

Press release

N3 Engine Overhaul Services: Ground-breaking ceremony for expansion at Erfurter Kreuz

- **Thuringian Minister of Economic Affairs Wolfgang Tiefensee sees the expansion of N3 as a strong signal of progress for the region as a business location**
- **Cleaning line is upgraded and doubles capacity; factory hall gets more space for assembly areas and machining centres**
- **Logistics campus in planning**
- **Workforce to grow to up to 1,100 employees this year**

Arnstadt, 23 February 2024. In presence of the Thuringian Minister of Economics Wolfgang Tiefensee, N3 Engine Overhaul Services (N3) officially marked the start of its expansions with today's ground-breaking ceremony. The joint venture between Lufthansa Technik and Rolls-Royce plc. is massively expanding its building complex. The main construction works that are now beginning include:

- Expansion of the cleaning line for engine components to double process capacity. The state-of-the-art wastewater treatment plant that goes with it saves energy and reduces freshwater consumption by up to 90 %.
- Construction of a 6,000 m² extension to the existing production hall to expand the technical machining centres and assembly areas.

Finally, construction of a new logistics building, which will also include automated storage systems, is scheduled to begin in autumn.

The expansion will take place while operations continue and with increasing capacity utilisation.

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A future upgrade was already taken into consideration during the planning and construction of the facility between 2005 and 2007 and the areas on the 12-hectare site were planned accordingly. Carsten Behrens, Managing Director at N3, emphasises: "The decision of the parent companies to continue the long-term development of the joint venture values the expertise and extensive experience the team has built up over 17 years with Rolls-Royce Trent engines, including the latest generation of the Trent 1000."

According to Minister of Economic Affairs Wolfgang Tiefensee, who helped open the plant in 2007 as Federal Minister of Transport, N3 has become a permanent part of the Thuringian business landscape in the more than one and a half decades of its existence: "N3 sets standards in terms of quality, reliability and innovative capacity, making it a flagship for Thuringia as a high-tech location far beyond the borders of the federal state. With the expansion of the company here at the 'Erfurter Kreuz', N3 is opening a new chapter in its Thuringian success story. This sends out a strong signal of new momentum, especially in the current economic climate. As an attractive employer, N3 is making a decisive contribution to the creation of qualified jobs. This is a tailwind for our strategy of retaining skilled labour in the region and attracting new talents, also from abroad."

N3 has developed its own professional qualification programme for career changers and has been training its own specialists since the start of operations. The company now has six vocational training programmes in its portfolio. "In order to counter the shortage of skilled labour, we are also expanding our international recruiting measures," says Stefan Landes, Commercial Managing Director of N3. "A welcoming corporate culture is essential for the sustainable development of the location."

With an increase in demand for intercontinental travel since 2022 and the associated high demand for maintenance services for Rolls-Royce engines, the collaboration between the N3 shareholders was taken to the next level with a new joint business plan. This paved the way for an expansion to increase the plant's capacity to up to 250 engines per year in the long term. N3 is investing around 150 million euros in the facility's expansion.

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N3 Company profile

N3 Engine Overhaul Services (N3) is the European centre of excellence for the maintenance and repair of Rolls-Royce Trent engines. The joint venture between Lufthansa Technik AG and Rolls-Royce plc. is based just outside Arnstadt, in Thuringia's largest industrial area "Erfurter Kreuz". More than 950 employees, including 25 trainees, service engines for more than 50 international airlines on behalf of Rolls-Royce. The current N3 product portfolio includes the Rolls-Royce Trent 700, Trent 900, Trent XWB, Trent 1000 TEN and Trent 500 engines (serviceability checks, tests on demand). In 2023, 132 engines were overhauled; in 2024, this figure is set to rise by up to 50 per cent.

Media contact

Elke Siedhoff-Müller, Tel.: +49 151 589 431 61, E-Mail: elke.siedhoff-mueller@n3eos.com

<https://www.n3eos.com/>

Internet: <https://www.n3eos.com/en/company/media>

Images for publications: <https://www.n3eos.com/en/company/media/downloads#c808>

Register entry: Jena Local Court HRA 103052; Registered office: Arnstadt; General partner: N3 Engine Overhaul Services Verwaltungsgesellschaft mbH; Register entry: Jena Local Court HRB 113770; Managing Directors: Carsten Behrens, Stefan Landes; Chairman of the Advisory Board: Derrick Siebert

N3 Engine Overhaul Services GmbH & Co. KG, Gerhard-Höltje-Str. 1, 99310 Arnstadt

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Company profile

British-German success story in Thuringia, Germany

Arnstadt, January 2024. N3 Engine Overhaul Services (N3) is the European technological centre for the servicing and repair of Rolls-Royce Trent 500, Trent 700, Trent 900, Trent XWB and Trent 1000 TEN engines and their components. They serve as engines on Airbus models A340, A330, A380 and A350 as well as the Boeing model 787 “Dreamliner”. As one of the first to settle on the outskirts of Arnstadt, N3 has been active in the Erfurter Kreuz industrial area since 2007. The Thuringian company is integrated in the global Rolls-Royce network that consists of operations in Hong Kong, Singapore, and Great Britain (Derby). N3 quickly earned a good reputation in the aviation industry, particularly in terms of quality, flexibility and delivery reliability. The company serves more than 50 international airlines from all over the world. It is also one of the most profitable companies in the region. N3’s defined objective is to become the leading centre of excellence in the global Rolls-Royce network for the maintenance and repair of Rolls-Royce Trent 500, Trent 700, Trent 900, Trent XWB and Trent 1000 TEN engines and their components.

