# Vehicle Licensing Statistics: Annual 2018 

## About this release

This release presents the latest statistics on licensed motor vehicles. It is part of the Vehicle Statistics series. Detailed data tables are available online.

These statistics are based on administrative data held by the Driver and Vehicle Licensing Agency (DVLA).

Except where otherwise stated, the statistics refer to Great Britain. UK data is available from July 2014.

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## ULEVs

Ultra low emission vehicles (ULEVs) are vehicles that emit less than 75 g of carbon dioxide $\left(\mathrm{CO}_{2}\right)$ from the tailpipe for every kilometre travelled.

Next published:
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## Vehicles registered for the first time

## During 2018, 2.9 million vehicles were registered for the first time in Great Britain.

This was $5.5 \%$ lower than during 2017 and $11.0 \%$ lower than during 2016. However, it was similar to 2014 new registrations and still 23.7\% higher than the recession trough during 2009.

Several factors contributed to the second year of decline in new vehicle registrations. Two key factors were that new diesel car registrations have been declining since April 2017 (see page 3), and that the introduction of the Worldwide Harmonised Light Vehicle Test Procedure (WLTP) affected car registrations from September 2018 onwards. This was because new cars needed additional testing before they could be sold, which limited the supply of available cars in the market.

## Body type

Cars make up the majority of new registrations. In 2018, there were 2.3 million cars (79.9\%), 360,000 light goods vehicles (LGVs) (12.4\%), 49,000 heavy goods vehicles (HGVs) (1.7\%), 120,000 motorcycles (3.9\%), and 64,000 other vehicles (2.2\%) registered for the first time.

All body types, apart from motorcycles, saw a decline in 2018. Buses \& coaches had the largest decline (8.8\%) followed by cars (6.7\%).

Figure 1: Annual percentage change in vehicles registered for the first time by body type, Great Britain, 2018


## WLTP

The Worldwide Harmonised Light Vehicle Test Procedure (WLTP), became mandatory for cars registered for the first time from 1 September 2018 in the European Union (EU).

## Updated tables

Detailed new registrations data tables updated this quarter:

All vehicles types:
VEH0150 to 0170
Cars: VEH0252 to 0261
Motorcycles: VEH0354 \& to 0355

LGVs: VEH0452 to 0454
HGVs: VEH0554 \& 0556
Buses \& coaches:
VEH0651 \& 0654

## Northern Ireland

During 2018, there were 64,600 vehicles registered for the first time in Northern Ireland, which was $3.4 \%$ lower than in 2017.

There were 52,500 cars (81.3\%), 7,000 LGVs (10.9\%), 1,300 HGVs (2.0\%), 2,000 motorcycles (3.0\%), and 1,800 other vehicles (2.8\%) registered for the first time in Northern Ireland in 2018.

## Europe

New passenger car registrations across the European Union (minus Malta) as a whole increased by $0.1 \%$ in 2018, according to provisional figures from the European Automobile Manufacturers' Association (ACEA). The UK remained the second largest new car market (16\%) in Europe in 2018, after Germany.

## Vehicles and the environment

## New diesel car registrations continue to fall, contrasted by increases for petrol and alternative fuel cars.

ivThere was a $30 \%$ decline in the number of diesel cars being registered for the first time in 2018 compared to 2017, to 736,000 cars, which is below the 2008/09 recession dip and similar to 2003 registrations.

This was the second year of decline, following the 17\% decrease in new diesel car registrations in 2017. Since 2016, registrations fell by 42\% with 527,000 fewer diesels being registered for the first time.
Diesel cars accounted for $47 \%$ of all new car registrations in 2016, which has dropped to 31\% in 2018.

New car registrations
Annual change in 2018
Diesel Petrol Alt. fuel
$-30 \%+9 \%+22 \%$

Figure 2: Cars registered for the first time by fuel type, Great Britain, 2002 to 2018


In contrast, there was an increase in the number of petrol cars being registered for the first time in 2018, a rise of $9 \%$ to 1.5 million cars compared to 2017. Alternative fuel cars continued to see a large increase in 2018 , a rise of $22 \%$ up to 146,000 cars. The majority ( $59 \%$ ) of these registrations were hybrid electric cars.

