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TESTIMONY

KEVIN MESSNER
SENIOR VP, POLICY & GOVERNMENT RELATIONS

ON BEHALF OF
THE ASSOCIATION OF HOME APPLIANCE MANUFACTURERS

BEFORE THE HAWAII STATE LEGISLATURE
HOUSE COMMITTEE ON CONSUMER PROTECTION & COMMERCE

HEARING
H.B. 1649
RELATING TO DIGITAL ELECTRONIC EQUIPMENT REPAIRS

FEBRUARY 2, 2018

Chairman Takumi, Vice Chair Ichiyama and members of the Committee, I am submitting this testimony on behalf of the Association of Home Appliance Manufacturers (AHAM). We strongly urge the committee to oppose H.B.1649, relating to digital electronic equipment repairs. Similar bills have been introduced in other states, but after closer consideration of the implications, have not been enacted into law.

AHAM believes that H.B. 1649 is overly broad. The bill requires that manufacturers make available “[t]o independent repair providers or owners of equipment manufactured by the original equipment manufacturer, diagnostic and repair information, including repair technical updates, schematic diagrams, updates, corrections to embedded software, and safety and security patches.” Further, the bill would require this information be “made available at no charge or for no more than what the original equipment manufacturer would charge to make the same information available to an authorized repair provider.” This requirement and the definition of “Original equipment manufacturer” and “Equipment,” which includes a broadly and undefined term “digital electronic device,” can be interpreted to include the home appliance industry and, therefore, raises serious questions that AHAM strongly urges this committee to carefully consider.

AHAM represents manufacturers of major, portable and floor care home appliances, and suppliers to the industry. AHAM’s membership includes over 150 companies throughout the world. AHAM members employ tens of thousands of people and produce more than 95% of the household appliances that are shipped for sale within the United States. The factory shipment value of these products is more than \$38 billion annually. The home appliance industry, through its products and innovation, is essential to consumer lifestyle, health, safety and convenience. Through its technology, employees and productivity, the industry contributes significantly to the US job market and the nation’s economic security. Home appliances also are a success story in terms of energy efficiency and environmental protection. The purchase of new appliances often represents the most effective choice a consumer can make to reduce home energy use and costs.

Home appliance manufacturers are continuously innovating in order to make better and more functionally convenient products for consumers. This includes ensuring that consumers have access to highly educated, trained and certified repair technicians. Home appliance manufacturers not only ensure that authorized repair providers are properly trained and certified, manufacturers also take necessary precautions so that when a repair provider enters a private home that the home owner as well as the property are safe and secure. The fact that repair providers enter consumers’ homes to conduct appliance repairs presents a different set of circumstances regarding the repair of digital electronic equipment.

H.B. 1649 comes into conflict with important industry doctrines:

- **Safety:** H.B. 1649 poses serious product, property and consumer safety concerns.

- **Cyber Security:** H.B. 1649 requires manufacturers to make certain technologies available to independent third parties who may not have the proper certification and training thus exposing the home to cyber threats.
- **Manufacturer's Warranty:** H.B. 1649 negates a manufacturer's ability to honor factory warranties by allowing independent third parties access to component parts and all diagnostic information.

Safety

Safety is a top priority for AHAM members. The industry designs appliances that are as safe as they are useful and consumers recognize this commitment. Today there are more than 860 million appliances in use largely without incident and 93 percent of consumers believe home appliance manufacturers do a good job in providing safe and quality appliances. Moreover, another 85 percent understand that safety policy is a top priority for the industry. The primary reason that H.B. 1649 is of concern to the home appliance industry is the broad safety concerns presented by the legislation. There are three principal safety concerns that H.B. 1649 presents: product safety, consumer safety and property safety.

Product Safety

H.B. 1649 requires that manufacturers make all diagnostic and repair documentation available to independent third parties or equipment owners. Today, home appliances contain highly advanced operating systems and many of these products are considered smart or connected devices.

Manufacturers develop diagnostic tools for certified engineers who have the educational and technical background and training necessary to troubleshoot, diagnose and conduct repairs to the appliance. H.B. 1649 would broadly expand the universe of technicians that could access diagnostic tools and information. Also, manufacturer authorized servicers are typically required to perform repairs with manufacturer authorized parts that have been tested and qualified to meet the reliability and safety requirements of the home appliance product. Opening up the repair process to any third party services will loosen the control in this area significantly and could have a considerable impact on the safety and reliability of the product. In addition, manufacturers control the software used for service technicians. Without proper training, significant damage to the appliance and the home can occur if these tools are improperly used.

Today, modern appliances contain sophisticated and technologically advanced electronics and internal controls that are uniquely designed and programmed for specific products. These electronics and internal controls contain safety features (both software and hardware) that are relied upon for the safe operation of the appliance. Manufacturers very strictly and carefully control the access to these features by their own certified service professionals when performing any diagnostics and repair. Manufacturers often invest substantial resources to ensure diagnostic tools are impervious to failure and tampering by the manufacturers own agents, the manufacturer will employ software and Information Technology tools specific to its agents to guarantee the service. The same cannot be ensured once these tools are opened up to third party servicers. It could be detrimental to the inherent safety of the appliance if access were to

be granted in the public domain where defeating any of these features (either intentionally or inadvertently) could happen during diagnostics and repair, which could then create potential safety hazards to the consumer.

