



# The Passat

## Environmental Commendation



## A sustainable success story

# The Environmental Commendation for the Passat

The Passat is not only one of Volkswagen's most successful models but also one of the most popular cars in Europe. And the Passat success story looks set to run and run.

That also applies to the Passat's environmental properties. Over the course of time, this best-selling model has gradually been improved, for example by BlueMotion Technologies, enabling the Passat not only to retain its edge but also to extend its lead.

Volkswagen aims to develop new models that present better environmental properties than their respective predecessors over the full life cycle. Environmental impacts are not restricted to the service life of a vehicle; they also occur during production of the raw materials, during manufacturing and ultimately during recycling and disposal.

That's why, when we plan and develop our vehicles, we do so not just in line with criteria such as safety, comfort and visual appeal, but also with the Group-wide environmental goals of the Technical Development department. This

ensures that we not only meet the legal requirements in terms of emissions and materials, but also adopt a holistic approach that embraces the entire value chain.

In order to reduce environmental impacts to a reasonable minimum, the full life cycle of a product must be taken into account. To this end, Volkswagen draws up Life Cycle Assessments that analyse the creation of new vehicles, components and materials. On top of this we also consider the environmental impact of production of the fuel consumed during the vehicle's service life.

In a Life Cycle Assessment in line with ISO 14040 the first step is to document all the relevant types and quantities of material and types and quantities of energy consumed in the production, use and recycling of the product. Step two

### The Environmental Commendation

We use Environmental Commendations to inform our customers, our shareholders and other stakeholders within and outside the company how we are making Volkswagen's products and production processes more environmentally compatible and what we have achieved in this respect. The information in this Environmental Commendation is based on a Life Cycle Assessment of the Passat which has been verified and certified by the technical inspection organisation TÜV NORD. The TÜV certificate confirms that the Life Cycle Assessment is based on reliable data and that the methods used to compile it comply with the requirements of ISO standards 14040 and 14044



is a Life Cycle Impact Assessment which classifies the environmental impact of the product into categories such as global warming, photochemical ozone creation, soil and water acidification and eutrophication. This is followed by interpretation of the findings of the first two steps. For the Life Cycle Assessment of the Passat we compared the popular diesel-engined version 2.0 TDI BlueMotion

Technology (103 kW)<sup>1</sup> with an equally powerful predecessor and the 90-kW petrol-engined models 1.4 TSI<sup>2</sup> and 1.4 TSI BlueMotionTechnology<sup>3</sup> with a similarly engaged predecessor.

