



# Protecting the climate, driving efficiently

Every year, VerkehrsRundschau presents the **Green Truck Award** to the most environmentally friendly tractor truck from the previous test year. 13 vehicles are in the running, and it's a close race.

**T**his is the biggest field of Green Truck contestants ever. The VerkehrsRundschau annual environmental award honours the most environmentally friendly 4x2 rig from the previous year's vehicle tests. All seven major truck manufacturers opted to take part in the contest, with some even submitting multiple vehicles.

The benchmark, as ever, is our own Mercedes-Benz Actros 1845, including a

fully laden curtainsider from Schmitz Cargobull. As a reference vehicle, it accompanies every trip on our 353 kilometre standardised test route - a distance that allows all the different weather conditions encountered to be taken into account.

## 24-tonne test semi-trailer

The transport task is also the same for all contestants: all of them have to mount our Krone test semi-trailer on the fifth-

wheel plate. Loaded with 24 tons, this results in almost 32 tonnes of total weight depending on the rig configuration - a comparatively easy transport task. And that is why the Green Truck specification for 2019 also stipulates an engine with no more than 500 horsepower.

There is a rare unanimity among the manufacturers when it comes to choosing the right performance class. Just under 450 horsepower seems to be the most



Economical but quick:  
The Scania R 450 Highline wins  
Green Truck 2019

Karel Seifna/VerkehrsRundschau



The DAF CF 450 proves to be a highly economical lightweight, but its low average speed on the test route costs it the victory.



The Scania G 410 is doubtless not exactly a driver's favourite, but it's definitely a hit in terms of economy: 3rd place

economical option for towing, as demonstrated by the fact that every maker submitted a test vehicle with that engine power to the competition.

Befitting such a tough contest, the truck manufacturers give nothing away. Just half a litre of diesel over the entire 353 kilometre test route ultimately separates this year's winner from the rest. But more about that later ...

First let's consider an emerging trend that modern diesel engines, with their early torque delivery and increasingly intelligent automated manual transmissions, are making possible: extremely long rear axle

ratios, resulting in fuel-saving low revs.

We believe that's the right way to go – at least if the truck is mainly run part-loaded. Because it's not possible without losing out on agility. The engines can even cope with some inclines without having to shift down, which is otherwise done by the automated manual transmission, with no driver intervention required.

#### 1000 revs at 85 km/h

The most advanced make to date in this respect is currently DAF. Its XF and CF models can be equipped with a 2.21 axle

that cuts the engine speed to 1000 revs per minute at 85 km/h. The in-line six-cylinder engines of the Iveco and Volvo test vehicles are also combined with long axle ratios, and rev a mere 50 rpm faster at the same running speed.

The use of a GPS cruise control system – a proven way to save fuel – is also indispensable in the hunt for fuel economy records. So the VerkehrsRundschau testers are all the more astounded that still only a fraction of transport companies seem to be requiring their drivers to use these fuel-saving systems. →

## GREEN TRUCK 2019 ECO-RANKING

Rank	Manufacturer / Model	Emission standard	Consumption (l/100 km)	Speed km/h	Weight Kilograms	Economy *	CO <sub>2</sub> e
1	Scania R 450 Highline	Euro 6c	23.25	80.42	7321	1.241	738
2	DAF CF 450 Space Cab	Euro 6c	23.39	78.68	6865	1.230	742
3	Scania G 410	Euro 6c	24.02	79.65	7163	1.207	762
4	Volvo FH 460 Globetrotter	Euro 6c	24.46	80.17	7081	1.203	776
5	DAF XF 480 Space Cab	Euro 6c	23.81	79.22	7480	1.194	756
5	Volvo FH 420 Globetrotter	Euro 6c	24.38	79.77	7212	1.194	774
7	MB Actros 1846 StreamSpace	Euro 6c	24.76	79.57	7180	1.179	786
8	Iveco Stralis XP 460 Hi-Way	Euro 6c	24.39	79.23	7390	1.178	774
8	MAN TGX 18.460 XLX	Euro 6c	24.56	79.37	7300	1.178	779
10	Iveco Stralis XP 480 Hi-Way	Euro 6c	25.08	79.90	7400	1.163	796
11	Iveco Stralis XP 420 Hi-Way	Euro 6c	24.89	79.05	7375	1.158	790
12	Renault T 480 High	Euro 6c	25.29	79.27	7841	1.129	803
13	Renault T 440	Euro 6c	26.90	78.78	7396	1.089	854

All consumption figures quoted without AdBlue, \*Average speed / (2 x consumption) + (0.25 x unladen weight)





Volvo submitted two FH models featuring the Globetrotter cab to the competition. The 460 is placed 4th; its twin, with 40 hp less engine power, comes 5th. One of Volvo's strengths is clearly its light weight.

