Range challenge for the Porsche Taycan

12/12/2024 1,111 kilometres in one day: Porsche invited international journalists to a special kind of all-electric test.

“Electric cars have too small a range and charging isn't really practical.” When it comes to electromobility, these are two of the main concerns that are repeatedly voiced.

To dispel them, Porsche created the Taycan 1,111-km Challenge. The task for the media who attended was to visit all four Porsche Charging Lounges:

- Koblach, near Lake Constance in Austria
- Bingen am Rhein in Rhineland-Palatinate, Germany
- Würzburg in Franconia, Germany
- Ingolstadt in Upper Bavaria, Germany

If lines are drawn between all four charging points on the map, with a little imagination the outline of the Nürburgring Nordschleife appears. And in a best-case scenario, the distance is exactly 1,111 kilometres. Charging at non-Porsche stations was prohibited during the drive. The special thing about this challenge was that the fixed charging points are not the fastest way to cover this distance, so instead the focus was on driving style and charging strategy.

Who drove to the lounges, how fast, and in what order, was up to the journalists. Koblach was the start and finish point.

The first stretch up to Bingen was about efficiency. The second leg back to Koblach was about finding the correct charging strategy.

The event started early in the day at 06:30. Driving more than 1,000 km in one day is a challenge, regardless of the powertrain type, so each of the six Taycan models taking part had a team of two drivers. The cars used were the Sport Sedan, Sport Turismo and Cross Turismo in 4S, Turbo or Turbo S form. All of the cars had a range approaching the 600 km mark according to the WLTP. Once all six cars were fully charged in Koblach, they set off on their journeys at the same time.

The first challenge: 450 kilometres to Bingen via the motorway, without recharging. Single-digit temperatures, rain and traffic jams made it difficult to select the best possible speed. Everyone wanted to go as fast as possible, within the limits of what is allowed, and fully use the 97 kilowatt hours available to them. An average consumption of 21.5 kWh/100 km or less should be sufficient to reach the first stop.

As with the Koblach site, the Porsche Charging Lounge in Bingen has six 400 kW Alpitronic chargers, a lounge area with toilets, a coffee machine and a snack machine. When six Taycan models charge simultaneously, at more than 300 kW, a total of almost two megawatts flows through the power lines. This is where the event's charging record with a peak output of 321 kW was set.

Next stop: Würzburg. 190 kilometres away. The question for the participants was: by how much should we recharge the battery? Is it better to charge more than necessary in case the motorway is clear or is it better to get going again as quickly as possible? The teams chose different strategies, which saw the states of charge (SoC) vary from 55 to 92 per cent on departure. On long journeys served by well-developed infrastructure, charging to a SoC greater than 80 per cent rarely results in an earlier arrival time, as the charging speed decreases when the battery is almost full. An additional challenge: unlike in Koblach and Bingen, there were only four chargers in Würzburg and Ingolstadt. The network of Porsche Charging Lounges is set to expand continuously at traffic hubs near motorways. In total, up to 15 locations are planned for Germany, along with 25 Charging Lounges throughout Europe. The next two will be opened in northern Germany and Switzerland.

Four teams arrived in Würzburg with a remaining SoC of two per cent. Most teams then recharged their batteries to almost 70 per cent in just a quarter of an hour. This is when electromobility is fun. The next destination was exactly 200 km away: Ingolstadt. There, most of the cars charged to around 80 per

cent, again in just 20 minutes. It was then time for the final push. The last stage was almost 300 km long. Time for one last snack, another coffee and a driver change. They needed to avoid the Munich bottleneck – either by going further, via Augsburg, or by taking the A99 to the north of the Bavarian capital. Again, the teams gave it their all.

