

"The society dedicated to advancing mobility engineering worldwide"

Aerospace FACTS

SAE Technical Standards

SAE in Integrated Vehicle Health Management (IVHM)

SAE International is both leader and partner in developing and harmonizing standards documents for the global aerospace industry. This role can be seen in its technical committee rosters and in its relationships with industry, government/regulatory agencies, and academia throughout the globe. It can also be seen in its extensive library of technical standards documents—Aerospace Standards (AS), Aerospace Material Specifications (AMS), Aerospace Information Reports (AIR), and Aerospace Recommended Practices (ARP)— that are in use around the world today.

With more than 250 standards-developing technical committees, health management expertise in such aerospace systems areas as aircraft structures, propulsion systems, and landing gears as well as additional expertise in prognostics and fiber optic sensors, it was a natural step for SAE to explore needs for standardization in support of **Integrated Vehicle Health Management** technology, or IVHM.

To do so, SAE has established an **IVHM Steering Group** to lead the initiative, bringing together the participation of key experts and organizations to provide the infrastructure, guidance, and recommendations necessary for the coordinated development of SAE standards required to advance and support IVHM technology.

The SAE IVHM standards initiative includes expertise from several current SAE health management-relevant committees, including:

- E-32 Aerospace Propulsion Systems Health Management;
- G-11 Reliability, Maintainability, Supportability and Probabilistic Methods;
- G-11 SHM, Structural Health Monitoring and Management;
- A-5B Aerospace Landing Gear Systems, Gears, Struts & Couplings;
- S-12 Helicopter Powerplant;
- A-6 Aerospace Actuation, Control and Fluid Power;
- AS-3C2 Fiber Optics Sensors Task Group; and
- AE-5 Aerospace Fuel, Oil and Oxidizer Systems.

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Integrated Vehicle Health Management (continued)

There is also representation from the Cranfield IVHM Centre of Excellence, the FAA, and EASA. Participants from the wider health management community are also expected.

While the SAE's IVHM Steering Group will coordinate IVHM and health management standards developed by current and future SAE Technical Committees, and provide leadership for the aerospace and IVHM communities, specific goals of the group involve...

- the development of a single definition and taxonomy of IVHM to be used by the aerospace and IVHM communities;
- the identification of how and where IVHM could be implemented;
- the development of a roadmap for IVHM standards;
- the identification of future IVHM technological and regulatory needs; and
- the recommendation of technical standards requirements.

If interested in learning more about this initiative that uniquely approaches vehicle health management holistically and systematically, or you would like to play a role in addressing this issue, please contact us.