United Kingdom

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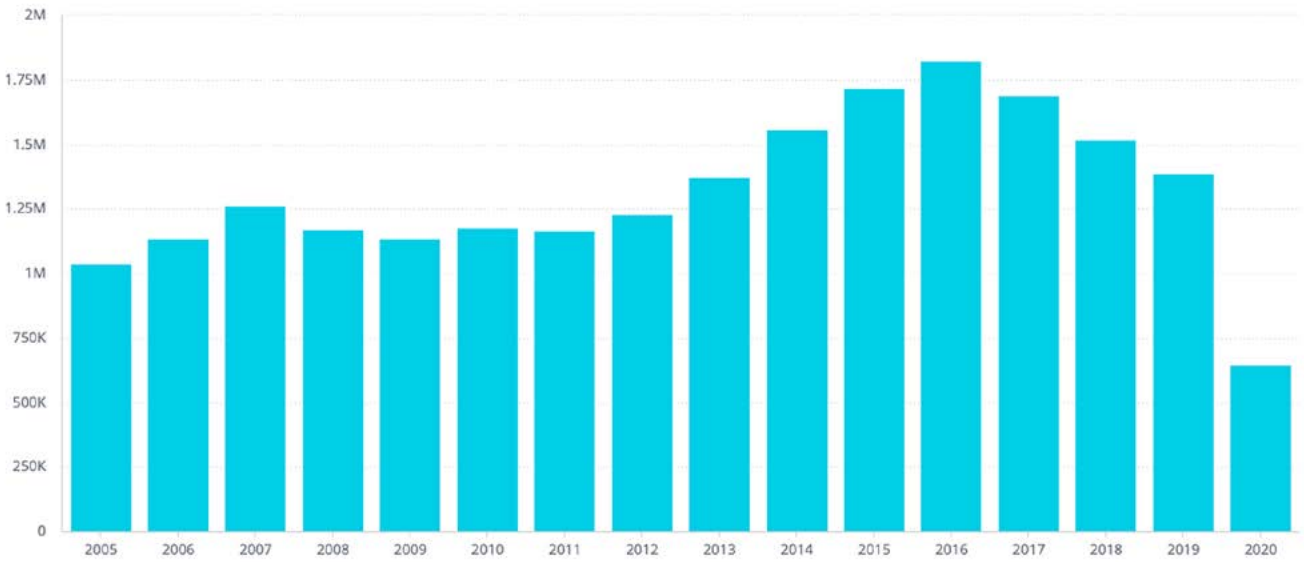
The United Kingdom includes England, Scotland, Wales and Northern Ireland, with a total population of almost 68m. It is an ageing population, with a 23% increase of those in the 65, 70 and 85 year age groups over the past 10 years. The most populous inner cities are London (7.5m), Birmingham (985k) and Liverpool (864k), although if surrounding areas are included, Greater Manchester (2.8m) and Glasgow/Clyde (1.1m) move into the top three.

UK GDP has seen exponential growth since the mid-80s, peaking in 2007 at around £2.3trn before the financial crash. Since then, growth has recovered to around £2.17tr in 2019, up £27bn on previous year, and making it sixth largest in the world by nominal measurement.

Service industries contribute more than 70% of UK GDP, primarily from the financial services sector, with industry (especially construction and manufacturing) providing around 17% and agriculture some 0.6%. However, the COVID pandemic has had a significant negative impact in 2020, particularly on the usually high-contributing tourism, retail, hospitality and entertainment sectors.

Having joined the European Communities (subsequently the European Union) in 1973, the UK's membership will end in January 2021 and is likely to have a significant impact on its influence in Europe. Although a trade deal has been agreed head of the deadline, the overall impact on the UK economy and its European and global status is unlikely to be established for a number of years.

Passenger car ownership in United Kingdom by year of registration at December 2020. Total Parc=~41.24M



Source: OATS

The vehicle park, manufacturing and sales

Whilst the UK's role as a global car and steel producer has diminished in recent years, car production in UK was still the fifth largest in Europe in 2019, with some 1.3m cars (80% for export), more than 62k commercial vehicles and 2.2m engines manufactured. Volume car makers including Vauxhall (Opel), Honda, Nissan and Toyota have large manufacturing plants in the UK. Domestic brands such as Jaguar/Land Rover, Bentley and Rolls Royce, Mini, Morgan and McLaren all produce on home soil despite the majority now being foreign-owned.

