

Green Flag & Brake Reports on Safe Driving

Vehicle maintenance



Produced by:



Working in partnership with:



Brake asked 2,019 drivers questions about vehicle maintenance and roadworthiness. The survey was carried out online in March 2020 by independent market research company, SurveyGoo.

Driving a faulty car is a huge issue. Not only is it likely to be illegal but it is dangerous for you, your passengers and other road users. Ignoring a vehicle part that needs fixing is likely to make things worse, ending up costing more money in the long run.

The findings from this report into vehicle maintenance are cause for concern: of the 37 million cars and vans on our roads, a significant proportion are found at MOT to have a dangerous defect, which means that the safety of all road users is at risk. With the recent and prolonged significant drop in car usage, it is likely that there are drivers who won't have as much as turned their engine on for the duration of the coronavirus lockdown. Coupled with the government announcing a six-month extension on vehicles due for MOT on or after 30 March, it is more important than ever to ensure vehicles are kept roadworthy.

As schools begin to re-open, and more people start going back to work, drivers will return to the roads just as quickly as they left. Just like the increases Green Flag sees after the Christmas break, we expect to see bigger increases than this in breakdown call outs when people return to driving regularly.

Green Flag understands that drivers have differing degrees of mechanical knowledge when it comes to cars; however, in the same way that it is crucial that you know how to drive a car, it is also your responsibility to maintain it.

Our survey has uncovered gaps in driver knowledge when it comes to basic vehicle maintenance: Around a fifth of drivers don't know how to check brakes, fluids, or tyre tread depth – and even more concerning is that the same amount of people admit to have knowingly driven an unroadworthy vehicle – which is not only unsafe but could account for the high level of vehicle defects at MOT.

Green Flag urges drivers to thoroughly check their vehicles so that they are confident they are safe to drive. If you're unsure how to do this, ask your garage for advice. Don't leave it until your next MOT if you know or feel there is something wrong with the car. You risk being fined up to £2,500 if caught at the wheel of a car deemed to be unsafe by police.

Keeping your vehicle in good working condition as opposed to driving an unroadworthy unsafe car could be the difference between getting to your destination safely or being the cause of an avoidable crash and serious injury, or worse.

blog.greenflag.com/category/car-maintenance



Dean Keeling
Managing director
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A road vehicle is a highly complex piece of heavy machinery that is used in an environment where a defect, or misuse, can result in serious injury, or death, to the user and to others. This statement should be the starting point for any discussion around vehicle maintenance – cars can be dangerous and must be well maintained and looked after by their owners. In this report we explore drivers' knowledge and behaviour on this important, but often overlooked, issue, hopefully providing some fresh insight into any gaps which may need to be remedied.

There are around 37 million licensed cars and vans on our roads – a significant number by any reckoning. Government test data shows that just below one in 10 of this category of vehicle failed their initial MOT because of a dangerous defect – a proportion which appears to be broadly consistent over time. This means that there is a shockingly large number of cars and vans, likely more than a million, licensed to drive on our roads and posing an immediate risk to the safety of the driver and other road users, because of a vehicle defect.

Our report has uncovered gaps in driver knowledge of vehicle maintenance – around a fifth don't know how to check brakes, fluids, or tyre tread depth – and an admittance of unsafe behaviour – a fifth state they have knowingly driven an unroadworthy vehicle – which may point us towards an explanation for the high prevalence of vehicle defects at MOT. We have also sought to explore if there is any variation in behaviour by gender and age to help target remedial measures to the right demographics. Further work to validate our findings would be valued; however, on the basis of the existing data, we can suggest that targeted information provision on vehicle maintenance would be especially valuable for women, whereas measures to discourage unsafe driving practices would be better targeted at men and younger drivers.

The increasing complexity of vehicle technology is certainly playing an important role in improving safety and this is also the case for vehicle maintenance, with improved on-board diagnostics supporting both drivers and professionals. However, such technology cannot be relied upon to solve the vehicle maintenance challenge, at least in the short-term. The average age of a vehicle in the UK is eight years, highlighting the time lag for the latest technology to penetrate the market and have an impact. Additionally, as technology increases in scope, there is a risk of drivers relying upon it, potentially resulting in the loss of valuable driver knowledge.

We hope this report helps shine a light on the issue of vehicle maintenance and highlights that, at a minimum, we must improve communication to drivers on their duties as a road user. On average, there is more than one death or serious injury on UK roads every day due to a vehicle defect. We must do all we can to minimise this tragic figure.



