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RAC develops UK's first lightweight charger to deliver a 'journey-saving' boost to electric vehicles

In readiness for the UK's expected electric vehicle boom, the RAC has developed its EV Boost system – the first lightweight mobile electric vehicle (EV) charger capable of giving stranded out-of-charge cars a power boost from one of its standard orange roadside rescue vans.

The bespoke solution can be rolled-out to hundreds of patrol vehicles ensuring the RAC can match the scale of demand as electric vehicle ownership grows in the coming years.

The first six Ford Transit Custom patrol vans equipped with the new EV generators - powered by an additional alternator fitted to each van - will take to the roads in June in London, Birmingham and Manchester and will be rolled-out to areas with high call-outs.

The charger, which was developed by the RAC's technical experts in partnership with automotive engineering firm Original Ltd, is capable of delivering a 'top-up' roadside charge from a standard Euro 6 diesel RAC patrol van sufficient to get a stranded EV safely to a nearby charge point.

The RAC EV Boost charger works with all Type 1 and Type 2 connections ensuring it will charge 99% of electric vehicles on UK roads today.

EVs present a particular challenge as many cannot be towed normally and ideally should be transported with all wheels off the ground which usually requires a flat-bed vehicle. So, if an electric car runs out of charge in a busy urban location, such as a red route in London or even just a narrow road, it can't be towed to the nearest charge point – and is likely to cause traffic jams and frustration.

RAC head of roadside rescue innovation Chris Millward said:

“Our solution enables our patrols to help stranded EV drivers at the roadside with a power boost, equivalent to a top-up from a fuel can for a petrol or diesel car, to get them on their way again.

“With nothing like it on the market the real challenge was to develop a mobile EV-charger system which is compact and light enough to fit into our normal patrol vehicles without compromising on space so we can still carry all the normal parts and tools to help our patrols continue to fix four out of five vehicles at the roadside.

“Other solutions that are available require valuable van space to be taken up by heavy portable chargers that negatively affect fuel economy and also need to be recharged after use. Our on-demand solution means that the power is always available when needed.

“The number of electric vehicles on the road will grow rapidly in the next few years, in particular we are seeing increased interest and take-up from

business and fleet managers, so it is critical that we have an effective mobile power source for these cars in an emergency giving EV-owners complete peace of mind. The new mobile RAC EV Boost charger has also been well received by our manufacturer partners.

“We also expect it will help address the anxiety some potential EV buyers have about the current charging infrastructure and vehicle range.

“The RAC is constantly looking to evolve and invest in technology to meet the changing needs of drivers and their modern vehicles, and this EV-charger fits perfectly with this strategy.”

Melanie Shufflebotham, co-founder of Zap-Map, the EV charging map, said:

“It’s great to see the RAC leading the way and introducing this new mobile EV charging system to its fleet of vans. Whilst the UK public charging network already has over 14,000 public charge points and is growing at a rapid rate, this service will give electric car drivers additional confidence as they plan longer electric journeys.”

Erik Fairbairn, Pod Point CEO and Founder, said:

“The number of EVs on UK roads is increasing exponentially and it’s great to see the RAC adapting its patrol vehicles accordingly.

“Range anxiety is a common phenomenon, particularly among those new to EVs, and this mobile charger will help reassure drivers that there is help available in the unlikely event that they do run out of charge.”

EV Boost: How does it work?

The new EV Boost system uses a generator permanently fitted to the 1.9 litre Euro 6 diesel engine, the power produced is passed through an inverter to give an out-of-charge electric vehicle a boost. This is the equivalent to a top-up of petrol or diesel from a can for a conventional fuelled vehicle. As most EVs cannot simply be towed to a charger as they require all wheels to be lifted the RAC will use the system to help drivers when they can’t reach a charger. In busy city locations and red routes it will be an invaluable boost

which will save time and reduce traffic disruption.

The EV Boost solution is faster and more efficient than the alternative options of towing the out-of-charge vehicle or carrying an additional large battery to supply the charge. It also produces less air pollution than these two options.

Notes to Editors

The press office email address is press.enquiries@rac.co.uk. **Please note:** the press office is unable to help with individual customer enquiries - please visit the [RAC contacts page](#) to find the right contact.

ISDN radio studio facilities are available for interviews Monday to Friday.

About the RAC

The RAC provides complete peace of mind to 12m UK private and business drivers, whatever their motoring needs. Its services include:

- **[Breakdown assistance](#)**. Its highly-skilled, 1,600-strong branded patrol workforce attends more than two million breakdowns every year, fixing on average four out of five vehicles at the roadside. The RAC's patrol fleet is one of the most advanced in the UK, and was the first to roll out both an [All-Wheels-Up recovery system](#), allowing the vast majority of vehicles to be recovered from a single patrol van, and [EV Boost](#) mobile electric vehicle charging units
- **[Insurance](#)**. The RAC is a top-five [car insurance](#) broker having surpassed the 500,000 policies-in-force milestone in 2018. It also offers '[black box](#)' [telematics policies](#), as well as home and travel insurance
- **[Other motoring services](#)**. The RAC leads in the development of new solutions for business, fleets, electric vehicles and future car technology. Its additional products and services include a [personal loans offering](#), a [used car buying website](#), [vehicle inspections and checks](#), [legal services](#) or up-to-the-minute [traffic](#)

[and travel information](#). It also has a network of [Approved Dealers](#) and [Approved Garages](#) which combine the trust of RAC brand with local service and convenience

The RAC also works to support the interests of its members and UK drivers on the most important motoring issues which it identifies via the annual [RAC Report on Motoring](#) and the RAC Opinion Panel. The Report on Motoring is the longest running analysis of driver opinion in the UK having been published every year since 1989.

For more information about the RAC, visit the [RAC website](#).

Contacts



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