherwise consistent with open source licensing, as well as restrictions arising from relationships or customary practice and social norms.

Further, copyright protection is limited to expression of embedded software and does not cover functional features, such as any "idea, procedure, process, system or method of operation," that are excluded from copyright protection and which may fall under patent or trade secret protection. (17 U.S.C. 102(b)). To the extent that the Proposed Class 16 exemption is not clearly limited, or is incapable of any practical limitation, to the copyrightable expression in the embedded software, the exemption to circumvent may interfere with federal trade secret protection; particularly so where contract, relationship, course of conduct, or social norms require the applicability of trade secret protection to protect the intellectual property rights of innovative manufacturers and software developers. The Copyright Office's approval of an exemption, and any circumvention that follows, is not necessarily done with the consent of the trade secret holder and should be considered destructive of any federal trade secret rights that the trade secret holder would otherwise hold. No security measure—no matter how reasonable or how robust—would be adequate under the existing U.S. regulatory regime to allow trade

secret protection for software in an environment where new temporary exemptions continue to accumulate.

Documentary Evidence

Exhibit A
EPA Tampering Bulletin

Exhibit B
Industry Commitment

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

ASSISTANT ADMINISTRATOR
FOR ENFORCEMENT AND
COMPLIANCE ASSURANCE

November 23, 2020

MEMORANDUM

SUBJECT: EPA Tampering Policy: The EPA Enforcement Policy on Vehicle and Engine Tampering and Aftermarket Defeat Devices under the Clean Air Act

FROM: Susan Parker Bodine SUSAN BODINE Digitally signed by SUSAN BODINE Date: 2020.11.23 11:51:25 -05'00'

This policy concerns the civil enforcement of the Clean Air Act's (Act or CAA) prohibitions on tampering and aftermarket defeat devices. The EPA's goal in issuing this Policy is to ensure we achieve the human and environmental health protections Congress intended by enforcing these prohibitions while not unduly restraining commerce in the aftermarket sales and service industry. The EPA reaffirms its longstanding practice of using enforcement discretion not to pursue conduct that could potentially constitute a violation of the Clean Air Act if the person engaging in that conduct has a documented, reasonable basis to conclude that the conduct does not adversely affect emissions. *See* Mobile Source Enforcement Memorandum 1A (June 25, 1974). The EPA evaluates each case independently, and the absence of such a documented reasonable basis does not in and of itself constitute a violation.

This Policy supersedes and replaces the following: Mobile Source Enforcement Memorandum 1A (June 25, 1974); Exhaust System Repair Guidelines (March 13, 1991); Engine Switching Fact Sheet (March 13, 1991). These former statements of EPA policy, addenda to them, and all statements restating or interpreting them, no longer apply. The EPA has undergone reorganizations since the issuance of these former statements, but each was issued by an office of the EPA that was responsible for (among other things) the civil enforcement of the prohibitions on tampering and aftermarket defeat devices. Based on this history, and in consultation with the EPA's Office of Transportation and Air Quality, this Tampering Policy is issued by the Office of Enforcement and Compliance Assurance.

This Policy is nonbinding and in no way affects the EPA's authority to investigate and enforce compliance with the Act. *E.g.*, CAA §§ 113, 114, 204, 205, 206, 208, 307, 42 U.S.C. §§ 7413, 7414, 7523, 7524, 7525, 7542, 7607. This Policy is not a final agency action. It is direction for EPA personnel regarding the potential investigation and prosecution of civil enforcement actions, and to inform the public. The EPA independently evaluates each case, considers relevant case-specific facts and circumstances, and reserves the discretion to act at variance with this Policy. The EPA also reserves the right to change this Policy at any time. This Policy creates no obligations on regulated parties, but instead describes steps they may take to avoid becoming the subject of an EPA enforcement action.

Questions about this Policy—or tips about conduct that might be illegal activity—may be directed to the EPA's Vehicle and Engine Enforcement Branch. Contact tampering@epa.gov.

EXHIBIT A

Scope of this Policy

This Policy addresses only potential civil enforcement actions under section 205 of the Act, 42 U.S.C. § 7524, for violations of sections 203(a)(3) or 213(d) of the Act, 42 U.S.C. § 7522(a)(3) and 7547(d), and 40 C.F.R. § 1068.101(b)(1)–(2). Note that state and federal law might apply to actions taken in the course of vehicle maintenance or modification, including the criminal prohibition against tampering with emissions monitoring devices (such as onboard diagnostic systems), in section 113(c)(2)(C) of the Act, 42 U.S.C. § 7413(c)(2)(C).

