## In brief

Every year, VerkehrsRundschau and its sister magazine "Trucker" awards its Green Truck, Green Van and Green Light Truck labels to the most environmentally friendly commercial vehicles. The results of independent vehicle tests are incorporated into the environmental rankings.

# A clean contest

Three manufacturers accepted the invitation to take part in VerkehrsRundschau's "Green Truck 2020" environmental rankings. The Mercedes-Benz Actros 1851 comes up against the Scania R 540 and the Volvo FH 500. Which of the trucks will prove to be the most environmentally friendly?

Scania has even eliminated the roof hatch on this test vehicle, saving 15 kilograms in weight. It's just one example of the radical slim-down the Swedish manufacturer has prescribed for the 7.37 tonne R 540 Highline – all the more crucial, as the trucks in

Scania's range are not exactly renowned for their light weight.

The same goes for the Mercedes-Benz Actros 1851, which has even been made 82 kilos lighter than the Scania. And that makes the FH's hefty 7610 kilos all the







demonstrated its ability to configure the FH with an almost unmatched light weight. So why the Gothenburg-based manufacturer chose not to do so with this "power blue" liveried FH 500 I-Save remains a mystery.

### Consumption, speed and weight count

After all, lighter weight is the first step towards a good placement in Verkehrs Rundschau's annual "Green Truck" environmental rankings. The candidates must have at least 500 horsepower under the bonnet, and feature a long-distance truck style high-roof cab. Three makers took up the challenge. A level playing-field is ensured by the required fitting of identical new tyres (Michelin X-Line-Energy) on all three of the contestants. Everything else, such as the choice of rear axle ratio, is left to the manufacturers as they compete in pulling a Fliegl trailer, loaded with 32 tonnes, as economically as possible and at a reasonable average speed on our standardised 343-kilometre "VR-Profi" test circuit.

Ranked 2nd with mirror replacement system: the Mercedes-Benz Actros 1851 Stream-Space

more surprising. Volvo has, after all, often

As always, our own reference vehicle - a Mercedes-Benz Actros 1845, with a loaded curtainsider from Schmitz Cargobull - is available on the various test days in order to provide the required comparability.

Despite the freedom of choice in the overall transmission ratio, there is broad agreement among the manufacturers, as all three are entering "Green Truck 2020" with their longest possible set-up. The most extreme is the FH, which revs to just a little over 1000 rpm at its 85 km/h cruising speed. The fact that the Volvo nevertheless achieves the highest average speed is a credit to the I-Save package (the predecessor model was still current at time of testing).

It also incorporates the Turbocompound turbine, installed downstream of the turbocharger rotated by the residual heat of **>** 



Find more on the subject at #GreenTruck

www.verkehrsrundschau-plus.de/hashtag



At 26.79 l/100 km on the test circuit, the Volvo FH 500 l-Save falls well short of its potential



the exhaust gas. The energy generated by this acts directly on the crankshaft, resulting in an additional 300 newton-metres of torque compared

to the standard FH. At 2800 newton-metres - developed from as low as 900 rpm - this represents a clear advantage for Volvo over its two competitors. That competitive edge is demonstrated in practice on the test circuit, where just three downshifts on uphill stretches are needed.

Between 2500 and 2800 newton-metres The Mercedes-Benz, in particular, needs quite a lot more - a total of 16 down-shifts

in fact - which is most likely down to its

delivering the lowest torque of all the contestants, just 2500 newton-metres, applied above 1100 rpm, which is the highest revs level too. The resultant speed disadvantage compared to the fast Volvo is a negligible 0.56 km/h (see box below).

Scania is placed between its two opponents in the speed ranking. It's a result that the truck-maker from Södertälje can certainly live with, as the R 540 Highline is the undisputed winner in terms of economy, with an average fuel consumption of 25.14 l/100 km. That's equivalent to 798 g/km of CO<sub>2</sub> emissions, making the Scania the most climate-friendly truck in the contest.

One more word about Volvo: The fact that the FH 500 I-Save lags behind its two competitors in terms of consumption should not be overestimated. At the time of testing, the test vehicle had just 12,000 kilometres on the clock, meaning it was still very much in the heavy fuel-consuming run-in phase. The manufacturer has already demonstrated that the recently updated FH model, in particular, can do better (see VR 38/2020).

#### The Scania secures the title

With the best economy index of 1.171 based on its low fuel consumption, coupled with good results in the average speed and unladen weight categories - the Scania R 540 Highline ultimately comes out on top, deservedly winning the "Green Truck 2020" award.

In fact, it marks the fourth time in a row that the coveted trophy has been awarded to the Swedish manufacturer. So its double congratulations from us to Södertälje!

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Manufacturer / Model	Euronorm	Consumption	Speed	Weight	Economy*	CO <sub>2</sub> e		
Scania R 540	Euro 6d	25,14	80,42	7370	1,171	798		
MB Actros 1851	Euro 6d	25,75	80,17	7288	1,150	817		
Volvo FH 500 I-Save	Euro 6d	26,79	80,73	7610	1,112	850		

 $Consumption figures quoted without AdBlue, *Average speed / (2 x consumption) + (0.25 x unladen weight); CO_2e = CO_2 equivalent (0.2$