



The Vehicle Suppliers Association

**Comments of
MEMA, The Vehicle Suppliers Association
to the U.S. Copyright Office on a Proposed Exemption Under 17 U.S.C. § 1201**

ITEM A. COMMENTER INFORMATION

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ITEM B. PROPOSED CLASS ADDRESSED

Class 7 (Computer Programs— Vehicle Operational Data)

ITEM C. OVERVIEW

MEMA, The Vehicle Suppliers Association, is the leading trade association in North America for vehicle suppliers, parts manufacturers, and remanufacturers. Automotive and commercial vehicle suppliers are the largest manufacturing sector in the United States and lead the way in new vehicle innovations. MEMA has been the voice of the vehicle supplier industry since 1904. Its more than 1,000 members are Strong by Association. MEMA Aftermarket Suppliers, a group of MEMA, exclusively serves manufacturers of aftermarket components, tools and equipment, and related products, an important part of the automotive parts manufacturing industry which supports 907,000 American jobs in all 50 states. MEMA Aftermarket is a recognized industry change agent – promoting a collaborative industry environment, providing a forum to address issues and serving as a valued resource for members across all areas of the aftermarket including light vehicle, commercial vehicle, and remanufacturing. Members supply the aftermarket with the parts that keep millions of vehicles on the road, fueling international commerce and meeting society’s transportation needs. MEMA members are committed to safety and sustainability.

MEMA submits these comments in support of its proposed new class 7 exemption, which would permit circumvention of technological protection measures (“TPMs”) that control access to electronic control units (“ECUs”) that are contained in and control the functioning of a lawfully acquired motorized land vehicle or marine vessel such as a personal automobile or boat, commercial vehicle or vessel, or mechanized agricultural vehicle or vessel to allow lawful vehicle owners and lessees, or those acting on their behalf, to access, store, and share vehicle operational data, including diagnostic and telematics data.

ITEM D. TECHNOLOGICAL PROTECTION MEASURE(S) AND METHOD(S) OF CIRCUMVENTION

Modern vehicles are equipped with ECUs that monitor and control vehicle functions. A vehicle may have several ECUs that facilitate its operation. The individual ECUs are programmed to fulfill specific vehicular functions, such as engine control, fuel efficiency and braking. The software programs contained in ECUs are copyrightable as “literary works,” but copyright protection is limited to the programs’ “source code,” which consists of words,

numbers, and symbols typed by a programmer, as well as the compiled “object code,” which is used by the computer to carry out the instructions, but generally cannot be read by a human being.¹

As has been well-documented in prior DMCA triennial rulemakings, there are several types of TPMs that restrict access to ECUs, including challenge-response mechanisms, encryption, and disabled access ports on the circuitry itself.²

ITEM E. ASSERTED ADVERSE EFFECTS ON NON-INFRINGEMENT USES

I. Adverse Effects

The pace of change in the automotive industry is nothing short of astonishing. According to data from the International Energy Agency, the share of electric vehicle sales globally has grown from around 4 percent in 2020 to an expected 18 percent for calendar year 2023.³ In the U.S., sales of electric cars are expected to reach 1.6 million units in 2023, up from 300,000 in 2020.⁴ Along with electrification, vehicles are also being built with increasingly powerful hardware units and software,⁵ which together are capable of collecting exponentially more data and performing an ever-increasing number of vital tasks, from autonomous driving to entertainment. In short, “the era of the software-defined vehicle is upon us.”⁶

As the line between vehicles and tech products fades, it will be increasingly important for vehicle owners and lessees to have access to the computer programs that control those vehicles—subject to prudent restrictions to ensure safety and regulatory compliance—so that they can access, view, share, and otherwise utilize their own vehicle operational and telematics data.