Section 203(a)(3) of the Act prohibits tampering with emissions controls, and also prohibits making and selling products with a principal effect of bypassing, defeating, or rendering inoperative emissions controls. The prohibitions in section 203(a)(3) apply to all vehicles, engines, and equipment subject to the certification requirements under section 206 of the Act, or other design requirements in the Act or regulations. This includes all motor vehicles (e.g., light-duty vehicles, highway motorcycles, heavy-duty trucks) and motor vehicle engines (e.g., heavy-duty truck engines). Section 213 of the Act and regulations written thereunder apply these prohibitions to nonroad vehicles (e.g., all-terrain vehicles, off-road motorcycles) and nonroad engines (e.g., marine engines, engines used in generators, lawn and garden equipment, agricultural equipment, construction equipment). Certification requirements include those for exhaust or "tailpipe" emissions, evaporative emissions, and onboard diagnostic systems. The prohibitions also apply to those products (e.g., replacement engines under 40 C.F.R. § 1068.240 and products under transition programs like that in 40 C.F.R. § 1039.625) that might be exempt from the Act's certification requirements but still must have emissions controls and meet standards.

The Act's prohibitions on tampering and defeat devices apply for the entire life of vehicles, engines, and equipment. They apply regardless of whether the regulatory "useful life" or warranty period has ended.

This Policy does not address vehicles, engines, or equipment that are excluded from the definitions of motor vehicle, motor vehicle engine, nonroad vehicle, and nonroad engine. *See* 40 C.F.R. § 85.1703 (defining "motor vehicle"). For example, this Policy does not address vehicles originally built and used exclusively for competitive motor sports, which are excluded from the Act's definitions of motor vehicle and nonroad vehicle. Also, this Policy does not address EPA-certified motor vehicles that are converted into a vehicle used solely for competition motorsports, nor aftermarket parts purportedly manufactured or sold for that purpose.

This Policy does not address conduct that is expressly addressed by regulations. This, for example, includes requirements for certification of new vehicles, engines, and equipment (including the regulatory requirements to disclose auxiliary emissions control devices and demonstrate they are not defeat devices), alternative fuel conversions at 40 C.F.R. Part 85, Subpart F, rebuilds pursuant to 40 C.F.R. § 1068.120, and the conversion of nonroad vehicles and nonroad engines for competition use only pursuant to 40 C.F.R. § 1068.235.

If conduct is addressed in a *general* manner by this Policy but that same conduct is addressed in a *specific* manner by a separate EPA enforcement policy, then the specific policy governs. Under such circumstances, if the EPA withdraws the specific policy, then the EPA Tampering Policy will govern. For example, the EPA has a 1986 enforcement policy that specifically addresses replacement catalysts for light-duty gasoline motor vehicles that are beyond their emissions warranty. Sale and Use of Aftermarket Catalytic Converters, 51 Fed. Reg. 28,114 and 51 Fed. Reg. 28,132 (Aug. 5, 1986). The EPA Tampering Policy includes provisions that generally address replacement after-treatment systems like catalysts. If the EPA withdraws this 1986 catalyst policy, then the generally applicable provisions of

the EPA Tampering Policy will apply to replacement catalysts for light-duty gasoline motor vehicles that are beyond their emissions warranty.

This Policy does not address remanufacturing a vehicle, engine, or piece of equipment into a "new" product. As with manufacturing from new components, manufacturing a motor vehicle, motor vehicle engine, nonroad vehicle, or nonroad engine from used components is generally subject to the Act's certification requirements. Generally, the remanufactured vehicle, engine, or equipment must be covered by an EPA certificate of conformity (either its original certificate or a new certificate) or exempted from the certification requirements before being sold, offered for sale, or placed back into service.

This Policy does not address potential violations of section 203(a)(3) by original equipment manufacturers (OEMs).

Lastly, this Policy addresses only the federal Clean Air Act. Many states also have laws prohibiting tampering with in-use vehicles, and some states also prohibit dealers from selling tampered in-use vehicles. In addition, there are state and local inspection programs that require periodic vehicle inspections to determine the integrity of emissions control systems. This Policy does not affect a person's obligation to comply with such state and local laws.

