

**UNITED STATES
COPYRIGHT OFFICE**

Exemptions to Permit Circumvention of
Access Controls on Copyrighted Works

Docket No. COLC-2023-004

**COMMENT OF
THE UNITED STATES DEPARTMENT OF JUSTICE
AND FEDERAL TRADE COMMISSION**

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I. Introduction

The U.S. Department of Justice Antitrust Division (the “Antitrust Division” or the “Division”) and the Federal Trade Commission (the “FTC” or the “Commission”) (collectively, the “Agencies”) appreciate this opportunity to comment on the ninth triennial rulemaking under the Digital Millennium Copyright Act (“DMCA”).¹ This proceeding concerns possible temporary exemptions to the DMCA’s prohibition against circumvention of technological protection measures (“TPMs”) that control access to copyrighted works, including functional software that facilitates the repair and monitoring of consumer and industrial products. The United States Copyright Office (the “Copyright Office”) is considering whether it should recommend to the Librarian of Congress renewing exemptions that were granted during the eighth triennial rulemaking,² and whether it should recommend granting proposals for additional exemptions.³ In the Agencies’ view, renewing and expanding repair-related exemptions would promote competition in markets for replacement parts, repair, and maintenance services, as well as facilitate competition in markets for repairable products. Promoting competition in repair markets benefits consumers and workers because it makes it easier and cheaper to fix things you own. Eliminating repair restrictions can lower the cost of repairs, improve access to repair services, and minimize costly and inconvenient delays. Unnecessary repair restrictions have the opposite effect. They can reduce consumer choice, raise repair costs, and drive independent repair shops out of business by denying them access to key inputs.⁴

Changes in technology and the more prevalent use of software have created fresh opportunities for manufacturers to limit Americans’ ability to repair their own products. Manufacturers of software-enabled devices and vehicles frequently use a range of restrictive practices to cut off the ability to do a “DIY” or third-party repair, such as limiting the availability of parts and tools, imposing software “locks,” such as TPMs, on equipment that prevent third-party repairers from accessing the product, imposing restrictions on warranties, and using product designs that make independent repairs less available.⁵ Manufacturers use TPMs to prevent accessing or copying protected content—including software. As software has become

¹ 88 Fed. Reg. 72,013 (Oct. 19, 2023) (to be codified at 37 C.F.R. pt. 201).

² 88 Fed. Reg. 72,015-24 (October 19, 2023).

³ 88 Fed. Reg. 72,024-26 (October 19, 2023).

⁴ FED. TRADE COMM’N, NIXING THE FIX: AN FTC REPORT TO CONGRESS ON REPAIR RESTRICTIONS 18-19, 40 (May 2021) [hereinafter NIXING THE FIX REPORT]; Statement of Interest of the United States, In re: Deere & Company Repair Services Antitrust Litigation (N.D. Ill. 2023) (No. 3:22-cv-50188) [hereinafter Statement of Interest].

⁵ NIXING THE FIX REPORT, at 7.

ubiquitous in everything from tractors⁶ to coffeemakers,⁷ digital “locks” on devices have become the norm.

Section 1201 of the DMCA prohibits the “circumvention” of TPMs⁸ and imposes civil and criminal penalties for bypassing these digital locks.⁹ It is possible to violate Section 1201 without infringing a copyright. Although TPMs can serve the important function of protecting copyrighted works from theft and infringing uses, TPMs can also be used to prevent non-infringing “DIY” or third-party repair. For example, TPMs can be used to restrict access to computer maintenance hardware and software programs, thus creating an environment where maintenance and repair work can be performed legally only by original equipment manufacturers (“OEMs”). Ultimately, by limiting access to data and software functionality necessary for independent repair and maintenance, TPMs can be used to squash competition for replacement parts, repair, and maintenance, thus ultimately limiting consumer choice.

The Librarian of Congress has previously granted exemptions from Section 1201 of the DMCA for computer programs that control devices designed primarily for use by consumers¹⁰ and computer programs that control motorized land vehicles, marine vessels, and mechanized agricultural vehicles.¹¹ These exemptions can facilitate non-infringing diagnosis, maintenance, and repair. The Agencies recommend renewing these important exemptions.

In addition, new exemptions proposed in this proceeding would further allow the circumvention of TPMs that control access to software for industrial and commercial equipment (“Class 5” proposed expansion in the Copyright Office’s NPRM)¹² and restrict access to vehicle diagnostic and telematics data for monitoring purposes (“Class 7” proposed new exemption in the NPRM).¹³ In the Agencies’ view, granting these additional exemptions would further promote competition in repair markets.

Accordingly, we urge the Copyright Office to recommend that the Librarian renew the existing repair-related exemptions and grant these additional proposed exemptions to the DMCA.

⁶ Peter Waldman and Lydia Mulvany, *Farmers Fight John Deere Over Who Gets to Fix an \$800,000 Tractor*, BLOOMBERG, March 5, 2020.

⁷ Josh Dzieza, *Keurig’s Attempt to ‘DRM’ its Coffee Cups Totally Backfired*, THE VERGE, Feb. 5, 2015.

⁸ To “circumvent a technological measure” means to descramble a scrambled work, to decrypt an encrypted work, or otherwise to avoid, bypass, remove, deactivate, or impair a technological measure, without the authority of the copyright owner.” Circumvention of Copyright Protection Systems, 17 U.S.C. §§ 1201(a)(3)(A) (1998).

⁹ 17 U.S.C. §§ 1203-1204.

¹⁰ 37 C.F.R. § 201.40(b)(14) (2005).

