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Summary of Agricultural Issues Related to Right to Repair / Fair Repair

- *Opposition Argument: Dealerships are already consolidating. We worry that Fair Repair will reduce availability of manufacturer repair technicians.*

Farming is a time sensitive activity. Downtime caused by equipment failure leads to loss of crop income, overtime pay, and costly repairs. Availability of local qualified repair technicians is therefore essential to agriculture.

Dealerships are consolidating into fewer and larger showrooms, leaving vast areas of farmland 50 or more miles away from dealership technicians. Travel time and hauling costs make this business model not viable for farmers. It is therefore impractical to leave the business of repair exclusively to dealerships.

Independent Ag dealers and repair shops in local communities are gone. Despite having the talent and facilities, independents lack access to required information or technical tools to perform the work. Large farms often have their own repair staff, but cannot make repairs for the same reasons. Rural community stewardship and viability has become difficult as service industries are taken away from rural locations.

The obvious solution to a shortage of repair technicians is to allow more repair technicians to make a living. When dealerships are the only source of repair, they are the only possible employer. Wages set by the dealership have suppressed, rather than expanded, the choice of repair as a vocation.

- *Opposition Argument: Independent and DIY technicians may not be adequately trained.*

The key word here is “may”. Original equipment manufacturers (OEMs) have blocked access to the information and materials necessary for training, limiting training options. Skilled and certified mechanics are not able to form their own independent businesses because they cannot acquire parts, tools, firmware or diagnostics.

The auto industry has a different business model and supports over 500,000 qualified technicians using multiple options for training. An independent training option must be allowed to develop in order to serve the needs of agriculture.

Many young farmers go to trade school for farm equipment repair, but are unable to perform the skills learned on the farm due to service lockouts created by OEMs.

- *Opposition Argument: Dealerships invest heavily in training.*

Training of employees is an ordinary cost of doing business. This claim doesn't make dealerships special, but it does raise a problem of improving the skilled labor pool necessary to support modern agriculture.

The costs of training has also been artificially inflated by the dealership-monopoly model. OEMS demand their franchisees send technicians to their training programs as a condition of being an affiliated dealership. The dealership is stuck paying whatever the OEM demands, which can be excessive. The market for training is itself monopolized and serves to keep the labor force limited.

The farm community could fill many of these gaps, and many have the training, but are excluded from independant participation.

- *Opposition Argument: Warranties will be voided by independent repair*

This is likely correct, but not necessarily relevant. Most electronics carry very brief warranty periods of one year or less. Tractors are covered by two year warranties for parts and labor. Many farms run equipment well beyond the warranty expiry dates. R2R extends the typical useful service life of equipment by 10-15 years.

The Magnuson-Moss Warranty Act of 1975 may also apply, although the protections are specific to "consumer products". Most of the in-cab electronics such as monitors and GPS and cell phones fall into the consumer category. Court challenges to the blurry line between consumer and commercial products may also alter the application of this law.

Right to Repair is intended to allow the post-warranty market for repair to function. As long as OEMs remain in total control of post-warranty repair, farmers will be price-gouged for services without competitive options and at high risk of being forced to replace equipment far in advance of its total useful life.

- *Opposition Argument: Repair involves tinkering with copyrighted materials.*

Tinkering, though not repair, is legal. Current US Copyright Law specifically allows for tinkering/hacking of software for purposes of repair of land-based motor vehicles, given that other laws are not broken.

Opponents have repeatedly asserted that farmers want to hack their tractors to defeat EPA Tier IV emissions requirements. Even if this pejorative projection of motives is correct, it is not the job of the dealership nor the OEM to police state or federal laws. The equipment owner is responsible for their own illegal acts, just as automobile owners are responsible for their own speeding tickets.

Nor does blocking access to repair prevent illegal acts. Anecdotal evidence is that Tier IV emissions are widely violated by commercial vehicles using the same diesel engines as their off-road cousins, at no peril to the OEMs. The same groups in opposition on the basis of diesel particulate emissions remain in opposition over electric engines powering home

lawn mowers and power tools. This argument appears to be less of a legitimate environmental concern and more of a ruse to block legal repair.

Practically, the business of repair is not tinkering but restoration. Repair technicians use OEM designed materials to restore products to function. Very little, if any, repair requires any software access other than to apply OEM-created patches and fixes. It is specifically legal under copyright law to backup and restore copyrighted materials for purposes of repair.

- *Opposition Argument: Modified (tinkered) equipment might enter the used market and be unwittingly sold to unsuspecting buyers.*

Resetting computer settings to their factory original is very common in the electronics industry. Anyone that has ever restored the "BIOS" on a computer or had their phone "wiped" is resetting the firmware. Dealerships are able to reset the firmware, but have monopolized this function, leading to domination of the used market.

Dealerships are taking used equipment trade-ins and adjusting prices for condition, taking into account any excess wear and tear. They can reset software to its original state, but might not be able to guarantee downstream buyers that the tractor was always operated under specs. The same problems exist in the used automobile business. If dealerships are selling to "unwitting" buyers, it is their business ethics that should be of concern.