For example, the home appliances industry is constantly innovating and advancing our products in order to deliver optimum solutions to consumers, which are energy efficient and continually better for the environment. Newer refrigerant gases that are non-ozone depleting and have very low global warming potential are an example. Comprehensive training is required in order for a technician to handle and conduct repairs on systems that contain different types of refrigerant. Mixing refrigerant types can be problematic and dangerous. An older product designed to operate with R134a gas refrigerant does not have the appropriately designed relays and electrical mechanical components for the newer R600a refrigerant. R600a gas is a flammable refrigerant gas that has positive attributes to reduce climate change and has started to be added to new refrigeration products in the U.S. market. It is critical that technicians are properly trained to identify which product utilizes which gas and how the gas is properly handled to ensure the utmost safety.

Authorized servicers can be directly trained and tools provided to 1) allow technicians to understand the systems included on every model and 2) repair those products appropriately. The same concerns hold true for the manipulation of LPG and natural gas in cooking products, dryers and water lines and the appropriate manipulation of 110V and 220V electrical connections. If not properly installed, leaks and overheating can occur.

H.B. 1649 evades many of the safety provisions that Underwriters Laboratory (UL) and others test against. UL standards and independent laboratory testing ensure that the products the customer is purchasing are safe; requiring OEMs to provide these tools circumvents the role of safety standards.

Property Safety

Appliance repairs when not performed correctly can be the cause of property damage, e.g., flooding and fires. Insurance claims as well as increases in homeowner's insurance premiums could result if independent third parties improperly perform in-home repairs. Additionally, in the event of significant property damage and/or personal injury, the manufacturer could face legal claims.

Manufacturers, in general, have process and procedures in place that track repairs completed through their servicer network. This allows the manufacturer to create traceability of repairs for their customers/consumers and is one of the critical factors if fire or another sort of property damage were to occur. Opening up this domain to third-party servicers, inhibits the ability for manufacturers to track any repairs made to home appliance products and has the potential to create issues in determining liability if the source of the repairs cannot be readily identified. Traceability is also important because improper repair or servicing can be a cause of appliance fires. Finally, this assists insurance companies and other entities if the incident requires investigation.

Consumer Safety

The nature of appliance repairs requires repair technicians to enter the homes of consumers. In-home safety and security is of paramount importance to appliance manufacturers and we assume the same holds true for independent service technicians. Manufacturers who certify technicians may require extensive background checks as well as drug screening, and as previously mentioned technical and safety training. If manufacturers are required to make their technical information public knowledge, they no longer have the ability to address whether the technicians who are entering the homes of consumers have completed the necessary technical, safety and security checks.

Cyber Security

In an increasingly connected world, the threat of cyber-attacks has extended into the home through connected technology. In fact, connected devices will be in nearly every home by 2020, and the total number of those devices is expected to reach 26 billion. Home appliances touting “smart features” are already in the market. AHAM’s member companies are leading the way in bringing connected appliances to customers around the world and are committed to addressing those concerns so that consumers are able to access the full, life-enhancing potential of connected appliances while minimizing potential cyber threats. Without the proper training, independent third party service providers could unknowingly expose consumers to cyber threats while conducting un-secured repairs to these products.

H.B. 1649 completely disregards the security implications brought to light by requiring the release of firmware and other software systems within home appliances. Hacking, data privacy, cyber threats are real concerns, as homes become more connected. AHAM, therefore, cannot comprehend why H.B. 1649 has ignored these very real threats and will likely make home appliances more vulnerable to cyber-threats and corruption. For example, security key pairings have to be embedded in the firmware. If a manufacturer is required to provide the firmware to third parties, the manufacturer is providing the keys to the operating system, once the keys become public it completely breaks the firmware security chain and the home appliance is not fully secure.

This also applies to remote and wireless interaction. Connected appliances in some circumstances require Wi-Fi connectivity to the consumer’s personal in-home network. Manufacturer authorized technicians when performing repairs or instructing consumers on the use of such products could gain access to those private networks. Manufacturer authorized technicians are under contract, for whom the authorized service providers may have traceability. Opening that access up to independent third parties may give unauthorized personnel access to consumer's private Wi-Fi network and create opportunity for further risk exposure.

Simply put – H.B. 1649 and cybersecurity are like oil and water.

Manufacturer's Warranty

Most manufacturers often explicitly state that the warranty on the product is void in case of unauthorized repairs. It is because it is not possible for a manufacturer to warranty that a product will meet the design and manufacturing specifications that may have been repaired by a third-party servicer. As such, this bill has the potential to harm consumers rather than providing benefits.