Joshua Harris
Director of campaigns





VEHICLE DEFECTS AND ROAD CRASHES

In 2018, 39 deaths and 378 serious injuries resulted from crashes which were given a 'contributory factor' relating to vehicle defects, by the police investigating the scene – 3% and 2% of the total of those incidents, respectively, on the road that year. 'Illegal, defective, or under-inflated tyres' were the most significant cause in the police data, contributing to 169 deaths and serious injuries, followed by 'brakes' defects, which contributed to 133 deaths and serious injuries on the road.¹ Every death or serious injury on our roads is a tragedy and many of these incidents may have been preventable, or it may have been possible to reduce their impact, with robust vehicle maintenance.

BASIC VEHICLE MAINTENANCE

Brake advises that car owners carry out regular 'walk-round' checks of their vehicles, once a week and before any long journeys. This should only take a few minutes and the main things to look out for are:

- **tyre tread wear.** Look out for tread wear indicator bars on tyres – small bumps in the main grooves which indicate the minimum tread. Change tyres well before tread gets to the legal minimum (1.6mm in the UK). Brake recommends replacing at 3mm, as tyres can be dangerous in wet conditions with less than this. People who drive with tyres below the legal limit could face three penalty points and a £2,500 fine.
- **tyre pressure.** Buy a hand-held tyre pressure gauge and check the pressure weekly, when the tyres are cold. The correct pressure will be written in a vehicle's handbook. If you do not have a pressure gauge, visit your local garage.
- **general tyre condition.** Check for cracks, bulges or bubbles on the sides of tyres. These are signs that the tyre is damaged and at risk of blowing out. If you see any of these, get the tyre checked by a professional, and replaced if necessary.
- **lights are working.** Check lights are clean and bulbs aren't blown (reflect against a wall, or ask someone to help).
- **oil, water and fluids.** Check oil and water levels, and other fluids such as power steering, windscreen washer and brake fluid, are well above minimum levels.
- **wiper blades.** Check they are in full working order and replace if worn.
- **wheel fixings.** Check wheels and wheel fixings for defects, including loose nuts.

If there is any suspicion at all there's a problem with a vehicle, the owner should take it to a garage immediately – putting it off could cost money, result in a breakdown, or worse, lead to a serious crash.

VEHICLE SAFETY CHECKS & ROADWORTHINESS

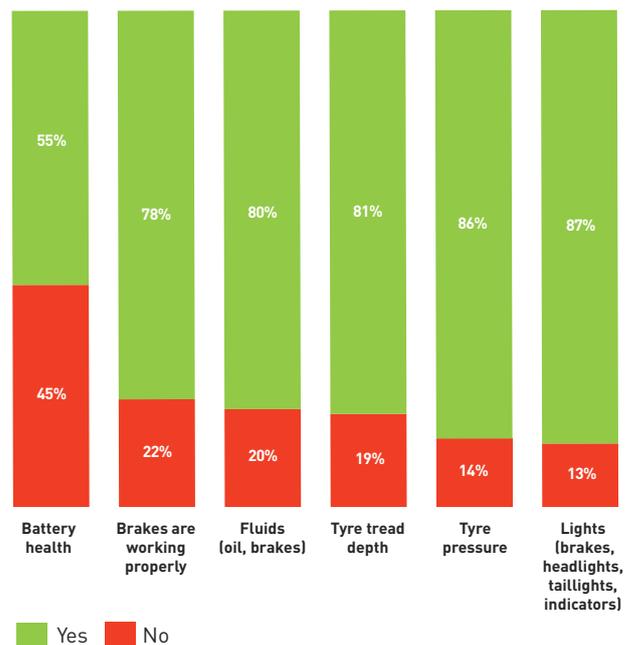
In this survey we sought to understand drivers' knowledge and behaviour in relation to vehicle safety checks and roadworthiness.

In question 1, drivers were asked if they know how to perform certain safety checks on their vehicle.

We asked drivers if they knew how to check the following on their vehicle: battery health; that brakes are working properly; fluid (oil and brakes); lights (brakes, headlights, taillights, indicators); tyre pressure; and tyre tread depth.

For each of the six safety checks, more drivers said they knew how to perform them than those that didn't. For five of the six safety checks, more than three-quarters of drivers answered, yes, they did know how to perform them, ranging from 78% stating that they know how to check brakes are working properly, to 87% stating that they know how to check lights. The outlier within this question was the safety check on battery health, which just over half (55%) of drivers stated they knew how to perform.

Q1. Do you know how to perform the following safety checks on your vehicle?



