



Right to Repair Model State Law

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INTRODUCTION

Nebraska farmer Kyle Schwarting, who also repairs tractors and other farm equipment and resells it to other farmers, has become a “hacker by necessity.” Because he needs diagnostic software to fix computer-enabled farming equipment—and because companies like John Deere limit access to and use of this software¹—he downloaded it from a Torrent site. Mr. Schwarting told *Motherboard*, “You have a real small window to get [a harvest] done in the year, and the tractor broke down. I had to find the software to be able to repair my tractor and make my customer happy and make a living.”² With authorized repairers charging thousands of dollars for even minor fixes, Mr. Schwarting had little choice but to take matters into his own hands to make simple repairs and undertake regular maintenance.

Mr. Schwarting isn’t alone. Consumers, farmers, and others who have fixed their own cars, machinery, or appliances, or worked with a neighborhood repair shop or mechanic, know well how important it is to maintain meaningful ownership over the products that they buy, including the right to safely repair, alter, tinker with, or resell them. Recent developments in technology have compromised consumers’ ability to exercise their full ownership rights. Now, electronic products from smartphones and televisions to farm equipment and medical devices are increasingly outfitted with computer software, and it has become more and more difficult for consumers to fix their own product, or even to choose where to have it fixed. Too often, manufacturers restrict access to the information and tools necessary for repair so that only their authorized servicers get access, limiting options for repair.³

That’s why Consumer Reports⁴ supports the Right to Repair—in other words, expanding access to the information and tools necessary for repair, on the same terms as it is offered to authorized repairers. Ensuring that consumers and independent repairers have this access will not only preserve ownership rights, but it will expand consumer choice in the marketplace, save consumers money, and reduce waste as well. In recognition of the decline in repair choices, momentum for the Right to Repair is growing in the states. Last year, Right to Repair bills were active in over dozen states, generating bipartisan support.⁵ In Missouri, for example, legislators on both sides of aisle introduced similar Right to Repair bills.⁶ Consumers have already begun to see some progress. For example, in 2012, Massachusetts voters approved a ballot initiative to

¹ Jason Koebler, *Why American Farmers Are Hacking Their Tractors with Ukrainian Firmware*, MOTHERBOARD (Mar. 21, 2017), https://motherboard.vice.com/en_us/article/xykkkd/why-american-farmers-are-hacking-their-tractors-with-ukrainian-firmware.

² Jason Koebler, *Tractor-Hacking Farmers Are Leading a Revolt Against Big Tech's Repair Monopolies*, MOTHERBOARD (Feb. 18, 2018), https://motherboard.vice.com/en_us/article/kzp7ny/tractor-hacking-right-to-repair.

³ Emily Matchar, *The Fight for the Right to Repair*, SMITHSONIAN (Jul. 13, 2016), <https://www.smithsonianmag.com/innovation/fight-right-repair-180959764/>.

⁴ Consumer Reports is an expert, independent, non-profit organization whose mission is to work for a fair, just, and safe marketplace for all consumers and to empower consumers to protect themselves. Consumer Reports is the world’s largest independent product-testing organization, using its dozens of labs, auto test center, and survey research department to rate thousands of products and services annually. Founded in 1936, Consumer Reports has over 6 million members and publishes its magazine, website, and other publications.

⁵ *17 States Now Weighing Right to Repair Bills as Momentum Grows*, REPAIR.ORG (Jan. 18, 2018), <https://repair.org/news/2018/1/18/17-states-now-weighing-right-to-repair-bills-as-momentum-grows>.

⁶ Missouri HB 2254 (2018), <https://www.house.mo.gov/Bill.aspx?bill=HB2254&year=2018&code=R>; Missouri HB 2204 (2018), <https://www.house.mo.gov/Bill.aspx?bill=HB2204&year=2018&code=R>.

guarantee the Right to Repair for automobiles.⁷ After Right to Repair legislation went into effect, auto manufacturing associations agreed to extend these protections nationwide.⁸ Now, state legislators have the opportunity to extend similar consumer protections to other products, such as cell phones, televisions, and computers.

