

Oslo, August 2011

## Evaluation of Battery Conditioner - Megapulse First Aid for Batteries (FAB).

Scania AS of Norway has been testing Megapulse FAB-MK4-24V in our contract vehicles and in Scania vehicles sold to Eastern ASKO AS since 2005. The Megapulse FAB products were acquired from the Scandinavian Distributor of Megapulse products, Jens Kleven Trading.

All vehicles installed with Megapulse FAB have been regularly monitored and battery measurements carried out and recorded. Selected vehicles are used in the distribution sector and are fitted with electric loading platforms.

We have learned from reports generated from tests carried out on 70 trucks from the period of 2005 to 2010 that Megapulse FAB helps to reduce operating costs.

The tests entailed monitoring the batteries on the 70 vehicles fitted with FAB throughout the contract period of 5 years, and at the same time monitoring similar vehicles not fitted with FAB over the same 5-year period. The total cost over the period for battery replacement and electrical system faults for the 70 vehicles fitted with FAB was NKR 69,000 whereas vehicles not fitted with Megapulse FAB incurred significantly higher costs, in fact more than 50% higher over the same period.

Based on our previous experiences, we were not surprised by the evaluation (below) made by ASKO East AS on 22 August 2011 on 5 vehicles fitted with FAB in 2007. The battery measurements carried out on the vehicles in question were performed in the afternoon, after all trucks had been on distribution runs from that morning. The battery cells were measured with an optical hydrometer with 3 decimals.

Vehicles tested on 22/8/2011:

AE 17833 fitted with FAB in 2007.

End voltage of 25.6V and all cells had acid weight of 1270 and clear electrolyte. The vehicle was also fitted with a second FAB unit on the cooling unit from Thermo King, and this battery measured a rest voltage of 12.8V. This battery is valve regulated so no cells were measured.

AE 17376 fitted with FAB in 2007

End voltage of 25.6V and all cells had acid weight of 1260 and clear electrolyte. The vehicle was also fitted with a second FAB unit on the cooling unit from Thermo King, and this battery measured a rest voltage of 12.6V. This battery is valve regulated so no cells were measured.

AE 22618 fitted with FAB in 2007  
End voltage of 25.3V and all cells had acid weight of 1260 and clear electrolyte.

AE 22648 fitted with FAB in 2007  
End voltage of 25.2V and all cells had acid weight of 1250 and clear electrolyte.

AE 18793 Joined 2007  
End voltage of 25.4V and all cells had acid weight of 1250 and clear electrolyte.

In addition to the cost savings in terms of battery operation that our customers experience with our vehicles, the environmental benefit of FAB contributes to our vehicles in making them more environmentally friendly because each vehicle is fitted with 2 x 225Ah Lead Acid batteries weighing approximately 115Kg, FAB keeps these batteries in service longer helping to reduce the number of discarded batteries annually.

We also confirm that all of our SCANIA OMNI Biofuel buses delivered to Unibuss AS Oslo in 2007 and fitted with Megapulse FAB, have to date experienced no battery related costs or electrical-related costs.

We are pleased to provide this reference to Jens Kleven Trading and we believe that Megapulse FAB will be included as a "Green" cost reduction aid in our vehicles.

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