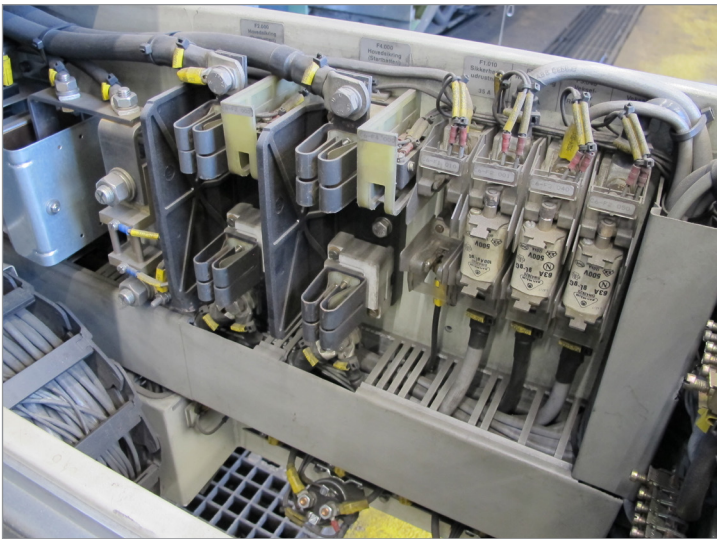




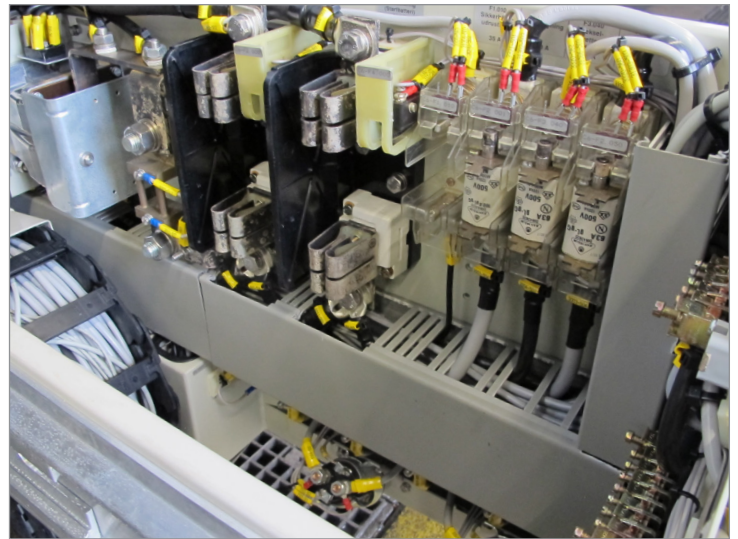
KEEPING THE NATIONAL DANISH RAILWAYS ON TRACK WITH PREVENTIVE MAINTENANCE

Case Study

The National Danish Railways (De Danske Statsbaner – DSB) has partnered with AREPA on several large restoration projects following severe fire damage to drive sections as well as carriers. Following these [restoration projects](#), the National Danish Railways contacted AREPA to discuss options for improving and optimizing the operation stability of their fleet of IC3 train set drive sections.



▲ Before Preventive Maintenance



▲ After Preventive Maintenance

Optimizing Operation and Reducing Downtime

A primary area of focus was to minimize the risk of short circuit damages in electrical drawers and plug connections at the carriage connection joints.

The installations are located in a tough environment and there are microscopic iron materials continuously being worn off from the wheel section of the carriages. These are then spread around when the trains are in motion with the debris potentially contaminating the external technical and electrical equipment of the carriages.

“After a job well done on a fire damage project, we reached out to AREPA again to get some expert assessment and input on how we could extend the lifetime of our IC3 fleet,” said Jens Søndergaard Madsen, technical management of DSB Maintenance for IC3 and who has worked for DSB for more than 30 years.

Extending the Life of 30-Year-Old Trains

Short circuit incidents could result in days – even weeks – of downtime on a carriage which results in high costs and problems in operations and service. DSB decided to create a serious and ambitious maintenance program to their IC3 fleet.

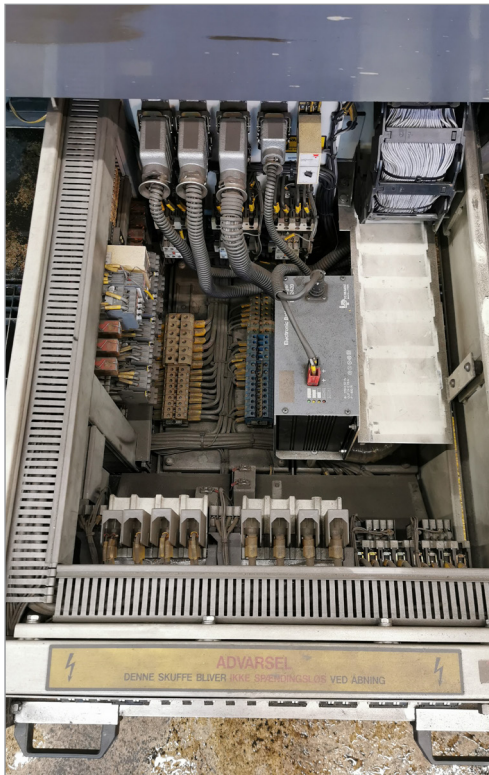
“We invited AREPA to perform an inspection and report their recommendation on how to achieve the best preventive maintenance,” said Madsen.

The initial inspection was completed in 2018 and a proposal of a schedule preventive maintenance program was presented to DSB. After reaching an agreement on the preventive maintenance program, the AREPA team arrived at DSB’s mechanical shopfloor in Aarhus to clean and execute the preventive maintenance on site on one carriage per week.

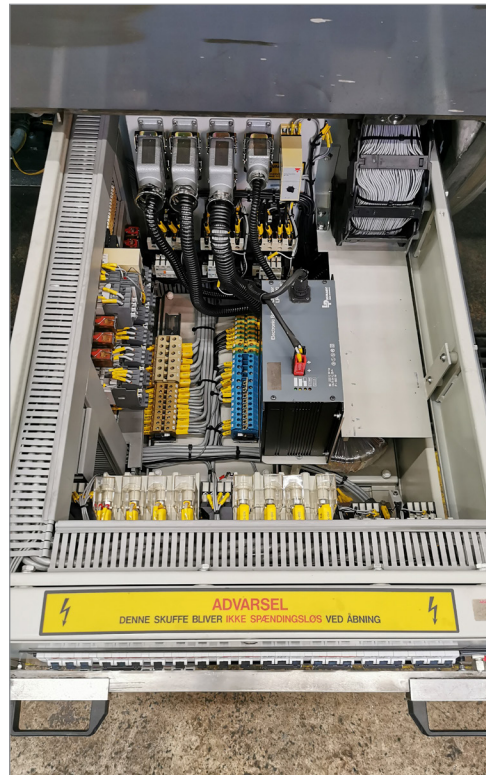
“Since our preventive maintenance cooperation, with one carriage being cleaned down each week, short circuit damages are practically non-existent in the carriages handled by AREPA.”

DSB has since experienced an increased operation stability on a 30-year-old fleet due to the preventive maintenance services performed by AREPA.

“There is no doubt that this has impacted our operation and service to the public as well as saved us a lot of trouble and money by reducing our downtime and damages,” said Madsen.



▲ Before Preventive Maintenance



▲ After Preventive Maintenance

AREPA In Action



▲ Top photo: before preventive maintenance.
Bottom photo: after preventive maintenance.