Written warranties on new major appliances usually cover the cost of parts and labor to repair defects in materials or workmanship, which appear under normal home use. Warranties often cover defects over a predetermined period after purchase or delivery. It would be extremely difficult for manufacturers to honor product warranties in circumstances in which independent third party servicers are granted full access to manufacturer's software, parts and products because they could damage a product with an improper repair. This could lead to a shortening of warranty commitments and protections for the consumer.

Conclusion

Thank you for the opportunity to present testimony to the committee. As you can see, H.B. 1649 raises serious safety, cyber-security and contractual concerns. AHAM strongly urges you to reconsider this bill for the reasons set forth in this testimony. At the very least, H.B. 1649 should be amended to reflect the appliance industry views.



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Honolulu, Hilo, Wailuku, Kona, Lihue

January 31, 2018

The Honorable Roy M. Takumi
Hawaii State Capitol
415 South Beretania St Rm 320
Honolulu, HI 96813

Dear Representative Takumi,

My name is Jeff Feyerisen and my family owns Allied Machinery Corporation which is located in Waipahu. Our dealership has operated in this community for 40 years and currently employs 65 of our friends and neighbors.

As you may know, consumer advocate groups across the country have begun promoting what is commonly known as "Right to Repair" legislation. This type of legislation has recently been introduced in Hawaii as HB 1649. These bills seeks to make repair information and tools for cutting-edge, sophisticated and often dangerous equipment used in agriculture, construction and other industries available to customers and independent repair shops outside of the authorized dealer network.

Proponents of this type of legislation argue that Right to Repair will lead to increased competition and decreased prices for consumers. What proponents won't tell you is that this type of legislation will incentivize a race to the bottom for consumers, equipment technicians and the environment in several ways.

First, this type of legislation allows unqualified and untrained individuals to "repair" sophisticated equipment which, if performed improperly, could result in death or serious injury to the equipment operator or others.

Second, Right to Repair laws, such as HB 1649, are likely to lead to the circumvention of safety and environmental preservation mechanisms which are required by law and strictly observed by authorized dealers. What's more, these types of modifications can void the manufacturer's warranty for the equipment in question, thereby leaving the consumer in a disadvantageous position.

Third, this legislation puts authorized dealers, who invest heavily in training and safety infrastructure, at a price disadvantage against those who choose to skip such measures. A majority of independent repair shops and consumers lack the resources to invest in the safety and technology training that is required of authorized dealerships. In essence, these operators want to "fix" equipment without investing in the educational and safety mechanisms that ensure that it is done safely and correctly.

Finally, this requirement would place the risk and liability on third parties unable to support that due to lack of assets and/or lack of appropriate insurance coverage.

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Our dealership strives to bring our customers value in all we do. To do so, we spend significant capital each and every year to ensure our technicians have the latest safety and technology training. We believe that our investment in our employees leads to more efficient and reliable repair processes which, in turn, benefit our customers' own bottom lines as well as helping to ensure their safety.

Given these significant issues, I ask that you oppose HB 1649. It is wrong for our state and our community.

Sincerely,

A handwritten signature in black ink that reads "Jeff Feyerisen" with a long horizontal flourish extending to the right.

Jeff Feyerisen

President

Allied Machinery Corporation

Hawaii HB 1649: Digital Electronic Equipment Repair Act

Position:

CNH Industrial (CNHI), manufacturers of Case IH and New Holland brands of farm equipment opposes Hawaii HB 1649 which seeks to make diagnostic and repair information, including repair technical updates and embedded software updates and corrections, available to any independent repair provider in the State.

Background:

Digital Equipment Repair legislation was born out of the consumer electronics industry where consumers typically don't face potential costly risks associated with repair of consumer electronic products;



CNHI respects the long-standing tradition of equipment owners repairing their equipment and choosing their service providers. We work closely with our authorized dealer organization (Allied Machinery Co. in Hawaii) to ensure that customers have access to highly trained, well equipped technical and repair personnel, who are supported by significant investment in repair parts, facilities and systems.

HB 1649 is a consumer electronics bill that captures farm and construction equipment within. The issue of "Fair Repair" touches a number of critical topics ranging from environmental regulation, consumer safety, consumer training, dealer and manufacturer liability, to ultimate accountability that the customer's machine is operating in the manner and capability it was designed to. HB 1649 addresses none of these critical topics.

HB 1649 fails to anticipate execution and future technology of heavy-duty equipment:

- The "how and when" and realities of implementing diagnostics capability to consumers in an efficient and cost effective manner;
- The fast advancing technology impacting heavy-duty equipment:
 - remote – dealer direct to machine – diagnostics;
 - "smart tractors" that provide sensing and control to-and-from trailing implements;
 - autonomous tractors soon to be realized in the marketplace;

HB 1649 Over-reaches the intent of the bill:

- It is an over-reach to mandate the "release of diagnostic repair tools incorporating the same diagnostic, repair and remote communications

capability that such manufacturer makes available to the “repair or engineering personnel employed by such manufacturer”. Engineering personnel possess programming capabilities that allow for testing program code. This presents a clear opportunity for infringement of U.S. copyright law as well as dangerous machine manipulation.