Right to Repair legislation will expand repair choices for consumers, help them save money, and reduce waste. When manufacturers effectively have a monopoly on repair, with no competition, they can charge a consumer whatever they like for servicing. In some cases, manufacturers have made simple repairs so expensive that consumers are incentivized to buy a new device.⁹ Consumers would likely save a lot of money with a competitive market for repair, as they would be better able to make more affordable repairs to their existing devices. This, too would reduce waste—a significant concern, as currently consumers throw away over six million tons of electronic waste each year.¹⁰ Furthermore, this increase in consumer choice would also mean that small businesses, such as independent servicers, would receive more business. In the battle for Motor Vehicle Right to Repair, a survey of 1,000 auto repair shops demonstrated that they were losing more than \$5.8 billion each year in service they could have provided consumers, simply due to lack of access to repair information.¹¹

Instead, however, manufacturers have actively worked to limit consumer choice in the aftermarket. The revelation in late 2017 that Apple pushed out a software update in 2016 to slow down certain iPhone models to compensate for aging batteries, without adequately notifying consumers,¹² highlights the importance of having multiple, affordable repair options, and helped spur Right to Repair activity in the states. Had iPhones been made with replaceable batteries, consumers could have easily returned their phones to full functionality by simply replacing the batteries. And if independent repair servicers had been better empowered to fix Apple devices, consumers might have had more options for replacing the batteries.¹³ Apple has also discouraged independent repair by pushing out iOS updates that “brick” smartphones with third-party replacement screens. In early 2016, the Guardian reported that a number of iPhone 6 users who had used a third-party repairer to fix a cracked screen ended up with bricked phones after the iOS9 update. According to iFixit, the update checked for original components. If the home button or cable had been changed, the phone shut down.¹⁴ Ultimately, Apple apologized and

⁷ *Right to Repair*, BOSTON.COM, <http://archive.boston.com/news/special/politics/2012/general/mass-ballot-question-1-election-results-2012.html> (last visited Aug. 8, 2018).

⁸ *Memorandum of Understanding*, AUTOMOTIVE AFTERMARKET INDUSTRY ASSOCIATION (Jan. 15, 2014), <https://www.autocare.org/workarea/DownloadAsset.aspx?id=1440&gmssopc=1>.

⁹ Damon Beres, *Apple's War Against You Repairing Your iPhone is Pure Corporate Greed*, MASHABLE (Feb. 16, 2017) <https://mashable.com/2017/02/16/apple-right-to-repair-lobbying/#BgGVNJxtWPqf>.

¹⁰ Brook Larmer, *E-Waste Offers an Economic Opportunity as Well as Toxicity*, N.Y. TIMES (Jul. 5, 2018), <https://www.nytimes.com/2018/07/05/magazine/e-waste-offers-an-economic-opportunity-as-well-as-toxicity.html>.

¹¹ Miles Moore, *Right-to-Repair Battle Continues*, TIRE BUSINESS (Aug. 28, 2006) <http://www.tirebusiness.com/article/20060828/NEWS/308289995&template=printart>.

¹² Tom Warren and Nick Statt, *Apple Confirms iPhones with Older Batteries Will Take Hits in Performance*, THE VERGE (Dec. 20, 2017), <https://www.theverge.com/2017/12/20/16800058/apple-iphone-slow-fix-battery-life-capacity>.

¹³ Jonathan Vanian, *Getting the Apple iPhone Battery Upgrade Could Take Weeks*, FORTUNE (Jan. 4, 2018), <http://fortune.com/2018/01/04/apple-iphone-battery-upgrade-wait/>.

¹⁴ Miles Brignall, *'Error 53' Fury Mounts as Apple Software Update Threatens to Kill Your iPhone 6*, THE GUARDIAN (Feb. 5, 2016), <https://www.theguardian.com/money/2016/feb/05/error-53-apple-iphone-software-update-handset-worthless-third-party-repair>.

rolled out updates to restart the bricked phones in February 2016.¹⁵ Apple also restricts repair information and replacement parts to authorized repairers,¹⁶ and uses proprietary screws, further challenging third-party repair.¹⁷

Apple is far from alone in discouraging third-party repair. US PIRG recently surveyed fifty manufacturers, and found that 90% of them indicated in their warranty information that independent repair would void the warranty, statements that potentially violate the Magnuson-Moss Warranty Act (MMWA).¹⁸ Under the MMWA, a warranty cannot be voided by independent repair, except as to effects directly caused by the repair. In some cases, this behavior has attracted the attention of the federal authorities. In April 2018, the Federal Trade Commission warned six electronics manufacturers against misleading consumers that they must use only manufacturer-authorized parts and services to maintain their warranty, noting that these practices could violate the MMWA, and could be considered deceptive in violation of Section 5 of the FTC Act.¹⁹

Manufacturers and their representatives have also worked to defeat Right to Repair in the state legislatures, often by using spurious arguments about safety and security.²⁰ In fact, these bills could actually *improve* the safety of products. Withholding information and tools for repair makes third-party repair *less* reliable and safe. Right to Repair legislation would ensure that independent repair technicians—who would have to meet whatever certification requirements are set by state law, just like authorized repair technicians—have access to proper instructions that are vetted for safety.

