Table 4-8: Commissioning and Initial Operations – Safety in Operations.

Safety in the operation of FCBs– see also Planning and Procurement in Chapters 2 and 3 –
In the more than 20 years of European Fuel Cell Bus Demonstration projects, the issue of the safety of the new technology has remained a constant focus. As with all new technologies, each project has developed and refined procedures that have allowed overwhelmingly safe operations. Despite that, there has been a recent case of an empty FCB being involved in a fire. This event is being thoroughly investigated and will be publicly reported. Given that fire is not unknown in conventional buses, this is not of itself a cause for alarm. However, the incident does serve to remind all that this is new technology that brings together high voltage electricity with ignitable gas under pressure. Safe operating protocols must always be observed and constantly reviewed. JIVE sites have prepared their own 'Hydrogen Safety Plans' from information freely available. **<u>Generally speaking: Good Training and Maintenance = Safe Operations</u>** *See also Resources in Table 4-9. Numerous commercial bodies can also advise on Hydrogen Safety in Transport.*

Table 4-9: Commissioning and Initial Operations – Useful Resources.

Area of Interest	Resources and where to find them
Safety	• https://h2tools.org/sites/default/files/Safety_Planning_for_Hydrogen_and_Fuel_Cell_Projects.pdf • Reference Documents of the European Hydrogen Safety Panel https://www.clean-hydrogen.europa.eu/get-involved/european-hydrogen-safety-panel-0/reference-documents_en in particular: ➢ Simple template for a safety plan Interim publishable version ➢ Safety Planning Implementation and Reporting for EU projects ➢ Statistics, lessons learnt and recommendations from the Analysis of the Hydrogen Incidents and Accidents Database (HIAD 2.0) • "Wasserstoffsicherheit in Werkstätten "(DGUV Information 209-072, in German), published by Deutsche Gesetzliche Unfallversicherung (DGUV, statutory accident insurance in Germany), Berlin, March 2021 https://publikationen.dguv.de/regelwerk/dguv-informationen/265/wasserstoffsicherheit-in-werkstaetten
Hydrogen Safety Myths (2017/18)	• https://blog.ballard.com/hydrogen-safety-myths
JIVE Projects Safety Resource	• Hydrogen Safety Kit https://www.fuelcellbuses.eu/publications