



WHAT ARE ILLINOISANS FIXING?

The devices Illinoisans tried to fix in 2020 and why it's harder to repair than it should be.

FEBRUARY 2021

Illinois PIRG

Education Fund

U.S. PIRG

Education Fund

What are Illinoisans Fixing?

| WRITTEN BY:

Anne Marie Green and Alex DeBellis, U.S. PIRG Education Fund.

Cover photo courtesy of iFixit.com.

| ACKNOWLEDGEMENTS

The authors thank Kyle Wiens, Co-Founder and CEO, iFixit.com; Gay Gordon-Byrne, Executive Director, Repair.org; and Nathan Proctor, Right to Repair Campaign Director for U.S. PIRG.

The authors bear any responsibility for factual errors.

© 2021 U.S. PIRG Education Fund. Some Rights Reserved. This work is licensed under a Creative Commons Attribution Non-Commercial No Derivatives 3.0 Unported License. To view the terms of this license, visit creativecommons.org/licenses/by-nc-nd/3.0.

U.S. PIRG Education Fund is an independent, non-partisan group that works for consumers and the public interest. Through research, public education and outreach, we serve as counterweights to the influence of powerful special interests that threaten our health, safety or well-being. For more information, please visit www.uspirgedfund.org.

EXECUTIVE SUMMARY

Here in Illinois, we want to fix our stuff – even during the COVID-19 pandemic.

As people try to stay at home as much as possible, it's more important than ever that our home appliances and devices are working. From kitchen appliances to laptops, gaming systems and televisions, our tech helps us stay home, stay safe, and stay sane.

But inevitably, things break or don't work right. You could throw it away, but don't want to be wasteful, and money is tight in this economy. In addition, due to supply chain disruptions and store closures, you might have difficulty finding some devices to buy, especially in the spring and summer of 2020.¹ Instead, you try to get your device fixed or to fix it yourself.

According to a review of data from iFixit, which describes itself as the “repair guide for everything, written by everyone,” 2.2 million unique users from Illinois went to www.iFixit.com to look up how to repair something in 2020.

Of those visitors, the top ten device types that Illinoisans attempted to fix were cell phones, laptops, gaming consoles, automobiles, tablets, desktop computers, smart watches, vacuums, clothing, and speakers. Cell phone repair guides were the most popular, receiving 21 percent of all the page views. Laptops were second, receiving 16 percent.

According to the repair shop owners and repair industry experts we interviewed, the pandemic also changed which devices we took to repair shops. We interviewed ten repair shop owners, seven of which reported an increase in business during the pandemic. They repaired more gaming consoles and computers than normal, and their customers were eager to get their devices fixed quickly.

Repair cuts waste, saves consumers money, and also promotes resilience that helps us manage a pandemic. Even as repairing our devices for learning and working became critical to staying safe, 6 of the top 10 most popular manufacturers of devices that Illinoisans were trying to fix

ACCORDING TO IFIXIT DATA

2.2
MILLION

unique users from Illinois visited iFixit to repair something in 2020.

ACCORDING TO IFIXIT DATA

6 of 10

manufacturers of devices that Illinoisans went to iFixit to repair often do not sell parts or provide service information.

restrict access to parts and service information – including the top five. Repair is popular, but the makers of the devices we most want to fix restrict access to what we need, underscoring the importance of Right to Repair reforms.

Repair is good for our pocketbooks and good for the planet

Every item that can be reused should be reused. The increasing trend of disposable electronics is creating a brewing ecological crisis.

Electronic waste is now the fastest growing waste stream in the world.ⁱⁱ In America, we discard over 416,000 phones per day, and approximately 15,300 per day in Illinois.ⁱⁱⁱ Not only is the waste generated from discarded electronics highly toxic,^{iv} but the manufacturing of new electronics takes up an understated amount of energy and natural resources. According to the Institute of Electrical and Electronics Engineers, 165 pounds of raw material are required to produce one 8-ounce cell phone.^v The vast majority of the greenhouse gas emissions associated with cell phones comes from the production of the phone, not the cell phone's use.^{vi} With every American family disposing an average of 176 pounds of electronic waste annually, or 6.9 million tons in total, the rapid consumption of electronics is environmentally detrimental.^{vii}

Apart from its ecological benefits, repair saves us money. If Americans repaired electronics instead of replacing them, we could save \$40 billion annually.^{viii} Money has been tight for many Illinoisans due to the global pandemic, and repair can help us reduce expenses. The pandemic has also highlighted the need for a resilient and more localized economy, to which independent repair is paramount.

