

Easy and fast on-board fiber optic repair solutions for Airlines



What if during your Milan-Chicago flight the board entertainment suddenly stops working? Definitely not the best timing... Nowadays, passengers often take these small displays for granted, together with the important pieces of information and the entertainment possibilities they offer. There is no doubt that without them the time flow in the plane would appear to be far more.

So, what to do if the system breaks down? If one of the take off-landing camera stops working due fiber breakage? The plane will not take off. The enormous financial impact of a non-flying plane and the tight flight schedules force the company to proceed with the take off in any case, compromising the pillar of every airline company: customer satisfaction. At the present day, the most suited technology for data transmission on planes is fiber optics and that is where DIAMOND SA comes in. Thanks to its long-lasting leading experience in the field, DIAMOND SA can provide a repair solution to fix the in-flight entertainment (IFE) in the shortest delay, so that every passenger can start enjoying a high-definition movie already when rolling down the runway.

Challenges

In a glass fiber, the light is confined in the fiber core, a capillary more than ten times thinner than a human hair. Even if protected by robust external jackets, sudden movements may cause cracks in the fragile fiber. The fibers more exposed to rupture are situated inside and below the passenger seats, where frequent repositioning, cleaning and maintenance increase the damage risk.

The challenge for the airlines consists in repairing the damaged cables in the shortest possible time, without wasting any precious second, depriving the passengers of the IFE or, even worse, keeping the planes on the ground.



The solution – Repair Kit

In collaboration with Airbus, DIAMOND SA developed a simple and effective repair kit that contains the necessary tools and consumables to repair the ABS 0963-003 LF cable, usually adopted as standard in the Airbus planes. The possibility to fix the fiber directly on the plane without removing the entire cable offers a quick and straightforward solution. To assure the best results, DIAMOND SA strictly followed Airbus instructions and guidelines during design, test and qualification phases.

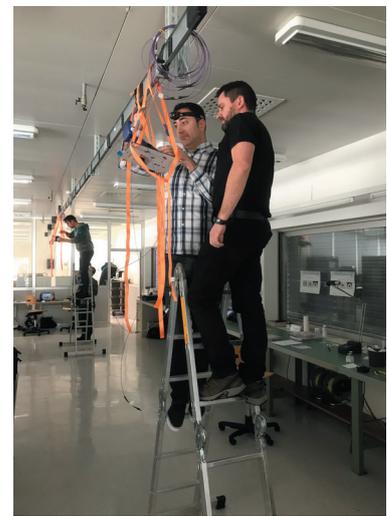
By implementing DIAMOND's repair solution, the airline company can profit from several advantages:

- ▶ Airbus-compatible equipment: tested and qualified following the Airbus program
- ▶ Rapid solution of the inconvenience
- ▶ No delay caused by material delivery
- ▶ Easy to use – the repair can be performed by technicians with a 2 day specific training course
- ▶ DIAMOND's yearly maintenance service with accurate control of the entire kit's equipment.

Training and Formation Courses

DIAMOND SA has been a pioneer in the fiber optics field for more than 40 years, successfully developing, producing and assembling millions of reliable components. It is in our interest to share the cumulated knowledge with our customers. For this reason, we regularly organize training and formation courses on diverse topics in the wide fiber optics domain. Over the years, we trained more than 130 Airbus technicians and many others from different airline companies that decided to work with our repair kit.

We strongly recommend all technicians that daily work with planes, to attend the formation and refresh courses: they are tailor made for them! Usually, the courses take place in our Swiss Headquarter in Losone, but can also be carried out at the customer's location. More details about the program of the courses can be found on our website.



DIAMOND SA

DIAMOND SA is a company that is proud to represent the quality, reliability and precision, that the "Swiss made" brand is famous for worldwide, in the field of fiber optics. Our core competence is the realization of high-end, low-loss and extremely precise interconnection solutions for fiber optics. Through a long tradition of vertical integration, DIAMOND acquired a unique experience in the fabrication of ceramic, metal and plastic components. Small details make a great difference when it comes to precision: by thoroughly controlling every step of the product realization, from the raw material to the final assembly, DIAMOND built over the years the reputation of its high-performance products.