

Germany



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Germany, with a population of 83 million people, is a key member of the European Union. Consisting of 16 semi-autonomous states, Germany is bordered by nine other European countries. Although, only four German cities have a population of more than one million inhabitants, overall it is the most populous nation in the EU.

Since the end of World War II, Germany has become an industrial powerhouse. From the 1970s, Germany's death rate has been higher than its birth rate. With unemployment currently running at 3.1%, living standards are generally high, although economic development of the heavy-industry region, formerly known as East Germany, has been slower than former West Germany.

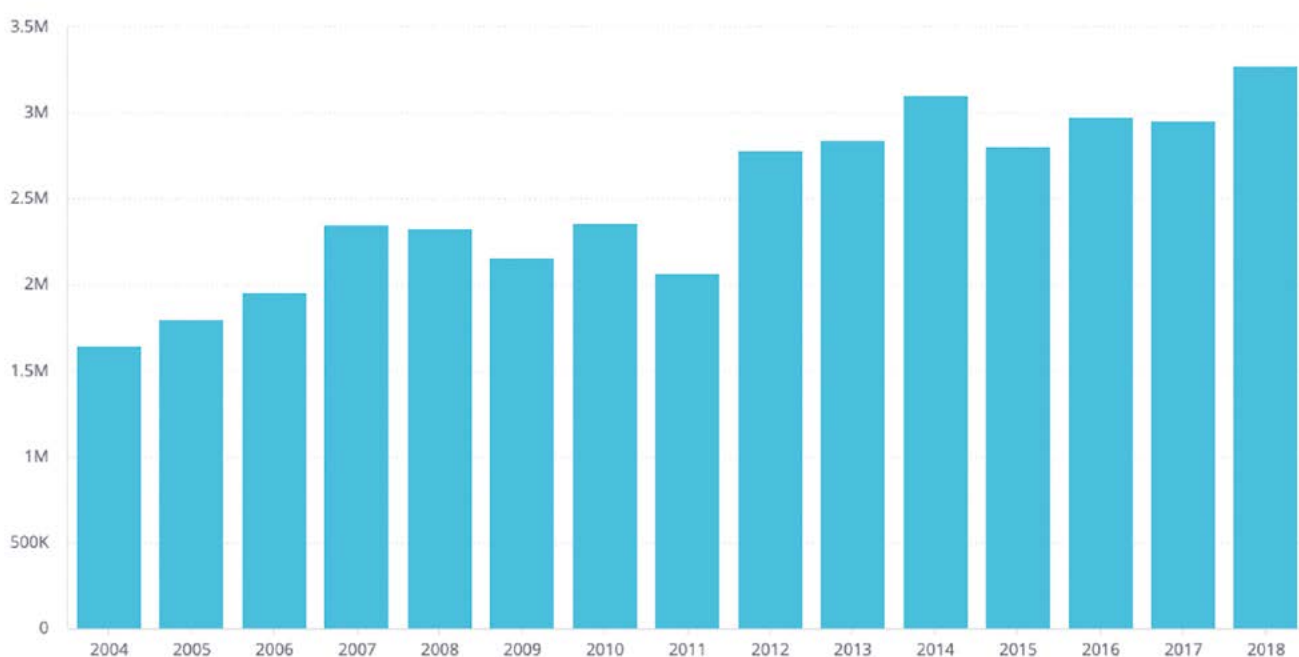
The vehicle parc, manufacturing and sales

Germany is the birthplace of a number of famous car marques including Mercedes-Benz, BMW, Volkswagen and Porsche. The country's auto industry is also one of the largest employers in the world, with a labour force of more than 820,000 people, and ranks fourth in terms of production behind China, USA, and Japan.

German vehicle manufacture is generally known for its competitiveness and innovation. However, since the end of 2017, production has slowed and the first half of 2019 saw a 12% year-on-year decline with more than 75% of cars produced in Germany being exported. In 2017, the industry's total turnover was €423bn, with €272bn of that coming from exports.

With the recent negative news, however, the outlook for the near future of Germany's key industry is becoming alarming. Daimler, Audi, Continental and Bosch are reporting the loss of thousands of jobs. Meanwhile, the German Industry Association VDA offers more concrete figures, suggesting 70,000 jobs will be lost in the production of gasoline and diesel engines alone by 2030.

The total number of vehicles on Germany's roads in 2019 was 64.8m, almost one million more than the previous year. Of those, 47.1m were cars. The compact car segment takes the largest share (25%) of the overall car market, followed by small cars. However, the SUV/crossover segment (both large and small) is the fastest-growing; 30% of all new car



Passenger car ownership by year of reg (Dec 2018). Total parc = 47m. Source: OATS

sales are SUVs. The average vehicle age has increased slightly to 9.5 years.