Unfortunately, TPMs and section 1201(a)(1)(A) restrict vehicle owners and lessees from accessing and utilizing this data. The adverse effects of these restrictions are evident today and they are likely to become even more so over the next three years. This includes:

- Stifling competition. As vehicles generate more and more data, exclusive control over that data by the original equipment manufacturer will make it more difficult for owners and lessees to

¹ See U.S. Copyright Office, *Software-Enabled Consumer Products, A Report of the Register of Copyrights*, p. 12 (Dec. 2016) available at <https://www.copyright.gov/policy/software/software-full-report.pdf>.

² U.S. Copyright Office, Section 1201 Rulemaking: Sixth Triennial Proceeding to Determine Exemptions to the Prohibition on Circumvention, Recommendation of the Register of Copyrights, (Oct. 2015) (“**2015 Recommendation**”) p. 220 (describing TPMs and recommending adoption of repair exemption); U.S. Copyright Office, Section 1201 Rulemaking: Seventh Triennial Proceeding to Determine Exemptions to the Prohibition on Circumvention, Recommendation of the Register of Copyrights, (Oct. 2018) (“**2018 Recommendation**”) p. 25 (citing continuing justification for repair exemption due in part to TPMs); U.S. Copyright Office, Section 1201 Rulemaking: Eighth Triennial Proceeding to Determine Exemptions to the Prohibition on Circumvention, Recommendation of the Register of Copyrights, p. 26 (Oct. 2021) (“**2021 Recommendation**”) (citing continuing justification for repair exemption).

³ IEA, *Electric Vehicles*, available at www.iea.org/energy-system/transport/electric-vehicles.

⁴ *Id.*

⁵ S&P Global Mobility, *Be Ready for the Coming Shift in Automotive Computing Power* (April 2023) available at www.spglobal.com/mobility/en/research-analysis/be-ready-for-the-coming-shift-in-automotive-computing-power.html; Automotive Edge Computing Consortium, *General Principle and Vision, White Paper* (Sept. 2023), available at <https://aecc.org/resources/publications/>.

⁶ Motor Trend, *In-Car Ethernet: Untangling the Wads of Wires to Enable Ever More Data* (August 22, 2023) available at <https://www.motortrend.com/features/what-is-ethernet-for-cars/>.

exercise genuine choice in the service and aftermarket parts markets, which will ultimately result in less competition and higher prices for consumers.

- Restricting access to driving records and vehicle logs that could be used to, for example, monitor or evaluate the driving habits of new drivers using the family car.
- Creating inefficiencies in vehicle repair and maintenance processes. For example, the proposed class 7 could allow a vehicle owner or lessee to share service alerts or vehicle performance metrics with his or her preferred service provider. Using this information, the service provider could ensure that it has all necessary replacement parts on hand (e.g., brake pads, sparkplugs, air filters, tires, etc.) before the owner or lessee's next service appointment. Rather than leaving a car in the garage for days or weeks awaiting replacement parts or making multiple trips to the garage, the service provider would know which specific replacement parts are needed and have them ready.
- Preventing vehicle owners from personalizing or customizing their vehicles, such as preventing owners with disabilities from enhancing accessibility; improving vehicle energy efficiency; changing audio settings; eliminating distracting software features or functions; and turning off or customizing self-driving and driver-assist technologies.

The Copyright Office has already recognized that TPMs and Section 1201(a)(1)(A) adversely affect the ability of vehicle owners and lessees, including those acting under their direction, to engage in diagnosis, repair, and lawful modification of their vehicles. The proposed class 7 simply recognizes that as computer programs become more integral to vehicles and perform more functions, the TPMs that restrict access to those programs will adversely affect more non-infringing uses. As such, a new, broader exemption is warranted in this era of the "software-defined vehicle."

