



## CHRONO Flex Switches to Sandwich Composites for Mobile Workshop Fleet

CHRONO Flex is the leading onsite repairer of hydraulic hoses in France. In addition to a very extensive French network, it also has operations in Belgium, Spain, Sweden, Switzerland and the French overseas territories of Guadeloupe, Guyana, Martinique and Reunion. Currently, it has over 10,000 customers and last year carried out more than 75,000 “call-out” repairs.

As 98% of repairs are carried out where the customer’s equipment is located, CHRONO Flex’s fleet of 180 strategically-located mobile workshops is absolutely critical to its 24/7 operation.

To improve its mobile workshops, the company has decided to switch from a conventional steel unit to one that offers all the advantages of sandwich composites.

CHRONO Flex and its designated vehicle body builder have been working closely with Diab to develop both the laminate specification (based on *Matrix 7-7* structural foam core) and the one-shot, core infusion manufacturing process. By taking the sandwich composite approach and using *Matrix 7-7*, CHRONO Flex has not only been able to achieve a weight savings of 400 kg (882 lb), but has also gained an extra 1.5 m<sup>3</sup> (53 ft<sup>3</sup>) of workshop/storage space. This increased payload means each vehicle can carry a wider assortment of spare parts, thereby making them better prepared to handle any possible repair need. Also, the mobile workshop is much stronger than its steel predecessor and is expected to have a much longer service life. The nature of sandwich composites

means that any damage tends to be restricted to a localized area that can be readily repaired. In the case of a steel-bodied workshop, any damage often results in the replacement of a complete panel.

With the core infusion process (in which the core acts as the resin transfer medium), the sides, front and roof of the workshop, plus some internal "furniture", are produced as a single molding with an easy-to-maintain, gel-coated internal finish. As well as not requiring any further interior finishing, this approach speeds the manufacturing process and reduces the risk of water ingress due to the elimination of seams.

With the ramping up of production of the new mobile workshop bodies, it is planned that Diab will start to supply CHRONOFlex's sub-contractor with ready-to-use *Matrix 7-7* core kits to further speed the manufacturing process.

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