

## CASE STUDY | WELLHOUSE

*Wellhouse Leisure was looking to specify a complete charging system in the Ford Terrier campervan to ensure that the leisure battery, powering important vehicle devices, was charged whilst on the move, to help owners get the most out of their vehicle.*

**WELLHOUSE LEISURE IS THE UK'S LEADING** manufacturer of compact motorhomes. Situated at Shepley near Huddersfield, they offer a range of conversions based on Toyota Alphard, Ford Custom, Ford Connect and the new Mercedes Vito base vehicles. An award winning campervan converter, Wellhouse Leisure also has a dealer network of around 20 official Ford dealers around the UK.

Wellhouse Leisure contacted CTEK UK distributor RoadPro during the design and development of the Ford Terrier, which when launched would be the first UK conversion of the passenger carrying, short wheelbase Ford Transit. This particular conversion would feature a higher standard specification than most other conversions in the marketplace, that would be available with special options to customise it for optimum comfort. Since its launch it has won many awards for its design.

The Ford Terrier comes packed with features such as heater, LED lights, fridge, mini grill, electric step all of which are powered by the leisure battery. Wellhouse Leisure was looking for an onboard charging solution that would quickly and efficiently charge the leisure battery whilst on the move and utilise solar power to continue to charge the leisure battery if the Ford Terrier was parked off-grid, away from a mains power supply.

When a vehicle is on the move, many on-board charging systems rely solely on the vehicle alternator to charge both the starter and service batteries - in reality, the alternator only has sufficient capacity to charge the starter battery. Couple this with the fact that alternator will drastically reduce the charge being delivered once it is satisfied that the starter battery has received sufficient charge, and it's safe to say that the leisure battery will never be fully charged.

So with many charging systems lacking the sophistication required to charge batteries beyond around 80%, Wellhouse was looking to specify an on-board charging solution that would quickly and safely 100% charge the leisure battery.



*"We were looking to specify an on-board charging system for the Ford Terrier that would bring the leisure battery up to 100% state of charge whilst on the move. We wanted to guarantee battery performance so that Ford Terrier owners could enjoy the good times, without the hassle of a flat leisure battery."*

**Tim Hughes**  
Project Design Manager

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### SOLUTION

The CTEK D250S Dual Smart Charger was specified to deliver a powerful 20A charge to the leisure battery whilst on the move. The solar panel connector can be connected to a solar panel on the roof to deliver a charge to the leisure battery when parked away from mains power. The compact, lightweight yet powerful charger is easily fitted into the vehicle without the need to compromise on space

The CTEK MXS 10, a 10A mains powered charger, was also specified to deliver power to the vehicle if it was parked for longer periods of time and there was access to mains power.

The EN 61000-3-2 Class A rating on both of these products means they are approved for permanent installation, so they are completely safe too.

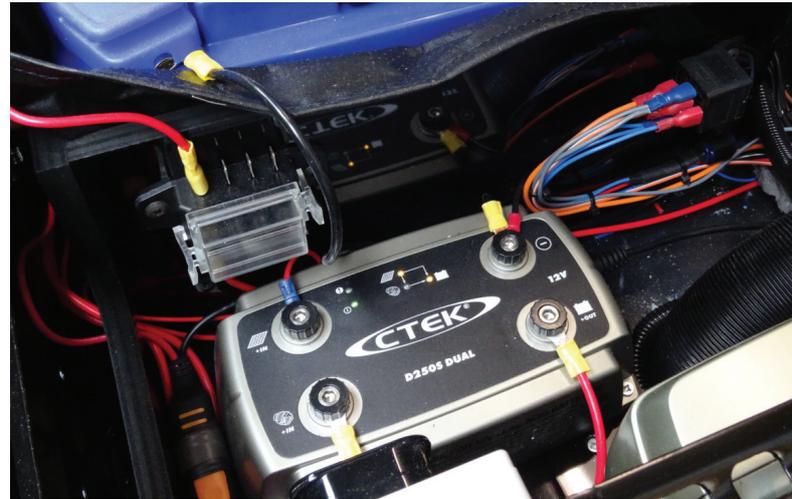
The combination of both of these chargers, would result in 100% charge and maintenance of the leisure battery, increasing battery efficiency and guaranteeing performance.

### ABOUT THE D250S DUAL

The D250S Dual is a 20A DC/DC on board charging system that will maximise the performance and increase the life of the leisure battery.

Drawing its energy from the vehicle alternator, this small yet powerful charger continuously determines the needs of the leisure battery, delivering a safe, powerful charge whilst making sure that it doesn't damage the alternator or overcharge the battery. Unlike other parallel or split relay DC/DC systems, whereby the alternator only sees the starter battery and drastically reduces the charge being delivered once this has been fully charged, the D250S Dual communicates directly with the leisure battery, ensuring that its charging requirements are also fully met.

The solar panel connector can be directly connected to a solar panel on the roof to deliver a charge to the leisure battery when parked away from mains power. Once the leisure battery has been fully charged, the solar panel connector also enables additional maintenance charging of both the leisure battery and starter battery when parked in daylight.



### ABOUT THE MXS 10

The MXS 10 is a 12V, 10A smart mains battery charger. This battery charger and maintainer has an extended five pulse per second de-sulphation stage providing maximum opportunity to fully restore battery capacity. CTEK MXS 10 will revive, charge, condition and maintain the leisure battery and can be connected indefinitely if required, without risk of over or under-charging the battery.

Both units use patented CTEK technology will charge all types of 12V lead-acid batteries including maintenance free types and all chemistries including Wet, Calcium, GEL and AGM – they will exactly meet the needs of the leisure battery. They deliver a really 'clean' charge so it's safe for the vehicle too - there isn't any risk of disruption to the vehicles ECU settings.

The unique and advanced charging cycle in both the D250S Dual and the MXS 10 means they are fast, effective and will charge the leisure battery in the shortest possible time.

### BENEFITS

The inclusion of the D250S Dual within the Ford Terrier specification will realise a great many benefits for their owners:

- Leisure battery is charged to 100% - reducing the risk and hassle of a flat battery and loss of power for important vehicle devices.
- Increased leisure battery life - CTEK research shows that using a CTEK charger can extend the life of the battery by as much as three times as well as maximising capacity
- Additional maintenance of the vehicle starter battery - once the leisure battery has been fully charged, the D250S Dual will also deliver an additional maintenance charge of both the leisure battery and starter battery.

It will also reduce the risk of battery related warranty returns for Wellhouse Leisure, support their commitment to customer service and maintain the strong relationships that they have with their customers.