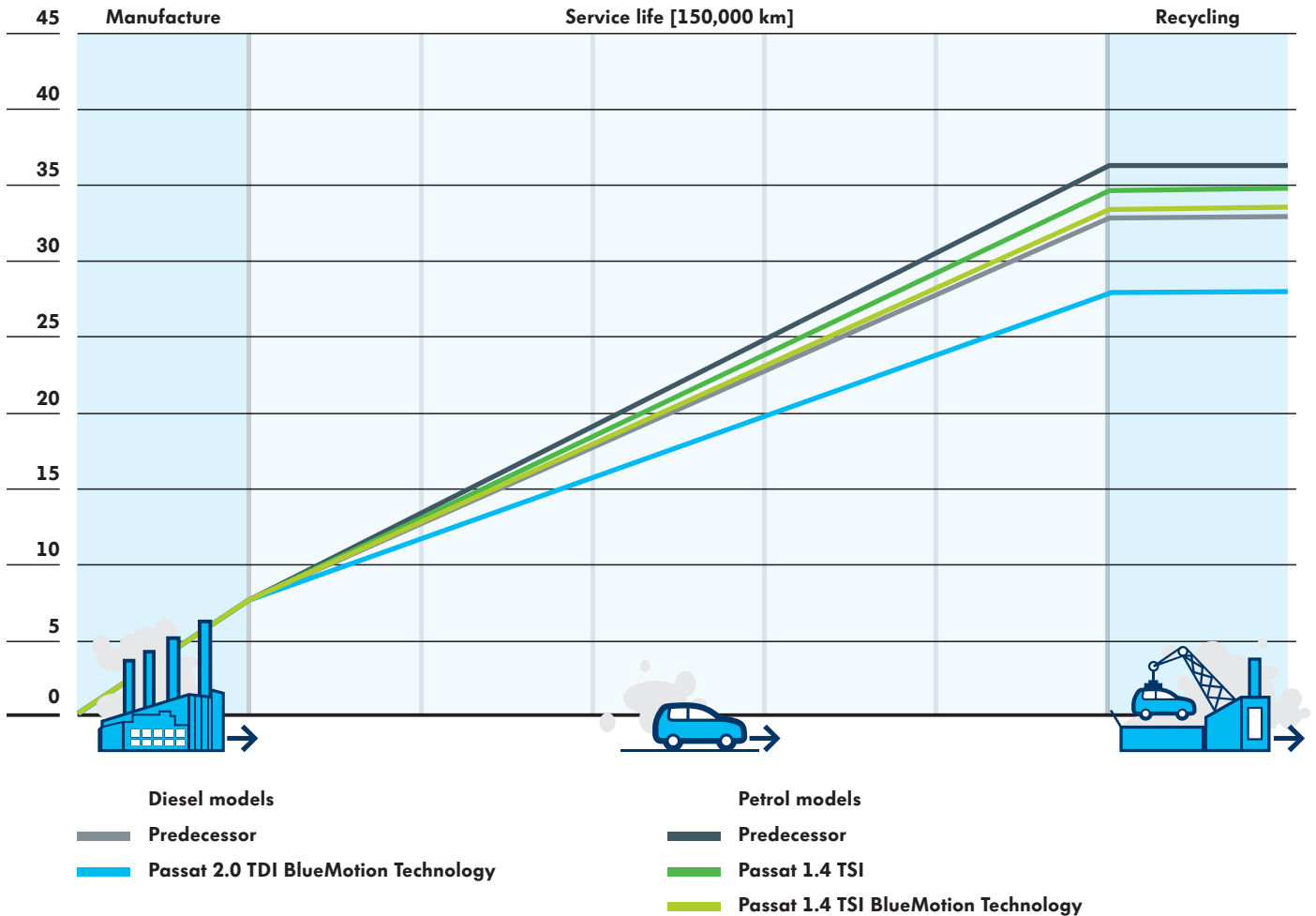
**Urban/non-urban/combined, L/100 km; g CO<sub>2</sub>/km**

<sup>1</sup> 6.5/4.0/4.6 L/100 km; 120 g/km

<sup>2</sup> 8.1/5.6/6.4 L/100 km; 149 g/km

<sup>3</sup> 8.0/5.1/6.1 L/100 km; 142 g/km

## Comparison of impact on global warming potential t CO<sub>2</sub> equivalents



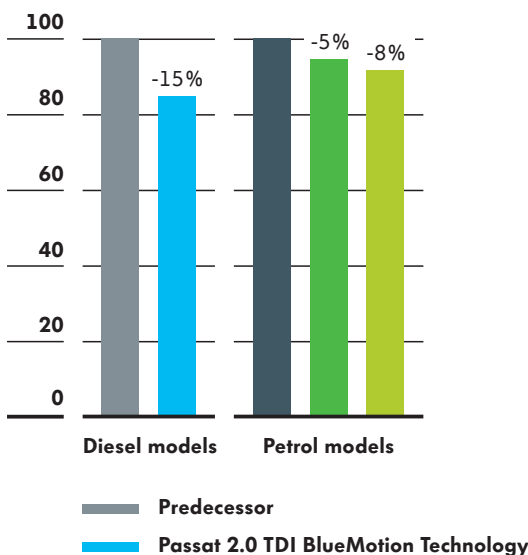
## A promise kept

True to our goal of ensuring that each new model outperforms its predecessor in ecological terms, the latest Passat presents a better balance sheet over its full life cycle with regard to its environmental impact. The improvements are largely accounted for by lower fuel consumption and the resultant drop in driving emissions and the accompanying reduced environmental impact of the fuel production process.