FINDINGS

One of the most popular and utilized do-it-yourself repair websites is iFixit, which offers guides, videos and tutorials for consumers and professional independent repairers on how to fix everything from vacuums to cars to cell phones.

On iFixit, Illinoisans can learn how to replace batteries and screens on our phones, upgrade the memory on our laptops, change the spark plugs on our cars, and many other repairs.

According to data from iFixit, the top ten devices that Illinoisans attempted to fix most often in 2020 were cell phones, laptops, gaming consoles, automobiles, tablets, desktop computers, smart watches, vacuums, clothing, and speakers.

Laptop repair guides were the second most popular in 2020, receiving 16 percent of all the page views. Beginning in early summer, the United States experienced a computer shortage as supplies dwindled and demands ballooned in the wake of remote work and learning.^{ix} The country as a whole experienced a shortage of 5 million laptops needed for remote learning this summer.^x

FIGURE 1 – Top 10 devices Illinoisans attempted to repair in 2020 according to iFixit data

Eight of the top ten devices that Illinoisans tried to repair are consumer electronics. Because consumer electronics represent the majority of devices that Illinoisans tried to fix in 2020 and they feature similar types of problems, we focused on these devices to determine the problems that Illinoisans were trying to solve in 2020 and identify potential barriers that stand in the way of Illinoisan’s right to repair their stuff.

Rank	Device Type
1	Cell phone
2	Laptop
3	Gaming console
4	Automobile
5	Tablet
6	Desktop computer
7	Smart watch
8	Vacuum
9	Clothing
10	Speaker

Most popular fixes for consumer electronics

The top ten issues in consumer electronic that Illinoisans attempted to fix were replacing batteries, screens, repairing hard drives, casing, logic boards or motherboards, forcing a restart, disassembling a device, repairing a disc drive, keyboards, and speakers.

FIGURE 2 – Top 10 problems in consumer electronics that Illinoisans were trying to fix in 2020 according to iFixit data

Rank	Problem
1	Battery
2	Screen
3	Hard drive
4	Casing
5	Logic / Motherboard
6	Force restart
7	Disassembly
8	Disc drive
9	Keyboard
10	Speaker

The battery was the most popular problem that Illinoisans were fixing in 2020, receiving 20 percent of all page views. Among the battery fixes, approximately 31 percent were for cell phones, and 19 percent were for laptops. Batteries in both phones and laptops are consumable; they last about two years before degrading.^{xi} When discarded lithium-ion batteries wrongly end up in the recycling, they are known to cause facility-wide fires.^{xii}

Swapping out the battery is a simple way to extend the lifespan of electronics by several years. However, manufacturers use unusual and proprietary screws and excessive adhesives, making it far more difficult to swap out batteries.^{xiii} In addition to these tactics, some manufacturers are serializing parts to devices, making replacement outside of the manufacturer itself more difficult. In October of 2020, YouTuber Hugh Jeffreys discovered that the camera could not be swapped in the newest iPhone without losing certain functions.^{xiv} Now, camera, screen and battery swaps all cause functionality loss or error messages if they are done outside of Apple’s control. While Apple began showing an error message for non-OEM batteries in 2019,^{xv} iFixit sees the recent part serialization on the newer iPhone as another step toward consolidating repairs.^{xvi}

Barriers to repairing our stuff

Despite the best efforts of websites like iFixit to provide Illinoisans with the tools and knowledge to repair our stuff, some manufacturers create unnecessary and unwarranted barriers, especially in the world of consumer electronics.

Barriers to consumers to easily fix their electronic devices include:

- Limiting a consumer or even a professional independent repairer from accessing the tools, parts, schematics, or software needed to perform simple repairs.
- Only making parts available to their own repair staff, even if you wanted to pay fair market value for the part.
- Limiting important manufacturer information that would allow consumers to address known issues, like when Apple did not tell consumers that they slowed down older phones in the “Batterygate” scandal.^{xvii}
- Serializing parts to the device, so that a consumer or independent repairer could not replace certain parts without losing some functionality.