- The U.S. Copyright Office ruling, issued in October, 2015, strikes a balance by giving the equipment owner limited access to embedded software for the purpose of assessing, repairing or modifying on-board control systems, while preventing the owner from transferring this authority to third parties. These limitations were deemed necessary to protect against potential infringement of the manufacturer’s copyright interests.
- Access to information that would allow changes to a machine’s data-management systems must be carefully controlled to ensure machine functionality, safety, and emissions compliance, and to preserve product warranties.
- HB1649 implies that manufacturers would be required to sell parts directly to consumers. This requirement infringes on existing contractual relationships with dealers.

Industry is best equipped to solve the issue:

- Over the last 12-months of research on the topic of “right-to-repair” we have been told by farmers, Farm Bureau representatives, state legislators, construction contractors and third party repair operations that:
 - Owners want to diagnose an equipment issue;
 - Owners want access to service manuals and;
 - Owners want to self-determine how to implement service for their equipment;
- The farm equipment industry has a long history of solving issues without legislative interference. The ultimate diagnostic solution must be efficient for farm producers and construction contractors e.g.:
 - Sensible standardization – where very little exists now;
 - Cost effective;
 - Scalable and executable in terms of access and ease of use;
 - Training and documentation;
 - Liability, licensing and warranty;
 - Third party re-seller commercial arrangements;
 - Third-party software commercial arrangements;



- Industry is best served to satisfy this need and recently announced an industry wide commitment to provide electronic diagnostics to machine owners starting with model year 2021.

We very much appreciate your consideration and we welcome the opportunity to create a solution that meets the needs of Hawaii farmers and construction contractors..

Please feel free to call upon us if we may provide input.

Sincerely,

George Whitaker

George Whitaker
State Government Affairs
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Email: george.whitaker@cnhind.com

CNH Industrial America (CNHI)

CNHI is a global manufacturer of Case IH and New Holland brands of agricultural equipment, and, Case and New Holland brands of construction equipment. Our brands are sold and serviced by dealers in all 50 states and over 160 countries around the globe.

CNHI in Hawaii:

CNHI has a long standing dealer relationship with Allied Machinery Co. with locations on Oahu, Hilo, Maui and Kauai



OUTDOOR POWER EQUIPMENT
INSTITUTE

January 31, 2018

Transmitted via e-mail

Representative Roy M. Takumi
Chair, House Committee on Consumer Protection & Commerce
Hawaii State Capitol
Room 320
415 South Beretania Street
Honolulu, HI 96813

Representative Linda Ichiyama
Vice-Chair, House Committee on Consumer Protection & Commerce
Hawaii State Capitol
Room 327
415 South Beretania Street
Honolulu, HI 96813

Re: OPEI opposition to: HB 1649 – Fair Digital Electronic Equipment Repair Act

Dear Representatives Takumi and Ichiyama:

The Outdoor Power Equipment Institute (“OPEI”) writes in opposition to HB 1649 which would inappropriately provide access to sophisticated coding and diagnostic information for the repair and modification of “equipment, digital electronic devices”.

OPEI is an international trade association representing the manufacturers and their suppliers of consumer and commercial outdoor power equipment such as lawnmowers, garden tractors, utility vehicles, trimmers, edgers, chain saws, snow throwers, tillers, leaf blowers and other related products. OPEI member companies and their suppliers contribute approximately \$13 billion to US GDP each year. OPEI members currently distribute their products across all 50 states, through a diversity of retail outlets including independent dealers who are authorized to sell and service their equipment through a contractual arrangement.

The subject legislation defines its scope [equipment, digital electronic device] such that it would place new adverse requirements on virtually all of our members and the overwhelming majority of the products they manufacture. Our members make considerable investments in developing cutting-edge technology, which often includes electronic functions and controls reliant upon embedded software for proper operation, diagnostics, and repair. To support such technology and customer needs, our members likewise make considerable investments in training authorized technicians to correctly analyze and address service issues. In the case of emission controls, protected access to embedded software is necessary to assure that products are not improperly repaired or altered in ways which cause emissions to exceed legal limits. The safe and efficient operation of this equipment is of the utmost importance to our members, for the safety and well-being of their customers. In reality, almost all service information regarding parts, services and best practices for equipment is available to consumers – often at no cost to the consumer.

If adopted, this legislation would turn back long-standing and necessary protections of information necessary for digital repair, with significant potential consequences for the manufacturers. Further, this legislation would grant compulsory licenses to intellectual property without compensation to the owners (manufacturers).

Other examples of the adverse consequences of this legislation, impacting manufacturers and in many cases consumers, are:

- a.** Disclosure of proprietary information to the general public;
- b.** Dilution of time / training investment in servicing dealers;
- c.** Safety concerns if information is not used as intended;
- d.** Alterations to embedded software, which can result in:
 - i.** The unsafe operation of the product;
 - ii.** Disruption of the product's capabilities and performance;
 - iii.** Illegal emission controls alterations;
 - iv.** The voiding of a product's warranty;
 - v.** A lack of transparency during resale;
 - vi.** A hindered customer experience.