## The proportion of total licensed cars that were diesel fell for the first time in over 20 years.

At the end of 2018 , there were 18.5 million licensed petrol cars, 12.4 million licensed diesel cars, and 620,000 licensed alternative fuel cars.
Diesel cars accounted for $39 \%$ of all licensed cars at the end of 2018, slightly below the 2017 peak value of $40 \%$. This proportion had been steadily rising from $12 \%$ since 1998.

## Key events

 surrounding the decline in new diesel car registrationsNovember 2017:
Transport for London announces the "world's first Ultra-Low Emission Zone" - although new diesel cars would not be charged under the current plan.
July 2017: UK Plan for Tackling Roadside Nitrogen Dioxide Concentrations is announced, ending the sale of all new conventional petrol and diesel cars and vans by 2040.

April 2017: changes are introduced for newly registered car tax bands and rates.

## Alternative fuel

Alternative fuel vehicles are those that can be powered by something other than petrol or diesel fuel, including hybrid electric, battery electric, gas, gas bi-fuel, and hydrogen / fuel cell electric.

## Updated tables

Detailed fuel and environment data tables updated this quarter:
ULEVs: VEH0130, 0131, 0132 \& 0170

Cars: VEH0203, 0206, 0253 \& VEH0256

LGVs: VEH0403 \& 0453

## Ultra low emission vehicles continue to increase their share of new registrations in the UK to 2.1\%.



In 2018, 63,992 ULEVs were registered for the first time in the United Kingdom, up 20\% on 2017 and $53 \%$ on 2016. ULEVs accounted for $2.1 \%$ of all new vehicle registrations - up from
 $1.7 \%$ one year previously and $1.2 \%$ two years previously.

The majority ( $76 \%$ ) of these ULEVs were eligible for plug-in grants. New registrations of ULEVs in 2018 included 47,422 cars and 1,248 light goods vehicles that were eligible for these grants.
The changes to the plug-in car grant in October 2018 removed all previously eligible plug-in hybrid models from the grant. As a result, only $41 \%$ of ULEVs were eligible for plug-in grants during 2018 Q4, compared to 89\% during the first three quarters of 2018.

Nevertheless, because the changes happened late in the year, there were $4 \%$ more plug-in grant eligible ULEVs registered for the first time in 2018 compared with 2017.
During 2018, the most common generic model of ULEV registered for the first time in the UK was the Mitsubishi Outlander with 8,703 vehicles, followed by the BMW 5 Series with 6,571 vehicles and the Nissan Leaf with 5,348 vehicles.

The most common generic model for non plug-in ULEVs was the Toyota Prius with 796 hybrid electric cars.

Figure 3: Top 20 generic models for ULEVs registered for the first

## Key events surrounding the uptake of new ULEV registrations

October 2018: The government announced that changes would be made to the plug-in car grant, focusing on battery electric vehicles.

July 2018: Road to Zero Strategy is announced, confirming the government's ambition to see at least half of new cars to be ultra low emission by 2030 .

March 2016:
Major changes are implemented to the plug-in grants, including other vehicle types being included.

2011/2012: plug-in car and van grants are introduced, reducing the cost of new qualifying models. time by fuel type, UK, 2018


## At the end of 2018, there were 200 thousand ultra low emission vehicles in the UK.



There were $39 \%$ more licensed ULEVs at the end of 2018 compared to the previous year.
The vast majority of ULEVs licensed at the end of 2018 were either plug-in hybrid electric vehicles (56\%) or battery electric vehicles (35\%). A small proportion of ULEVs were range-extended electric vehicles (5\%), which is currently only available in a small selection of models.

Figure 5: Map of licensed ULEVs as a proportion of all licensed vehicles by unitary authority, United Kingdom, 2018


Figure 4: Licensed ULEVs by fuel type, United Kingdom, 2018


In the UK at the end of 2018, ULEVs accounted for $0.5 \%$ of all licensed vehicles. Regionally, the highest rate was seen in London with $0.8 \%$ and the lowest was in Wales with $0.2 \%$.

The lower tier local authority with the highest rate was the Isles of Scilly with $6.0 \%$, followed by City of London with $5.0 \%$, and Peterborough with 4.9\%.

The lower tier local authority with the lowest rate was Fermanagh and Omagh (Northern Ireland), with $0.1 \%$.