Aftermarket Defeat Devices and Tampering

Vehicle manufacturers employ a wide variety of elements of design to control emissions. Examples include fueling strategies, ignition timing, exhaust gas recirculation systems, filters, and catalysts. Aftermarket parts with a principal effect of bypassing, defeating, or rendering inoperative any aspect of these elements might be illegal aftermarket defeat devices. The EPA enforces the Act's prohibitions on tampering and aftermarket defeat devices to prevent air pollution that harms people's health, especially oxides of nitrogen and particulate matter, and to maintain a level playing field in the aftermarket parts and service industries. The agency generally focuses its civil enforcement efforts on companies that manufacture or sell aftermarket defeat devices, companies that tamper with commercial fleets of vehicles, and service shops that routinely delete emissions control equipment.

All modern motor vehicles and engines, and many nonroad vehicles, engines, and equipment, are equipped with electronic control units (ECUs). ECUs are computers that process user input (like throttle position), the conditions inside and outside the engine and emissions control systems (like atmospheric conditions, engine load, emissions levels), and other information. Based on this information, and according to their programming, ECUs direct the operation of the engine and emissions control systems. OEMs design fuel injection timing—and fueling strategy generally—to be a primary emissions control device and program the ECU accordingly. As described below, ECUs also commonly manage after-treatment systems and onboard diagnostic systems. Products that change an ECU—commonly known as tuners—might be an illegal aftermarket defeat device, the use or installation of which might constitute illegal tampering.

Besides the ECU, OEMs also employ various emissions control equipment. These include exhaust gas recirculation (EGR) systems, which recirculate an engine's exhaust back through the engine to reduce emissions. This also includes a variety of after-treatment systems (which are commonly managed by software in the ECU) which treat exhaust from the engine in order to reduce the amount of pollution emitted into the ambient air. Such devices include three-way catalysts, diesel oxidation catalysts, diesel particulate filters, and selective catalytic reduction systems. The manufacture, sale, offering for sale, or installation of hardware that modifies such emissions control equipment might be prohibited by the

Clean Air Act. Common examples are products that block EGR systems and hollow "straight" pipes that replace filters or catalysts that belong in the exhaust system.

Any part or component that changes an onboard diagnostic system (OBD system) might be an illegal aftermarket defeat device, the use or installation of which might constitute illegal tampering. OBD systems are critical to ensure vehicles, engines, and equipment continue to meet emissions standards throughout the product's life. Egregious examples of aftermarket defeat devices are *delete kits* which include replacement exhaust pipes to remove after-treatment systems and tuners that both reprogram engine function and override the OBD system so the tampered vehicle will operate without any "check engine" light or other result from the OBD system.

Legal Context for This Policy

This Policy concerns the enforcement of Part A of Title II of the Act, 42 U.S.C. §§ 7521–7554, and the regulations promulgated thereunder. These laws reduce air pollution from mobile sources. In creating the Act, Congress found, in part, that "the increasing use of motor vehicles . . . has resulted in mounting dangers to the public health and welfare." CAA § 101(a)(2), 42 U.S.C. § 7401(a)(2). Congress' purpose in creating the Act, in part, was "to protect and enhance the quality of the Nation's air resources so as to promote the public health and welfare and the productive capacity of its population." CAA § 101(b)(1), 42 U.S.C. § 7401(b)(1).

As required by the Act, the EPA has prescribed standards applicable to the emissions of certain air pollutants from nearly every vehicle, engine, and piece of equipment containing an engine that is introduced into United States commerce. Regulated air pollutants from vehicles, engines, and equipment include oxides of nitrogen, hydrocarbons, carbon monoxide, particulate matter, and greenhouse gases. Regulated products include motor vehicles, motor vehicle engines, nonroad vehicles, nonroad engines, and equipment containing nonroad engines.

To ensure that every vehicle, engine, and piece of equipment introduced into United States commerce satisfies the applicable emissions standards, as required by the Act, the EPA administers a certification program. Under this program, the EPA issues certificates of conformity (COCs), and thereby approves these products for introduction into United States commerce. As described above, OEMs employ many elements of design to meet emissions standards, and pursuant to EPA regulations they must describe these elements in their COC applications and actually employ them in their products to maintain compliance.