OPEI recognizes the consumer interest in additional tools to help diagnose issues with their equipment and determine their best option for repair to maximize efficiency and minimize downtime. To this end, our industry is interested in a dialogue about service information issues with all affected stakeholders to eliminate the need for such legislation. OPEI hopes that through such a dialogue a consensus can be reached which meets consumer needs while protecting information proprietary to manufacturers. In the end, all solutions must first provide for the safety of products as intended by the manufacturer.

OPEI very much appreciates the opportunity to provide comments on this legislation, and would be happy to provide further information if requested.

Best regards,



Daniel J. Mustico
Vice President, Government & Market Affairs
Outdoor Power Equipment Institute, Inc.
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cc: Members of the House Committee on Consumer Protection & Commerce
Representative Scott Y. Nishimoto, Chair, House Committee on Judiciary
Representative Joy A. San Buenaventura, Vice-Chair, House Committee on Judiciary



Testimony of Lisa Volpe McCabe
In Opposition to Hawaii House Bill 1649
Before the House Committee on Consumer Protection & Commerce
January 31, 2018

Chair Takumi, Vice Chair Ichiyama and Members of the Committee, thank you for the opportunity to provide this testimony on behalf of CTIA®, the trade association for the wireless communications industry, in opposition to House Bill 1649. This legislation seeks government regulation of the relationship between original equipment manufacturers and equipment repair facilities.

HB1649 would mandate manufacturers of digital electronic products sold or used in Hawaii to make available for purchase that equipment's diagnostic and repair information, software, tools and other parts to independent repair facilities and device owners.

We have strong concerns about the safety of the servicer who may cause himself or herself or others harm by doing certain repairs without proper training. There is also concern about the consumer whose personal property and safety may be endangered by repairs that are performed improperly. HB 1649 could result in unintentional adverse impacts to the consumer. Improper repairs may also endanger networks and peripheral equipment that may be connected to a repaired device, causing additional harm and safety issues.

Currently and historically, many electronics are produced as highly-integrated devices and therefore not made to be dismantled unless done so by properly trained personnel. Customer safety, security and privacy are fundamental goals in the design of electronic devices. Smartphones, computers, servers and other devices are constantly at risk from hackers and any weakening of those standards such as sharing sensitive diagnostic tools will increase risks to consumers.

Proper repair is extremely detailed and complicated. Manufacturers and providers want to ensure that their products are serviced by professionals who understand the intricacies of their products and have spent time obtaining the specific knowledge necessary to safely repair the device and return it to the consumer without compromising those standards. Manufacturers have invested



heavily in their brands and have gone to extraordinary lengths to maintain the quality of the device carrying that brand for the first owner and all others for the life of the device.

Furthermore, HB 1649 is not necessary as consumers already have options for repairing phones and tablets in Hawaii and throughout the country. Many manufacturers have programs that establish criteria and capabilities in which independent repair facilities can become authorized repair facilities. These authorized repair facilities work under contract with many manufacturers and providers to ensure repairs are made properly and safely. Their authorization to perform repairs ensures that the changes made to the devices are compatible with current technology and the networks on which they operate. This bill will harm the marketplace by weakening the relationship that manufacturers have with authorized repair facilities. Without the training and vetting of authorized service providers – implemented through enforceable legal contracts that ensure compliance and accountability that protect consumers – manufacturers would not be able to stand behind their work, warranties, technical support, ongoing training and business support.

HB 1649 seeks to establish inappropriate intervention in the marketplace. By mandating the distribution of electronic diagnostic and repair information to anyone who asks, in contravention to any established contractual relations, the marketplace is distorted unnecessarily. Because a vibrant repair marketplace already exists; one in which consumers already have choices regarding who repairs their electronic devices, government interference in the marketplace is not necessary. Therefore, we respectfully urge you not to advance HB 1649.



AHAM
ASSOCIATION OF HOME
APPLIANCE MANUFACTURERS



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AIR-CONDITIONING, HEATING,
& REFRIGERATION INSTITUTE
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NetChoice



NEMA



SIA
SECURITY INDUSTRY ASSOCIATION



TIA
ADVANCING GLOBAL COMMUNICATIONS

State Privacy and Security Coalition, Inc.



the **toy**
association



TECHNET
THE VOICE OF THE
INNOVATION ECONOMY

February 2, 2018

The Honorable Roy M. Takumi
Chair, House Committee on Consumer Protection and Commerce
Hawaii State Capitol
415 South Beretania Street
Honolulu, HI 96813

Subject: HB 1649 – Electronic Products Manufacturers Opposition

Dear Chair Takumi and members of the Committee,

On behalf of the hundreds of manufacturers and businesses our organizations represent, we appreciate the opportunity to share our perspective on HB 1649, legislation that would mandate original equipment manufacturers (OEMs) of digital electronic products sold in Hawaii to make available those products' diagnostic and repair information, software, tools, and parts to independent repair facilities and product owners.

