

Yanfeng's instrument panel and passenger airbag integrated safety solution changes the traditional way of assembling and creates value for the future

Improving the carbon footprint thanks to less material and optimized package space

Neuss, Germany – 24 November 2022. *Yanfeng, a leading global automotive supplier, presents a new solution for integrating the passenger airbag into the instrument panel. This is an example of the cross-divisional collaboration between the Interior and Safety Business Units of the company. This new airbag module provides an integrated safety solution with reduced package size, weight, cost and improved performance, while at the same time providing greater design freedom for interior designers and engineers and a leaner manufacturing process.*

Airbag modules integrated into the instrument panel typically use a separate housing and are installed in many cases at the customer location and supplied separately from the instrument panel manufacturers creating added cost and complexity in logistics and testing. Therefore, chute structures, as part of the instrument panels, and passenger airbag module housings are developed as separate parts, resulting in an interface that does not reflect potential synergies very well. The new application combines the airbag chute and module housing into a single part, reducing weight, package space consumption and overall system costs. This results in lower energy requirements to produce the passenger airbag system, as one component is omitted. The new instrument panel integrated airbag module demonstrates Yanfeng's successful commitment in reducing the carbon footprint by 50%.

"This new integration approach is a small but very important step for a more sustainable future, and improved efficiencies in engineering and manufacturing costs for both Yanfeng and our customers. Another benefit is that with our unique safety systems and interiors integration capabilities, we can leverage synergies and achieve weight savings of up to 23%. We can offer the new passenger airbag integration for all instrument panels, and in all vehicle

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segments," said Mike Hague, Vice President and General Manager of Yanfeng Safety Systems in Europe and North America.

Design freedom is another advantage, as the airbag module can adapt to any instrument panel design. Less space is required due to the removal of redundant structures, approximately 10-12 mm surrounding the airbag module.

Fewer interfaces thanks to combined manufacturing assembly

In addition to redesigning the airbag-chute/housing of the passenger airbag, Yanfeng is also optimizing the manufacturing process. The idea is to integrate the airbag already within the instrument panel production line and assemble it together with it. This results in a reduction of costs, gains space and creates synergies in the development process.

In the future, this will enable the customer to procure a pre-assembled instrument panel with the airbag modules from one single source.

"The improvement of the new solution is that the airbag module is an integral component of the instrument panel," explained Hague. "This also leads to leaner project management between the supplier and the automaker."

The new instrument panel and passenger airbag integration from Yanfeng is ready for series production for the next vehicle generation. This product was recently honored with a 2022 Altair Enlighten Award in the 'Future of Lightweighting' category. This is the industry's only award dedicated to vehicle lightweighting.

Yanfeng will present a selected range of its passive safety systems portfolio at the International Symposium and Exhibition for Advanced Vehicle Safety Systems Airbag 2022 in Mannheim, Germany, on November 28-30, 2022.

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About Yanfeng

Yanfeng is a leading global automotive supplier, focusing on interior, exterior, seating, cockpit electronics and passive safety. Yanfeng has more than 240 locations and approximately 67,000 employees worldwide. The technical team of 4,200 experts is located at 10 R&D centers and other regional offices, with complete capabilities including engineering, software development, design and user experience, as well as test validation. Focusing on Smart Cabin and lightweight technology, Yanfeng supports automakers to explore future mobile spaces and provide leading cabin solutions. For more information, please visit www.yanfeng.com.