The Act requires OEMs to provide emission-related warranties for their products. CAA § 207, 42 U.S.C. § 7541. The EPA has specified warranty requirements by regulation.

The Act's prohibitions against tampering and aftermarket defeat devices are set forth in section 203(a)(3) of the Act, 42 U.S.C. § 7522(a)(3).[1] The Act directs the EPA to enforce emissions standards

[1] **Tampering:** CAA § 203(a)(3)(A), 42 U.S.C. § 7522(a)(3)(A), 40 C.F.R. § 1068.101(b)(1): "[The following acts and the causing thereof are prohibited–] for any person to remove or render inoperative any device or element of design installed on or in a motor vehicle or motor vehicle engine in compliance with regulations under this subchapter prior to its sale and delivery to the ultimate purchaser, or for any person knowingly to remove or render inoperative any such device or element of design after such sale and delivery to the ultimate purchaser[.]"

for nonroad vehicles and nonroad engines in the same manner as for motor vehicles and motor vehicle engines. CAA § 213(d), 42 U.S.C. § 7547(d). Accordingly, the EPA has issued regulations prohibiting tampering and aftermarket defeat devices for nonroad vehicles and nonroad engines at 40 C.F.R. § 1068.101(b)(1)–(2). Where this Policy refers to the prohibitions in section 203(a)(3) regarding motor vehicles and motor vehicle engines, unless otherwise noted, it also refers to the prohibitions on tampering and aftermarket defeat devices for nonroad vehicles and nonroad engines in 40 C.F.R. § 1068.101(b)(1)–(2).

Section 203(a)(3)(A) prohibits tampering with emissions controls, including those controls that are in the engine (e.g., fuel injection, exhaust gas recirculation), and those controls that are in the exhaust (e.g., filters and catalysts). Section 203(a)(3)(B) prohibits aftermarket defeat devices. This includes hardware (e.g., modified exhaust pipes) and software (e.g., engine tuners and tunes). Oftentimes, aftermarket defeat devices, while sold as a single product, alter numerous emissions-related elements of design. For such aftermarket defeat devices, multiple violations occur when a person manufactures, sells, offers for sale, or installs them.

The EPA may bring enforcement actions for violations of section 203(a)(3) under its administrative authority or by referring matters to the United States Department of Justice. CAA §§ 204, 205, 42 U.S.C. §§ 7523, 7524. Violations are subject to injunctive relief under section 204 of the Act, 42 U.S.C. § 7523. Persons violating section 203(a)(3) are currently subject to a civil penalty of up to $48,192 (for manufacturers and dealers) or $4,819 (for individuals) for each act of tampering, and $4,819 for each aftermarket defeat device. These amounts periodically increase with inflation. 40 C.F.R. § 19.4.

Aftermarket Defeat Devices: CAA § 203(a)(3)(B), 42 U.S.C. § 7522(a)(3)(B), 40 C.F.R. § 1068.101(b)(2): "[The following acts and the causing thereof are prohibited–] for any person to manufacture or sell, or offer to sell, or install, any part or component intended for use with, or as part of, any motor vehicle or motor vehicle engine, where a principal effect of the part or component is to bypass, defeat, or render inoperative any device or element of design installed on or in a motor vehicle or motor vehicle engine in compliance with regulations under this subchapter, and where the person knows or should know that such part or component is being offered for sale or installed for such use or put to such use[.]"

EPA Enforcement Policy Statement on Tampering and Aftermarket Defeat Devices

The EPA typically does not take enforcement action for conduct that might be a violation of section 203(a)(3) of the Clean Air Act if the person engaging in the conduct has a documented "reasonable basis" to conclude that the conduct (or, where the conduct in question is the manufacturing or sale of a part or component, the installation and use of that part or component) does not and will not adversely affect emissions. This Policy Statement does not apply, however, to conduct affecting an OBD system, which may be subject to enforcement regardless of effect on emissions.

The EPA typically considers the documentation of a reasonable basis to be relevant only if that documentation exists at or before the time the conduct that might be a potential violation of section 203(a)(3) occurs (including sale, installation, and service).

