

Media release

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Stadler is preparing locomotives for ETCS, paving the way for a faster ETCS roll-out in Germany

Deutsche Bahn (DB), Stadler and its engineering joint venture AngelStar have prepared locomotives for the European Train Control System (ETCS) for the first time without the involvement of the locomotive manufacturer. Manufacturers' capacities are considered likely to be one of the potential bottlenecks when around 13,000 locomotives and multiple units in Germany have to be retrofitted for ETCS in the coming years. The retrofits are necessary because more and more railway lines can only be used with the new, pan-European standardised technology. ETCS represents the basis for the further digitalisation of railway operations. The successful completion of an ETCS retrofit without the involvement of the vehicle manufacturer makes new capacities available in this area, and will therefore make a significant contribution to ensuring a faster ETCS roll-out in Germany.

Following successful retrofitting, two DB Cargo locomotives are now back on the tracks with the GUARDIA Baseline 3.4.0 ETCS automatic train protection system. This is the first retrofitting of DB locomotives from the 185.2 series with the ETCS system from Stadler. The pilot project by Stadler, DB and AngelStar therefore required particularly complex pioneering work before the first locomotive received its re-approval as "First of Class". Official approval was much simpler for the second locomotive converted in the same way: since it was deemed to be structurally identical, it was awarded "Conformity to Type" status. All future retrofits performed in this manner can now refer back to this model.

"Stadler has deliberately broken new ground with this retrofit project in order to simplify the retrofitting of modern signalling technology in existing vehicles. With this innovation, we can create the urgently needed capacity in the rail industry to transport the large number of existing vehicles in Europe into the digital future", says Ansgar Brockmeyer, Head of the Sales & Marketing Division and Deputy Group CEO of Stadler.

Hans Peter Lang, Chief Technology Officer (CTO) at DB Group and Chairman of the Management Board of DB Systemtechnik, explains: "Equipping lines and vehicles with ETCS technology that is standardised across Europe is the basis for the further digitalisation of railway operations. This will create more capacity for travel and freight transport by rail. The fact that Stadler and AngelStar, DB Cargo and DB Systemtechnik have now together succeeded in retrofitting ETCS without the involvement of the vehicle manufacturer opens up new paths and strengthens competition. This will significantly facilitate the ETCS roll-out for the entire industry in Germany."

Manuel Ayala, Project Manager at Stadler Signalling, says: "This innovation partnership means that Stadler is now able to equip vehicles made by other manufacturers with its own system without their involvement. This is not only of great importance for rail transport in Germany, but will also smooth the way for new opportunities in other market regions. We would like to thank Deutsche Bahn for the trust they have placed in us and look forward to continuing our successful collaboration."

Oliver Kaiser, COO of AngelStar, is delighted: "In the course of this challenging retrofit project, we were once again able to demonstrate the quality and flexibility of the GUARDIA system. Along with the agile organisation, these are the best possible prerequisites for further retrofit projects."

Until now, Stadler had mainly been accustomed to carrying out retrofit orders for its own vehicles. Stadler received its first retrofit order for GUARDIA in 2020 from the Dutch rail operator Arriva. Some of its 34 FLIRT vehicles are also used for cross-border transport in the Netherlands, Belgium and Germany.

The ETCS automatic train protection system GUARDIA from AngelStar, a joint venture between Stadler and the MERMEC Group, has already been approved in several European countries and is in operation in Germany, Poland, Hungary, Slovenia, Switzerland and the Netherlands. GUARDIA consists of both hardware and software components that are used in the trains. The system allows the train driver to visualise the position of the train, its speed and other data. All this data is also transmitted to a control centre. Data such as track warrants can be collected at the same time.

About Stadler

Stadler has been building trains for 80 years. The provider of mobility solutions in rail vehicle construction, service and signalling technology has its headquarters in Bussnang, eastern Switzerland. It has a workforce of over 13,500 based in various production and engineering locations as well as more than 80 service locations. The company is conscious of its social responsibility for sustainable mobility and therefore stands for innovative, sustainable and durable quality products. The product range in the field of mainline railways and city transport includes high-speed trains, intercity trains, regional and suburban trains, metros, tramways and trams. Stadler also manufactures main-line locomotives, shunting locomotives and passenger carriages. It is the world's leading manufacturer in the rack-and-pinion rail vehicle industry.

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