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SE Drive
HD **FUSO LEADS THE CHARGE**
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The Japanese truck maker has begun a trial of all-electric trucks in Portugal, writes GEOFF PARADISE.

Japanese truck maker, Fuso, has put into limited production the first "zero emissions" all-electric light duty truck. For now, the Canter E-Cell, made on a dedicated production line for prototypes at the **company's** Portuguese plant, is being trialled by a small number of operators in Europe. It produces no emissions and is almost silent in its operation.

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Fuso has been a leader in reducing truck emissions in its light duty trucks, with a diesel-electric hybrid available in Australia and overseas and Euro VI emissions standard light duty truck in overseas markets. Euro VI is some years away from being mandated in Australia.

Fuso says the "zero emission" Canter E-Cell is particularly suitable for use in limited-mileage operations in environmentally sensitive areas, for example in city-centre traffic or in eco-zones and pedestrian precincts.

Being "green" it gives socially conscious organisations, companies and government bodies the opportunity to show their awareness of the pollution that plagues so many cities.

"The Fuso Canter E-Cell allows us once again to emphasise our leadership in the field of alternative drive systems," said Dr Albert Kirchmann, president and chief executive of Mitsubishi Fuso Truck and Bus Corporation.

Kirchmann said the advanced engineering team based in Japan and led by Daimler Trucks, based in Portugal, have realised another milestone by bringing this technology to the market.

The customer trials with the Canter E-Cell under real-life conditions are set to run for one year. The vehicle is based on the Canter with a wheelbase of 3400 millimetres and features a wide single cab. Each of the eight battery-powered test vehicles is fitted with either a tray or pantech body and are being put to the test under a wide range of conditions.

The trials in Portugal include working in horticultural and waste disposal purposes. Another contractor will use it for house-to-house deliveries as part of its short-radius distribution service and it will be tested by the Portuguese postal service on transport runs between its distribution centres.

The design of the electrically powered light-duty truck is based on the chassis of the conventional Canter and allows a permissible gross vehicle weight of six tonne. The resulting payload of the chassis is about three tonne.

The electric motor gives it a power output of 110 kW and maximum torque of 650 Nm. It has a single-speed transmission and both the cardan shaft and the rear axle have been adopted from the conventionally powered Canter.

Top speed, as with all vehicles in this weight class, is limited to 90 km/h.

On each side of the frame are four battery packs, in two enclosed boxes. The lithium-ion batteries have a nominal capacity of 48.4kWh which gives the truck a range of more than 100 kilometres. Charging the batteries takes around seven hours, but a rapid-charging system can reduce this to just one hour.

Fuso says the vehicle is simple to drive: a twist of the ignition key and, as with a conventional torque-converter automatic, the driver can select between the gear settings Drive, Reverse and Park. The practical crawl function in Drive and Reverse is comparable with that of an automatic transmission.

Whether the truck industry is ready for a fully electric truck is the biggest question though. There is already one electric truck **sold** in Europe and the US, the Smith, but it has struck trouble. It's a marriage of a Czech-built Avia truck and electric motor technology that can be traced back to British electric **milk** trucks. But that **company** has had a rocky year after suspending operations in April only to be rescued by **Chinese** battery maker, Sinopoly, in May which injected a claimed \$42 **million** in the **company**.

In the Smith case, it was suggested the market is not ready for electric trucks or the price premium they demand. Fuso, by taking it in small steps, and with the backing of Daimler, is well placed to make a success of zero emissions, electric truck technology.

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