Manufacturers have claimed that consumers cannot trust independent servicers, because they are not affiliated with a recognizable brand. Again, these claims are spurious. There is no evidence that independent repairers are any less trustworthy than authorized repairs. And, review sites and independent rating organizations can help consumers choose reliable servicers. Studies show that consumers are happy with third-party repair. According to a Consumer Reports

¹⁵ Matthew Panzarino, *Apple Apologizes and Updates iOS to Restore iPhones Disabled by Error 53*, TECHCRUNCH (Feb. 18, 2016),

<https://techcrunch.com/2016/02/18/apple-apologizes-and-updates-ios-to-restore-iphones-disabled-by-error-53/>.

¹⁶ *Apple Makes iPhone Screen Fixes Easier as States Mull Repair Laws*, REUTERS (Jun. 7, 2017),

<https://www.cnbc.com/2017/06/07/exclusive-apple-makes-iphone-screen-fixes-easier-as-states-mull-repair-laws.html>.

¹⁷ Damon Beres and Andy Campbell, *Apple Is Fighting a Secret War to Keep You from Repairing Your Phone*, HUFFINGTON POST, (Jun. 10, 2016), https://www.huffingtonpost.com/entry/apple-right-to-repair_us_5755a6b4e4b0ed593f14fdea.

¹⁸ *Warranties in the Void*, U.S. PIRG at 2 (Oct. 2018),

<https://uspig.org/sites/pirg/files/reports/Warranties%20in%20the%20Void%20U.S.%20PIRG%20Education%20Fund%20-%20Oct2018.pdf>.

¹⁹ *FTC Staff Warns Companies that It Is Illegal to Condition Warranty Coverage on the Use of Specified Parts or Services*, FED. TRADE COMM'N (Apr. 10, 2018) <https://www.ftc.gov/news-events/press-releases/2018/04/ftc-staff-warns-companies-it-illegal-condition-warranty-coverage>.

²⁰ Mikey Campbell, *Apple Lobbies Against 'Right to Repair' Proposal in Nebraska*, APPLE INSIDER, (March 9, 2017), <http://appleinsider.com/articles/17/03/09/apple-lobbies-against-right-to-repair-proposal-in-nebraska>

survey, consumers who use independent servicers consistently report higher satisfaction rates.²¹ Above all, consumers should be given the opportunity to select the repairer of their choice.

Similarly, in contrast to manufacturer claims, it is actually their *failure* to release repair information that could compromise the cyber-security of connected devices. First, releasing information about a device's design and function does not make it less secure or more susceptible to attack.²² In addition, a major threat to cybersecurity is failure to update software and fix security patches, which became evident in the Mirai botnet attack of 2016, in which attackers were able to easily take over unsecured connected devices, ultimately taking down major websites such as Twitter and Netflix.²³ It's particularly important that users are able to keep their software patched and updated for the full lifespan of the device. Having a robust market of third-party repairers to help do so would better enable consumers to keep their devices updated and secure.

Finally, withholding repair information and inhibiting legitimate third-party repair is, realistically, neither necessary nor effective for preventing the creation of knock-off or copycat devices—those interested in doing so could still take the device apart to figure out how it works.²⁴ While manufacturers may be well within their rights to copyright their repair manual, they shouldn't be able to prevent others from purchasing it on reasonable terms. In addition, the U.S. Copyright office has recently made breaking digital locks, for the purpose of repair of smartphones and software-enabled appliances, exempt from the restrictions in the Digital Millennium Copyright Act, further demonstrating that independent repair occupies a protected position with respect to copyright law.²⁵

To help improve consumer choice in the aftermarket, to help consumers save money, and to help reduce waste, we urge lawmakers to take up Right to Repair legislation. Consumers are the rightful owners of the products they buy, and should be able to make informed choices about where and how those products are fixed. Right to Repair legislation is necessary to ensure that consumers have genuine choice and ownership over their devices. Below, we have provided template legislation that would secure this Right to Repair for consumers.