Our organizations represent a broad spectrum of manufacturers of consumer electronics, home appliance, HVACR, security equipment, medical devices, toys, and other connected electronic products that stand behind the quality of their products. Our members develop products and services for a wide range of commercial, government, and consumer users that are often highly regulated. Their customers depend on these products to operate safely, securely, and accurately, whether they are being used to support banking and commercial transactions, transmit and store sensitive personal data, support industrial operations, medical applications, or deliver entertainment and other services. As businesses, government agencies, and consumers continue to increase their reliance on connected devices to help deliver efficiency, convenience, and services, it is important to remain vigilant and focused on mitigating the risks associated with the safe and secure operation of those products.

We believe that, if enacted, this legislation would lead to grave unintended consequences to the operation, security and safety of those products. Agreements between OEMs and authorized repair networks, which include businesses of all sizes, would be undermined and provide no protection or quality assurance for consumers. Further, such legislation mandates the disclosure of proprietary information that may violate federal copyright protection and state trade secrets laws. Finally, numerous options are already available to consumers to repair their products, and thus the legislation is unwarranted. For these reasons, we urge the General Assembly against moving forward with this legislation.

The legislation threatens consumer security and safety

One of our chief concerns with this legislation is its potential to weaken the privacy and security features of various electronic products. The security of user information on these products is of the utmost importance to consumers that rely on them. Industrial equipment, home appliances, smartphones, computers, servers, consumer electronics, medical devices, and other connected devices are at risk of hacking, and weakening of the privacy and security protections of those products will increase risks to consumers. With access to technical information, criminals can more easily circumvent security protections, harming not only the product owner but also everyone who shares their network. In an era of sophisticated cyber attacks, we should not make it easier for criminals to hack security provisions.

Consumers, small businesses, large businesses, public schools, hospitals, banks, and industrial manufacturers all need reasonable assurance that those they trust to repair their connected devices will do so safely, securely, and correctly. State law should not mandate that all manufacturers must provide a “how to” manual for any product and provide it to anyone who asks.

Manufacturers offer authorized repair networks to provide consumers with assurance that their products are serviced by properly trained and vetted repair professionals that have the necessary skills to safely and reliably repair electronic products. Some types of repairs can be extremely detailed, complicated, performed in someone’s home, and, in some cases, dangerous to perform for those without proper training. Manufacturers want to ensure that their products are serviced by professionals who understand the intricacies of their products and have spent time procuring the knowledge necessary to safely repair the product and return it to the consumer without compromising those standards or undermining the safety and security of their products. Authorized repair networks not only include training requirements, but also ensure that only the correct parts and procedures will be used. Consumers are protected by warranties or other means of recourse. The legislation provides no such protections for consumers, repair shops or manufacturers.

When an electronic product breaks, consumers have a variety of repair options, including using an OEM’s authorized repair network, which often include local repair service providers as well as mail-in, and even in-house repair options for some products. Consumers may also choose to use one of many independent repair service providers; although they do so without the quality assurance provided by using a manufacturer’s authorized network provider. The point is that the free market economy

already provides a wide range of consumer choice for repair with varying levels of quality, price and convenience without the mandates imposed by this legislation.

Manufacturer authorized networks of repair facilities guarantee that repairs meet OEM standards. If an OEM's brand and warranty are to stand behind repair work and assume product liability, it is only reasonable that the repair facility demonstrates competency and reliability. Without the training and other quality assurance requirements of authorized service providers – implemented through enforceable legal contracts that ensure compliance and accountability that protect consumers – manufacturers would not be able to stand behind their work, warranties, technical support, ongoing training, and business support.

This legislation mandates the disclosure of protected proprietary information

Manufacturers make significant investments in the development of products and services, and the protection of intellectual property is a legitimate and important aspect of sustaining the health of the vibrant and innovative technology industry. However, this legislation puts at risk the intellectual property that manufacturers have developed.

Consumer electronics use on-board software (i.e., firmware) to help control the product. That firmware is subject to copyright under federal law, and Section 1201 of the Digital Millennium Copyright Act, a related federal law, ensures that bad actors cannot tamper with the digital rights management that copyright owners use to protect this software. The problem is that making repairs to hardware components may necessitate modifying the firmware so that the product will work again.

Importantly, however, firmware controls many other product functions, and opening it up for repair purposes exposes to potential tampering other, more sensitive functions, such as security features. Given the scope of products covered and what must be provided under the legislation – including diagnostics, tools, parts, and updates to software – it is highly likely some of that information would be proprietary. Providing unauthorized repair facilities and individuals with access to proprietary information without the contractual safeguards currently in place between OEMs and authorized service providers places OEMs, suppliers, distributor and repair networks at risk.