Engine overhauling using the latest methods

Since 2007, more than 1,560 engines have been dismantled, inspected, repaired and tested at the company. Currently, 150 to 200 engines can be processed per year. The factory is equipped with the latest facilities e.g., for cleaning components, for thermal coating and for machining and balancing. The engine test station is one of the most advanced and powerful at any overhauling facility in the world. N3 continually expands its capacity for repair. Thus, the Thuringian company has Rolls-Royce certification for special repairs known as “source-controlled repairs”. For these procedures, MRO companies (Maintenance, Repair and Overhaul) require certification from Rolls-Royce to be able to conduct these repairs autonomously.

Unique to N3: vertical stripping and building

In order to achieve the best results when overhauling engines, N3 uses vertical stripping and building. Engines are disassembled into individual assemblies while standing vertically and then reassembled in the same way. This is very efficient and non-destructive.

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N3 Engine Overhaul Services GmbH & Co. KG, January 2024

Attractive employer and one of the best training companies in the region

N3's settlement in Erfurter Kreuz, currently the largest industrial area in Thuringia, gave the region an enormous boost. After N3 settled on a location, other renowned national and international companies decided to build factories in the dynamic region.

N3 offers modern and attractive working conditions to its highly qualified workers. Occupational safety and health protection are given top priority. The workforce has tripled from 270 when operations began to the 920 employees there are now. The Thuringian aviation company has provided itself with well-educated young talent since 2007. In September 2023 the 15th technical training cohort for aircraft mechanics in the field of engine technology began. The apprentices learn about the complete process of maintaining, servicing and repairing engines. Within the scope of the operation of the different specialist departments, the working steps e.g., disassembly, inspection, repair, assembly and test of assemblies and engine parts, are conveyed with due regard to the general aviation-specific conditions. Graduates of the technical apprenticeship are among the best in their field. In 2020, the prize for Germany's best aircraft mechanics was awarded to an N3 graduate for the 4th time. In addition to aircraft mechanics, warehouse logistics specialists are being trained for the first time since September 2016. Due to the special aviation-specific requirements at N3, training on these logistical planning and organisational processes should be encouraged. A third apprenticeship was added, that of industrial machinist. N3 will also train IT specialists from 2023 and from 2024 onwards as well Material tester specialising in metal.

The company already supports middle-school students in their professional orientation. Students are able to take part in a weeklong internship at N3 during the autumn and winter holidays.

Key Corporate Figures

Joint Venture	Lufthansa Technik AG and Rolls-Royce plc.
Corporate mission	Servicing and repair of aircraft engines and components
Operational start-up	05 April 2007
Portfolio	Rolls-Royce Trent 500, 700, 900, XWB and 1000 TEN engines and their components. They serve as engines on the Airbus A340, A330, A380 and A350 models as well as on Boeing 787 "Dreamliner" model. Including Trent 800, Trent 1000 and RB211-535 in the field of component repair.
Executive Board	Carsten Behrens (Director and General Manager) Stefan Landes (Director of Finance)
Supervisory Board	Derrick Siebert, Matthias Niessen, Dirk Brüggmann (Lufthansa Technik) Craig Askew, Bruce Blythe, Michael Lenzen (Rolls-Royce)
Turnover	2022: 593 Million € 2021: 643 Million € 2020: 713 Million € 2019: 972 Million €
Investment	171 million € since Operational start-up (as of: June 2023)
Location	Arnstadt, Industrial Area Erfurter Kreuz, Germany
Size of the premises	12 ha
Factory capacity	150 – 200 engines per year
Number of overhauled engines	in total: 1561 (December 2023) 2023: 132 2022: 101 2021: 70 2020: 98 2019: 150 2018: 118 2017: 121 2016: 100
Number of employees	920 (December 2023)
Job training	Aircraft mechanics in the field of engine technology Warehouse logistics specialist Industrial clerk Cutting machine operator IT-specialist Material tester specialising in metal
Number of apprentices	29 (December 2023)
Union	IG Metall
Employers' association	Verband der Metall- und Elektro-Industrie in Thüringen e. V. (VMET)

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N3 Engine Overhaul Services – company history milestones

2003	Foundation of the company and location search
2004	Location selection
2005	Planning phase Start of the qualification program - Building permit issuance
2006	Construction phase Ground-breaking ceremony in February - Topping out ceremony in September
2007	Moving into the factory Trent 500 operational approval - Operational start-up Start of commercial training
2008	Trent 700 operational approval DIN EN ISO 14001 certification - Joining the Thuringia Sustainability Agreement Start of technical training
2009	Overhauling of the 100th engine
2010	Trent 900 operational approval
2011	Overhauling of the 250th engine, AEO F certificate
2012	5 years in operation
2013	Roll-out of the 500th overhauled engine
2014	For the third time, the best German graduate aircraft mechanic in the field of aviation technology comes from Arnstadt
2015	Overhauling of the 100th Trent 900 engine
2016	Start of logistical training for warehouse logistics specialists Trent XWB operational approval
2017	10 years in operation
2018	Overhauling of the 1000th engine Energy efficiency award
2019	Overhaul of the first Rolls-Royce Trent XWB engine
2020	For the fourth time, the nation's best trainee (Aircraft mechanic specialising in engine technology) comes from N3
2022	15 years in operation Trent 1000 TEN operational approval
2023	Start of the extensive expansion of the company during ongoing operations