II. Non-Infringing Uses

a. The Proposed Use

As an initial matter, it is important to clarify what proponents are seeking. Vehicle ECUs consist of software and hardware that control vehicle functions. As noted, software programs contained on the ECUs are copyrightable works, with protection extending not only to the "literal" elements of computer software—the source code and object code—but also to a program's "non-literal" elements, including its structure, sequence, organization, user interface, screen displays, and menu structures.⁷

In addition to these protectible elements, vehicle software programs also collect and process a large amount of raw data generated as a direct result of the owner or lessee's use of and operation of the vehicle. This data may be stored as unmodified raw data or it may be processed and stored as part of an organized database schema. While the copyright owner may be able to claim copyright protection in the

⁷ See, e.g., *General Universal Systems, Inc. v. Lee*, 379 F.3d 131, 142 (5th Cir. 2004) ("It is settled that computer programs are entitled to copyright protection. This protection extends not only to the 'literal' elements of computer software—the source code and object code—but also to a program's non-literal elements, including its structure, sequence, organization, user interface, screen displays, and menu structures."); *Whelan Assoc., Inc. v. Jaslow Dental Lab., Inc.*, 797 F.2d 1222, 1248 (3d Cir. 1986) (holding that copyright protection of computer programs "extend beyond the programs' literal code to their structure, sequence, and organization").

database schema, the raw and processed data is not capable of copyright protection because it is purely factual and the owner or lessee plays a significant role in producing that data.⁸

Proponents of class 7 seek the ability to circumvent TPMs that restrict access to copyrighted vehicle software programs solely to allow vehicle owners and lessees or those acting under their direction to copy, download, and otherwise utilize the non-copyrightable data stored within those copyrightable works.

Proponents acknowledge that in order to access and utilize the non-copyrightable data contained within the copyrightable software programs, incidental copying of protectible elements of the software may occur. For example, owners and lessees may download copies of protectible database schema or source as a necessary step of retrieving that data. In such cases, copying is likely to be of a limited and fleeting nature, such as making copies in the random access memory (“RAM”) of an owner or lessee’s computer. Such copies, however, could be deleted after the target vehicle operational or telematics data has been retrieved and saved into a separate file. As further discussed below, any such use of the copyrighted computer software is fair use.

b. Fair Use

The proposed uses constitute fair use under the Copyright Act. As noted above, the proposed class 7 exemption would allow vehicle owners and lessees to, for example, review critical vehicle performance data, evaluate the safety of their and their family members’ driving, and better understand vehicle operations, including safety features and fuel efficiency. All of these uses, when undertaken by or at the direction of the vehicle owner or lessee, constitute fair use under the Copyright Act.

The first fair use factor—the purpose and character of the use—looks at the commerciality of the use and whether it is transformative. Although not a prerequisite for a fair use finding, “the more transformative the new work, the less will be the significance of other factors, like commercialism, that may weigh against a finding of fair use.”⁹ As noted above, the proposed class 7 exemption would allow vehicle owners and lessees to, for example, evaluate how their vehicle is serving their unique needs, grant aftermarket services providers access to certain vehicle performance metrics, and monitor use of the family car. These uses are primarily non-commercial in nature when undertaken by or on behalf of the vehicle owner or lessee for his or her own personal use. Consumers with access to their operational and telematics data are able to analyze and make important determinations about their own driving practices, the safety and efficiency of their vehicles, the timing and possible causes of accidents and malfunctions, and potential replacement parts that may improve the performance and longevity of their vehicles—all uses that are non-commercial.

Moreover, the purpose of the proposed use differs significantly from that of the original work. The copyrightable elements of vehicle software work in concert to perform pre-defined tasks and process data. In contrast, proponents seek to use only such limited portions of the copyrightable work as may be

⁸ *Digital Drilling Data Sys. LLC v. Petrolink Servs. Inc.*, No. 4:15-CV-02172, 2018 WL 2267139, at *9 (S.D. Tex. May 16, 2018), *aff’d sub nom. Digital Drilling Data Sys., L.L.C. v. Petrolink Servs., Inc.*, 965 F.3d 365, 378 (5th Cir. 2020), citing *Feist Publications, Inc. v. Rural Tel. Serv. Co.*, 499 U.S. 340, 344, 111 S.Ct. 1282, 1287, 113 L.Ed. 2d 358 (1991) (“That there can be no valid copyright in facts is universally understood”).