However, 2021 may see significant change depending on the outcome of Britain's departure from the EU (Brexit), with a number of manufacturers considering re-siting operations elsewhere in Europe or Latin America.

Like many other developed nations, UK consumers are rejecting diesel cars in favour of gasoline, with additional exponential growth in fully or hybrid electric vehicles. Heavy duty commercial equipment is also following this trend with a number of battery powered, hybrid, or alternative energy powered buses and off-highway equipment already on the road, planned or in early production.

In 2019, the UK's total vehicle parc reached a record 40.4m, with more than 35m cars and 4.5m light commercial vehicles. The average age was 8.3 years, with new car sales reaching 2.2m predominantly for fleet use.

Despite year-on-year car sales falling by almost 30% in 2020 to 1.6m, fully-electric and hybrid cars sales bucked the trend with exponential growth against 2019 figures and although diesel vehicle sales continue to fall sharply, Mild Hybrid Electric diesel sales were more than 80% up on 2019.

Base oil production

Oil and gas play a central role in the both the UK's economy and industry, with the UK being the third largest producer and consumer in the EU. Oil and gas accounts for around 70% of the nation's total primary energy needs and 90% of transport fuel, notwithstanding a government target of 20% provision from renewable sources. Around 25% of requirements are imported.

North Sea production peaked in 1999 and the scale of output, combined with the UK's financial services strengths, led to Brent crude becoming a world benchmark for crude trading. Mostly based in Aberdeen, Scotland, the UK became a leader in technology development for off-shore hydrocarbon extraction, particularly sub-sea technology.

Its influence has since waned due to shrinking investment and increased extraction costs. However, in 2016 the oil and gas industry still contributed more than £15bn directly to the UK's GDP and supported 300000 direct and indirect jobs. In 2017 capital investment remained well over £5.5bn.

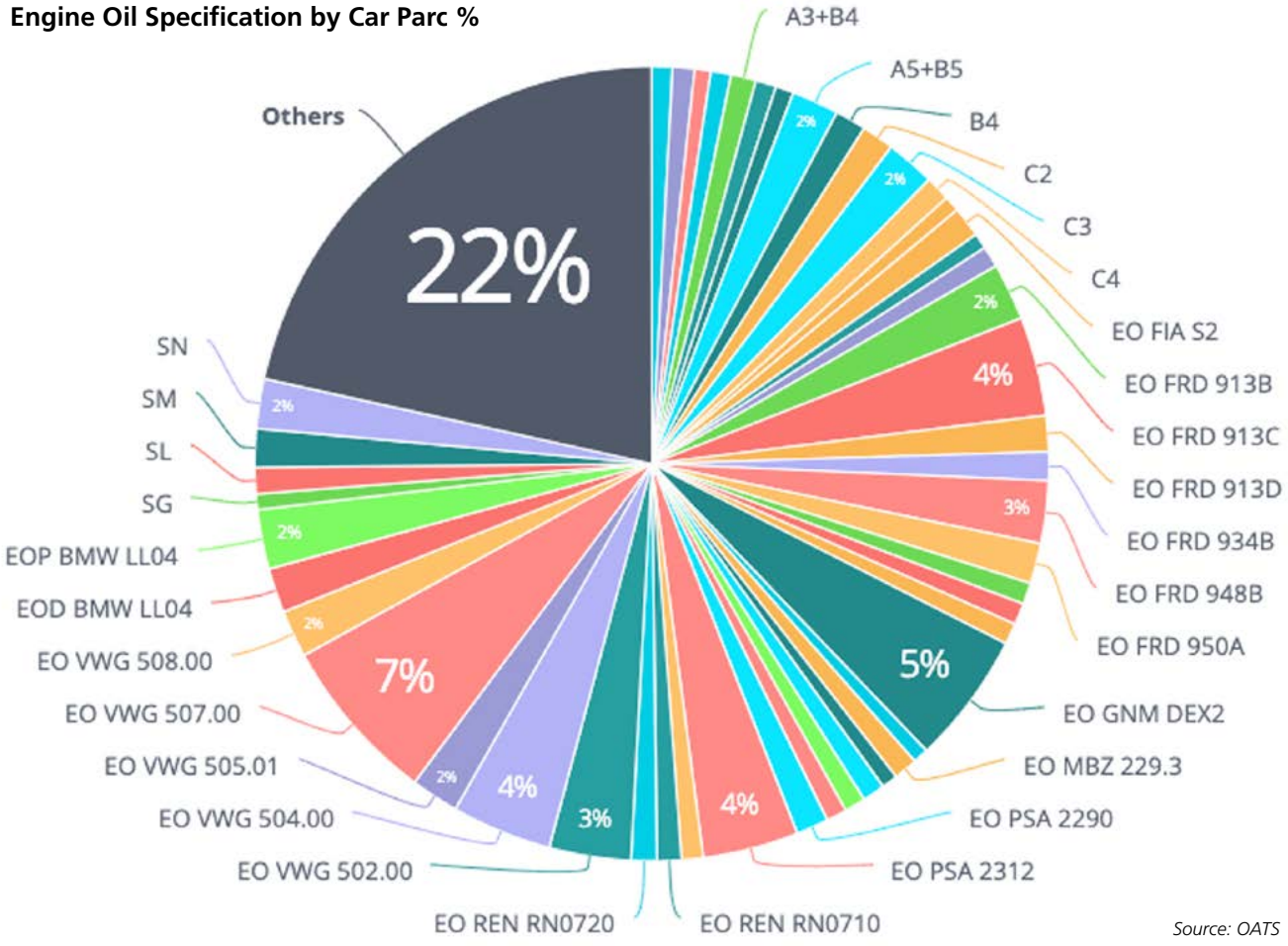
Liquid fuels production and consumption remained steady for many years. Consumption started to decline in 2012 and production of both liquid fuels and natural gas have shown significant declines.