It's hard to understand, because the cruise control systems of all seven makes efficiently utilise the kinetic energy of the rig when approaching hilltops and on downward slopes. The systems by the makers from Sweden and from Wörth on the Rhine in Germany continue to most effectively manage the interplay of Eco-Roll, overrun cut-off and the automated manual transmission.

The fact that the DAF CF 450 falls behind in terms of road speed – a further criterion

in terms of the Green Truck Ranking – is down neither to DAF's Predictive Cruise Control GPS-based system nor to the aforementioned long axle.

It's because the Dutch maker pairs an eco software called "Dynamic Cruise" with its GPS cruise control system. The system holds back the engine speed on inclines, keeping the vehicle around two kilometres per hour below the actual possible speed when in cruise control mode. So where the CF would theoretically reach 80 km/h, it

goes uphill at just 78. That's not exactly conducive to responsive behaviour, as is reflected in the lowest average speed among the entire competition field. On the other hand, Dynamic-Cruise demonstrably saves fuel. In fact, the CF 450 is behind only the Scania R 450 when it comes to fuel economy – and, as already mentioned, only very narrowly.

#### Economical but quick

The economical Swedish truck consumed 23.25 litres of diesel per 100 kilometres,



The new Actros generation currently being launched is sure to set new records. Its predecessor 1846 model is awarded 7th place.



For the current MAN TGX 18.460 this was something of a farewell tour. The launch of its long-awaited successor is imminent ...





Featuring the XF 480 Space Cab, the big brother of the DAF CF shares 5th place with the Volvo FH 420



long-distance routes, with only occasional overnight stops. The Dutch model does compensate its buyers (and drivers) for this shortcoming with the lightest weight in the field: at 6.86 tonnes, the CF is the only truck to weigh less than seven-tonnes.

The Volvo FH traditionally also scores well in terms of weight. The impressively low 7,081 kilogram weight of the FH 460 is a result of the consistent slimming-down process to which the Gothenburg-based maker subjects its product. And the FH, in combination with the Globetrotter cab, is a fully-fledged long-distance truck that is likely to have strong appeal to drivers too.

### Third victory in a row

Nevertheless, neither the Volvo FH nor the DAF CF can ultimately beat the Scania R 450. With an economy index of 1.241, it secures the title of “Green Truck 2019” – albeit very narrowly. So the environmental award goes to Södertälje for the third time in a row. But we can be sure that many a competitor will be trying to break that stranglehold on the title in 2020! ■■■

Jan Burgdorf



Find out more in the “Green Truck” dossier

[www.verkehrsrundschau.de/dossiers](http://www.verkehrsrundschau.de/dossiers)

releasing only 738 g/km of CO<sub>2</sub> into the vulnerable environment – figures that many a flashy SUV can only dream of! Moreover, despite its comparative lack of thirst, the R 450 towed our test trailer at an average speed of 80.42 km/h, making it the fastest truck in the field.

Both factors are sufficient to outplay one of the biggest shortcomings of Scania's current truck series. Because the make bearing the griffin badge is known as being not exactly one of the lightweighters on the market.

That is particularly evident in the second Scania entered in the contest which – with its low G-cab, submitted to the test without even featuring the roomier Highline roof – is in no way suited to long-distance transport. Despite its compact dimensions, the G 410 weighs in at a comparatively hefty 7,163 kilograms, including the 400 litres of diesel and 60 litres of AdBlue which we always add.

Despite its Space Cab high roof, the DAF CF 450 is likewise suitable at best for in-country



... a fate that it shares with the Iveco Stralis XP 460 Hi-Way, as well as its Green Truck placement: 8th place



Contrary to the company's claim, the Stralis XP 480 featuring Smart EGR is not quite as economical as its less powerful SCR-only stablemates.