At the end of the challenge, the six Taycan models had covered a total of 20,000 km over three days using electric power. The fastest pair took exactly 11 hours, including an 80 per cent charge at the final Charging Lounge. Their Taycan 4S Cross Turismo averaged 25 kWh/100 km, without charging losses, at an average speed of more than 100 km/h. As a kilowatt hour costs just 39 cents at all Porsche locations, thanks to the three years of free access to the low charging rates of the Porsche Charging Service that is available to Taycan customers, the total cost of the challenge, including charging losses, was just 125 euros. That was after the Taycan had been fully charged back up to 100 per cent, just as it had been in the morning. In total, the Taycan consumed 320 kWh in the challenge. The petrol for a comparable combustion-engined car would have cost at least twice as much on this trip.

Taycan wins P3 Charging Index

Porsche has won the P3 Charging Index 2024 with the updated Taycan, which premiered worldwide in February. Compared to the first generation from 2020, the new model benefits from a 50 kW increase in charging power and a significantly extended fast-charging period. The Taycan reaches a peak charging power of 325 kW, higher than any other car, and maintains its top plateau of more than 300 kW until it reaches at least a 60 per cent state of charge (SoC). This is reflected in the average charging power between 10 per cent and 80 per cent SoC, which stands at 282 kW, offering a good balance between maximum and average charging power. The latter is the highest figure for any car, making the Porsche model the clear leader in terms of charging performance. The new Performance Battery Plus can be charged from 10-80 per cent SoC in 18 minutes.

MEDIA ENQUIRIES

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Consumption data

Taycan 4S Cross Turismo (WLTP)*: Electrical consumption combined: 21.5 – 18.7 kWh/100 km; CO_2 emissions combined: 0 g/km; CO_2 class: A

Taycan Turbo Cross Turismo (WLTP)*: Electrical consumption combined: 21.5 – 18.9 kWh/100 km; CO_2 emissions combined: 0 g/km; CO_2 class: A

Panamera 4 E-Hybrid (WLTP, preliminary values)*: Fuel consumption weighted combined: 3.8 – 3.0 l/100 km; Fuel consumption with depleted battery combined: 9,6 – 8,7 l/100 km; Electrical consumption weighted combined: 18.4 – 17.9 kWh/100 km; CO_2 emissions weighted combined: 86 – 69 g/km; CO_2 class weighted combined: B; CO_2 class with depleted battery: G

Taycan Turbo (WLTP)*: Electrical consumption combined: 20.0 – 17.8 kWh/100 km; CO_2 emissions combined: 0 g/km; CO_2 class: A

Taycan Turbo S Cross Turismo (WLTP)*: Electrical consumption combined: 21.4 – 19.0 kWh/100 km; CO_2 emissions combined: 0 g/km; CO_2 class: A

Taycan Turbo S Sport Turismo (WLTP)*: Electrical consumption combined: 21.0 – 18.8 kWh/100 km; CO_2 emissions combined: 0 g/km; CO_2 class: A

Taycan Turbo S (WLTP)*: Electrical consumption combined: 20.0 – 17.8 kWh/100 km; CO_2 emissions combined: 0 g/km; CO_2 class: A

Taycan Turbo Sport Turismo (WLTP)*: Electrical consumption combined: 21.0 – 18.6 kWh/100 km; CO_2 emissions combined: 0 g/km; CO_2 class: A

Taycan 4S (WLTP)*: Electrical consumption combined: 20.2 – 17.6 kWh/100 km; CO_2 emissions combined: 0 g/km; CO_2 class: A

Taycan 4S Sport Turismo (WLTP)*: Electrical consumption combined: 21.0 – 18.5 kWh/100 km; CO_2 emissions combined: 0 g/km; CO_2 class: A

*Further information on the official fuel consumption and the official specific CO_2 emissions of new passenger cars can be found in the "Leitfaden über den Kraftstoffverbrauch, die CO_2-Emissionen und den Stromverbrauch neuer Personenkraftwagen" (Fuel Consumption, CO_2Emissions and Electricity Consumption Guide for New Passenger Cars), which is available free of charge at all sales outlets and from DAT (Deutsche Automobil Treuhand GmbH, Helmuth-Hirth-Str. 1, 73760 Ostfildern-Scharnhausen, www.dat.de).

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