¹¹ 37 C.F.R. § 201.40(b)(13).

¹² 88 Fed. Reg. 72,025 (October 19, 2023).

¹³ 88 Fed. Reg. 72,026 (October 19, 2023).

II. Interest of the Agencies

A. The Antitrust Division

The Antitrust Division protects competition in the marketplace through the enforcement of the antitrust laws, including the Sherman and Clayton Acts, which prohibit monopolization, unreasonable restraints of trade, and unlawful mergers and acquisitions.¹⁴ Consistent with this mission, the Division has a strong interest in the adoption of policies that promote robust competition in markets for goods as well as in aftermarkets for replacement parts, repair, and maintenance. TPMs can act as functional repair restrictions that lock consumers into service and repair arrangements, potentially harming competition and implicating the antitrust laws. For example, the Division recently filed a statement of interest in *In re Deere & Co. Repair Services Litigation*, 3:22-cv-50188 (N.D. Ill., 2023), a multidistrict antitrust litigation involving John Deere tractors. The Division explained that the “federal antitrust laws have long protected competition in aftermarkets,” such as markets for replacement parts and repair services by independent dealers,¹⁵ and the brief elaborated on the proper application of *Eastman Kodak Co. v. Image Tech. Servs., Inc.*, 504 U.S. 451 (1992), the Supreme Court’s leading antitrust case addressing repair aftermarkets.

The Antitrust Division has a significant enforcement interest in preventing anticompetitive conduct by companies that unreasonably restrict repairs or impede third-party repair to strengthen their own monopolies unlawfully. In addition, the Division may bring cases to prevent anticompetitive mergers that substantially lessen competition in markets for repair services or component parts. As one example, the Antitrust Division filed a complaint to block John Deere’s acquisition of Precision Planting from Monsanto. The complaint explained that aftermarket competition for component parts (retrofitting kits) was important to farmers, who used the components to retrofit their current planting machines with the most up-to-date technology without having to purchase new equipment. The merger had the potential to lessen competition for these retrofitting kits, which could have impeded farmers’ ability to improve their existing machines; however, the parties abandoned the deal after the Antitrust Division challenged the merger.¹⁶ In a recent speech, the Antitrust Division emphasized the importance of the right to repair movement for farmers and stated that “we will not shy away from difficult cases, whether it be the law or the evidence, where – and this is important – we believe [an antitrust] violation has occurred.”¹⁷

¹⁴ See 15 U.S.C. §§ 1-2; 15 U.S.C. § 18 (2021).

¹⁵ Statement of Interest at 8. The district court recently denied the defendant’s motion for judgment on the pleadings, in part, citing the Division’s statement. The court’s reasoning acknowledged that the defendant plausibly has market power in the equipment market, and the difficulty of lifecycle pricing can support a repair aftermarket for purposes of determining harm to competition. Memorandum Opinion and Order at 39-49, *In re: Deere & Company Repair Services Antitrust Litigation*, (N.D. Ill. 2023) (No. 3:22-cv-50188).

¹⁶ See Complaint, *U.S. v. Deere & Co.*, (N.D. Ill 2016) (No. 1:16-cv-08515).

¹⁷ Michael Kades, Deputy Assistant Att’y Gen., Dep’t of Justice, Remarks at the 2023 Food & Agribusiness National Conference (Nov. 9, 2023).

The Antitrust Division also has challenged conduct by companies that use repair restrictions to limit competition in aftermarket repair or otherwise force purchasers to use the company's own repair services. For example, the Division challenged a medical device company's licensing restrictions that allowed hospitals to make their own repairs to medical equipment but prevented them from using licensed diagnostic software and other tools and manuals developed by the medical device company unless the hospitals agreed not to compete with the company in the servicing of the company's medical equipment at other hospitals. This case was settled by a consent decree that prohibited the company from enforcing the licenses.¹⁸

Finally, the Antitrust Division conducted a wide-ranging criminal investigation into collusion by companies making automotive parts, which resulted in numerous convictions, jail sentences, and significant criminal fines.¹⁹

In addition to the Antitrust Division's strong enforcement interests and competition advocacy, the Antitrust Division has provided technical assistance to Congress on proposed legislation that would promote the right to repair.

B. The Federal Trade Commission

The Federal Trade Commission is an independent federal agency charged with promoting fair competition and protecting the public from unlawful business practices. The Commission's authority derives primarily from the FTC Act—which prohibits unfair or deceptive acts or practices and unfair methods of competition—as well as a host of other related statutes. The FTC's mission is to protect consumers, workers, and honest businesses from anticompetitive, deceptive, and unfair practices across the economy. Over its century-long history, the FTC has prioritized addressing novel and important challenges that arise from the development and deployment of new technologies in order to ensure our markets are fair and free from monopolistic restraints.

The Commission's concern with repair restrictions dates back more than fifty years to 1973, when the Commission's then-Chairman testified in favor of the anti-tying provision of the Magnuson-Moss Warranty Act (the "MMWA").²⁰ Section 102(c) of the MMWA (the "anti-tying provision") prohibits a warrantor of a consumer product from conditioning its warranty on the consumer using any article or service which is identified by brand name unless the article or service is provided for free or the warrantor obtains a waiver from the Commission.²¹ In other

¹⁸ Competitive Impact Statement, *United States v. General Electric Co.*, (D. Mont. 1998) (Civ. No. 96-121-M-CCL).