When determining whether service performed on an element of an emissions control system was illegal tampering, the EPA typically compares the element after the service to the element's fully-functioning certified configuration (or, if not certified, the original configuration), rather than to the element's configuration prior to the service. Where a person is asked to perform service on an element of an emissions control system that has already been tampered with, the EPA will generally take no enforcement action against that person for their subsequent conduct if the person restores the element to its certified configuration or declines to perform the service.

The EPA has identified several ways that a person may document a reasonable basis to conclude their conduct does not adversely affect emissions. The list on the following pages is meant to be illustrative and is not exhaustive. Insofar as this Policy describes a reasonable basis or other consideration partly in terms of specific numbers, test methods, or other criteria, they reflect the EPA's anticipated judgment in distinguishing between those situations where the EPA would likely investigate further and those situations where the EPA would likely exercise enforcement discretion based on the information available and take no further action. The EPA retains discretion to vary from those criteria. In considering whether to bring an enforcement action under section 203(a)(3), the EPA considers each case independently, taking into account all relevant case-specific facts and circumstances.

A. Identical to Certified Configuration: The EPA will typically find that a person has a reasonable basis for conduct if that conduct:

(1) is solely for the maintenance, repair, rebuild, or replacement of an emissions-related element of design; and

(2) restores that element of design to be identical in all emissions-related respects to the certified configuration (or, if not certified, the original configuration) of the vehicle, engine, or piece of equipment.

Notes on Reasonable Basis A:

i. The conduct (e.g., maintenance, repair, rebuild, or replacement) should be performed according to instructions from the OEM of the vehicle, engine, or equipment.

ii. The "certified configuration" of a vehicle, engine, or piece of equipment is the design for which the EPA has issued a certificate of conformity. The "original configuration" means the design of the emissions-related elements of design to which the OEM manufactured the product. The appropriate source for technical information regarding the certified or original configuration of a product is the product's OEM.

iii. In the case of a replacement part, the part manufacturer should represent in writing that the replacement part will perform identically with respect to emissions control as the OEM's part to be replaced, and should make available either: (a) documentation that the replacement part is identical in all emissions-related respects to the replaced part (including engineering drawings or similar showing identical dimensions, materials, and design), or (b) test results that support the representation. Such written representations may be in literature that accompanies the product, or in a publicly available source such as a product catalogue or website.

iv. In the case of replacement parts, this reasonable basis applies equally to new parts as to used or remanufactured parts.

v. In the case of engine switching, the person installing an engine into a different vehicle or piece of equipment would have a reasonable basis if they could demonstrate that the resulting vehicle or piece of equipment is: (a) in the same product category (e.g., light-duty vehicle) as the engine originally powered, and (b) identical (with regard to all emissions-related elements of design) to a certified configuration of the same or newer model year as the vehicle chassis or equipment. Alternatively, one may show through emissions testing that there is a reasonable basis for an engine switch under Reasonable Basis D (Emissions Testing), below. Note that there are substantial practical limitations on switching engines. Vehicle chassis and engine designs of one vehicle manufacturer are distinct from those of another, such that it is generally not possible to put an engine into a chassis of a different manufacturer and have it conform to a certified configuration.

B. Emissions Testing for Replacement After-Treatment Systems for Older Vehicles, Engines, and Equipment: The EPA will typically find that a person has a reasonable basis for conduct if:

(1) that conduct involves a replacement after-treatment system, the replacement after-treatment system is used to replace the same kind of system on a vehicle, engine, or piece of equipment, and that replaced system is beyond its emissions warranty; and

(2) emissions testing shows that the vehicle, engine, or piece of equipment with the replacement after-treatment system meets or would meet all applicable emissions standards for an amount of time or distance (as applicable) that is equivalent to at least 50% of the regulatory useful life for that category of vehicle, engine, or piece of equipment; and

(3) the replacement after-treatment system bears a permanent label stating the name of the manufacturer of the system, the part number or identifier, the date of manufacture, and the suitable applications for the system.

