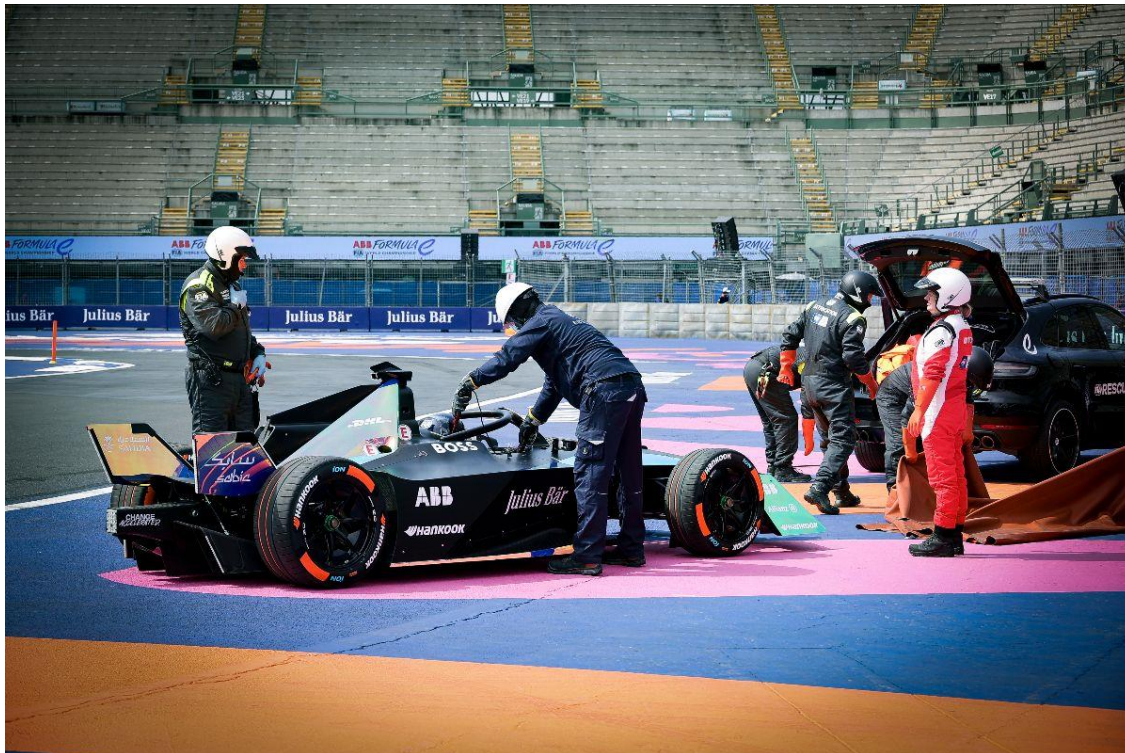




ASN Safety Bulletin #44



High-voltage technologies were introduced for the first time in Formula 1 and in the World Endurance Championship in 2009 and 2012 respectively. The FIA has always positioned safety as a priority, and it was natural for the FIA to pay particular attention to the safe running of the events mindful of the high-voltage risks.

With the transition to hybrid or full electric in a number of FIA championships, in 2019 the world governing body of motor sport launched a research project in to the operational side of high-voltage safety.

The FIA Safety Department studied existing high-voltage safety regulations, consulted experts in the area from the automotive industry, and worked with its experience in motor sport to develop the new FIA e-Safety regulations, which can be found in the Supplement 10 of the Appendix H of the FIA International Sporting Code, and can be downloaded [HERE](#). The main goal was to deliver a set of regulation, protocols and training materials to ensure that a motor sport event can be run in a safe way, on and off track,

with a wider scope of on-track interventions, and all the aspects related to the safety of the officials and volunteers, competitors and spectators.

What is E-Safety?

The FIA operational e-Safety is about planning, preparing, and delivering what is required to help the organisation in charge of the event to manage the high-voltage risk and/or incidents. The focus is on on-track rescue operations, particularly in the case of an incident with a high-voltage risk.

To be prepared and avoid any incidents, four important measures have been put in place:

1. Education

Before the event, a new set of FIA e-learning modules are available in various languages (with the support of ASNs). This provides the first level of information about FIA e-safety and what is to be expected on-site during the event.

2. Information

For FIA championships running with HV technology and therefore implementing e-Safety regulations, the FIA holds onsite briefings for the officials and volunteers and distributes summary sheets called FIA e-Safety Hand-outs. These documents provide information regarding the car technology and its associated risks, the e-Safety organisation and the relevant procedures and PPE (Personal Protective Equipment) for each role (marshal, scrutineer, rescue, medical, recovery, teams and drivers).



3. Training

Practical hands-on training is mission-critical and is delivered on-site, if possible, on a representative race car and under the supervision of FIA e-Safety and Medical Delegates.



4. Expertise

The FIA nominates, amongst others, Technical, Safety and Medical Delegates, and is now complementing its presence with the role of an FIA e-Safety Delegate. This delegate works closely with existing FIA delegates and officials on-site to enable a smooth implementation of the regulation. He/she will deliver the FIA e-Safety Briefings to all relevant parties. When cars are on track, he/she will intervene alongside the rescue and medical team to assist them by securing the car and making sure all actors are following the e-Safety procedures and PPE (Personal Protective Equipment).

FIA E-Safety Organisation

The implementation of FIA e-Safety includes a specific organisation, that gathers experts from the FIA but also from the local organisation. The target is to make sure that the event's organisation is ready to manage critical situations. It is crucial that everyone is aware of the risks, knows how to identify them and what is expected from them, including how they should respond.

The FIA e-Safety Delegate is the main contact for all e-safety matters on site. The role is split into two phases.

The preparation phase includes the delivery of the FIA e-Safety Briefings and the participation in the training and exercises. He/she will also support the organisation to make sure all necessary equipment and zones are put in place adequately (quarantine

zone, PPE location and state...).

The FIA e-Safety Coordinator is an official with an existing role at the Race Control or Rally Control. They are in direct communication with the FIA e-Safety Delegate when a track intervention is requested by the Race Director.

The HV System Expert is a nominated person by the technology provider but is not an FIA delegate. They will be the third pillar of the triangular communication between the FIA e-Safety Delegate and Race Control. This role is to deliver his interpretation of the High Voltage system status using telemetry. From the very first second of the incident, the HV System Expert provides quick and clear feedback on the situation. The HV System Expert can assist the operation of recovery and hand-over to the team while the car is in handled in the quarantine zone.

FIA support to ASN

The FIA has put in place a pack of information in order to hand over easily all necessary information, documents and tools for the implementation of an e-Safety initiative at national level.

The “ASN e-Safety Tool Kit” contains various documents, including:

- An introduction note for those who are new to the topic.
- The last up-to-date e-Safety regulation (Supplement 10 of the appendix H to the FIA ISC)
- FE and WRC briefing material in PowerPoint format
- FE and WRC hand-outs sheets in PowerPoint format
- List of recommended PPE per role (for circuit and for closed roads)
- Pack of communication assets as used in WRC

The FIA remains at the full disposal to the clubs in case of any support needed via email hv-safety@fia.com

The tool kit is available on the FIA box [here](#).



PROJECT SUPPORTED BY  **FOUNDATION**

FIA Safety Department