¹⁹ DEP'T OF JUSTICE, [SHERMAN ACT VIOLATIONS RESULTING IN CRIMINAL FINES & PENALTIES OF \\$10 MILLION OR MORE](#) (last updated Sept. 13, 2023) (reporting fines for various automotive parts, including wire harnesses and related products, body sealing, and anti-vibration rubber products).

²⁰ Statement of Hon. Lewis A. Engman, Chairman, Federal Trade Commission, included in H.R. Rep. No. 93-17, at 58 (1973).

²¹ 15 U.S.C. § 2302(c) (2013).

words, the anti-tying provision bars manufacturers from voiding warranties if consumers use third-party replacement parts or independent repair shops. The Commission actively enforces the anti-tying provision of the MMWA.²² In the years since the enactment of the MMWA in 1975, however, technological developments have introduced new challenges as many manufacturers implement practices that restrict independent repair and “DIY” repair even when a warranty does not explicitly require that repairs be performed by the OEM using OEM parts.

In July 2019, the FTC held a workshop examining ways in which manufacturers may limit consumers or independent repair shops from repairing various consumer products.²³ In conjunction with the workshop, the FTC called for public comment and empirical research on repair restrictions.²⁴ In its subsequent report, “Nixing the Fix: An FTC Report to Congress on Repair Restrictions” (“Nixing the Fix Report”), the FTC evaluated manufacturer practices that restrict the ability of owners and independent repair shops to fix things, the harms caused by these repair restrictions, and manufacturers’ professed justifications for the restrictions.²⁵ The Commission found that “there is scant evidence to support manufacturers’ justifications for repair restrictions,” including manufacturers’ claims about the safety of “DIY” repairs and repairs conducted by independent repair shops.²⁶

In July 2021, President Biden’s Executive Order on Promoting Competition in the American Economy made it the policy of the United States to promote competition in repair markets and encouraged the FTC to consider using its authorities to address anticompetitive restrictions on third-party repair or self-repair of items.²⁷ Later that month, the Commission unanimously adopted a bipartisan enforcement policy statement on repair restrictions imposed by

²² For example, in October 2015, the FTC approved a complaint and settlement against BMW for violating the anti-tying provision. BMW of N. Am., LLC, F.T.C. File No. 132-3150 (2015) (alleging that BMW violated the MMWA by conditioning the warranties it offered on its MINI cars on the use of MINI dealers and genuine MINI parts without providing such parts and services for free or seeking a waiver from the FTC). Subsequently, in April 2018, the FTC announced that staff issued several warning letters to companies marketing automobiles, cellular devices, and video gaming systems in the United States. Press Release, Fed. Trade Comm’n., FTC Warns Companies that it is Illegal to Condition Warranty Coverage on the Use of Specified Parts or Services (Apr. 10, 2018) (warning companies that telling consumers they need to use specified parts or services to keep the warranties intact would violate the MMWA’s anti-tying provision) (placing companies on notice that violations of the MMWA may result in legal action).

²³ *Nixing the Fix: A Workshop on Repair Restrictions*, FED. TRADE COMM’N. (July 16, 2019).

²⁴ Responses to FTC’s call for comments and empirical research are available at [regulations.gov](https://www.ftc.gov/regulations). During this comment process, several organizations reported that warranty tying continues to be prevalent in the marketplace. See *Nixing the Fix Report* at 8.

²⁵ See *Nixing the Fix Report*.

²⁶ See *Nixing the Fix Report* at 6.

²⁷ See Exec. Order No. 14,036, 86 Fed. Reg. 36987 (July 14, 2021).

manufacturers and sellers.²⁸ The policy statement focuses on manufacturer practices that restrict competition for repair services and describes how these practices can increase the cost of repairs, generate harmful waste, and deny opportunities to entrepreneurs and local businesses. The policy statement emphasizes that the Commission will “prioritize investigations into unlawful repair restrictions” under Section 5 of the Federal Trade Commission Act and will bring an interdisciplinary approach to the issue by using resources and expertise from both the FTC’s Bureau of Consumer Protection as well as the FTC’s Bureau of Competition.

The FTC is committed to restoring the right to repair by vigorously enforcing the law to combat repair restrictions that violate antitrust or consumer protection laws. For example, the FTC sued motorcycle manufacturer Harley-Davidson, grill maker Weber, and the manufacturer of Westinghouse outdoor power equipment for illegally restricting customers’ right to repair their purchased products.²⁹ The FTC’s complaints alleged that the companies’ warranties included provisions that unlawfully conveyed that the warranties would be voided if a customer used third-party parts, or in the case of Harley-Davidson and Westinghouse, independent repairers.³⁰ The FTC ordered Harley-Davidson, Westinghouse, and Weber to fix their warranties by removing illegal terms and recognizing the right to repair, come clean with customers, and ensure that dealers compete fairly with independent third parties.³¹

Commission staff has also taken an active role working with state legislators who are considering state legislation to open repair markets.³² For instance, the Commission testified in support of California’s Right to Repair Act³³ and expanding Colorado’s right to repair law,³⁴ and

²⁸ FED. TRADE COMM’N. POLICY STATEMENT OF THE FEDERAL TRADE COMMISSION ON REPAIR RESTRICTIONS IMPOSED BY MANUFACTURERS AND SELLERS (2021).

²⁹ Press Release, Fed. Trade Comm’n., [FTC Takes Action Against Harley-Davidson and Westinghouse for Illegally Restricting Customers’ Right to Repair](#) (June 23, 2022); *see also* Lesley Fair, [FTC announces three right-to-repair cases: Do your warranties comply with the law?](#), FED. TRADE COMM’N (July 7, 2022).

