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ŠKODA FABIA RS Rally2: Cutting-edge technology and maximum safety

- › **New engine delivering around 214 kW (289 hp) based on the 2.0 TSI from the EA888 engine series**
- › **Sequential 5-speed transmission allows gear changes within milliseconds**
- › **Roll cage made from 35.8 metres of steel and side impact protection made of carbon fibre, Kevlar and energy-absorbing foam**

Mladá Boleslav, 10 October 2022 – ŠKODA Motorsport has developed a new engine for the FABIA RS Rally2 and further optimised the time-proven powertrain. The 1.6-litre turbo engine is based on the 2.0 TSI from the EA888 engine series with an output of around 214 kW (289 hp). The maximum 430 Nm torque is distributed across all four wheels via a 5-speed sequential gearbox. The best possible protection for driver and co-driver is ensured by a 35.8-metre tubular steel roll cage and a side-impact protection system made of various high-tech materials.

ŠKODA Motorsport has developed a new engine for the FABIA RS Rally2. The Rally2 regulations of the FIA (Fédération Internationale de l'Automobile) stipulate a 1.6-litre turbo engine based on a production engine for vehicles in this category. ŠKODA has based its engine on the 2.0 TSI with integrated exhaust manifold from the EA888 engine series. The same engine family is used in the KODIAQ RS and OCTAVIA RS. The four-cylinder features redesigned intake and exhaust ports, optimised pistons and combustion chambers as well as variable valve timing for a significantly enhanced mixture preparation and combustion process. The newly designed lubrication system ensures efficient engine lubrication while using less oil. The engineers also revised the exhaust system, which has a new turbocharger, and developed an innovative intercooler and cooling circuit with greater cooling capacity. The FABIA RS Rally2 also benefits from new engine management software. The diameter of the air restrictor is 32 millimetres, in line with the FIA's technical regulations for the Rally2 category. This translates to an engine output of around 214 kW (289 hp) and a maximum torque of 430 Nm.

Power transmission via 5-speed sequential gearbox

The sequential gearbox, which was specially designed for rally use, has five gears in accordance with FIA specifications and enables the driver to change gears in milliseconds using the gear stick alone. Although the FABIA RS Rally2 has a mechanical clutch, it is only used for starting, parking or when driving slowly. The disconnecting clutch between the front and rear axles is now operated electro-hydraulically when the handbrake is pulled, and locks the rear wheels only when steering into sharp corners on the rally track. The electro-hydraulic control is a new technology developed for the FABIA RS Rally2; the predecessor only had a hydraulically operated disconnecting clutch. For optimum acceleration on tight, winding rally stages, the FABIA RS Rally2 has a relatively short gear ratio, offering a top speed of around 200 km/h.

Comprehensive crew protection

The measures and equipment used to protect the driver and co-driver in a rally vehicle differ significantly from those in a production model. In addition to racing seats with integrated head protection and six-point seat belts, they include mechanical features such as a roll cage and



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sophisticated side protection in the event of a side impact. An energy-absorbing structure made of foam and door panels made of composite materials are installed between the outer door skin and the interior. The structure of the composite panels is predefined: five layers of carbon and one layer of Kevlar. The Kevlar layer is closest to the driver and co-driver and protects them from sharp fragments of carbon 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. For safety reasons, the side windows of the FABIA RS Rally2 are not made of glass but of lightweight polycarbonate and can be easily removed in line with FIA regulations.

Roll cage made of high-strength chromoly steel

ŠKODA Motorsport engineers have also used computer calculations to develop a new roll cage for the FABIA RS Rally2, made from a total of 35.8 metres of high-strength chrome-molybdenum steel tubing. It consists of longitudinal, transverse and diagonal tubes in the door openings, under the roof, around the windscreen and behind the seats. The dimensions and material of the safety cell are defined in the FIA's technical regulations. ŠKODA Motorsport goes far beyond these requirements in the FABIA RS Rally2. In the event of an accident, the roll cage ensures the survival space of the driver and co-driver even if the bodywork is badly damaged. The roll cage is welded to the chassis during body assembly before the side panels and roof are fitted. This procedure allows for even greater manufacturing precision, as well as a better fit and connection to the body. 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 gussets in the door openings are also even more robust than required by the FIA. 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.



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Follow us at twitter.com/skodaautonews for all the latest news. All the content on ŠKODA's RS models can be found at [#SkodaRS](https://twitter.com/skodaautonews).

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).
- › Supported by ŠKODA Motorsport, Toksport WRT became Team Champion of the WRC2 category in 2020.
- › ŠKODA Motorsport customer teams have also secured titles in the FIA World Rally Championship (WRC), the FIA European Rally Championship (ERC) and the FIA African Rally Championship (ARC), the North and Central American Rally Championship (NACAM), the South American Rally Championship (CODASUR) and the 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 October 2022, the ŠKODA FABIA R5 (Rally2) and ŠKODA FABIA Rally2 evo had secured over 1,900 victories and more than 4,650 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.