VW remains the most popular brand – representing 21.3 % of the vehicle population (one fifth of all vehicles) and the Golf model accounting for three times more car sales than its nearest rival, the VW Tiguan. Opel (9.5%) and Mercedes (9.4%) claim around one tenth each of the market, although it's the Mercedes C-Class and Skoda's Octavia that are the first challengers to VW's model dominance in fifth and sixth place.

Base oil production

Germany is totally dependent on imported crude oil. It has mainly relied on Russia, the North Sea, and North and West Africa for crude oil supplies, imported via four main trans-national pipelines and four ports. Refined product comes from 13 German refineries with a combined capacity of around 106m tonnes. BP is the largest refiner with two major sites in Gelsenkirchen and Lingen.

Competition has increased due to consolidation and the entrance of major foreign players, including Russia's Rosneft, which has increased its refinery ownership and, by 2018, held more than 12% of German refining capacity. Having focused investment in recent years on increasing diesel production, the country's refiners may face challenges as European diesel vehicle sales, and thus fuel usage, reduce as emissions legislation tightens.

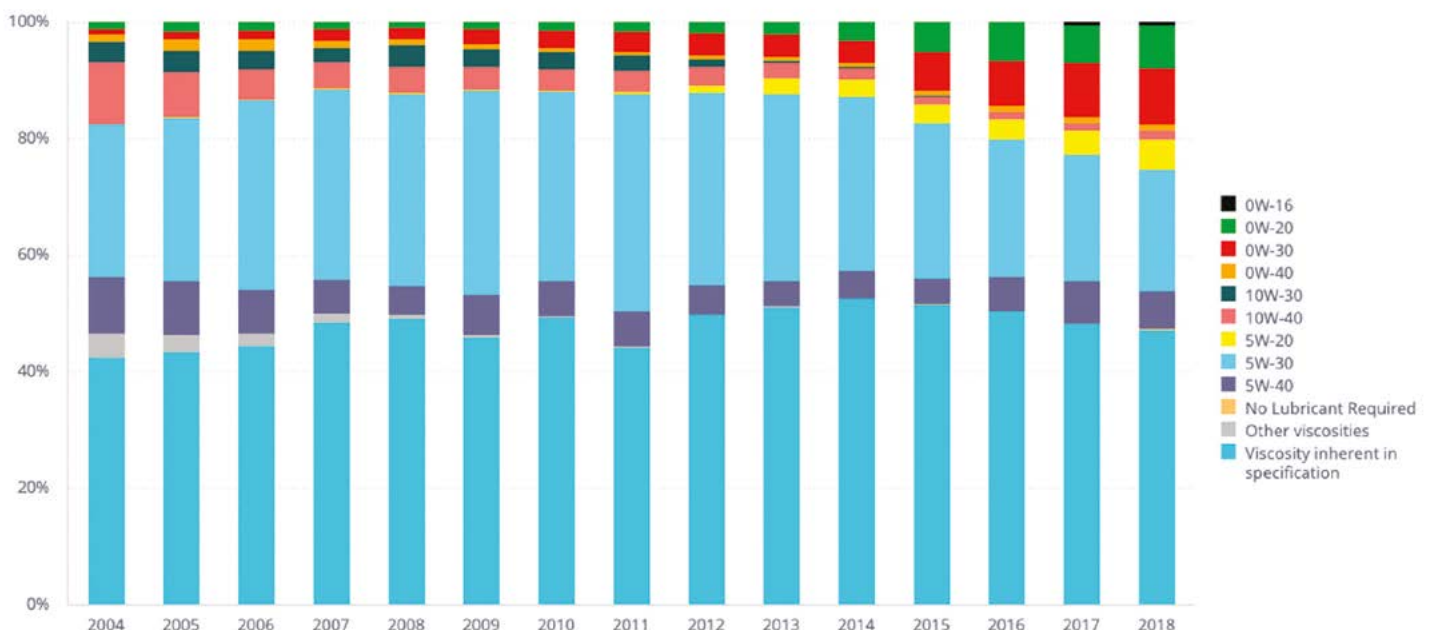
Lubricants production and market

Germany's oil industry is well supported by lubricants producers and sets high standards for manufacturing. It is now the only country worldwide to state that Group IV base oil is the only true synthetic base oil, with Group II and III considered as mineral oils, albeit of high quality. This policy has led to some blurring of the lines when it comes to synthetic terminology, with some producers claiming their products as 'synthetic' when actually formulated using Grp II/III base oils.