Company vehicles affecting this map

Company vehicles are often registered in bulk to the same address for administrative reasons, i.e. to a central office.

However, this causes hotspots in the map, where there's a high concentration of licensed vehicles that aren't used in that area.

Up to $0.25 \%$
Over 0.25\% to 0.5\%
Over $0.5 \%$ to $1.0 \%$
Over 1.0\% to 2.0\%
Over 2.0\%


## A range of factors have caused the average $\mathrm{CO}_{2}$ emissions of cars registered for the first time to increase during 2018.



Average $\mathrm{CO}_{2}$ emissions from cars registered for the first time were steadily falling since 2003, but began to rise from mid-2016 through to August 2018.
This increase was broadly due to a shift towards registering larger cars (which have higher emissions) and increases in emissions for popular petrol car models.
The introduction of WLTP in September 2018 caused a marked increase in average $\mathrm{CO}_{2}$ emissions. However, changes from September 2018 are not directly comparable with previous periods.

Figure 6: Average $\mathrm{CO}_{2}$ emissions for cars registered for the first time, monthly, Great Britain, December 2012 to December 2018


Figure 7: Cars registered for the first time by VED band, quarterly, with inset for lowest four bands, Great Britain, 2003 Q4 to 2018 Q4


## Measuring $\mathrm{CO}_{2}$

 emissionsThe following main methods have been used to determine car $\mathrm{CO}_{2}$ emissions in the UK.

New European Driving Cycle (NEDC): Original
lab test based on theoretical behaviour.
Worldwide Harmonised Light Vehicle Test Procedure (WLTP):
More advanced lab test to replace NEDC, based on real driving data.

Break in series for $\mathrm{CO}_{2}$ emissions
For tax and monitoring purposes, vehicles tested under WLTP are provided with a "NEDC correlated" figure using a tool developed by the European Commission.

From September 2018 onwards, the $\mathrm{CO}_{2}$ figures reported here will be a mix of NEDC and NEDC correlated figures. As a result, figures are not directly comparable with earlier months.

## VED bands

Vehicle Excise Duty (VED) is charged on vehicles registered in the UK.

Since March 2001, car VED has charged in bands on the basis of their $\mathrm{CO}_{2}$ emissions (NEDC).
From April 2017, the $\mathrm{CO}_{2}$ emission bands for VED were revised.

## At the end of 2018, there were 38.2 million licensed vehicles in Great Britain, a 1.2\% increase compared to 2017.

The total number of licensed vehicles has increased in practically every year since the end of the Second World War.
Over the last 20 years, the typical annual growth in licensed vehicles has averaged 630,000 per year, although the 2008/09 recession slowed this rate to average to 230,000 between 2008 and 2013.

Figure 8: Licensed vehicles at the end of the quarter, Great Britain, 1998 Q4 to 2018 Q4, with inset back to 1950


At the end

38.2 million
vehicles licensed for use on roads in Great Britain

How are these different from new registrations?
Figures on licensed vehicles have slower variations compared to vehicles registered for the first time as there are many more vehicles that remain licensed over the year.

## Updated tables

Detailed licensed vehicle data tables updated this quarter:

All vehicles types:
VEH0101 to 0132
Cars: VEH0202 to 0221
Motorcycles: VEH0301 to 0311

LGVs: VEH0402 to 0411
HGVs: VEH0504 to 0525
Buses \& coaches:
VEH0601 to 0611

## Body type

Cars make up the majority of licensed vehicles. There were 31.5 million cars ( $82.5 \%$ ), 4.0 million LGVs (10.5\%), 0.5 million HGVs (1.3\%), 1.2 million motorcycles (3.3\%), and 0.9 million other vehicles (2.4\%) licensed at the end of 2018.
All body types apart from buses \& coaches saw an increase since 2017. The largest percentage increase was for LGVs at 2.9\%, followed by cars at $1.0 \%$, motorcycles at $0.7 \%$, and HGVs at $0.2 \%$. Buses \& coaches fell by $2.2 \%$, which is in line with the decline in new registrations.