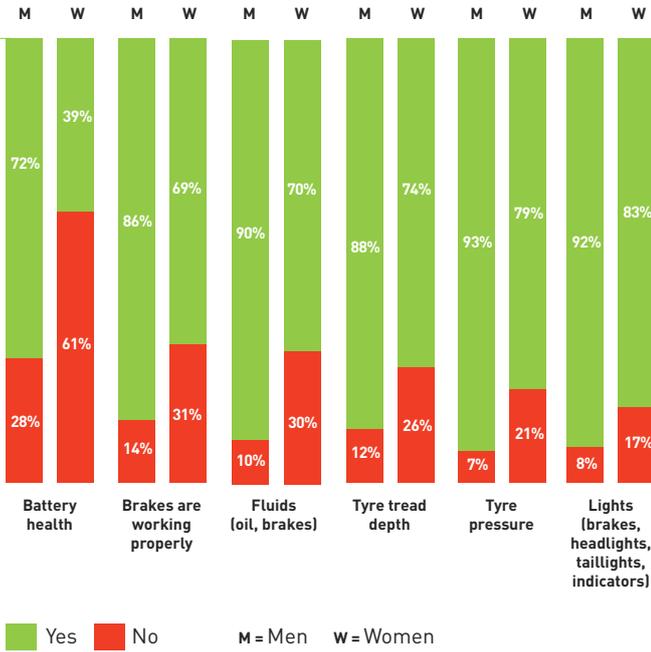
Looking at responses by the gender of the driver, men were more likely to state that they knew how to perform each of the vehicle safety checks than women asked the same question. This was most apparent regarding battery health, with seven in 10 men stating they knew how to check this compared with four in 10 women. More than a quarter of women also stated that they did not know how to check that brakes are working properly, or how to perform safety checks on fluids, or tyre tread depth.

Answers to this question were reliant on the respondent stating that they knew how to perform a safety check and did not include any validation of this claim. It is therefore important to note that these findings may not show that men know how to perform vehicle safety checks more than women, it may just be that they are more likely to state that they know how to do this.

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Q1. Do you know how to perform the following safety checks on your vehicle?



In question 2, drivers were asked how regularly they perform safety checks on their vehicle.

Drivers were asked how regularly they perform safety checks on their vehicle. Answers were mixed, with once a month the most common frequency chosen – picked by just over a third of drivers. A quarter (27%) stated that they perform safety checks just once a year and around one in 10 stated that they perform vehicle safety checks every time they use their vehicle (12%). Slightly fewer stated that they never perform vehicle safety checks (9%). The mixed responses indicate a varied approach to performing vehicle safety checks among drivers. However, these findings may also have been influenced, in part, by a differing perception of what a ‘safety check’ is among respondents.

Younger drivers were more likely to state that they perform vehicle safety checks every time they use their vehicle – one in four 18–34 year olds stated that they do this, in comparison with just one in 20 drivers over the age of 45. Younger drivers were also less likely to state that they never perform safety checks on their vehicle, with one in 20 drivers aged 18–34 stating this, in comparison with one in 10 of those over the age of 45.

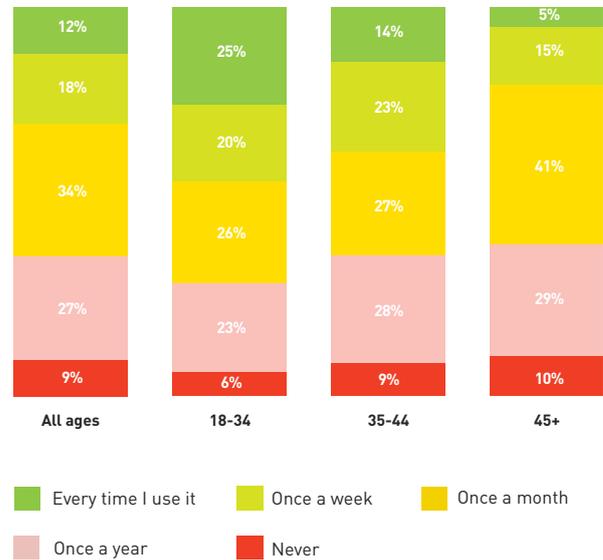
When analysing responses to this question, it is important to note that the answer ‘every time I use it’ may not indicate the greatest frequency of performing safety checks. It is possible that those who chose alternative answers, such as ‘once a week’, used their vehicle less often than the frequency of the check.

PROFESSIONAL MAINTENANCE AND THE MOT

In the UK, all cars, motorbikes and light passenger vehicles must pass an annual MOT test once they are three years old (known as 3-1-1 frequency). These tests are intended to confirm that vehicles meet roadworthiness and environmental standards. If vehicles are kept well-maintained throughout the year, with any defects noticed and remedied promptly, they should be able to pass the test. However, MOT results show that many drivers do not pay enough attention to routine maintenance: a third of cars, vans and passenger vehicles with up to 12 seats failed their initial MOT in 2018/19 and more than a quarter failed the final MOT.²

Just because a vehicle has passed an annual test or been serviced, it does not mean it will be safe until the next service. Brake advises car owners to talk to their garage about the level of wear on brake pads and tyres, and any other problems a vehicle might experience in the coming months, so they know if a visit between services is likely to be required.

Q2. How regularly do you perform safety checks on your vehicle?



