Johnson Matthey to open its first hydrogen internal combustion engine testing facility in Gothenburg

July 2025

Johnson Matthey (JM), a global leader in sustainable technologies, has moved to strengthen its world-class Heavy Duty Vehicle testing capabilities, as the market and regulatory environment continue to evolve and manufacturers seek cleaner mobility solutions.

The new upgraded facility will be at its current Gothenburg site. Alongside the site's existing diesel engine test cells (both heavy and light duty), JM has now expanded its H2ICE capabilities, scaling up its ability to now test with engines for the first time, building on previous test capability for H2 combustion Engine development. The test area is set to be operational in autumn 2025.

It will test the performance of catalysts within the wider engine aftertreatment and control systems, providing key insights in the development of hydrogen mobility solutions. This follows on from JM's partnership with Cummins, and technology partners PHINIA and Zircotec, who launched *Project Brunel* in November 2021. This collaboration was successfully concluded in March 2025 – by delivering proof points towards significant improvements in H_2ICE engine performance and durability.

The new testing capabilities will include:

- Its own hydrogen supply & storage area (H2@max 500 bar) with compressor and intermediate storage tank
- Control/safety system for compressor/storage.
- Hydrogen flow meter and analyser
- Test cell upgrade - supporting H2 ICE engines up to 600kw (800hp)
- Safety system, multiple gas sensors, new fire detection sensors.
- The adaption of conventional exhaust measuring instruments

Tauseef Salma, Chief Technology Officer, Johnson Matthey Clean Air, said:

"With a rich heritage in tackling air pollution, Johnson Matthey is continuing to invest in its world-class testing facilities and maintaining our leading role in heavy duty road transportation.

"The upgrade of our testing capabilities in Gothenburg to include H2ICE is a real show of our backing to this technology, as we seek to unleash the potential of hydrogen mobility.
"Across Europe and elsewhere, we cannot rely on battery electric vehicles alone to solve our challenges. H2ICE is already a ready-to-go technology with hydrogen solutions in road transport maturing, reliable and essential if we are to meet our decarbonisation and climate goals."

Johnson Matthey recently signed up as a founding member of the Global Hydrogen Mobility Alliance - a coalition of more than 30 major companies across the automotive, energy, and technology sectors, aiming to accelerate the deployment of hydrogen fuel cell solutions in Europe's transport sector. The alliance, which includes companies like BMW, Toyota, Hyundai, Air Liquide, and Linde, is urging EU policymakers to prioritise hydrogen mobility as a key component of their decarbonisation and industrial strategies.

ENDS

About Johnson Matthey:
Johnson Matthey is a global leader in sustainable technologies. For over 200 years we've used advanced metals chemistry to tackle the world's biggest challenges.

Many of the world's leading energy, chemicals and automotive companies depend on our technology and expertise to decarbonise, reduce harmful emissions, and improve their sustainability.

And now, as the world faces the challenges of climate change, energy supply and resource scarcity, we're actively providing solutions for our customers. Through inspiring science and continued innovation, we're catalysing the net zero transition for millions of people every day.
For more information visit www.matthey.com.

For media enquiries

Johnson Matthey:
Email: jmpr@matthey.com
Telephone: +44 207 269 8001