²¹ *Should You Repair or Replace that Product?* CONSUMER REPORTS (Jan. 2014) <https://www.consumerreports.org/cro/magazine/2014/02/repair-or-replace/index.htm>.

²² Rachel Kalmar and Nathaniel Freitas, Harvard Berkman Klein Center for Internet and Society, *Right to Repair and Securing the Commons*, <https://uspig.org/blogs/blog/usp/rebutting-claim-right-repair-undermines-security>.

²³ *Id.*; Nicky Woolf, *DDos Attack that Disrupted the Internet Was the Largest of its Kind in History, Experts Say*, *The Guardian* (Oct. 26, 2016), <https://www.theguardian.com/technology/2016/oct/26/ddos-attack-dyn-mirai-botnet>.

²⁴ Kyle Wiens, *Using Copyright to Keep Repair Manuals Secret Undermines Circular Economy*, *THE GUARDIAN* (Dec. 20, 2013), <https://www.theguardian.com/sustainable-business/copyright-law-repair-manuals-circular-economy>.

²⁵ Chaim Gartenburg, *New Copyright Exemptions Let You Legally Repair Your Phone or Jailbreak Voice Assistants*, *THE VERGE* (Oct. 25, 2018), <https://www.theverge.com/circuitbreaker/2018/10/25/18024332/us-copyright-office-right-to-repair-dcma-exemptions>.

Model State Right-to-Repair Law

Section 1. Short title. This Act may be cited as the Digital Fair Repair Act.

Section 2. Definitions. In this Act:

(a) “Authorized repair provider” means an individual or business who is unaffiliated with an original equipment manufacturer and who has an arrangement with the original equipment manufacturer, for a definite or indefinite period, under which the original equipment manufacturer grants to the individual or business a license to use a trade name, service mark, or other proprietary identifier for the purposes of offering the services of diagnosis, maintenance, or repair of digital electronic equipment under the name of the original equipment manufacturer, or other arrangement with the original equipment manufacturer to offer such services on behalf of the original equipment manufacturer. An original equipment manufacturer who offers the services of diagnosis, maintenance, or repair of its own digital electronic equipment, and who does not have an arrangement described in this subsection with an unaffiliated individual or business, shall be considered an authorized repair provider with respect to such equipment.

(b) “Digital electronic equipment” or “equipment” means any product that depends for its functioning, in whole or in part, on digital electronics embedded in or attached to the product.

(c) “Documentation” means any manual, diagram, reporting output, service code description, schematic diagram, or similar kinds of information provided to an authorized repair provider for purposes of its effecting the services of diagnosis, maintenance, or repair of digital electronic equipment.

(d) “Embedded software” means any programmable instructions provided on firmware delivered with digital electronic equipment, or with a part for such equipment, for purposes of equipment operation, including all relevant patches and fixes made by the manufacturer of such equipment or part for these purposes.

(e) “Fair and reasonable terms” for obtaining a part or tool or documentation means at costs and terms, including convenience of delivery, and including rights of use, equivalent to what is offered by the original equipment manufacturer to an authorized repair provider, using the net costs that would be incurred by an authorized repair provider in obtaining an equivalent part or tool or documentation from the original equipment manufacturer, accounting for any discounts, rebates, or other incentive programs in arriving at the actual net costs. For documentation, including any relevant updates, “fair and reasonable terms” means at no charge, except that, when the documentation is requested in physical printed form, a charge may be included for the reasonable actual costs of preparing and sending the copy.

(f) “Firmware” means a software program or set of instructions programmed on digital electronic equipment, or on a part for such equipment, to allow the equipment or part to communicate with other computer hardware.

(g) “Independent repair provider” means an individual or business operating in this State, who does not have an arrangement described in subsection (a) with an original equipment manufacturer, and who is not affiliated with any individual or business who has such an arrangement, and who is engaged in the services of diagnosis, maintenance, or repair of digital electronic equipment, except that an original equipment manufacturer or, with respect to that original equipment manufacturer, an individual or business who has such an arrangement with that original equipment manufacturer, or who is affiliated with an individual or business who has such an arrangement with that original equipment manufacturer, shall be considered an independent repair provider for purposes of those instances in which it engages in the services of diagnosis, maintenance, or repair of digital electronic equipment that is not manufactured by or sold under the name of that original equipment manufacturer.