⁹ *Campbell v. Acuff-Rose Music, Inc.*, 510 U.S. 569, 114 S. Ct. 1164, 1166, 127 L. Ed. 2d 500 (1994).

necessary to access non-copyrightable data, and only so that they may derive new insight and understanding about their own driving habits and vehicle performance. These insights will be limited to the user's *own* vehicle, with little, if any, value to anyone other than the vehicle owner or lessee. As such, the proposed use will not result in new works that "supersede" the original, but will instead add something new, with a further purpose of different character.

The second factor—the nature of the copyrighted work—also favors a finding of fair use. The second factor "calls for recognition that some works are closer to the core of intended copyright protection than others, with the consequence that fair use is more difficult to establish when the former works are copied."¹⁰ Courts consider "whether the work is expressive or creative, ... with a greater leeway being allowed to a claim of fair use where the work is factual or informational," and "whether the work is published or unpublished, with the scope for fair use involving unpublished works being considerably narrower."¹¹ As the Acting Register of Copyrights (the "Register") has concluded in the past, vehicle software is a functional work used for the limited purpose of operating a vehicle, rather than a creative work with expressive or artistic value.¹²

The third factor—the amount and substantiality of the portion of the work used—also favors a finding of fair use. Owners or lessees are unlikely to reproduce or otherwise use any substantial portion of the copyrighted computer software. Rather, owners and lessees will be accessing the copyrighted works merely to retrieve the non-copyrightable data—vehicle telematics or operational data generated by their own vehicles. None of the data that owners or lessees are likely to obtain under the proposed class 7 exemption would have been part of the copyrighted work, whether at the time of registration, publication, or when the vehicles left the factory or dealership. Rather, owners and lessees primarily seek to access the copyrighted works to retrieve *data* generated by the copyrighted work about their own vehicles. Moreover, courts have held that the third factor does not necessarily weigh against fair use when using software is necessary to understand its function.¹³

As to the fourth factor—the effect of the use upon the potential market for or value of the copyrighted work—this factor, like the others, favors a finding of fair use. The fourth factor requires the Register to consider "not only the extent of market harm caused by the particular actions of the alleged infringer, but also 'whether unrestricted and widespread conduct of the sort engaged in by the [user] . . . would result in a substantially adverse impact on the potential market.'"¹⁴ There is limited, if any, market for vehicle software as a standalone product that is separate and distinct from the market for vehicles. In 2015, the Register concluded that "computer programs on the majority of ECUs are only meaningful in connection with the vehicle, that the copies are generally sold only with the vehicle, and that the consumer pays for those copies when purchasing the vehicle."

¹⁰ *Campbell*, 510 U.S. at 586.

¹¹ *Cariou v. Prince*, 714 F.3d 694, 709–10 (2d Cir. 2013).

¹² 2015 Recommendation at 257.

¹³ See e.g., *Sony Comp. Entertainment, Inc. v. Connectix Corp.*, 203 F.3d 596, 599–601 (9th Cir.2000) (holding that a competitor may create copies of copyrighted software for the purpose of analyzing that software and discovering how it functions).

¹⁴ *Campbell*, 510 U.S. at 590.

III. The statutory prohibition on circumvention prevents vehicle owners and lessees from using telematics or vehicle operational data in a non-infringing manner.

The statutory prohibition on circumvention prevents vehicle owners and lessees from using telematics and vehicle operational data in a non-infringing manner.