³⁰ Complaint, Harley-Davidson Motor Company Group, LLC, F.T.C. 212-3140 (2022); Complaint, Weber-Stephen Products LLC, F.T.C. 212-3139 (2022); Complaint, MWE Investments, LLC, F.T.C. 222-3012 (2022).

³¹ Press Release, Fed. Trade Comm’n., [FTC Approves Final Orders in Right-to-Repair Cases Against Harley-Davidson, MWE Investments, and Weber](#) (October 27, 2022). Decision, Harley-Davidson Motor Company Group, LLC, F.T.C. 212-3140 (2022); Decision, Weber-Stephen Products LLC, F.T.C. 212-3139 (2022); Decision, MWE Investments, LLC, F.T.C. 222-3012 (2022).

³² Letter from Samuel Levine, Director, Bureau of Consumer Protection & Elizabeth Wilkins, Director, Office of Policy Planning to Patricia Fahy, Member, N.Y. State Assembly (Aug. 19, 2022), https://www.ftc.gov/system/files/ftc_gov/pdf/letter-assemblymember-fahy.pdf; [Letter from Samuel Levine](#), Director, Bureau of Consumer Protection & Hannah Garden-Monheit, Director, Office of Policy Planning to Paul Holvey, Representative, Oregon House of Representatives (Feb. 26, 2024).

³³ *Repair Restrictions: Hearing before the S. Comm. on the Judiciary*, 2023 Leg. (Ca. 2023) (Prepared Statement of the Federal Trade Commission).

³⁴ [Repair Restrictions: Hearing before the Commission on Business Affairs & Labor](#), Colorado General Assembly (Feb. 29, 2024) (Prepared Statement of the Federal Trade Commission),

Commission staff has provided technical assistance to legislators in numerous other states on proposed legislation to promote competition in repair markets. Chair Khan also recently participated in a White House convening of state legislators and others in support of the right to repair.³⁵

The Agencies are committed to using all their enforcement and policy tools to combat unlawful repair restrictions and promote competition in repair aftermarkets.

III. Expanding Access to Repair Choices Benefits Competition

President Biden’s Executive Order on Promoting Competition in the American Economy highlights the problem of “unfair anticompetitive restrictions on third-party repair or self-repair of items, such as the restrictions imposed by powerful manufacturers,” which can prevent consumers and business users from repairing their own devices and equipment and limit the ability of independent service providers—including small businesses and entrepreneurs—to provide repair services.³⁶ Renewing the current repair-related exemptions and granting the proposed exemptions for Class 5 and Class 7 would advance important policy goals recognized by the Agencies and President Biden. The executive order requires a whole-of-government approach to address overconcentration, monopolization, and unfair competition in the American economy, “especially as these issues arise in . . . repair markets.”³⁷

The Agencies likewise recognize the procompetitive benefits that flow from consumers’ and businesses’ ability to repair the products they own. Many consumer products have become harder and more expensive to fix and maintain. Repairs today often require specialized tools, difficult-to-obtain parts, and access to proprietary parts or diagnostic software. As a result, consumers whose products break have limited repair options. Makers of equipment and devices are often incentivized to restrict repair so they can extract recurring revenue or induce new purchases, rather than allow families and businesses the opportunity to choose their repair services in open and competitive repair markets. With digital devices being increasingly necessary to navigate daily life, consumers’ right to repair their own products is essential.

Open repair markets have numerous benefits. More choice in repairs can reduce costs by enabling competition for product repairs and maintenance, as it is often more expensive to repair through authorized repair providers and OEMs.³⁸ Competitive repair markets also promote entrepreneurship through the formation and operation of third-party repair markets, ultimately improving consumer choice, satisfaction, and innovation. The availability of independent repair

³⁵ Read Out, The White House, [Read Out of the White House Convening on Right to Repair](#) (October 25, 2023).

³⁶ Exec. Order No. 14,036, § 1.

³⁷ *See id.* Further underscoring this approach and the concerns that restrictive technologies pose, the order instructs the Secretary of Defense to “submit a report to the Chair of the White House Competition Council, on a plan for avoiding contract terms in procurement agreements that make it challenging or impossible for the Department of Defense or service members to repair their own equipment, particularly in the field.”

³⁸ *See, e.g., Nixing the Fix Report* at 40, 44.

can improve access to local and timely repairs as well as access to repairs that OEMs and authorized repair providers do not offer.³⁹ For example, Americans living in rural communities often lack access to a nearby authorized repair provider. Therefore, more open repair ecosystems can allow consumers to have their goods repaired more quickly or repair them in a timely manner themselves.

The harms stemming from repair restrictions are also well documented. When engineers are restricted from fixing hospital equipment, patient care can suffer, and the inability to repair equipment becomes a matter of life or death.⁴⁰ When farmers are blocked from repairing tractors and other equipment, delays in obtaining repair can lead to spoiled crops and reduced income.⁴¹ In addition, repair restrictions contribute to environmental and electronic waste when they reduce the useful lifespan of products.⁴²

Moreover, the *Nixing the Fix Report* noted that the burden of repair restrictions may fall more heavily on communities of color and lower-income communities.⁴³ There are Black-owned small businesses in the repair and maintenance industries, and difficulties facing small businesses can disproportionately affect small businesses owned by people of color.⁴⁴ Repair restrictions for some products—such as smartphones—may also place a greater financial burden on communities of color and lower-income Americans.⁴⁵ Black and Hispanic Americans and

³⁹ *Id.* at 44.