Imports are mainly delivered via the UK's multiple, mixed-product pipeline network. Petroleum, gas and other products are transported to and from the 41 coastal and 20 inland terminals and storage facilities in England, moving more than 30m tonnes of product per year.

From 11 refineries in 1938 - with names like Anglo-Iranian Oil Co, Cory Brothers, William Briggs and Shell UK – the number increased to 23 in 1973 with the likes of Esso, Mobil Amoco, Gulf Texaco and Total. Today, only six UK refineries remain, owned by ExxonMobil, Phillips 66, Total, Petroineos, Essar Energy and Valero.

As with all leading economies, the UK has a growing oil collection and re-refining sector producing light feed stock for power station and industry fuel or other oil-based products for manufacturing, such as foam for mattresses and furnishings. Used oil collection for re-refineries sits at around 350,000 tonnes per annum, with growth potential estimated at 700,000t p/a.

Engine Oil Specification by Car Parc %



Source: OATS

The lubricants market

Lubricants production is well represented in the UK, both by majors including Shell, ExxonMobil, Chevron, Total and Gulf, as well as strong independents such as Morris Lubricants, Witham Oil and Paint, Moove, GB Lubricants, Exol and Millers Oil. Fuchs also have a strong UK presence with high quality fluid production sites. In some cases, these organisations have been operating in the UK for more than 100 years.

