



Press information

The first hybrid refuse truck in the world launched in Sweden

Steeply rising oil prices and a strong focus on the climate have made fuel-saving hybrid technology particularly interesting. Volvo Trucks is now taking an important step towards commercialisation of this technology for heavy vehicles by launching two hybrid refuse trucks that will be tested in regular daily operations in Sweden by refuse collection firms Renova and Ragn-Sells.

“This test phase is the last stage in the evaluation of our hybrid solution ahead of production launch,” reveals Staffan Jufors, president and CEO of the Volvo Truck Corporation. “Since we presented our first concept vehicle in 2006, we have seen considerably heightened market interest in this technology. What makes our solution unique is that it is sufficiently powerful to drive heavy vehicles and more cost-effective than all other current alternatives. It is these characteristics that determine whether a hybrid can be commercially viable. We will start producing hybrid trucks in 2009.”

Fuel-efficient, quiet and clean

Volvo’s hybrid solution combines a diesel engine with an electric motor, with the electric motor being used for moving off from standstill and for acceleration up to 20 km/h. At higher speeds, the diesel engine is activated. When the truck stops, the diesel engine automatically switches off, thus avoiding unnecessary idling. The batteries are recharged using the power that is generated during braking, making this system highly suitable for operating cycles involving repeated stops and starts, such as refuse collection duties. The hybrid refuse trucks are expected to use up to 20 percent less fuel and thus cut carbon dioxide emissions by a corresponding amount. What is more, one of the trucks is equipped with an extra battery pack that drives the refuse compactor, and this is charged via the mains electrical system when the truck is parked overnight. Its total reduction in carbon dioxide emissions is expected to be as much as 30 percent, giving this approach a better eco-effect than for instance a truck powered by natural gas. Electric power has the added advantage of being entirely exhaust-free and emitting low noise, important considerations for refuse collection vehicles that often operate in urban areas early in the morning.



Hybrid technology is the future in all transport segments

Initially, hybrid technology will be utilised by vehicles in urban operations. In the longer term, however, Volvo aims to offer hybrid trucks within long-haul and construction too.

“Hybrid technology will play a major role in the future as the climate issue and oil dependency come into ever-sharper focus,” says Mats Franzén, engine manager at Product Strategy and Planning at Volvo Trucks. “No matter which fuels dominate in the future, their supply will be limited. Technology that leads to lower fuel consumption will be of immense interest to our customers, irrespective of the type of haulage operation with which they work. For distribution trucks, fuel consumption may be able to be cut by 20 to 30 percent. In long-haul operations, the percentage reduction will not be as great but since these trucks cover long distances, the total fuel saving will nonetheless be considerable.”

Volvo FE hybrid refuse trucks

- 7-litre diesel engine producing 320 hp.
- Volvo’s I-SAM (Integrated Starter Alternator Motor) serves as a starter motor, electric drive motor and alternator (120 kW).
- Electronic control unit and voltage converter (AC/DC).
- Lithium-ion batteries that are recharged via the energy generated from braking, or via I-SAM.
- Volvo I-Shift, automated gearchanging system.
- The superstructures are delivered by Norba

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