⁴⁰ See Rohit Chopra, Commissioner, Fed. Trade Comm’n., Prepared Remarks Regarding a Motion to Adopt a Policy Statement on Repair Restrictions Imposed by Manufacturers and Sellers (July 21, 2021); Lina Khan, Chair, Fed. Trade Comm’n., Statement at White House Convening on Right to Repair (Oct. 25, 2023); Kari Paul, *Why Right To Repair Matters According to a Farmer, a Medical Worker, a Computer Store Owner*, THE GUARDIAN, Aug. 2, 2023; *Nixing the Fix Report* at 51 n. 284.

⁴¹ See Rohit Chopra, Commissioner, Fed. Trade Comm’n., Prepared Remarks Regarding a Motion to Adopt a Policy Statement on Repair Restrictions Imposed by Manufacturers and Sellers (July 21, 2021); Lina Khan, Chair, Fed. Trade Comm’n., Statement at White House Convening on Right to Repair (Oct. 25, 2023); *Nixing the Fix Report* at 39.

⁴² *Nixing the Fix Report* at 41-42; see also Letter from Michael S. Regan, Administrator, Environmental Protection Agency to Rob Larew, President, National Farmers Union (Aug 4, 2023) (on file at <https://files.constantcontact.com/63400020701/bfa78700-0f65-4f17-bfc8-1a9c05916b6f.pdf?rdr=true>) (explaining that “the EPA believes barriers to the proper repair and maintenance of nonroad equipment is harmful to the environment” and clarifying that independent repair is allowed under the Clean Air Act); Janet McCabe, Deputy Administrator, ENVIRONMENTAL PROTECTION AGENCY, White House Convening on Right to Repair (Oct. 25, 2023) (reiterating the EPA’s strong support for right to repair provisions because barriers to proper repair and maintenance are harmful to the environment).

⁴³ *Nixing the Fix Report* at 3-4, 40-41 n.223, 43 n.237.

⁴⁴ *Nixing the Fix Report* at 3.

⁴⁵ *Nixing the Fix Report* at 4.

lower-income Americans are more likely to be smartphone-dependent, which makes repair restrictions on smartphones more likely to affect these communities adversely.⁴⁶

Some manufacturers suggest that repair restrictions arise from their desire to protect repair workers and consumers or reduce cybersecurity risks.⁴⁷ Although safety considerations are a critical part of any discussion about repairs, the Nixing the Fix Report reflects scant evidence to support manufacturers' justifications for repair restrictions based on claims about the safety of repairs conducted by independent repair shops and owners.⁴⁸ Furthermore, manufacturers' safety arguments are difficult to square with the automotive sector, where owners and independent repair shops are routinely able to repair highly complex products that could cause great harm if improperly repaired.⁴⁹ The automotive sector's experience shows that with appropriate parts, repair information, and training, owners and independent repair shops can frequently be capable of safely repairing other products.

The Nixing the Fix Report record contained no empirical evidence to suggest that independent repair shops are more or less likely than authorized repair shops to compromise or misuse customer data.⁵⁰ Relatedly, the Commission did not find any evidence that providing independent repairers with access to diagnostics and firmware patches would introduce cybersecurity risks.⁵¹ Instead, the record examined in the Commission's report suggests that, with appropriate parts and repair information, consumers and independent repair shops would be equally capable of minimizing cybersecurity risks as authorized repairers.⁵²

In the five years since the FTC held the Nixing the Fix Workshop, the Agencies have not seen any additional data that supports the manufacturers' safety and privacy justifications for repair restrictions.

IV. Background on the Ninth Triennial

Title 17, Section 1201(a)(1) of the DMCA prohibits anyone from circumventing a TPM that controls access to a copyrighted work. This prohibition applies even if the ultimate use of the copyrighted work after circumvention is non-infringing. Consequently, TPMs can prohibit a wide range of activities that may otherwise be permitted under copyright law, including routine repairs.

⁴⁶ *Id.*

⁴⁷ *Nixing the Fix Report* at 10, 19-21, 26-32, 36-38.

⁴⁸ *Nixing the Fix Report* at 6, 28.

⁴⁹ *Nixing the Fix Report* at 29.

⁵⁰ *Nixing the Fix Report* at 31.

⁵¹ *Id.*

⁵² *Nixing the Fix Report* at 31-32.

Congress created the triennial rulemaking process to help mitigate overly broad applications of TPMs. The Librarian of Congress may issue temporary exemptions from the prohibition against circumvention of TPMs if certain factors counsel in favor of granting the exemptions.⁵³ The Librarian considers:

- i. the availability for use of copyrighted works;
- ii. the availability for use of works for nonprofit archival, preservation, and educational purposes;
- iii. the impact that the prohibition on the circumvention of technological measures applied to copyrighted works has on criticism, comment, news reporting, teaching, scholarship, or research;
- iv. the effect of circumvention of technological measures on the market for or value of copyrighted works; and
- v. such other factors as the Librarian considers appropriate.⁵⁴

In deciding whether to grant exemptions to the DMCA, the rulemaking process requires the Librarian to consult with the Department of Commerce's Assistant Secretary for Communications and Information and Administrator of the National Telecommunications and Information Administration (NTIA).⁵⁵ NTIA's consultation letter in the Eighth Triennial Rulemaking supported renewing each of the then-existing exemptions and supported expanding certain repair-related exemptions. In the present rulemaking, stakeholders have requested to renew most of the current circumvention exemptions and to expand the exemptions for computer programs in Class 5 and Class 7, as described below.

