

**Volvo Bus Corporation** 

## **Press Information**

## Volvo to commence serial production of hybrid buses

Volvo Buses will now commence serial production of its hybrid bus Volvo 7700 Hybrid and the double-decker Volvo B5L Hybrid. The hybrid bus will reduce fuel consumption by up to 35% and carbon emissions by an equal amount.

Following several years of research and development of the hybrid technology, Volvo is now ready for serial production of city buses with hybrid technology. The 12-meter Volvo 7700 Hybrid bus is now being built in the company's plant in Wroclaw, Poland and the chassis for the double-decker Volvo B5L Hybrid will be built in Borås, Sweden. The coaches for the double-deckers will be built by Wrightbus in Northern Ireland.

"This is a major step for the Volvo Group and for the bus industry," says Håkan Karlsson, President of Volvo Buses. "There is now a hybrid bus in the market, which will significantly reduce fuel consumption, strongly reduce emissions and is also commercially viable."

In North America, hybrid buses currently represent about 20% of the market for city buses and that portion is steadily increasing. However, the hybrid technology used there is less cost-efficient and thus requires various types of subsidies for investments to be profitable for bus operators. In Europe, interest in and access to subsidies is lower and consequently, the portion of hybrid buses is not as high.

"It is only now that there is a commercially viable hybrid bus in the European market," says Håkan Karlsson. "Thanks to significant fuel savings and the fact that our technology is based on standard components, our customers will recover the additional costs for the bus in a relatively short time."

"In addition, most are convinced that the price of diesel will increase, making hybrid technology even more attractive."

Volvo's hybrid buses have a smaller diesel engine than normal and an electric engine that can operate the bus independently or jointly. When the bus brakes, the brake

energy is utilized and stored in a battery, which then drives the electric engine when the bus accelerates again.

A key advantage of Volvo's parallel technology is that the engine switches off automatically at bus stops. The bus then restarts only with the help of the electric engine. The diesel engine does not start until the bus reaches 15-20 km/hour. This gives a quiet and exhaust-free environment at bus stops.

Another advantage is that the bus generates significant fuel savings regardless of where it is in operation. Many of the older hybrid solutions are only efficient in highly congested city traffic, but Volvo's technology functions equally well when there is a greater distance between bus stops. In addition, the passenger capacity has increased compared with the standard diesel bus.

For over a year, Volvo Buses have conducted field tests on the buses and the first customers have driven their hybrid buses in normal traffic for some time. Everyone has considerable experience of the buses, both with respect to fuel consumption and reliability.

In many respects, the fuel consumption is better than Volvo anticipated. Customers' experience demonstrated savings from 25% on lines with fewer stops and between 30 and 35% in more congested city traffic. There are customers that report even larger savings.

"To date, the result has surpassed our expectations and all indications are that we are at the breakthrough for hybrid technology for buses in Europe as well," says Håkan Karlsson. "Key support in this respect is gained from the EU's new procurement regulations for reduced energy consumption. This is precisely what we achieve with the hybrid technology."

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