Some manufacturers embrace repair

When we reviewed Illinoisans’ use of iFixit we found that of the top ten manufacturers that produced things Illinoisans tried to fix, two of them manufacture automobiles and eight of them manufacture consumer electronics. Three of them manufacture gaming consoles and controllers: Sony (PlayStation), Nintendo, and Microsoft (Xbox).

FIGURE 3 – Top 10 manufacturers of devices that Illinoisans tried to fix in 2020 according to iFixit data

An analysis of the eight consumer electronic companies that made this top ten list, combined with expert advice from Repair.org, found that six of them do not sell the parts or tools necessary to repair their devices to the public. This includes the top five manufacturers of devices Illinoisans are most trying to fix.

Rank	Manufacturer
1	Apple
2	Samsung
3	Sony
4	Microsoft
5	Nintendo
6	Dell
7	HP
8	Google
9	Honda
10	Ford

Because of the automobile Right to Repair law, Honda and Ford provide access to repair information and tools.^{xviii} The automotive Right to Repair was further solidified with the passing of a 2020 ballot question in Massachusetts, which gives independent repair shops access to the same telematic data that car dealers automatically receive. The ballot measure passed with 75 percent approval.^{xix}

Apart from Honda and Ford, which are obligated to provide repair information to independent shops, some manufacturers of consumer electronics tout repair-friendly products despite a lack of a Right to Repair law. HP^{xx} and Dell^{xxi} provide manufacturer parts for sale and free access to technical support manuals, and therefore make manufacturer-quality independent repair largely accessible to Illinoisans.

Six companies that made the devices that Illinoisans most commonly tried to fix via iFixit's website, Apple^{xxii} along with Samsung,^{xxiii} Sony,^{xxiv} Google,^{xxv} Microsoft,^{xxvi} and Nintendo^{xxvii} frequently do not offer the parts, tools, schematics, and information necessary to repair their devices for sale to consumers.^{xxviii}

Limiting consumers' ability to access the necessary parts and information makes repairs more difficult, and in some cases impossible. For example, without access to diagnostic software, you cannot replace the home button on an older iPhone – the phone will not recognize the new button. For other repairs, sourcing parts is difficult and repair technicians might be unable to find a suitable part to complete the repair.

How the COVID-19 pandemic has impacted Right to Repair

The COVID-19 pandemic changed Americans' and Illinoisans' lives in countless ways – including what we needed to fix and how we fixed it.

The pandemic, especially in the earliest wave, highlighted the ways restricted repair options make it more difficult to respond to challenges. For example, because Americans were staying home and using appliances more often than normal, appliance repair technicians were in short supply in 2020, all while Americans found it difficult to find new appliances available for purchase.^{xxix}

While some homeowners lacked access to new appliances, schools found it difficult to get computers for remote learning. Independent repair and refurbishment could have addressed the shortage of 5 million laptops in the United States in early summer.^{xxx} The shortage

demonstrated a stark digital divide, in which children from families who could afford more than one internet-connected-device were better prepared for online education than families who could not.^{xxxii}

One refurbisher, John Bumstead, noted how frequently his field deals with activation-locked devices, sharing a photo of 550 locked tablets -- perfectly functional equipment, yet locked from use by the manufacturer.^{xxxiii} If there were fewer barriers to repair, including activation locking, refurbished computers could help boost our capacity.



Apple refurbisher John Bumstead on Twitter, June 22, 2020

Unfortunately, barriers to repair are not limited to consumer electronics. Biomedical repair technicians, or people who repair medical equipment and machinery, spoke out during the COVID-19 pandemic about the barriers they faced to repairing medical equipment, including ventilators. U.S. PIRG Education Fund released a report in July 2020 after surveying 222 biomedical repair technicians, or biomedes, about their experience repairing critical medical equipment during the pandemic. Nearly half reported that they had been denied access to “critical repair information, parts or service keys” within the five-month period between March and July.^{xxxiii} As a result, U.S. Senator Ron Wyden and Representative Yvette D. Clark introduced the Critical Medical Infrastructure Right-to-Repair Act of 2020.^{xxxiv} The limited Right to Repair bill would allow biomedes easier access to repair information in order to service critical medical equipment, including ventilators. Congress has not yet advanced the legislation.