V. The Proposed Class 5 and 7 Exemptions Should be Granted

A. Class 5 – Computer Programs – Repair

An exemption currently exists for computer programs that control devices designed primarily for use by consumers for diagnosis, maintenance, or repair of the device.⁵⁶ The Copyright Office intends to recommend renewal of this exemption,⁵⁷ and the Agencies support this recommendation. The Agencies also support expanding the current exemption to commercial and industrial equipment.

⁵³ 17 U.S.C. § 1201(a)(1)(C).

⁵⁴ *Id.*

⁵⁵ *Id.*

⁵⁶ 37 C.F.R. § 201.40(b)(14).

⁵⁷ 88 Fed. Reg. 72,020 (October 19, 2023).

Public Knowledge and iFixit have proposed expanding the current exemption to further include computer programs that control access to commercial and industrial equipment.⁵⁸ NTIA has consistently supported a similar expansion of this exemption in prior triennial rulemakings.⁵⁹ In 2021, for example, NTIA supported expanding the exemption to reach “the diagnosis, maintenance, and repair of all software-enabled devices, machines, and systems” for lawfully acquired devices, including as required by third parties to make necessary repairs.⁶⁰

As described by Public Knowledge and iFixit, four “index” examples of commercial and industrial device categories would benefit from the proposed expansion: commercial soft serve machines, proprietary diagnostic kits, programmable logic controllers, and enterprise IT.⁶¹ In each case, an exemption would give users more choices for third-party and self-repair and would likely lead to cost savings and a better return on investment in commercial and industrial equipment. It would also facilitate innovation and competition among third-party repair and maintenance servicers, against whom OEMs would have to compete meaningfully in these important aftermarkets.

The proposed expansion would benefit competition in areas beyond those outlined by Public Knowledge and iFixit. For example, increasingly sophisticated agricultural equipment often employs onboard computers that control error identification and repair, limiting options for farmers in need of quick repairs.⁶²

In the Agencies’ view, facilitating greater freedom and choice in repairs will alleviate costly downtime due to broken equipment that results in a significant loss of revenue for businesses.⁶³ For example, during a 2016 hearing before the Nebraska legislature, a representative of an agricultural replacement company testified that “if [a tractor is] down for one or two days during planting season or during harvest season, they’re wasting money . . . if the only person who can repair that equipment is the OEM, then if they have a tech that’s already out, they don’t have another tech to get out there and essentially plug in a USB and fix their

⁵⁸ Comment of Meredith Rose, Public Knowledge et al, Long Comment Regarding a Proposed Exemption Under 17 U.S.C. § 1201, Docket No. 2023-0004 (Oct. 2021, 2023) [*hereinafter* [Public Knowledge – iFixit Comment](#)].

⁵⁹ *E.g.*, Comment of David J. Redl, National Telecommunications and Information Administration, Re: Exemptions to Permit Circumvention of Access Controls on Copyrighted Works, Docket No. 2017-10 (Sep. 25, 2018) [*hereinafter* [2018 NTIA Comment](#)]; Comment of Evelyn L. Remaley, National Telecommunications and Information Administration, Re: Exemptions to Permit Circumvention of Access Controls on Copyrighted Works, Docket No. 2020-11 (Oct. 1, 2021) [*hereinafter* [2021 NTIA Comment](#)].

⁶⁰ [2021 NTIA Comment](#) at 76-84.

⁶¹ [Public Knowledge – iFixit Comment](#) at 3-7.

⁶² See Statement of Interest, In re: Deere & Company, at 5, 7.

⁶³ See [Public Knowledge – iFixit Comment](#) at 8, 11.

tractor, then they're out. So they're essentially tying up all the market into a monopoly to themselves, not allowing competition which drives prices up.”⁶⁴

Expanding the current exemption to include computer programs that control access to commercial and industrial equipment would open repair aftermarkets to competition. OEM lock-in reduces opportunities for service and repair aftermarkets and decreases incentives to innovate and compete on price. OEM-authorized technician and dealer networks are often the only market participants because of TPMs.⁶⁵ NTIA has expressed concerns to the Librarian about lock-in, observing that locking consumers into OEM repair and maintenance is “contrary to the [DMCA’s] purpose: as the Copyright Office has stated, ‘section 1201 was not intended to facilitate manufacturers’ use of TPMs to facilitate product tying or to achieve a lock-in effect under which consumers are effectively limited to repair services offered by the manufacturer.’”⁶⁶ Relevant to this rulemaking, NTIA indicated in 2021 that “[s]imilar problems [concerning lock-in effect] arise in the context of industrial devices,”⁶⁷ which counsels in favor of expanding the current exemption to industrial and commercial products.

In addition, the DMCA’s Section 1201(a)(1)(C) factors counsel in favor of expanding the exemption to industrial and commercial equipment:

Availability for use: Expanding options for repair of software-enabled commercial and industrial devices can facilitate restoration of these devices’ functionality—extending the useful life of commercial and industrial devices as well as increasing availability of the device software itself. TPMs have the potential to cause anticompetitive effects when there are no alternative practicable means of accessing information necessary to repair industrial and commercial equipment. Moreover, TPMs can delay the repair of industrial and commercial equipment, increase repair costs, and exacerbate revenue losses.⁶⁸ Access to repair information is needed if

⁶⁴ *Nixing the Fix Report* at 39.

⁶⁵ [Public Knowledge – iFixit Comment](#) at 11-16.

⁶⁶ [2021 NTIA Comment](#) at 80.