Figure 9: Annual change in licensed vehicles by body type, Great Britain, end of 2018


## Northern Ireland

At the end of 2018, there were 1.2 million licensed vehicles in Northern Ireland, which is an increase of $1.9 \%$ compared to the previous year.
The distribution of vehicles by body type was broadly similar to Great Britain. There were 980,000 cars ( $82.6 \%$ ), 120,000 LGVs (10.0\%), 24,000 HGVs (2.1\%), 22,000 motorcycles (1.9\%), and 40,000 other vehicles (3.4\%) licensed at the end of 2018 in Northern Ireland.

## Long term trends in body type

Over the last 24 years, vehicle stock has increased by $51 \%$. The largest increase was for LGVs at $88 \%$, followed by motorcycles at $72 \%$, and cars at $49 \%$. There were $19 \%$ more HGVs and a similar number of buses \& coaches.

At the end of 2018, the numbers of licensed cars and LGVs were at their highest ever levels. The numbers of motorbikes, HGVs and buses \& coaches, on the other hand, remained below their peak levels, which they reached between 2004 and 2007.

Figure 10: Index of licensed vehicles at the end of the quarter by body type, Great Britain, 1994 Q4 to 2018 Q4


## The average age of licensed cars and LGVs at the end of 2018 was 8.2 years.



Petrol cars were generally older, with an average age of 9.1 years compared with 6.9 years for diesel cars. The average age of all cars and diesel cars increased compared to the end of 2017, whereas petrol cars remained stable. The recent decline in new car registrations would have impacted on these figures.
The average age of licensed HGVs was 7.5 years, buses \& coaches was 10.6 years, and motorcycles was 14.7 years.

## Motorcycles

The number of licensed motorcycles fluctuates considerably by quarter, with higher numbers licensed at the end of June and September compared to the end of March and December.
This is consistent with riders typically licensing their motorcycle for 6 months during the summer months but not during winter.
The National Travel Survey provides more information on motorcycle use.

What affects the average age of vehicles over time?
The average age of a vehicle increasing over time could indicate that keepers are holding onto their older vehicles rather than replacing them with newer ones.

The average age of vehicles that are written off, scrapped, or given a SORN also affect these figures.

## In the United Kingdom, there were 39.4 million licensed vehicles at the end of 2018.

NT This figure was made of 32.5 million ( $83 \%$ ) vehicles registered Tans to an address in England, 1.9 million (5\%) in Wales, 3.0 million (8\%) in Scotland, and 1.2 million (3\%) in Northern Ireland.
In addition, there were 0.8 million ( $2 \%$ ) vehicles either between keepers or unknown country, of which 0.7 million (2\%) were previously GB registered.

Figure 11: Map of licensed vehicles per 1,000 head of population by unitary authority,


Company vehicles affecting this map
Company vehicles are often registered in bulk to the same address for administrative reasons, i.e. to a central office.

However, this causes hotspots in the map, where there's a high concentration of licensed vehicles that aren't used in that area.

## Car makes and models

## The most common make for cars registered for the first time during 2018 was Ford, followed by Volkswagen and Vauxhall.



During 2018, the top five makes were Ford (11\%), Volkswagen (8\%), Vauxhall (7\%), Mercedes-Benz (7\%), and BMW (7\%), accounting for 41\% of all new car registrations. This is the same order and a similar distribution to during 2017.

There were 17 makes with over 50 thousand cars registered for the first time each, accounting for $84 \%$ of all new car registrations.
For total licensed stock at the end of 2018, the top five makes were different to new registrations, namely Ford (13\%), Vauxhall (11\%), Volkswagen (9\%), BMW (6\%), and Audi (5\%), which accounted for 43\% of all licensed cars.

There were 21 makes with over 500 thousand licensed cars each, accounting for $92 \%$ of all licensed cars.

## Updated tables

Detailed make and model data tables updated this quarter:
VEH0120 to 0129, 0160 \& 0161

Figure 12: Top five makes for cars registered for the first time during 2018 and for those licensed at the end of 2018, Great Britain


The Ford Fiesta was the most common new car registration in 2018, with 95,000 registered for the first time. This was followed by the Volkswagen Golf with 66,000 and Vauxhall Corsa with 52,000.

At the end of 2018, the most common licensed car was the Ford Fiesta, with 1.5 million cars licenced, followed by the Ford Focus with 1.3 million, and the Vauxhall Corsa with 1.1 million.