Repair businesses become critical during the pandemic

“We used to repair devices, now we repair lifelines.” - Andrew Harding, owner of Salem Techsperts in Salem, MA

Repairing devices during the pandemic was a challenge. Supply chain interruptions made it difficult to consistently stock parts, and stores and factories had to change operations to take necessary health precautions.^{xxxv} Meanwhile, customers were increasingly reliant on their devices, which drove demand for repair services.

To get a sense of how repair shops were impacted, we interviewed 10 repair shops and spoke to industry leaders who work with repair shops across the country. Seven of 10 repair shops said that their business increased in the months after the pandemic began in March.

“We actually did better during the pandemic than we ever have,” said Bryan Harwell, Owner of Replay’d, a gaming console and cell phone repair shop in Allston, Massachusetts. While there are relatively few shops that specialize in gaming repair, our iFixit data analysis shows that gaming console repair surged in 2020. “We’re seeing 20 of them a week, and I’m the only person who can fix them,” said Harwell.^{xxxvi}

Other electronics repair shops reported increases in laptops, computers, and tablets -- devices essential to work-from-home and remote learning. Tom Hintenach, owner of Electronics Unlimited in central Maryland, reported an increase in sales of refurbished computers.^{xxxvii} Andrew Harding, owner of Salem Techsperts in Salem, MA, reported an uptick in customers needing computer screen repairs, who were disappointed by the high price of the part replacement.^{xxxviii} Other repair shop owners, like Andrew Flagg of Mountain Computers in Reno, Nevada, noted a backlog in computers and part shipments due to disruptions in the supply chain.^{xxxix}

Even more than normal, shop owners reported that customers were more eager to get their devices fixed. “Everything that walks in the door needs to be fixed yesterday, and it’s incredibly stressful,” said Harding on how desperately people have needed their devices in 2020. “We used to repair devices, now we repair lifelines.”

Across the board, repair shop owners discussed the difficulties associated with repairing certain electronics. Harwell reported a lack of access to diagnostic software, hindering him from

diagnosing problems. When that happens, Harwell has “to be the bearer of bad news and tell [the customer] that their PS4 is basically junk.”

In some cases, repair is difficult because of how devices are made. Flagg said that the recent MacBook Pros are difficult to repair by design: “The mac mini (circa 2014) is one of the most difficult devices to upgrade and repair. Nearly impossible without the right tool, and horrendous to disassemble.” Harwell comments on the same trend for consoles and smartphones. “What’s changed is the ability to repair items. They’re just adding more screws...and it takes more time for us to take them apart, and that’s billable time for our customers,” said Harwell.

Appliance technicians also noted a lack of design for repairability. “It used to be unusual for an appliance not to last more than 20 years,” said Dean Landers, owner of Landers Appliance in Baltimore, Maryland.^{xl} Now, appliances typically last between five and ten years.^{xli} Landers attributes this to the newfound trend of “flimsy” parts “made with plastic,” and generally designed “without repair in mind.”

Myles Ong, owner of J & M Appliances in Reno, NV, said that parts which used to be replaceable are now soldered to circuit boards.^{xlii} When this is done, replacing the part can cost twice as much.

Another tactic electronics manufacturers use to inhibit repair is restricting parts, or making them obsolete. “In the past, parts would be available for at least 10 years,” said Ong, “now, they’re only available for three to five.” Right to Repairs reforms in Europe have addressed this, by requiring manufacturers to stock appliance spare parts for seven years.^{xliii}

With parts less and less available and new electronics making machines more and more complex, even the flashiest appliances may only last a few years. “You can buy a \$1200 washer, a \$2000 washer, or a \$300 washer, surprisingly enough, they’re all the same,” said Ong.

| CONCLUSION

A significant number of Illinoisans want to repair their devices. The top products those Illinoisans are trying to fix are consumer electronics. Unfortunately, for much of the stuff Illinoisans are trying to fix, we can’t get the information, schematics, diagnostic software, parts and tools we need.

Making it hard to fix electronic devices increases the number of fixable devices that enter our waste stream and the number of new devices that need to be produced. Not only does this cost consumers money as we are forced to purchase unnecessary new devices, but it also requires us to waste materials and energy producing those devices.

Additionally, as the COVID-19 pandemic highlighted, restrictions to repair undermine community resilience. It makes it harder to make do with what we have, and more dependent on the global supply chain.