Notes on Reasonable Basis B:

i. This reasonable basis applies equally to new replacement after-treatment systems as to used or remanufactured replacement after-treatment systems.

ii. The EPA is unlikely to find that there is a reasonable basis if the system sold, offered for sale, or installed on a vehicle, engine, or piece of equipment is not on a list of applications approved by the after-treatment system manufacturer.

iii. In demonstrating the durability of a replacement after-treatment system, one may employ accelerated aging techniques and OEM deterioration factors (as specified in the pertinent application for EPA certification) if doing so is consistent with good engineering judgment and is acceptable by the California Air Resources Board for purposes of obtaining an Executive Order for that kind of replacement after-treatment system.

iv. In screening replacement after-treatment systems for potential investigation or enforcement action, EPA enforcement personnel will typically consider whether the system is covered by a warranty from its manufacturer (in terms of both emissions performance and structural integrity). The EPA generally views a warranty as providing further support for an identified reasonable basis, as described above, if the warranty lasts for a distance (or operating hours, as applicable) equivalent to at least 50% of the useful life of that category of vehicle, engine, or piece of equipment. In the case of replacement after-treatment systems for motor vehicles and motor vehicle engines, the EPA generally views a warranty as providing further support for an identified reasonable basis, as described above, if the warranty lasts at least until whichever of the following occurs first: 2 years (for heavy-duty applications) or 5 years (for light-duty applications), or 50% of the useful life of that category of motor vehicle or motor vehicle engine.

C. New After-Treatment Systems that Decrease Emissions: The EPA will typically find that a person has a reasonable basis for conduct if:

(1) that conduct involves mechanically adding an after-treatment system;

(2) the system is added into the exhaust of a vehicle, engine, or piece of equipment;

(3) the vehicle, engine, or piece of equipment is EPA-certified as having no such system and originally manufactured without any such system; and

(4) any person familiar with emissions control system design and function would reasonably believe adding the system would decrease emissions.

D. **Emissions Testing:** The EPA will typically find that a person has a reasonable basis for conduct if:

(1) that conduct alters a vehicle, engine, or piece of equipment;

(2) emissions testing of an appropriate test vehicle, engine, or piece of equipment that had been identically altered by the conduct shows that the vehicle, engine, or piece of equipment will comply with all applicable regulations including emissions standards for its full useful life; and

(3) (where the conduct includes the manufacture, sale, or offering for sale of a part or component) that part or component is marketed as suitable only to those vehicles, engines, or pieces of equipment that are appropriately represented by the tested product.

E. **EPA Certification:** The EPA will typically find that a person has a reasonable basis for conduct that has been certified by the EPA under 40 C.F.R. Part 85 Subpart V (or any other applicable EPA certification or exemption program).

Notes on Reasonable Basis E:

i. This reasonable basis is subject to the same terms and limitations that the EPA issues with any such certification. E.g., 40 C.F.R. Part 85, Subpart V.

ii. In the case of an EPA-certified aftermarket part or component, a reasonable basis generally would exist only if: the part or component is manufactured, sold, offered for sale, or installed on the vehicle, engine, or equipment for which the aftermarket part or component is certified; the installation is performed according to manufacturer instructions; the part or component has not been altered or customized; and the part or component remains identical to the EPA-certified part or component.

F. **CARB Exemption:** The EPA will typically find that a person has a reasonable basis for conduct if the emissions-related element of design that is the object of the conduct (or the conduct itself) has been exempted by the California Air Resources Board (CARB).

Notes on Reasonable Basis F:

i. This reasonable basis is subject to the same terms and limitations that CARB imposes with any such exemption. Generally, the conduct must be legal in California.

ii. In the case of an aftermarket part or component, the EPA considers exemption from CARB to be relevant even where the exemption for that part or component is no longer in effect due solely to passage of time.

iii. In the case of a replacement after-treatment system, the EPA considers exemption from CARB to be relevant even where the vehicle, engine, or equipment on which the system is installed is not among the vehicles, engines, or equipment covered by the CARB exemption, provided that the manufacturer of that replacement system, using good engineering judgment, represents that the system will not adversely affect emissions when used on the other vehicles, engines, or equipment (e.g., because as compared to the vehicles, engines, or equipment covered by the CARB exemption the other vehicles, engines, or equipment are certified to an equivalent or less stringent emission tier level, have the same exhaust configuration, and have similar or less demanding physical characteristics including vehicle weight and engine displacement).

