

Tractor hacking newest trick for right to repair

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In 2022 we have continued to follow the “right to repair” movement — a movement that has gained unprecedented momentum in a short period of time.¹ “Right to repair” refers to an effort focused on providing consumers and aftermarket businesses the ability to repair, maintain, and/or modify the devices and equipment consumers purchase.

Tractor hacking involves bypassing the digital locks in the software that operates complex equipment so that the machinery can only be repaired or modified by the manufacturer or an authorized repair facility.

Under the pressure of statements and executive orders from President Joe Biden² and support from lawmakers and consumers, the Federal Trade Commission (FTC) has voiced a commitment to enforcing existing laws to address consumer concerns related to the right to repair.

While lawmakers and regulators consider how to implement right to repair principles, some consumers are taking matters into their own hands. The latest example to gain notoriety is “tractor hacking” to get around manufacturer restrictions that limit the ability to modify or repair complex farming equipment.

As reported by *WIRED*, tractor hacking involves bypassing the digital locks in the software that operates complex equipment so that the machinery can only be repaired or modified by the manufacturer or an authorized repair facility.³

WIRED reports that a hacker known as “Sick Codes” has created a “jailbreak” that allows him to take control of multiple models of tractors through their touchscreens, permitting repair and modification of tractors without the intervention of the manufacturer.

Sick Codes has said that fixing the vulnerabilities his “jailbreak” has exploited may require a significant system overhaul in new tractor designs that may be difficult to deploy to existing equipment.

A closer look at this issue reveals the complexities of the right to repair movement. On one hand, equipment owners value the work of hackers like Sick Codes, because it allows them to maintain, service, repair and rebuild their tractors on their own and customize equipment to their unique needs.

Unauthorized service can also allow owners located in rural areas, where access to manufacturer-approved repairs is limited and where it could take days for replacement parts to arrive, to quickly get their heavy equipment back online, avoiding financial loss during critical times for planting and harvesting.

Manufacturers, on the other hand, are reluctant to allow untrained or unskilled consumers to modify sophisticated machinery. The digital locks ensure that only those with requisite training and skill can work on the equipment. This is important for brand protection to ensure that all equipment performs as promised.

Unauthorized modifications may also pose safety hazards in the event of inferior repair or miscalibrated machinery.

Finally, a company’s development of sophisticated computer software often represents a significant investment in intellectual property that a company is not willing to turn over to third-parties or its competitors.

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Thus, manufacturers and consumers often are at odds with one another regarding who is authorized to work on sophisticated equipment. The paradigm shift from analog equipment to complex machinery with integrated digital equipment will require lawmakers and regulators to strike a balance between consumer and manufacturer interests.

Takeaways

When it comes to the right to repair movement, the exact balance between consumer rights and manufacture interests has yet to be realized. Serious safety and business concerns create significant opposition to the right to repair movement. But for now, the movement appears to still be gaining steam.

Examples like tractor hacking are likely to catch the eye of regulators around the country, putting pressure on regulators to take action to avoid headline-making outcomes. While federal and state right to repair laws are being drafted, it is likely that regulatory investigations and enforcement proceedings will shape the contours of the right to repair jurisprudence in the short-term.⁴

To avoid becoming the subject of the next FTC or state agency investigation, companies should begin to prepare by considering the following actions:

- Revise warranty provisions that restrict consumers' rights to repair purchased goods or that void the warranty when non-original equipment manufacturer (OEM) parts are used;
- Avoid product design that results in repairs that could be characterized as unduly difficult (e.g. soldering batteries to the circuit board);
- Develop resources for third-party repair providers that facilitate repairs while protecting the company's intellectual property;
- Ensure that consumers know where to purchase replacement parts; and

- Review the company's standard contracts to ensure that intellectual property rights are not overly broad, potentially rendering them unenforceable.

Notes

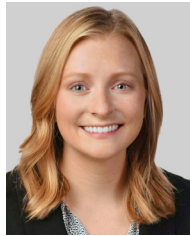
¹ Stephen Piepgrass and Abbey Thornhill, *President Biden Doubles Down His Support for "Right-to-Repair" Movement*, Regulatory Oversight (Feb. 8, 2022), bit.ly/3Mh8Apv; Seth Erickson, Stephen Piepgrass, Ashley Taylor, Jr., and Dan Waltz, *Right-to-Repair Movement Without Right-to-Repair Laws*, Regulatory Oversight (Mar. 18, 2022), bit.ly/3RBx7lw; Stephen Piepgrass and Abbey Thornhill, *The clash of two movements*, Thomas Reuters: Westlaw Today (April 22, 2022), <https://bit.ly/3OI4JZp>; Stephen Piepgrass and Abbey Thornhill, *FTC makes good on its promise to ramp up right-to-repair enforcement*, Thomas Reuters: Westlaw Today (July 20, 2022), <https://bit.ly/3Qo4gGC>.

² Stephen Piepgrass, Dan Waltz, and Jessica Ring, *Executive Order Signals Significant Changes for Technology Manufacturers*, Regulatory Oversight (July 14, 2021), <https://bit.ly/36yDB9s>.

³ Lily Hay Newman, *A New Jailbreak for John Deere Tractors Rides the Right-to-Repair Wave*, WIRED (Aug. 13, 2022).

⁴ See Erickson, Piepgrass, Taylor, and Waltz, *Right-to-Repair Movement Without Right-to-Repair Laws*, *supra* n.1.

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