While there are several exemptions and safe harbors to 1201(a)(1)(A), including the temporary exemption for diagnosis, repair, or modification of the vehicle, none of these existing exemptions or safe harbors clearly apply to telematics and operational data, despite the clearly non-infringing nature of the proposed uses. Section 117(a)(1), for example, provides a limited exemption for an “owner of a copy of a computer program” to circumvent TPMs, but the exemption is not available to owners of a given vehicle. The Ninth Circuit and the Register have held that for purposes of Section 117 of the Copyright Act, owning a “device” does not make one the “owner” of the copy of software on the device. Rather, the Register has advised that “vehicle owners may more properly be considered lessees of at least some telematics and entertainment system software.”¹⁵ Consumers are unable, then, to enjoy the safe harbor that Section 117(a)(1) provides to circumvent TPMs for non-infringing use.

Similarly, while Section 1201(i) allows users to circumvent technological protection measures that collect personal data, the exemption is unavailable to the vehicle owners who desire to circumvent TPMs to access their telematics and vehicle operational data. Under Section 1201(i), a user may circumvent a work’s TPMs if (1) the measure is capable of collecting personal information, (2) the measure collects personal information without notice to users and without the ability for users to opt out of that collection, (3) the act of circumvention has the “sole effect” of disabling the information collection and “has no other effect on the ability of any person to gain access to any work,” and (4) the act of circumvention is only carried out for the purpose of preventing the collection of personal information.”¹⁶ 1201(i) provides no solution for a vehicle owner who does not want to disable the collection of data, but rather use it and allow others to assist with analysis thereof.

Thus, the TPMs that restrict access to onboard computer systems and ECUs prevent vehicle owners and lessees from accessing and using telematics and vehicle operational data for non-infringing purposes and the statutory prohibition on circumvention places consumers at risk of incurring liability under 1201(a)(1)(A). The proposed class 7 exemption is therefore warranted.

Should the Register deem it necessary or appropriate, it could propose an exemption that contains reasonable limitations to protect third party intellectual property rights and to ensure safety and regulatory compliance, such as in the following proposed language:

A proposed exemption for circumvention of technological protection measures on computer programs that are contained in and control the functioning of a lawfully acquired motorized land vehicle or marine vessel such as a personal automobile or boat, commercial vehicle or vessel, or mechanized agricultural vehicle or vessel to allow lawful vehicle owners and lessees, or those acting on their behalf, to access, store, and share vehicle operational data, including diagnostic and telematics data, *where such circumvention is not accomplished for the purpose of gaining unauthorized access to other copyrighted works. Eligibility for this exemption is not a safe harbor*

¹⁵ 2018 Recommendation at 201.

¹⁶ 17 U.S. Code § 1201(i).

*from, or defense to, liability under other applicable laws, including without limitation regulations promulgated by the Department of Transportation or the Environmental Protection Agency.*¹⁷

IV. Conclusion

In a rapidly evolving automotive market defined by increasingly sophisticated software, car owners and lessees are currently excluded from benefiting from the data *they themselves have generated* by driving. Such potential benefits to everyday consumers are numerous, from the ability to customize a vehicle to promote accessibility or fuel efficiency, to providing aftermarket services providers real-time access to certain vehicle performance metrics. At present, the restrictions under section 1201(a)(1)(A) yield detrimental results for these consumers, allowing TPMs to gatekeep consumer-generated, factual data which is unprotected by U.S. copyright law.

The proposed use of *protected* elements of vehicle software (which may be incidentally copied in the process of obtaining one's raw data) by vehicle owners and lessees, and those acting on their behalf, constitutes fair use under the Copyright Act. Such use is limited in scope, transformative, likely to be non-commercial, and does not threaten the effectively non-existent market for vehicle software as a standalone product. Further, any incidental copying of protectible data is likely to be fleeting and for the limited purpose of retrieving unprotectable data that would not exist but for the car owner/lessee.

The new class 7 exemption would allow car owners and lessees to personalize their vehicles (subject to reasonable safety limitations), streamline the repair and maintenance process, access driving records to monitor family driving habits, and otherwise learn from their raw data in a non-infringing manner in plain furtherance of the purpose and spirit of the DMCA triennial rulemakings.

¹⁷ See, e.g., 37 CFR § 201.40(b)(13).