General Notes on Emissions Testing:

i. Where the above-described reasonable bases under the Policy Statement involve emissions testing, unless otherwise noted, the EPA expects that testing to be consistent with the following in order to form a reasonable basis.

ii. The emissions testing may be performed by someone other than the person engaging in the conduct (such as an aftermarket parts manufacturer), but the person performing the conduct should have all documentation of the reasonable basis at or before the time the conduct occurs. Such documentation may be in literature that accompanies the product, or in a publicly available source such as a product catalogue or website.

iii. The emissions testing and documentation are generally the same as the testing and documentation required by regulation (e.g., 40 C.F.R. Part 1065) for the purposes of original EPA certification of the vehicle, engine, or equipment at issue. Accelerated aging techniques and in-use testing are acceptable only insofar as they are acceptable for purposes of original EPA certification. One may employ OEM deterioration factors as specified in the pertinent application for EPA certification if doing so is consistent with good engineering judgment.

iv. The applicable emissions standards are either the emissions standards on the Emissions Control Information Label on the product (such as any stated family emission limit, or FEL), or if there is no such label, the fleet standards for the product category and model year. To select test vehicles or test engines where EPA regulations do not otherwise prescribe how to do so for purposes of original EPA certification of the vehicle, engine, or equipment at issue, one should choose the "worst case" product from among all the products for which the part or component is intended. The appropriate source for worst-case technical information is the product's OEM.

v. The EPA expects that the vehicle, engine, or equipment, as altered by the conduct, would perform identically both on and off the test(s), and should have no element of design that is not substantially included in the test(s).

Other Conditions and Notes:

i. The documentation of the above-described reasonable bases under this Policy Statement must be provided to the EPA upon request, based on the EPA's authority to require information to determine compliance. CAA § 208, 42 U.S.C. § 7542.

ii. The EPA will review reasonable bases as set forth in this Policy in the context of an investigation, and does not issue pre-approvals of reasonable bases.

iii. A reasonable basis consistent with this Policy does not constitute a certification, accreditation, approval, or any other type of endorsement by the EPA (except in cases where an EPA Certification itself constitutes the reasonable basis). No claims of any kind, such as "Approved [or certified] by the Environmental Protection Agency," may be made on the basis of this Policy. This includes written and oral advertisements and other communication. However, if true on the basis of this Policy, statements such as the following may be made: "Has no adverse effect on emissions, consistent with the EPA Tampering Policy (2019)."

ASSOCIATION OF EQUIPMENT MANUFACTURERS

EquipmentDealers ASSOCIATION

Farm Equipment Manufacturers and Dealers are Committed to Providing Maintenance, Diagnostic, and Repair Tools to End Users

The "Right to Repair" is not the Right to Modify

The Association of Equipment Manufacturers (AEM), the Equipment Dealers Association (EDA), and their members are dedicated to supporting farmers and their equipment needs, reducing downtime and maximizing productivity. Therefore, AEM and EDA reiterate their joint commitment to provide end users with the information and tools needed to maintain, diagnose, and repair their equipment.

To the extent not already available, the maintenance, diagnostic and repair information listed below will be made available to end users through authorized agricultural dealers at fair and reasonable terms, beginning with tractors and combines put into service on or after January 1, 2021. End users will also be able to purchase or lease diagnostic tools through authorized agricultural dealers. Certain information and tools may be available earlier.

Manufacturers, through authorized agricultural dealers, are committed to provide access to:

- Manuals (Operator, Parts, Service)
- Product Guides
- Product Service Demonstrations, Training, Seminars, or Clinics
- Fleet Management Information
- On-Board Diagnostics via diagnostics port or wireless interface
- Electronic Field Diagnostic Service Tools, and training on how to use them
- Other publications with information on service, parts, operation, and safety

Using this information and these tools, which will be available for purchase, lease, or subscription through authorized dealers, end users will be able to identify and repair numerous problems they may encounter with their equipment.

The industry supports equipment users' ability to maintain, diagnose, and repair their machinery. However, the ability to diagnose and repair does not mean the right to modify. For safety, durability, environmental, and liability reasons, diagnostic and repair information and tools will not permit consumers to do the following:

- Reset an immobilizer system or security-related electronic modules,
- Reprogram any electronic processing units or engine control units,
- Change any equipment or engine settings negatively affecting emissions or safety compliance,
- Download or access the source code of any proprietary embedded software or code

This commitment to providing maintenance, diagnostic and repair tools is a reaffirmation of the importance of seeking commonsense solutions to meet users' needs. The industry is eager to continue working with end users to provide the most innovative and high-quality equipment to meet the needs of modern production agriculture.

Learn more at http://www.R2RSolutions.org

EXHIBIT B