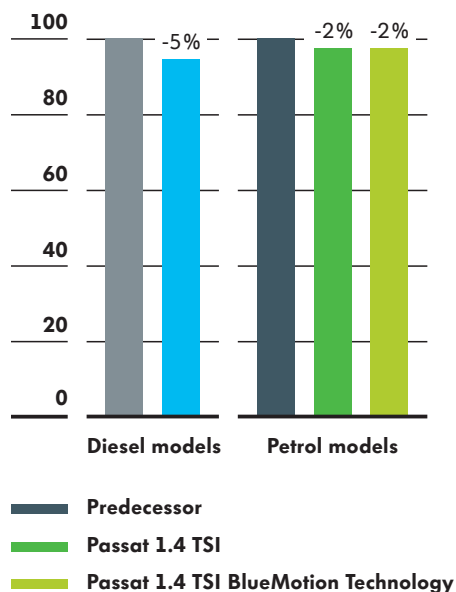
For an assumed lifetime mileage of 150,000 kilometres our calculations indicate life-cycle emissions of 18 metric tons of CO<sub>2</sub> for the Passat 2.0 TDI BlueMotion Technology<sup>1</sup>. The values for the petrol-engined models worked out at 22.4 metric tons of CO<sub>2</sub> equivalents for the 1.4 TSI<sup>2</sup> model and 21.3 metric tons for the 1.4 TSI with BlueMotion Technology<sup>3</sup>.

Viewed over the full life cycle, in terms of global warming potential this means a reduction of approximately 15% for the 2.0 TDI BlueMotion Technology. For the petrol models we calculated savings of around 5% and 8% of CO<sub>2</sub> equivalents respectively. In addition, the reduction in fuel consumption and the associated savings in terms of fuel production lead to a further easing of the burden on the environment, for example in terms of emissions that can lead to impairment of local air quality (photochemical ozone creation potential). Further details on the Life Cycle Assessment of the Passat and the technical specifications can be found in the Background Report to the Environmental Commendation at [www.environmental-commendation.com](http://www.environmental-commendation.com)

**Reduction in global warming potential over full life cycle for diesel and petrol models in %**



**Reduction in photochemical ozone creation potential over full life cycle for diesel and petrol models in %**





## Environmental Description, Passat

Generally improved environmental profile over the full vehicle life cycle compared with the predecessor model due to lower fuel consumption and reduced emissions

### Global warming potential – less CO<sub>2</sub> emissions overall\*

- Diesel model: -15%
- Petrol models: -5% or -8% (BlueMotion Technology)

### Reduced photochemical ozone creation potential (improvement of local air quality)\*

- Diesel model: -5%
- Petrol models: -2% or -2% (BlueMotion Technology)

### Reduced driving emissions (CO<sub>2</sub>)\*

- Diesel model: 120 g/km compared with 148 g/km (predecessor)
- Petrol models: 149 g/km or 142 g/km (BlueMotion Technology) compared with 158 g/km (predecessor)

### Reduction of fuel consumption through

- tyres with optimised rolling resistance
- smart lightweight design (hot stamping, used of aluminium parts)

- electrical components with optimized efficiencies
- low-friction oils
- reduced drag and friction

### Resource conservation through

- use of long-lasting components (long-life and LED lamps, maintenance-free particulate filters and catalytic converters)
- longer service and oil-change intervals

### Eco-friendly materials

- use of renewable raw materials (e.g. for filter materials)
- avoidance of components containing PVC or heavy metals

\* Applies to the actual vehicles assessed in this test series. See inside for fuel consumption and emissions figures

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