

Press information

Volvo Trucks initiates field testing of liquid gas

Today, Volvo Trucks will initiate public field testing with methane diesel trucks that can run on liquefied methane gas. At the same time, Sweden's first filling station for liquefied methane gas will open at Stigs Center in Göteborg.

This is a revolutionary step in the development of gas use in heavy vehicles, since trucks running on liquid gas combined with methane diesel technology has up to four times longer driving range compared to most traditional gas trucks.

"Increased use of gas is a bridge towards climate-neutral transports," comments Lars Mårtensson, Environmental Director at Volvo Trucks. "Biogas production is already taking off in many countries. We're currently in a transition period, moving from decades of dependence on oil to a society built on renewable fuels. When trucks can operate on 80 percent pure biogas and 20 percent pure biodiesel, carbon emissions will be 80 percent lower than with conventional diesel technology."

Three Volvo FM trucks with 13-litre engines are currently being field tested. The technology is based on Volvo's proven Euro 5 diesel engine, which has been converted for gas operation.

"We've chosen a route whereby we combine the diesel engine's superior efficiency rating with the benefits of gas, resulting in a truck that is significantly more energy-efficient than traditional gas trucks," explains Mats Franzén, Manager of Engine Strategy and Planning at Volvo Trucks.

The field test trucks are equipped with special tanks for liquefied methane gas. Liquid gas is the optimum fuel for methane diesel technology. When liquid methane and diesel are used in a ratio of 75–25, a truck performing long haul or intercity duties has an operating range 500 to 1000 km, depending on driving conditions. This is twice the operating range of methane diesel vehicles running on compressed gas and four times that of gas trucks with Otto engines.



"Until the infrastructure for liquid methane gas has been fully expanded, it is also a great advantage for trucks powered by methane diesel engines to be able to run on diesel alone," Franzén points out.

The field test vehicles are being operated by transport companies DHL, Götene Kyltransporter and Renova. The start of the field tests coincides with the inauguration of Sweden's first public filling station for liquefied methane gas at Stigs Center in Göteborg. The station is a collaborative project between Volvo Trucks, Fordonsgas Sverige and Göteborg Energi.

"In order for our methane diesel gas technology to have a wide impact, the distribution network for methane gas needs to be developed. The new filling station is an important step in that direction," says Mårtensson.

Filling stations have previously only existed for CNG (compressed natural gas). If methane gas is cooled down to minus 160 °C instead of being compressed, it becomes liquid and its volume is reduced by half. In this case, it is called LNG (liquefied natural gas), or LBG (liquefied biogas) if it is a biogas. Both these gases are also called LMG (liquefied methane gas).

"Volvo's focus on liquid gas opens up a whole new market for us," says Bo Ramberg, CEO, Fordonsgas Sverige AB. "Now it will also be very attractive for heavy vehicles to run on gas, and we expect that market to grow rapidly. To encourage this trend, we want to show that the infrastructure is being developed accordingly."

Three filling stations for liquefied methane gas have been planned in Sweden to date. Besides the completed one in Göteborg, Aga will open a filling station in Stockholm, and Eon will open one in Malmö. Volvo Trucks is a partner in all the projects. There are plans to build additional stations if demand increases.

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For further information, please contact: Lennart Pilskog, Corporate Communications, tel +46 66492, e-mail <u>lennart.pilskog@volvo.com</u>



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