The easiest action the consumer electronics industry can take is making its devices with repairability in mind. Making repair more accessible will increase the likelihood that people repair their devices, save money, and prevent another device from entering our waste stream.

If the electronics industry wants to become more transparent, sustainable and consumer-friendly, manufacturers should adopt and adhere to basic Right to Repair principles which include providing the information, schematics, software, tools, and parts necessary to repair their devices for free or at fair cost. Illinois's governor and legislators should consider taking action to ensure Illinoisans have the ability to repair their stuff.

METHODOLOGY

According to iFixit, 2.2 million unique visitors from Illinois accessed their repair guides from November 2019 to November 2020. We collaborated with them to determine what devices Illinoisans are trying to fix, what problems they are trying to fix, and what manufacturers make the things they are trying to fix.

We obtained the total number of unique users from Illinois that accessed iFixit.com from the company, which calculated this number based on Google Analytics data. We also obtained the pages that were viewed by browsers in Illinois and the number of views those pages had in Illinois.

We were able to group the pages by manufacturer, device type, and problem by viewing the guides and sorting them accordingly.

After we had created lists of pages sortable by device type, manufacturer and repair category, we calculated the total views within those categories. We created a top 10 list of the most

common manufacturers of devices that Illinoisans tried to fix in 2020. We used the same methods for device type.

Because more than half of the top ten devices Illinoisans tried to fix in 2020 were consumer electronics, we drilled down into what types of repairs were being attempted. We isolated consumer electronics and identified the problems that people were trying to fix. We grouped the problems into categories and used the total number of pages per problem to determine the top ten problems that Illinoisans tried to fix in their consumer electronics.

To determine which manufacturers did not make spare parts, service information or other repair resources available, we reviewed the information available through company online stores and consulted with the Repair Association's Executive Director Gay Gordon-Byrne. The Association, also known as Repair.org, represents independent repair technicians and advocates for Right to Repair. Gordon-Byrne confirmed which manufacturers do not provide access to parts and manuals.

SOURCES

- ⁱ Dan Primack, Axios, [“‘Historic’ laptop demand leads to shortage ahead of remote school.”](#) August 15, 2020.
- ⁱⁱ World Economic Forum, The Platform for Accelerating the Circular Economy (PACE), “A New Circular Vision for Electronics.” January, 2019.
http://www3.weforum.org/docs/WEF_A_New_Circular_Vision_for_Electronics.pdf
- ⁱⁱⁱ Nathan Proctor, [“Recharge Repair.”](#) U.S. PIRG Education Fund, February 2018.
- ^{iv} Peter Holgate, World Economic Forum, [“How do we tackle the fastest growing waste stream on the planet?”](#) Feb. 9, 2018.
- ^v iFixit.org 2019, Electronics Manufacturing Eats a Hole in the Earth Every Day
<https://ifixit.org/manufacturing>
- ^{vi} Apple, 2017. iPhone X Environmental Report.
https://images.apple.com/environment/pdf/products/iphone/iPhone_X_PER_sept2017.pdf
- ^{vii} Nathan Proctor, U.S. PIRG Education Fund, [“Repair Saves Families Big,”](#) January 2021, pg 3.
- ^{viii} Nathan Proctor, U.S. PIRG Education Fund, [“Repair Saves Families Big,”](#) January 2021, pg 4.
- ^{ix} Monica Chin, The Verge, [“The pandemic has made it harder to buy a new laptop,”](#) Jun. 4, 2020.
- ^x Nathan Proctor, U.S. PIRG, [“The Right to Repair could help address a critical shortage in school computers,”](#) Sep. 9, 2020.
- ^{xi} Eric Ravenscraft, New York Times, [“How to Make Your Smartphone Last Longer,”](#) Sep. 10, 2019
- ^{xii} Jillian Mock, The Verge, [“Recycling plants are catching on fire, and lithium-ion batteries are to blame.”](#) February 28, 2020.
- ^{xiii} Irina Ivanova, CBS News, [“How manufacturers make it impossible to repair your electronics.”](#) January 15, 2021.
- ^{xiv} Chaim Gartenber, The Verge, “iPhone 12 camera replacement issues could hint at further restrictions on third-party Apple repairs,” Oct. 30, 2020
- ^{xv} Chris Welch, The Verge, “Apple explains why iPhones now show an ominous warning after ‘unauthorized’ battery replacements,” Aug. 14, 2019
- ^{xvi} Kevin Purdy, iFixit, [“Is This the End of the Repairable iPhone?”](#) Oct. 29, 2020.
- ^{xvii} Arthur Shi, iFixit, [“Batterygate: A Complete History of Apple Throttling iPhones,”](#) September 8, 2018.
- ^{xviii} Gabe Nelson, Automotive News, [“Automakers agree to ‘right to repair’ deal,”](#) January 25, 2014.
- ^{xix} Nik DeCosta-Klipa, Boston.com, [“Massachusetts approves Question 1 ballot measure to expand state’s right-to-repair law,”](#) Nov. 3, 2020
- ^{xx} Accessed January 2021
<https://parts.hp.com/Hpparts/Default.aspx?mcsid=&cc=US&lang=EN&jumpid=>
- ^{xxi} Accessed January 2021 <https://www.dell.com/en-us/work/shop/parts-upgrades/ar/7566>
- ^{xxii} Accessed December 2020 <https://support.apple.com/iphone/repair/service>
- ^{xxiii} Accessed December 2020 <https://www.samsung.com/us/support/service/>
- ^{xxiv} Accessed December 2020 https://us.esupport.sony.com/support/s/model-accessories?language=en_US
Author’s Note: Sony has a very limited selection of spare parts available through a third party (<https://sony.encompass.com/>) but no parts for its gaming systems. We determined that these offerings were below what a user need to fix common issues.
- ^{xxv} Accessed January 2021 https://support.google.com/store/answer/6160400?hl=en&ref_topic=3244667

