



<b>HEALTH-READY COMPONENTS &amp; SYSTEMS RECOMMENDED PRACTICE</b>	<b>HRCS-N000002</b>
	<b>2021-09</b>
<b>RIGHT TO REPAIR</b>	

Modern surface and aerospace vehicles produce a significant quantity of maintenance and operating data relating to nearly all important vehicle systems. The advent of health-ready components is accelerating this trend. This data is widely recognized as valuable information which can be used to support maintenance, monitor operating conditions, and potentially predict impending problems and the remaining useful life of systems or subsystems. This policy statement addresses an owner's or operator's "Right to Repair," which is a special case of the Operating Data Ownership policy. This policy is focused on maintenance-related information and does not apply to clearly proprietary design content such as control logic.

In its most basic form, Right to Repair would simply require manufacturers to provide the same information to independent repair shops or organizations as they do to their licensed dealerships. Given this definition, one would expect little resistance from manufacturers. For example, automobile manufacturers have long offered reasonably priced, one-time or subscription-based access to their libraries of vehicle service information to any interested party. The libraries are updated multiple times per year and may be downloaded via the Internet, obtained as a set of DVDs, or via other reasonable means. Also, special maintenance tools (physical tools, fixtures, or computer-controlled devices) used in dealerships have largely been available for purchase by other companies. Similarly, aircraft manufacturers are required to produce instructions for continued airworthiness and maintenance manuals. The instructions specifically state that the holder of a design approval (i.e., the manufacturer) must make these instructions available to others who are required to comply with the terms of those instructions. Government regulators then hold the airlines or maintenance operators responsible to perform maintenance using the methods, techniques, and practices as defined by the OEM. As stated in the HRCS policy on Operating Data Ownership, it is inappropriate to provide maintenance-relevant data in proprietary formats requiring fees in order to access such information since this data is already owned by the asset owner or lessee. Value added services extending the value of such information may be negotiated commercially as long as those services are outside the scope of regulated maintenance.

A variety of legislation covering Right to Repair exists in the United States as well as in the European Union, Canada, Australia, Japan, and even China. U.S. federal Right to Repair legislation was first proposed in automotive in 2001 but was not passed at that time. The first U.S. legislation to take effect was the Massachusetts Right to Repair bill on July 31, 2012. Later, in 2014, the Automotive Aftermarket Industry Association, Coalition for Auto Repair Equality, Alliance of Automobile Manufacturers, and the Association for Global Automakers signed a Memorandum of Understanding that is based on the Massachusetts law, and which would commit the vehicle manufacturers to meet the requirements of the Massachusetts law in all fifty states. Consumer Reports had argued at that time that releasing "understandably secret details about vehicle security, smart-key codes, and engine immobilizer drives" would be a mistake. The Highway Loss Data Institute stated that it would be naïve to expect that the release of information regarding passive antitheft devices could remain uncompromised once disclosed.

Thus, Right to Repair is becoming increasingly problematic due to the rapidly growing complexity of the vehicle systems themselves (e.g., crash avoidance, automated driving, active vehicle control, etc.), as well as increasingly sophisticated maintenance support systems (e.g., vehicle health management systems incorporating prognostic capabilities in addition to traditional diagnostic capabilities). Also, many of the more-advanced vehicle systems are themselves dependent on other vehicle systems to operate properly. The manufacturer may of course choose to make some of the design IP available to third parties to enhance the value of their product at their option. Right to Repair proponents in the U.S. and Europe have been advocating greater and greater access to vehicle design IP information without reasonable safeguards being in place. This type of information sharing should be left to the discretion of the vehicle or component manufacturers, subject only to applicable regulation and careful consideration. Indiscriminate sharing of such information could jeopardize vehicle safety and security—both of which could be damaging to consumers and the general public. Arguments made for excessive information sharing under the Right to Repair banner have at times resorted to the presentation of emotionally charged scenarios unrelated to the technical merits in an effort to garner support.

SAE HRCS believes that any legislation seeking access to manufacturer and supplier design IP must fully consider all risks and rewards along with the safety of the consumer and the general public. This analysis must address the safety and security of the vehicle and its occupants, the safety of other vehicles operating around it, legal responsibility should critical components be modified by third parties, as well as the potential theft of intellectual property. In general:

- Right to Repair legislation should be restricted to maintenance and operating information needed to repair field-repairable components or systems.
- Modules inappropriate for field repair by the manufacturer for safety or security reasons, or too sophisticated for practical repairability reasons, should not be included in such legislation except as necessary to determine if the module requires replacement. This protection due to sensitivity would have to be applicable for all, including the manufacturers themselves, in order to prevent abuse by the manufacturer while remaining in compliance with airworthiness directives.
- Advanced customer support services, such as vehicle health management and proactive alerts, should be deployed in a transparent manner to all customers. Internal design details, however, should not be subject to Right to Repair legislation.
- Design IP such as control logic is outside the scope of maintenance and should remain the proprietary property of the manufacturer or supplier and not be subject to Right to Repair legislation.
- Intellectual property of manufacturers and suppliers alike must be recognized and protected to encourage continued technological development.
- Provisions for consumers' (vehicle owners) and fleet operators' rights to privacy must be respected and protected while sharing of maintenance and operating information.