⁶⁷ *Id.*

⁶⁸ See *Nixing the Fix Report* at 40 (indicating that International Association of Medical Equipment Remarketers and Services, Inc., found independent servicers of diagnostic imaging equipment cost \$150-\$250 per hour, while manufacturer servicing ranged from \$500-\$600 per hour with a four hour minimum); [Public Knowledge – iFixit Comment](#) at 11-16 (noting that soft serve equipment breakdown can lead to \$625 per day loss of sales, that there are long wait times for authorizer repairs, and that a licensed repair technician charges over \$300 per fifteen minutes) (noting that diagnostic equipment for certain construction equipment can only be accessed by dealers and that the standard wait time for an authorized technician to visit a dealer can be 90 days) (noting that certain programmable logic controllers must simply be thrown away and replaced, losing all code and customizations, if the password protecting the module is not shared or gets lost and that the 2019 average estimated “cost of unplanned manufacturing downtime was \$260,000 per hour, while automotive manufacturing stoppage costs approximately \$22,000 per minute”) (estimating the cost to businesses of planned mainframe outages at \$1.5m per quarter whereas unplanned outages can cost nearly \$9,000 per minute.).

a purchaser is to obtain the full value of a product, and controlling access to repair information can lead to lock-in and other market distortions.

Availability for nonprofit, preservation, and educational purposes: Some TPMs limit access to diagnostic information and/or system functions that technicians use to understand and address problems while operating software-enabled equipment. For example, iFixit and Public Knowledge describe how certain heavy equipment manufacturers lock critical diagnostic and error information behind TPMs, rendering the data inaccessible without the use of proprietary control modules which the companies do not sell to users or third parties.⁶⁹ This has had the effect of requiring users to defer to authorized dealers and technicians, thereby preventing training and development for employees who might otherwise be able to maintain, diagnose, and repair industrial and commercial equipment in the course of their work duties.⁷⁰

Impact of the prohibition on criticism, comment, news reporting, teaching, scholarship, or research: TPMs can prevent access to the technical information contained in protected copyrighted material and insight into the functioning of the related commercial or industrial device itself.⁷¹ Public Knowledge and iFixit explained how many types of control software that are currently protected behind TPMs are essentially functional, and accessing them can provide insight into the functioning of the software-enabled device.⁷² Thus, access can be necessary to better understand how devices work. Restricting third-party repairers' access to this information could undermine training and stymie attempts to safely and reliably repair devices.

Impact of the prohibition on the market for or value of copyrighted work: Circumvention is unlikely to impact the value or market for the copyrighted software. The software tends to be customized to and installed on a device that the customer has purchased. Accordingly, there is generally no stand-alone market for such software.⁷³

Other factors: The right to repair products is an area of significant legislative and regulatory focus. The FTC has found that independent repair provides “a variety of benefits . . . to consumers, including access to local and timely repair, competition in the cost of repairs, and access to repairs that manufacturers do not offer.”⁷⁴ These benefits apply to commercial and industrial devices as well. For example, when TPM-protected Programmable Logic Controllers fail and cause work stoppages, the cost to automotive manufacturers has been estimated at

⁶⁹ [Public Knowledge – iFixit Comment](#) at 4.

⁷⁰ See [Public Knowledge – iFixit Comment](#) at 16-17.

⁷¹ *Id.*

⁷² [Public Knowledge – iFixit Comment](#) at 9-10.

⁷³ See [Public Knowledge – iFixit Comment](#) at 17; See also Part C below.

⁷⁴ *Nixing the Fix Report* at 44.

\$22,000 per minute.⁷⁵ And even sophisticated commercial entities can be unexpectedly harmed by TPMs. For example, Public Knowledge and iFixit explain that TPMs caused a train operator to experience extended downtime through a “workshop detection system” that used GPS coordinates to thwart third-party repairs.⁷⁶ Repair aftermarkets also are important avenues for entrepreneurship and have an impact on the product markets for industrial and commercial goods. For example, the availability of independent repair and service options may enhance competition in the market for software-enabled devices by reducing the user’s reliance on OEM-authorized service providers. These additional factors counsel in favor of the exemption.

B. Class 7 – Computer Programs – Vehicle Operational Data

An exemption currently exists for computer programs that control motorized land vehicles, marine vessels, and mechanized agricultural vehicles for purposes of diagnosis, repair, or lawful modification of the vehicle or vessel function.⁷⁷ The Copyright Office intends to recommend renewal of this exemption,⁷⁸ and the Agencies support this recommendation. The Agencies also support adopting an additional exemption to allow vehicle owners or the repair shop of their choice to access, store, and share vehicle operational data.

MEMA, the Vehicle Suppliers Association, proposes a new, related exemption to access, store, and share vehicle operational data, including diagnostic and telematics data, from automobiles, boats, and commercial and agricultural vehicles in a manner that would further facilitate maintenance and repair of these vehicles. As with the expansion proposed for Class 5, the new exemption proposed for Class 7 would provide more options for maintenance and repairs, enhancing aftermarket competition.

In its comments supporting the proposed exemption, MEMA explains that modern vehicles increasingly monitor and log all manner of data reflecting the vehicle’s operation through the installation of electronic control units (ECUs) that are commonly TPM-limited.⁷⁹ MEMA argues that the proposed exemption would allow greater freedom for vehicle owners and lessees to seek service and repairs, and to make modifications to increase functionality and accessibility, among other potential non-infringing uses.⁸⁰

The Agencies agree that the proposed exemption allowing vehicle owners and lessees to “grant aftermarket service providers access to certain vehicle performance metrics” would give vehicle owners and lessees greater options when it comes to maintaining and repairing their

⁷⁵ [Public Knowledge – iFixit Comment](#) at 14.

