

Webasto Range Plus: Parking heater ensures warm e-van interiors

A retrofitted diesel air heater from Webasto ensures up to 35 percent more range in electrically powered vans during the cold months of the year. It moreover ensures pleasant temperatures for passengers and everyone who relies on a warm vehicle for work.

Gilching – March 15, 2022 – Despite new generation battery technologies and battery management systems, heating the interiors of electric vehicles during periods of cold weather limits the range per battery charge by up to 35 percent. Depending on the manner in which a van is deployed, heat escapes as a result of frequent door opening – as is the case in passenger transport and parcel service applications, for example. Furthermore, window areas also cause vehicle interiors to cool down quickly. The transportation of temperature-sensitive goods also demands for a reliable and constant ambient temperature, for which energy is needed to heat the cargo compartment.

Retrofitting the Webasto Range Plus system – a fuel-powered Air Top 2000 STC Air Heater plus fuel tank – significantly reduces the load on the vehicle's existing electric heater. Additional thermal energy is introduced into the vehicle's system, which makes the full capacity of the traction battery available for the maximum range of the e-vehicle.

Pioneering solution for the eVito from Mercedes-Benz

“We first decided to offer a retrofit kit for the Mercedes-Benz eVito/EQV because this vehicle is very commonly used in applications for which our heating solution is intended,” explains Uwe Trettin, Head of Application Development at Webasto. “Anyone who chooses an electric vehicle but cannot – or does not want to – forgo the safety and comfort of a permanent and reliable source of heat, while still achieving maximum range, can benefit from this. This primarily applies to so-called ‘minibuses’ used for transporting patients, schoolchildren or airport and hotel guests, as well as vans that also serve as workplaces for parcel delivery drivers, traffic monitoring officers and service technicians.”

If the vehicle also serves as a workplace, special rules apply. The German Social Accident Insurance Association (DGUV) writes in its Information Pamphlet 215-530, “Climate in the vehicle” on this topic: “In winter, it must be possible to drive wearing normal clothing. Thick jackets, gloves and scarves can interfere with driving and reduce the effectiveness of the seat belt.” With Range Plus, a parked vehicle can be preheated even without using a charging point; while driving, the air heater maintains the temperature.

Retrofitting made easy

The 1,000 certified Webasto partner workshops can retrofit the newly developed system without further training. Installation takes some ten hours and costs around 3,200 euro, including all parts. The tank holds eight liters of fuel, which is sufficient for about 40 hours of heating at full power, and even longer depending on the usage of the vehicle, weather conditions and temperature feeling.

The retrofit system is available for car (12V) as well as truck (24V) systems. The heater is fitted between the front and rear axles. This is where the exhaust system would be located in a

vehicle with an internal combustion engine. Depending on the vehicle's application, the heater can be installed so that it operates with either fresh air or recirculated air. In the case of the latter, the heater draws recirculated air from the vehicle's trunk, which allows the preheated air to be used in an energy-efficient manner and means the unit enters standby mode sooner. The warm air is then distributed in the footwell. The electricity required for the heater comes from the vehicle's starter battery, which is regularly recharged from the high-voltage battery.

To accommodate the tank filler neck, a cutout is made in the side wall at the point where the potable water connection and external power hook-up are fitted on the "Marco Polo" camper version of the Mercedes-Benz Vito. The filler cap therefore does not hinder the sliding door. The tank can either be filled with diesel, or – if available – hydrogenated vegetable oil (HVO).

To control the heater, the versatile ThermoConnect app or the MultiControl control panel (installed in the vehicle) are available as options.

Safety all round

The system was approved by an expert from a testing institute in accordance with §21 of the German Road Traffic Licensing Regulations (StVZO). During testing, attention was paid to robustness of the system in the event of a collision or vehicle rollover, for example. On the basis of this type report, straightforward final acceptance is performed for each retrofit application by a testing institute with technical service.

"Now that this initial application has been well received on the market, we are in the process of developing further vehicle-specific retrofit solutions," adds Trettin. "By following this path, we want to facilitate flexible and 'unplugged' heating for e-vehicles, too. Trip plans need not be modified to make routes shorter in winter, and the people working inside the vehicles can do so in a pleasant and safe environment."

About Webasto

The Webasto Group is a global innovative systems partner to the mobility industry and one of the 100 largest suppliers to the automotive sector worldwide. The company's offering includes in-house developed roof, heating and cooling systems for various types of vehicles, batteries and charging solutions for hybrid and electric vehicles, and additional services related to thermal management and electromobility. Among the customers of Webasto are manufacturers of passenger cars, commercial vehicles and boats, as well as dealers and end customers. In 2020, the Group generated sales of around 3.3 billion euros and employed more than 14,000 people at over 50 locations. The headquarters of the company, which was founded in 1901, is located in Stockdorf near Munich (Germany). For more information please visit www.webasto-group.com.

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