(h) “Manufacturer of motor vehicle equipment” means a business engaged in the business of manufacturing or supplying components that are used in the manufacture, maintenance, or repair of a motor vehicle.

(i) “Motor vehicle” means a vehicle that is designed for transporting persons or property on a street or highway and is certified by the manufacturer under all applicable federal safety and emissions standards and requirements for distribution and sale in the United States. Motor vehicle does not include:

(1) a motorcycle; or

(2) a recreational vehicle or an auto home equipped for habitation.

(j) “Motor vehicle dealer” means an individual or business who, in the ordinary course of business, is engaged in the business of selling or leasing new motor vehicles to an individual or business pursuant to a franchise agreement, has obtained a license under the [cite to state law], and is engaged in the services of diagnosis, maintenance, or repair of motor vehicles or motor vehicle engines pursuant to that franchise agreement.

(k) “Motor vehicle manufacturer” means a business engaged in the business of manufacturing or assembling new motor vehicles.

(l) “Original equipment manufacturer” means a business engaged in the business of selling or leasing new digital electronic equipment manufactured by or on behalf of itself, to any individual or business.

(m) “Owner” means an individual or business who owns or leases digital electronic equipment purchased or used in this State.

(n) “Part” means any replacement part, either new or used, made available by an original equipment manufacturer for purposes of effecting the services of maintenance or repair of digital electronic equipment manufactured or sold by the original equipment manufacturer.

(o) “Trade secret” has the meaning given it in [cite to definition in state law, or if no state definition, to 18 U.S.C. 1839].

Section 3. Requirements.

(a) For digital electronic equipment, and parts for such equipment, sold or used in this State, an original equipment manufacturer shall make available, for purposes of diagnosis, maintenance, or repair, to any independent repair provider, or to the owner of digital electronic equipment manufactured by or on behalf of, or sold by, the original equipment manufacturer, on fair and reasonable terms, documentation, parts, and tools, inclusive of any updates to information or embedded software. Nothing in this section requires an original equipment manufacturer to make available a part if the part is no longer available to the original equipment manufacturer.

(b) For equipment that contains an electronic security lock or other security-related function, the original equipment manufacturer shall make available to the owner and to independent repair providers, on fair and reasonable terms, any special documentation, tools, and parts needed to reset the lock or function when disabled in the course of diagnosis, maintenance, or repair of the equipment. Such documentation, tools, and parts may be made available through appropriate secure release systems.

Section 4. Enforcement by Attorney General. Violation of any of the provisions of this Act is an unlawful practice under the [cite to relevant state fraudulent and deceptive practices act]. All remedies, penalties, and authority granted to the Attorney General by that Act shall be available to him or her for the enforcement of this Act.

Section 5. Limitations.

(a) Nothing in this Act shall be construed to require an original equipment manufacturer to divulge a trade secret to an owner or an independent service provider except as necessary to provide documentation, parts, and tools on fair and reasonable terms.

(b) No provision in this Act shall be construed to alter the terms of any arrangement described in section 2(a) in force between an authorized repair provider and an original equipment manufacturer, including, but not limited to, the performance or provision of warranty or recall repair work by an authorized repair provider on behalf of an original equipment manufacturer pursuant to such arrangement, except that any provision in such terms that purports to waive, avoid, restrict, or limit the original equipment manufacturer’s obligations to comply with this Act shall be void and unenforceable.

(c) Nothing in this Act shall be construed to require an original equipment manufacturer or an authorized repair provider to provide to an owner or independent repair provider access to information, other than documentation, that is provided by the original equipment manufacturer to an authorized repair provider pursuant to the terms of an arrangement described in section 2(a).

Section 6. Exclusions. Nothing in this Act applies to a motor vehicle manufacturer, manufacturer of motor vehicle equipment, or motor vehicle dealer acting in that capacity, or to any product or service of a motor vehicle manufacturer, manufacturer of motor vehicle equipment, or motor vehicle dealer acting in that capacity.

Section 7. Applicability. This Act applies with respect to equipment sold or in use on or after the effective date of this Act.

Section 8. Effective date. This Act takes effect [date].