⁷⁶ [Public Knowledge – iFixit Comment](#) at 15.

⁷⁷ 37 C.F.R. § 201.40(b)(13).

⁷⁸ 88 Fed. Reg. 72,021 (Oct. 19, 2023).

⁷⁹ [MEMA Comment](#) at 1-3.

⁸⁰ See [MEMA Comment](#) at 2-7.

vehicles. Giving owners the option of providing their own data to their chosen repairer need not increase cybersecurity risks. The Nixing the Fix Report record contains no empirical evidence to suggest that independent repair shops are more likely than authorized repair shops to compromise or misuse customer data.⁸¹ Moreover, the proposed exemption would simply empower owners by providing them access to their own vehicle operational data. It would not prevent a manufacturer from imposing a reasonable authentication measure that prevents access to the data by someone other than the owner or the owner's authorized representative.

Similar to the expansions proposed for Class 5, the DMCA's Section 1201(a)(1)(C) factors support granting the proposed exemption for Class 7:

Availability for use: TPMs implemented in vehicular telematics control units limit access to various types of electronically logged operational data that are not copyrightable, including data relating to braking, fuel usage, and other aspects of vehicle operation.⁸² The protectable intellectual property used by these systems is generally limited to the computer code that constitutes a protectable work.⁸³ Access to uncopyrighted telematics data is useful for numerous non-infringing purposes including the repair and maintenance of vehicles, as well as other valuable monitoring uses. But MEMA indicates that access to this data is not practicable without circumvention, and while access to uncopyrighted telematics data may require some access to copyrighted code and/or data structure, such access would be merely incidental to the access for use of uncopyrighted data.⁸⁴

Availability for nonprofit, preservation, and educational purposes: In the same way that TPMs can undermine training opportunities that pertain to industrial and commercial software-enabled devices, TPMs implemented in vehicle ECUs can undermine training and development for employees that need to utilize telematics data in the course of their work duties.⁸⁵ By limiting telematics data access to authorized technicians and OEM employees, OEMs can undermine attempts by independent service shops and others to use such data to train employees in the diagnosis and interpretation of telematics information.⁸⁶

⁸¹ *Nixing the Fix Report* at 31.

⁸² See [MEMA Comment](#) at 1-2.

⁸³ [MEMA Comment](#) at 1-2., see also U.S. COPYRIGHT OFFICE, [SOFTWARE-ENABLED CONSUMER PRODUCTS, A REPORT OF THE REGISTER OF COPYRIGHTS](#) at 12 (Dec. 2016).

⁸⁴ See [MEMA Comment](#) at 4-7.

⁸⁵ See [Public Knowledge – iFixit Comment](#) at 16-17.

⁸⁶ See [MEMA Comment](#) at 3-4.

Impact of the prohibition on fair use: TPMs can undermine research into vehicle operation, safety, driver behavior, and other valuable areas of inquiry.⁸⁷ Such research could be valuable in promoting public health and safety, for example, by enabling the analysis of driving practices and behaviors, and the safety and efficiency of various vehicles.⁸⁸

Impact of the prohibition on the market for or value of copyrighted work: Copyrighted ECU programming is sold with each vehicle and is designed in tandem with the specific ECU installed in the vehicle.⁸⁹ The market for copyrighted ECU programming is, therefore, limited, particularly when compared to the value of potential aftermarket uses of uncopyrighted telematics data.

Other factors: Restricting access to non-copyrightable telematics data risks establishing a competitively harmful bottleneck by depriving users of the ability to share this data with aftermarket parts manufacturers, third-party maintenance and repair services, and other adjacent markets that would put such information to valuable commercial use. This restriction is unwarranted in light of the minimal risk of infringing use of copyrighted ECU programming.

C. No Countervailing Copyright Interests Exist

The exemptions proposed for Class 5 and Class 7 would enable non-infringing uses. Telematics data that would be accessible under the proposed exemption for Class 7 and software accessible under the proposed expansion for Class 5 are primarily functional and used for repair rather than creative works with expressive or artistic value.⁹⁰ NTIA has previously observed that “in most or all cases, there is no stand-alone market” for the materials that would be accessible under the exemptions proposed for Classes 5 and 7.⁹¹

Moreover, in both cases, access contemplated under the proposed exemptions bolsters the market for the copyrighted works.⁹² As the Acting Register stated in 2018 and NTIA noted in 2021, “because the fundamental purpose of repair is to restore the functionality of a device so that it may be used, ‘repair supports—rather than displaces—the purpose of the embedded programs.’”⁹³ Therefore, no countervailing copyright interests counsel against the exemptions.

⁸⁷ *Id.*

⁸⁸ [MEMA Comment](#) at 4.

⁸⁹ *See* [MEMA Comment](#) at 5.

⁹⁰ *See* [MEMA Comment](#) at 4-5; [Public Knowledge – iFixit Comment](#) at 9-10.

⁹¹ [2021 NTIA Comment](#) at 80-82.

⁹² *Id.*

⁹³ *Id.*

VI. Conclusion

The Agencies appreciate the opportunity to offer our views in this rulemaking. For the reasons stated, we urge the Copyright Office to recommend that the Librarian renew the existing repair-related exemptions; expand the exemption for Class 5 to include computer programs that control access to commercial and industrial equipment; and grant the proposed exemption for Class 7 to allow circumvention by lawful vehicle owners and lessees, or those acting on their behalf, to access, store, and share vehicle operational data.