Figure 13: Top five generic models for cars registered for the first time during 2018 and for those licensed at the end of 2018, Great Britain


## The commercial fleet and company car market is a primary driver of new registrations for cars.

During 2018, $57.3 \%$ of all car first registrations were made by companies. However, the proportion of licensed cars at the end of 2018 registered to companies was much lower, at only $8.8 \%$. This suggests that cars move quickly from the company market to the private market.

The percentage of company registered cars in the fleet in 2018 was slightly lower than the recent peak of $9.0 \%$ in 2016, but has remained relatively stable around 8-9\% since 2002.

Figure 14: Proportion of cars that are company registered, Great Britain, 2018


Who is a registered keeper?
Every registered vehicle, unless it is in the process of changing hands, has a registered keeper, whose details are held by DVLA.
Note that the registered keeper of a vehicle is not always the person who uses it, and the vehicle is not always based at the keeper's contact address. This is particularly true for company or fleet vehicles. The number of female registered keepers of licensed cars has increased by $58 \%$ since 1998 , compared with an increase of only $21 \%$ in male keepers. Women now account for $35 \%$ of registered car keepers, compared to 30\% in 1998.

Figure 15: Number of changes of car keeper during the year, United Kingdom, 2018


In the United Kingdom, it is estimated that there were around 7.5 million transfers of keepership of used cars during 2018, a fall of $2.8 \%$ compared to 2017 . The great majority of these transfers will be second-hand vehicle sales.

Around 5.8 million cars (15\% of all cars) changed hands once during the year and almost 0.8 million (2\%) changed hands two or more times.
Car transfers made up $83 \%$ of all vehicle transfers, with around 900 thousand light goods vehicles (10\%) and 500 thousand motorcycles (5\%) also changing hands during 2018.

## Background notes

## About these statistics

Almost all the statistics in the vehicle licensing statistics series are derived by Department for Transport statisticians from extracts of the Driver and Vehicle Licensing Agency (DVLA) vehicle database. The main purpose of the database is to administer vehicle registration and licensing records in the United Kingdom.

For further information, please see the detailed technical notes. There is also a Statement of Administrative Sources for the DVLA vehicles database.
A separate note on users and uses of these statistics is available from the vehicles statistics information web page.

## Request for feedback

We welcome any feedback on these statistics, to ensure future releases best meet user needs. Feedback can be provided by email to vehicles.stats@dft.gov.uk.

## Strengths and weaknesses of the data

The DVLA database can be regarded as being virtually complete in terms of the number of vehicles registered for the first time, licensed vehicles and vehicles with a SORN (Statutory Off-Road Notification). However, there may be some errors in some of the specific details of individual vehicles.

The Department for Transport estimates that under 2\% of the vehicles records have an inaccuracy in one of the variables used for the statistics published. Other factors to consider in interpreting these statistics include:

- Changes in legislation;
- Revisions to the series;
- Seasonal variation which affects some vehicle types;
- Foreign registered vehicles may also use UK roads without being registered with DVLA;
- Vehicle excise duty evasion.

Most of these factors will only have a marginal effect for most uses of the data.

## Geography

In July 2014, vehicle and registration services for Northern Ireland were centralised at DVLA, where these services for Great Britain were already administered. This created a single vehicle register for the United Kingdom, in place of separate registers for Great Britain and Northern Ireland.

As a result of these changes, the coverage of the vehicle licensing statistics tables was expanded to cover UK as well as GB where practical. Because of the greater availability of GB time series data, this statistical release will continue to focus mainly on GB rather than UK results for now. For further information, please see the detailed technical notes.

## National Statistics

All of the statistics published in this series are National Statistics, apart from the exceptions listed on the collection page. Vehicles statistics were assessed by the UK Statistics Authority and confirmed as National Statistics in April 2012.
National Statistics are produced to the high professional standards set out in the Code of Practice for Statistics. They undergo regular quality assurance reviews to ensure that they meet customer needs. They are produced free from any political interference.

Details of ministers and officials who receive pre-release access to these statistics up to 24 hours before release can be found in the pre-release access list.

## Next release

Vehicle Licensing statistical releases are published quarterly. The next release is due in June 2019. The Quarter 4 release for each calendar year is accompanied by a larger set of data tables and more detailed commentary.
Any updates to these plans will be advertised via the DfT statistical publications schedule.

## Release of DfT Statistics publications

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