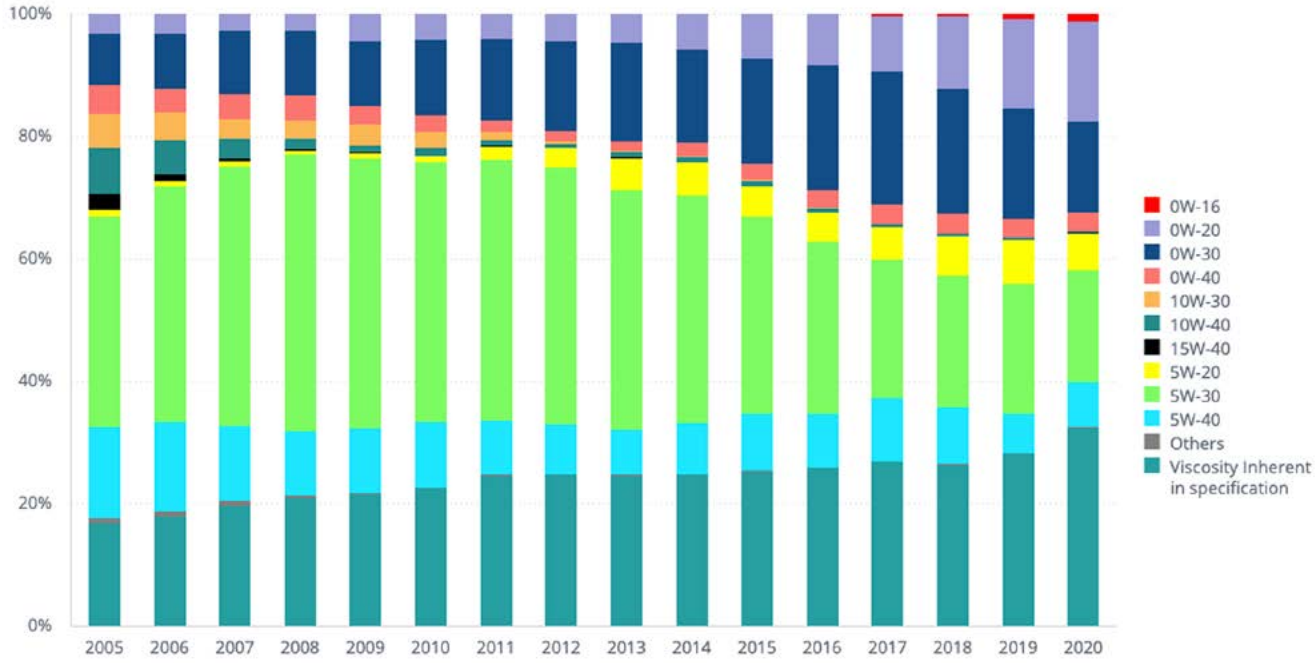
As with all major economies where emission regulations are continuously being updated, lubricant R&D and technology have played a large part in reducing engine emissions including through urea-based fluid injection, particulate filtration and oil and additives blending. Like crankcase engine oils, transmission fluids too have seen a drop in viscosity as OEMs use every available means to reduce emissions and increase fuel economy.

With the UK government's stated intention to stop the sale of new fossil-fuelled cars by 2030, lubes volumes are expected to decline. Almost the entire UK market is based on Grp II, Grp III and Grp IV base oil-derived products.

Reflecting the largely global trend, particularly in nations with a younger vehicle parc, demand for high-performance, lower viscosity engine oils have increased significantly. After a rise in demand for 5W-30 viscosities in the mid-2000s, the trend is now for 0W products with many OEMS and aftermarket outlets specifying 0W-30 viscosities or lower. These new formulations are based on ACEA specifications which stipulate lower high-temperature, high-shear (HTHS) apparent viscosity requirements than the common minimum of 3.5 mPa.s. and since 2017, the UK market is showing an early growth of 0W-16 lubricants.

The OEM influence is strong in the UK market, with the majority of the engine oil specifications for the car parc being automaker-specific. VW Group products dominate the market, followed by Ford specs. GM, PSA, Renault and BMW also feature.

Parc % by Year of Manufacture by significant Viscosities



Source: OATS

Summary

Of all the nations in Europe, the UK perhaps faces the most uncertain short to medium-term future. This applies not only to its overall economy, but to the lubricants sector in particular.

As well as facing the continued challenges of the COVID pandemic, including the emergence of a new virus strain which appears to have developed rapidly in the UK, there is also the ongoing uncertainty of Brexit. This, in particular, could have a dramatic impact on both economic growth and local, regional and global trade.

Even with a trade deal now agreed, it is likely to take a number of years before the full implications of the UK's independence from the European Union are fully understood. Trade tariffs, borders management and administration, specifications and other regulatory and legislative issues will only become clear as relationships are developed. These could prove favourable or otherwise for domestic lubricants producers and marketers. It will remain to be seen how the oil majors – including British-originated BP – decide to operate and market their products in the UK.

It is hoped that new global trade opportunities may arise, as well as a potentially stronger relationship with US markets as a result of independence, but this is in no way guaranteed, particularly with a new US administration about to be inaugurated.

With the UK continuing to drive technology and innovation as one of its core strengths, it is certainly likely that UK R&D is set to grow and remain a strong global influence particularly in areas such as renewable energy, lubricants, vehicle and engine design.