Conclusion

Thank you for your consideration of our perspective on this issue. We bear a significant responsibility to the businesses, governments, and individual consumers that depend on us to protect the safety and security of their electronic products, as well as the sensitive data they contain. We are committed to working with you to promote digital privacy and security, while resisting unwarranted state intervention in the marketplace with one-size-fits-all mandates that compromise consumer safety and protection.

Sincerely,

Air Conditioning, Heating and Refrigeration Institute (AHRI)
Association of Home Appliance Manufacturers (AHAM)
Computing Technology Industry Association (CompTIA)

HB 1649 – Electronic Products Manufacturers Opposition
February 2, 2018

Consumer Technology Association (CTA)
CTIA – The Wireless Association
Entertainment Software Association (ESA)
Information Technology Industry Council (ITI)
Internet Coalition
National Electrical Manufacturers Association (NEMA)
NetChoice
Security Industry Association (SIA)
State Privacy and Security Coalition, Inc.
TechNet
Telecommunications Industry Association (TIA)
The Toy Association

cc: Members of the House Committee on Consumer Protection and Commerce
The Honorable Scott Nishimoto

HB-1649

Submitted on: 2/1/2018 6:05:27 PM

Testimony for CPC on 2/2/2018 2:00:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Joani Woelfel	Far West Equipment Dealers Association	Oppose	No

Comments:

FWEDA opposes Hawaii House Bill 1649 — ‘Fair Digital Electronic Equipment Repair Act’

The Far West Equipment Dealers Association opposes HB 1649, “Fair Digital Electronic Equipment Repair Act,” as it seeks to clear the way for unbridled access to technology, software code and related tools to repair expensive and sophisticated machinery by potentially unqualified and unskilled individuals.

Far West Equipment Dealers Association represents agricultural, industrial, material handling, hardware, lumber, outdoor power and rental equipment dealers in Arizona, California, Colorado, Hawaii, Nevada, Utah and Wyoming. This comprises nearly 300 equipment dealerships that employ thousands of individuals across seven states whose contributions serve to enhance a healthy economy.

Qualified technicians employed by our dealers invest many years in training and developing their skillset to keep pace with the growing demands of intricate technology and safety features in today’s modern equipment industry. As emerging technology continues to dominate the landscape, so does the demand for skilled technicians to work on this equipment. In addition to maintaining the integrity of the machinery our dealers sell and service, this specialized workforce improves the economic circumstances for individuals and their families, and significantly improves the well-being of our communities.

The Right to Repair is not a *Right to Modify*

“Right-to-Repair” legislation as written jeopardizes the safety and integrity of machinery because it grants access to source code that:

- Risks permitting a user to override safety features and modify engines to increase horsepower beyond OEM ratings
- Compromises machinery that must comply with environmental and emissions standards

- Undermines manufacturers' intellectual property and stifles innovation; it will deter manufacturers and dealers who invest considerable resources in developing cutting-edge technology

FWEDA endorses a customer's Right-to-Repair as demonstrated by efforts of the Equipment Dealers Association and the Association of Equipment Manufacturers in making available the necessary tools that end-users need to navigate onboard technology. Users will soon have access to onboard diagnostics tools via in-cab display or wireless interface, electronic diagnostic service tools and training on how to use both. Manufacturers and dealers continue to make available manuals, product guides and product service information. Please refer to <http://www.r2rsolutions.org/> for more information about these tools.

This commitment to customer support makes Right-to-Repair legislation as written unnecessary. While FWEDA opposes HB 1649, at a minimum, should this legislation proceed, the bill should not apply to off-highway and stationary engines and equipment. To that end, we would request this class of equipment be removed from the proposed legislation as set forth in the following language that includes definitions of (i) nonroad engines, equipment, and vehicles and (ii) stationary engines and equipment.

Proposed Amendments to Hawaii HB 1649

Definitions:

The definitions in this section apply throughout this chapter unless the context clearly requires otherwise.

“Nonroad engine” means an internal combustion engine, including the fuel system, (i) that is not used in a motor vehicle or a vehicle used solely for competition, or (ii) that is not subject to the standards of performance for new stationary sources or the emission standards for new motor vehicles or new motor vehicle engines promulgated under the Clean Air Act, 42 U.S.C. §§ 7411, 7521.

“Nonroad equipment” means equipment that is powered by a nonroad engine and that is not a motor vehicle, a vehicle used solely for competition, or a nonroad vehicle.

“Nonroad vehicle” means a vehicle that is powered by a nonroad engine and that is not a motor vehicle or a vehicle used solely for competition.

“Nonroad engine, nonroad equipment, or nonroad vehicle dealer” means any person who is engaged in the sale or the distribution of new nonroad engines, new nonroad equipment, or new nonroad vehicles to the ultimate purchaser.

“Nonroad engine, nonroad equipment, or nonroad vehicle manufacturer” means any person engaged in the manufacturing or assembling of new nonroad engines, new nonroad equipment, or new nonroad vehicles, or importing such engines, equipment, or

vehicles for resale, or who acts for and is under the control of any such person in connection with the distribution of new nonroad engines, new nonroad equipment, or new nonroad vehicles, but shall not include any dealer with respect to new nonroad engines, new nonroad equipment, or new nonroad vehicles received by him in commerce.

