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TESTIMONY

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ON BEHALF OF
THE ASSOCIATION OF HOME APPLIANCE MANUFACTURERS

BEFORE THE VERMONT STATE LEGISLATURE
SENATE COMMITTEE ON ECONOMIC DEVELOPMENT, ECONOMY, HOUSING AND
GENERAL AFFAIRS

HEARING
SB 180
THE FAIR REPAIR ACT

FEBRUARY 7, 2018

Chairman Sirotkin, Vice Chair Clarkson 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 SB 180, the Fair Repair Act.

AHAM believes that SB 180 is overly broad. The bill requires that manufacturers make available “[t]o independent repair providers or owners of digital electronic products manufactured by the original manufacturer the same diagnostic and repair information, including repair technical updates, schematic diagrams, updates, corrections to embedded software, and safety and security patches timely, and for no charge or for the same charge and in the same format the original manufacturer makes available to its authorized repair provider and subcontract repair or refurbishment facilities.” This requirement and the definition of “Digital Electronic Product” in Section 2 of SB 180 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.

SB 180 comes into conflict with important industry doctrines:

- Safety: SB 180 poses serious product, property and consumer safety concerns.
- Cyber Security: SB 180 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: SB 180 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 SB 180 is of concern to the home appliance industry is the broad safety concerns presented by the legislation. There are three principal safety concerns that SB 180 presents: product safety, consumer safety and property safety.

Product Safety

SB 180 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. SB 180 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.

SB 180 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.

SB 180 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 SB 180 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 – SB 180 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, SB 180 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, SB 180 should be amended to reflect the appliance industry views.