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SIMPLY CLEVER

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## Safety: Even better protection for driver and co-driver

- › Rally2 vehicle's safety equipment exceeds FIA's strict technical regulations
- › Side impact protection made of carbon fibre, Kevlar and energy-absorbing foam

**Mladá Boleslav, 14 June 2022 – The engineers at ŠKODA Motorsport have introduced numerous measures to protect the driver and co-driver in the FABIA RS Rally2 even better in the event of a collision. One priority was safety in the event of a side impact, and comprehensive analyses of accidents provided important information on this issue.**

The measures and equipment to protect the occupants in a rally vehicle differ significantly from those in a production model. The airbags installed in the fourth-generation production FABIA cannot be used in rallying because the sensors and electronic control systems react too sensitively to the high G-forces during asphalt stages, on gravel tracks or in long jumps. The safety concept, therefore, relies on mechanical solutions such as a roll cage and side protection made of carbon fibre and energy-absorbing foam. Six-point harnesses and racing seats with integrated head protection also come into play.

### **Roll cage made of high-strength chromoly steel**

In designing the new model, the engineers at ŠKODA Motorsport used analysis data from previous rally accidents. The roll cage for the new FABIA RS Rally2, made of 35.8 metres of high-strength chromium-molybdenum steel, consists of longitudinal, transverse and diagonal tubes in the door openings, under the vehicle roof, around the windscreen and behind the seats. The dimensions and material of the safety cell are defined by the Fédération Internationale de l'Automobile's (FIA) technical regulations. ŠKODA Motorsport goes far beyond these requirements with the new Rally FABIA. The gusset plates that are relevant in the event of a side impact are also more robust than stipulated in the regulations.

Designed with the aid of computer calculations, the roll cage secures the survival space of the driver and co-driver in the event of an accident, even if the bodywork is badly damaged. It also forms an integral part of the chassis, to which it is hand-welded by certified professionals. This significantly increases the torsional rigidity of the body, which is already stiffer thanks to the MQB-A0 platform. Every FABIA RS Rally2 is assembled exclusively at ŠKODA Motorsport in Mladá Boleslav.

### **Side impact protection made of carbon fibre, Kevlar and energy-absorbing foam**

In a rally car, the driver and front passenger are particularly vulnerable in the event of a side impact. While the production FABIA is protected by a combination of B-pillars, door reinforcements and airbags, the rally version is protected by a roll cage with two door pillars and gusset plates. In addition, the FABIA RS Rally2 has an energy-absorbing structure made of foam between the outer door skin and the interior, as well as door panels made of composite materials. The structure of the composite panels is predefined: Five layers of carbon 280 and one layer of Kevlar 300. The Kevlar layer is closest to the driver and co-driver and protects them from sharp carbon fragments in the event of an accident. The absorbing foam must be approved by the FIA and have the minimum volume specified in the regulations in order to reduce the impact energy and thus the force on the human body. In the FABIA RS Rally2, special racing seats, six-point harnesses and personal



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equipment, including the mandatory head-and-neck support system (HANS) on the helmet with restraint straps also contribute to effectively mitigating the impact forces. This system protects the crew's heads from sudden and violent movements.

To better distribute the forces generated in a side impact, both body sides of the FABIA RS Rally2 are joined by the seat bracket structure and an additional rail. The door crosses of the roll cage are even more robust and exceed the FIA's requirements. To optimise the strength of the shoulder belt attachment points, the FABIA RS Rally2 has been fitted with an additional cage tube on each side of the vehicle.

### **Automatic fire extinguishing system on board**

The FABIA RS Rally2's polycarbonate side windows can be easily removed in accordance with FIA regulations. In addition, the on-board safety equipment includes a fire extinguishing system, comprising an automatic system with nozzles in the cockpit and engine compartment and a manual fire extinguisher in the co-driver's footwell. The system can also be activated externally.



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## Further information:

Zbyněk Straškraba

Motorsport Communications

T +420 326 811 785

[zbynek.straskraba@skoda-auto.cz](mailto:zbynek.straskraba@skoda-auto.cz)

<http://skoda-motorsport.com>

## ŠKODA Media Room

[skoda-storyboard.com](http://skoda-storyboard.com)

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You can find all content related to the ŠKODA FABIA RS Rally2 at [#FabiaRSRally2](https://twitter.com/motorsportskoda).

## ŠKODA Motorsport:

- › ŠKODA has been active in motorsport since 1901, garnering success in rallies as well as circuit racing.
- › Highlights include winning the 1981 European Touring Car Championship (ETCC) with the ŠKODA 130 RS.
- › In recent years, the ŠKODA FABIA celebrated numerous successes for the Czech manufacturer on rally stages worldwide. From 2009 to 2014, the ŠKODA FABIA S2000 (2.0 naturally aspirated engine, four-wheel drive) secured 50 international titles and national rally championships. The ŠKODA FABIA S2000 also helped to win the FIA European Rally Championship (ERC) and the Intercontinental Rally Challenge (IRC) three times each.
- › The ŠKODA FABIA R5 (1.6 turbo engine, four-wheel drive) continued the S2000's success story in 2015. In subsequent years, ŠKODA Motorsport factory drivers took multiple titles in the FIA World Rally Championship's support category WRC2/WRC2 Pro with the models ŠKODA FABIA R5 (Rally2) and ŠKODA FABIA Rally2 evo. Titles went to Jan Kopecký (CZE), Esapekka Lappi (FIN), Pontus Tidemand (SWE), Kalle Rovanperä (FIN) and Andreas Mikkelsen (NOR). Supported by ŠKODA Motorsport, Toksport WRT became Team Champion of the WRC2 category in 2020.
- › ŠKODA Motorsport customer teams have also won titles in the FIA World Rally Championship (WRC), FIA European Rally Championship (ERC), the FIA African Rally Championship (ARC), the FIA North American and Central American Rally Championship (NACAM), the FIA South American Rally Championship (CODASUR) and the FIA Asia-Pacific Rally Championship (APRC).
- › In 2021, Andreas Mikkelsen (NOR, Toksport WRT) took the WRC2 Drivers' Championship and the FIA European Rally Championship overall at the wheel of a ŠKODA FABIA Rally2 evo.
- › By the end of the 2021 season, the ŠKODA FABIA R5 (Rally2) and ŠKODA FABIA Rally2 evo had secured over 1,500 victories and more than 3,700 podium positions in 65 countries.

## ŠKODA AUTO

- › is successfully steering through the new decade with the NEXT LEVEL – ŠKODA STRATEGY 2030.
- › aims to be one of the five best-selling brands in Europe by 2030 with an attractive line-up in the entry-level segments and additional e-models.
- › is emerging as the leading European brand in important growth markets such as India and North Africa.
- › currently offers its customers twelve passenger-car series: the FABIA, RAPID, SCALA, OCTAVIA and SUPERB as well as the KAMIQ, KAROQ, KODIAQ, ENYAQ iV, ENYAQ COUPÉ iV, SLAVIA and KUSHAQ.
- › delivered over 870,000 vehicles to customers around the world in 2021.
- › has been a member of the Volkswagen Group for 30 years. The Volkswagen Group is one of the most successful vehicle manufacturers in the world.
- › independently manufactures and develops not only vehicles but also components such as engines and transmissions in association with the Group.
- › operates at three sites in the Czech Republic; has additional production capacities in China, Russia, Slovakia and India primarily through Group partnerships, as well as in Ukraine with a local partner.
- › employs 45,000 people globally and is active in over 100 markets.