Buyers and sellers buy and sell privately as well, but without independent access to diagnostics and the ability to reset firmware and apply corrections, it is even more difficult for buyers and sellers to evaluate equipment condition.

- *Opposition Argument: Firmware that has been modified might be transferred to a new buyer.*

Firmware is very easily restored to its original legally under current copyright law. The OEM only needs to make the process available. It is the choice of the new buyer how much they value or devalue the equipment for software settings.

- *Opposition Argument: Dealerships make significant money on repair. If they lose repair revenue they might fold up.*

This is true. Dealerships are consolidating because the showroom business model is collapsing in general and not only in agriculture. The changes wrought by the internet have ravaged retailers everywhere and in every industry. Agriculture is no exception.

Dealerships make roughly five times more money on repair than on new equipment sales. It is no surprise that dealerships see repair revenue as a lifeline to support their dying retail businesses. Dying businesses are propped up by monopolized repair, forcing farmers to subsidize investors in dealerships at their direct expense.

The cost of repair to farmers, and the revenue to dealers has increased significantly through the introduction of unreliable technical systems in products. Complex and vulnerable electronic systems have been added to highly durable mechanical parts, creating more modes and instances of failure. Many modern tractors now include 50-100 electronic sensors in addition to dozens of other electronic parts, each of which is a potential point of failure.

Sensors provide real-time feedback to systems and operators and are helpful to modern functions. The sensors themselves are easy to physically replace, but manufacturers have designed systems to require recalibration or software pairing of each replacement part. Sensor recalibration is restricted to dealer tools only forcing farmers to engage the manufacturer for each and every repair.

Recalibrations and other forms of pairing functions are also applied to mechanical parts too. Every recalibration is a service revenue for the dealer, as they are the only ones allowed and, by design, equipped to perform them. This is the same revenue protection used by Apple on their phones and computers. 50 to 100 potential sensor failures per product can generate a lot of service revenue for a dealer, at the expense of the farmer.

There are not any manual overrides on most farm equipment today. The mechanical systems can only be operated through the technical systems. A single technical system issue becomes a total equipment issue and stops the entire machine. This results in excessive and unnecessary downtime.

The overall failure rate of modern products is now far more frequent than at any time in the past decade greatly increasing the need for repair and service revenues to dealerships at the same time.

- *Opposition Argument: Manufacturers are subject to Federal Law, particularly for safety and emissions.*

This is true and does not conflict with Right to Repair. All manufacturers selling in the US must comply with all federal regulations. If they do not, they can face fines or have their products banned from sale. EPA emissions standards are just one of many federal requirements on manufacturers. These regulations are intended to protect the buyer and the public -- not the manufacturer.

Manufacturers are responsible for producing products that are safe to use as intended. Repair of any kind, including in-warranty repair, is a form of use. If manufacturers build products that are unsafe to repair under warranty, they would be placing their employees and subcontractors in jeopardy. Right to Repair statutes do not alter any aspect of liability law, which appears to have worked well for decades.

Federal requirements on OEMs do not transfer to the buyer. Once approved for sale, their responsibility is complete -- other than for serious defects or fraud. For example, OEMS of

autos are required to provide seat belts that meet specific standards. If the owner doesn't wear the seat belt, the owner gets the fine, not the OEM and not the Dealership.

Similarly, Tier IV emissions standards are required for new diesel products. Dealers face significant fines for selling modded equipment, but they are not the emissions police. The EPA does their own enforcement and has their own schedule of fines for equipment owners that are out of compliance.

When it comes to safety, the owner of the product is wholly responsible for errors of use. Every sales contract document specifically disclaims responsibility for accidents or stupid handling post-purchase. Those that sell, rather than rent, do so in order to avoid any actual responsibility of ownership.

Lastly, the insurance industry exists to help owners buffer their potential risks. Lessors and lenders demand they be listed as an "Additional Insured" and not the OEM.

- *Opposition Argument: How would a farmer get access to service updates outside of the Dealer network?*

Under proposed Right to Repair legislation, manufacturers are responsible to provide independent or customer access to service updates. The method of distribution is up to the OEM. Service updates are likely to be created electronically, making the distribution extremely simple. If OEMs decide to use their dealer networks as distribution hubs, they will also need to make provision for service updates directly.

- *Opposition Argument: How much additional liability would fall on the manufacturer if independent repair were permitted?*

There is nothing in Right to Repair legislation that proposes any changes to liability law or personal injury law. Independent repair and owner-directed repair is the norm and has been for centuries.

While we appreciate that OEMs are often embroiled in litigation not of their making, that is because they are viewed as the "deep pockets" and most likely to settle out of court for some nuisance value. OEMs would not be held responsible in court if there was a case where an independent repair was the cause of the litigation.

Manufacturers contribute to their own legal vulnerabilities by refusing to provide the information and tools necessary for product owners to safely care for their own equipment. OEMs that provide information to make repairs as safely as possible make an affirmative defense, and are on better legal ground than those that hide information.

For further information, please contact us at info@repair.org.