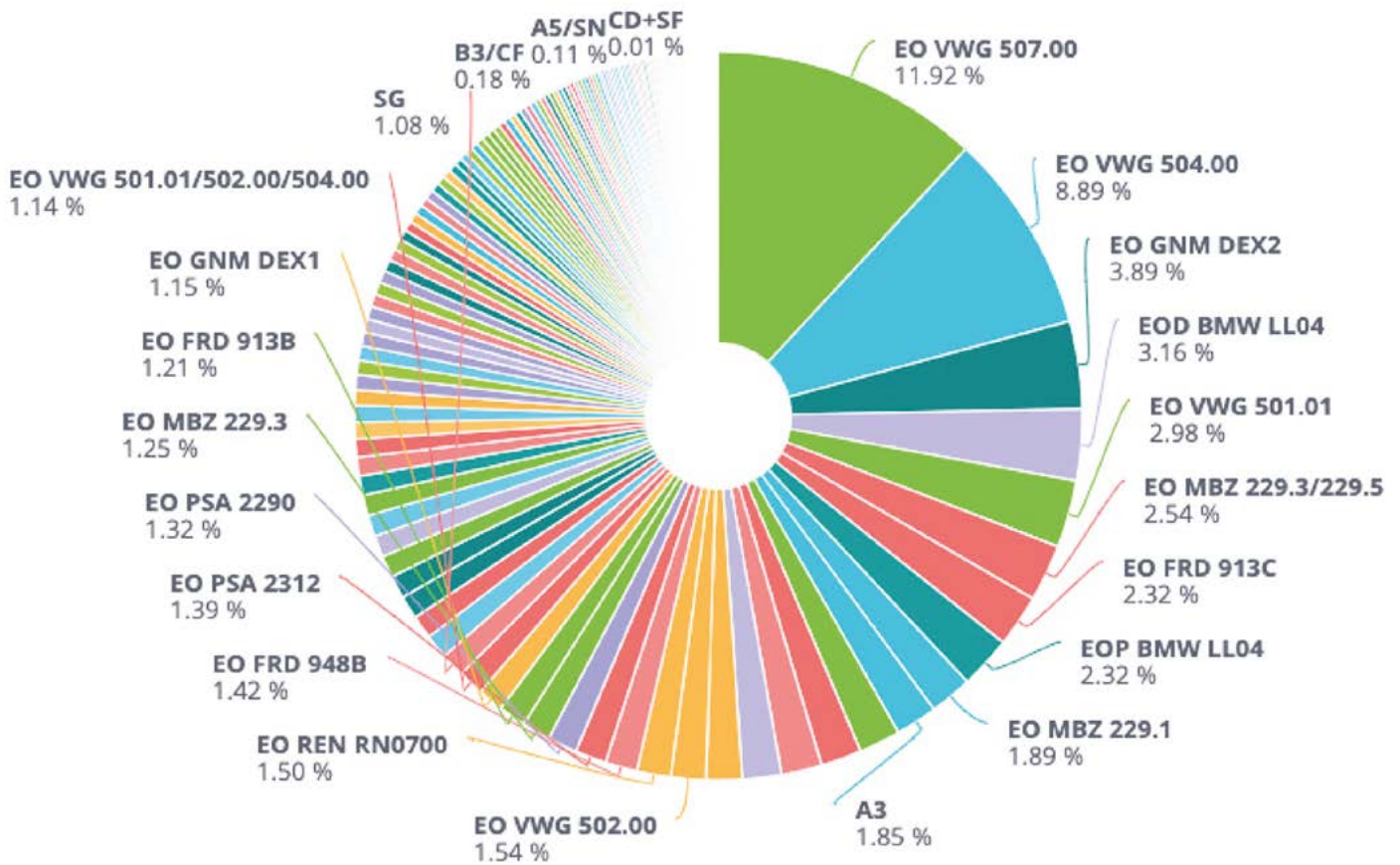
Formulations are based on European ACEA specifications although, as with many regions around the world, OEMs are increasingly demanding additional own-brand tests and products. This has increased manufacturer and supplier costs for approval licences.

Whilst crankcase fluids have seen a decline, reflecting the global trend, transmission fluid volumes have risen due to the uptake of automated and dual clutch gearboxes, which generally require an increased oil volume.

Since 2004, 5W-30 has dominated mid-market products, along with OEM-specific grades, and both carry that dominance into the new decade. However, from around 2015 onwards, Germany's lubricants consumption patterns saw a significant increase in ultra-high-performance products – 0W-30 being the most popular, but 0W-20 also taking an increasingly significant market share.



Significant viscosities for Parc by year of manufacture %. Source: OATS



Engine oil specification by car parc %. Source: OATS

In terms of specification of car engine oils, unsurprisingly, VW spec products take a 25%+ share of the overall market, with GM (PSA Group), BMW and Mercedes-Benz specs accounting for around five percent each.

The most popular consumer brands in Germany are: Castrol, Liqui Moly and Mobil.

In summary

As Europe's leading automotive manufacturing nation, Germany is likely to play a key role in setting the direction of the auto industry over the next decade. That said, the future of the country's refining industry is unclear, with increasing competition and the dependence on imported crude.

The strength in automotive innovation is certain to have a direct impact on lubes formulation and demand, particularly with the continued dominance of OEM specs, as well as the growth of ultra-low viscosity, fully-synthetics and fluid development for the EV/alternative power sector.

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