“Stationary engine” means an internal combustion engine that is not used in a motor vehicle, a vehicle used solely for competition, a nonroad vehicle, or nonroad equipment.

“Stationary equipment” means equipment that is powered by a stationary engine and that is not a motor vehicle, a vehicle used solely for competition, a nonroad vehicle, or nonroad equipment.

“Stationary engine or stationary equipment dealer” means any person who is engaged in the sale or the distribution of new stationary engines or new stationary equipment to the ultimate purchaser.

“Stationary engine or stationary equipment manufacturer” means any person engaged in the manufacturing or assembling of new stationary engines or new stationary equipment, or importing such engines or equipment for resale, or who acts for and is under the control of any such person in connection with the distribution of new stationary engines or new stationary equipment, but shall not include any dealer with respect to new stationary engines or new stationary equipment received by him in commerce.

Exclusions:

Nothing in this section applies to:

(a) nonroad engine, nonroad equipment, or nonroad vehicle manufacturers, any product or service of a nonroad engine, nonroad equipment, or nonroad vehicle manufacturer, or nonroad engine, nonroad equipment, or nonroad vehicle dealers; or

(b) stationary engine or stationary equipment manufacturers, any product or service of a stationary engine or stationary equipment manufacturer, or stationary engine or stationary equipment dealers.

Finally, we appreciate your attention to our concerns about this proposal, and we request an opportunity to discuss ways we can work together to find resolutions.

Respectfully,

Joani Woelfel

President & CEO

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02/01/2018

RE: Oppose HB 1649 "Fair Digital Electronic Equipment Repair Act"

Dear Committee:

I am writing to voice significant concern with HB 1649, which requires original equipment manufacturers of digital electronic devices to make diagnostic and repair information available to device owners and independent repair providers. Such "Right to Repair" initiatives often address two similar but very distinct issues: access to diagnostic tools and repair information, and access to software code embedded in machinery or in a device.

American Machinery is a farm, construction, forestry and turf equipment dealership with 5 locations in Hawaii. We employ more than 60 people. Our dealership strives to bring our customers value in all we do. To do so, we spend significant capital each and every year to ensure our technicians have the latest safety and technology training.

While John Deere equipment has become more sophisticated, Deere supports the customer's right to repair and has built advanced diagnostic capabilities into equipment that are available to the owner, dealers, or others. And for those customers who require even greater diagnostic capabilities, John Deere provides subscription access to "Customer Service Advisor" – a specialized diagnostic tool similar to the tools we use to support our customers.

Customers should be able to expect the same level of information for their tractors and combines across manufacturing brands. It is an appropriate solution that makes so-called "Right to Repair" legislation unnecessary.

That is why manufacturers and dealers have made an industry commitment to make available by model year 2021, the tools farmers need to navigate onboard technology. In the near future, end users will have access to on-board diagnostics tools via in-cab display or wireless interface, electronic diagnostic service tools and training on how to use both. Manufacturers and dealers will also make available manuals, product guides, and product service information. You can learn more at: <http://www.r2rsolutions.org/>

However, to the extent the owner has the right to lawfully repair his or her equipment, John Deere recommends against unauthorized modification of the embedded software code. Modifying or reverse engineering the embedded software can create a situation where the vehicle does not meet customer expectations, may exceed acceptable emission levels, or might create an unsafe environment for those operating the vehicle, those near the vehicle, or those repairing the vehicle.

Customers are able to farm better today because of better, smarter machines. The advanced software that powers these machines enables more uptime and better diagnostics, in addition to all the very important efficiencies they bring to the job of farming—like speed and precision—than farmers have ever had before.

Right to Repair is a complicated, yet important, issue. We believe the best solutions can be achieved when all parties talk together and allow the marketplace to shape the most appropriate solutions. The best solutions are not likely to come via legislative mandates. For these reasons, I urge you to oppose HB 1649.

Sincerely,

Andrew Lindstrom
Integrated Solutions Manager / IT
American Machinery

HB-1649

Submitted on: 1/31/2018 9:31:36 PM

Testimony for CPC on 2/2/2018 2:00:00 PM

Submitted By	Organization	Testifier Position	Present at Hearing
Patrick Karjala		Support	No

Comments:

Dear House committee members on Consumer Protection & Commerce,

I am writing today to offer my SUPPORT for HB1649.

In this day and age, vendor lock in and repair is a serious issue. The devices and electronics we buy are "owned" by the manufacturer, and we only get the right to use them. At least this is how the manufacturer would have it. At no point is the owner allowed to perform their own repairs, or obtain the means to do so. This is often passed off as a safety issue. However, this also prevents qualified individuals from performing repairs or replacements of their own devices.

This is akin to a car dealer selling you a car, then telling you it if you change your own oil at any time, they will never replace your spark plugs.

Please help give the rights back to consumers to repair and maintain their own devices.

Thank you,

Patrick Karjala

Honolulu, HI