-
- xxvi Accessed January 2020 <https://support.microsoft.com/en-us/surface/get-service-for-your-out-of-warranty-or-damaged-surface-08312d65-7d7d-5438-2f85-92c8b0a605ac>, Accessed January 2020 <https://support.xbox.com/en-US/help/hardware-network/warranty-service/getting-your-product-serviced>
- xxvii Accessed December 2020 <https://www.nintendo.com/consumer/orders.jsp#Topic04>
- xxviii Confirmed in personal communication with Gay Gordon-Byrne, Executive Director of Repair.org, February 2021.
- xxix Soo Youn, The Washington Post, [“Ovens, dishwashers and washing machines are breaking down like never before. But there’s nobody to fix them,”](#) Oct. 22, 2020. Alina Selyukh, NPR, [“Why It’s So Hard to Buy a New Refrigerator These Days,”](#) September 22, 2020.
- xxx Nathan Proctor, U.S. PIRG, [“The Right to Repair could help address a critical shortage in school computers,”](#) Sep. 9, 2020.
- xxxi Kellen Browning, The New York Times, [“The Digital Divide Starts With a Laptop Shortage,”](#) Oct. 12, 2020.
- xxxii Nathan Proctor, U.S. PIRG, [“The Right to Repair could help address a critical shortage in school computers,”](#) Sep. 9, 2020.
- xxxiii Nathan Proctor and Kevin O-Reilly, U.S. PIRG Education Fund, [“Hospital Repair Restrictions,”](#) July 2020.
- xxxiv [“Wyden and Clarke Introduce Bill to Eliminate Barriers to Fixing Critical Medical Equipment During the Pandemic,”](#) Aug. 6 2020.
- xxxv Kellen Browning, The New York Times, [“The Digital Divide Starts with a Laptop Shortage,”](#) October 12, 2020. Alina Selyukh, NPR, [“Why It’s So Hard to Buy a New Refrigerator These Days,”](#) September 22, 2020.
- xxxvi Personal communication with Bryan Harwell, owner of Replay’d, January 2021.
- xxxvii Personal communication with Tom Hintenach, owner of Electronics Unlimited, January 2021.
- xxxviii Personal communication with Andrew Harding, owner of Salem Techsperts, January 2021.
- xxxix Personal communication with Andrew Flagg, owner of Mountain Computers, January 2021.
- xl Personal communication with Dean Landers, owner of Landers Appliance, January 2021.
- xli Leah Milner, The Guardian, [“What do you mean we need a new cooker? We only got it in 1963,”](#) February 20, 2016
- xlii Personal communication with Myles Ong, owner of J & M Appliances, January 2021.
- xliii Jon Porter, The Verge, [“It’s about to get a lot easier to repair old appliances in the EU,”](#) October 1, 2019