Looking at responses by the gender of the driver, men were more likely to state that they perform vehicle safety checks every time they use their vehicle, and more likely to state that they never perform safety checks, when compared with women. The majority of men (59%) stated that they perform safety checks once a week, whereas less than half (45%) of women chose this option (although once a week was still the most popular answer for women).



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Q2. How regularly do you perform safety checks on your vehicle?



MOST COMMON VEHICLE DEFECTS AT MOT

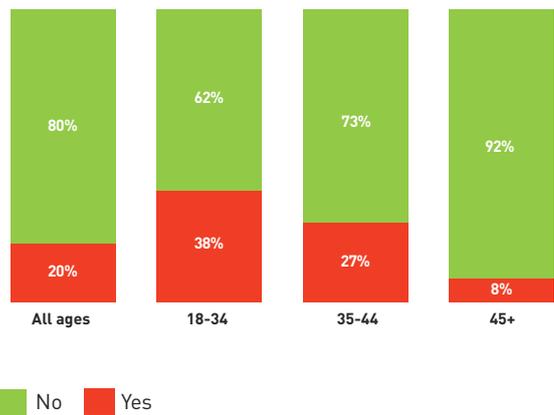
MOT test data for class 3 and 4 vehicles (the category which includes cars and light vans) shows that defects with 'lamps, reflectors and electrical equipment' are the most common, with 14% of vehicles being found at MOT to have a defect in this category. This is followed by 'suspension' (10%), 'brakes' (8%) and 'tyres' (7%). When looking at the defects categorised as 'dangerous', at MOT, 'tyres' are the most common, with 6% of all vehicles at MOT having been found to have a dangerous tyre defect. This is followed by 'brakes' (3%), 'suspension' (0.6%), and 'body/chassis/structure' (0.3%).³

In question 3, drivers were asked if they had ever knowingly driven a car that was not roadworthy.

One in five drivers stated that they had knowingly driven a car that was not roadworthy. Younger drivers (18-34 year olds) were four times more likely to state that they had knowingly driven a car that was not roadworthy than older drivers (those aged 45 and over). This finding is somewhat surprising, as a reasonable assumption would be that a group of older drivers would have, on average, been driving for a longer period than their younger counterparts, and therefore would have had a greater opportunity to have driven an unroadworthy vehicle. The findings of this question are also interesting in comparison with those of question two, where younger drivers appeared to be more vigilant when it came to performing vehicle safety checks than their older counterparts. It is possible that a root of these mixed findings is a differing perception of the term 'roadworthy' across the different age groups.

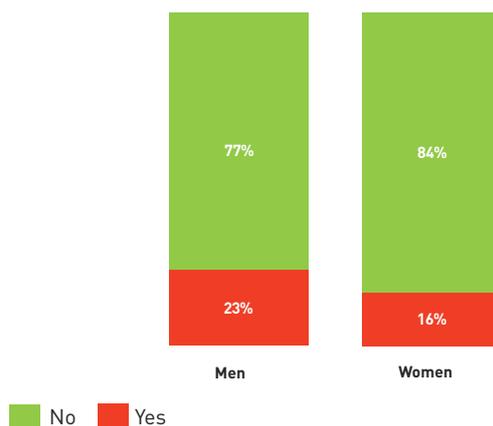
Question 3

Q3. Have you ever knowingly driven a car that was not roadworthy?

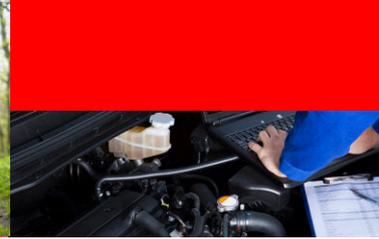


Looking at the gender of respondents, over three-quarters of both men and women stated that they had never knowingly driven a car that was not roadworthy, but men were more likely than women (by a 7% margin) to state that they had driven an unroadworthy vehicle.

Q3. Have you ever knowingly driven a car that was not roadworthy?



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BREAKDOWN ADVICE

Even if drivers follow all the right steps, a vehicle may still break down – an experience which can be scary and dangerous. In a breakdown situation, the most important thing for drivers to consider is the safety of themselves and other road users, particularly on high speed roads like motorways. The Highway Code (rule 274)* states that drivers should:

- get your vehicle off the road if possible;
- warn other traffic by using your hazard warning lights if your vehicle is causing an obstruction;
- help other road users see you by wearing light-coloured or fluorescent clothing in daylight and reflective clothing at night or in poor visibility;
- put a warning triangle on the road at least 45 metres (147 feet) behind your broken-down vehicle on the same side of the road, or use other permitted warning devices if you have them. Always take great care when placing or retrieving them, but never use them on motorways;
- if possible, keep your sidelights on if it is dark or visibility is poor;
- do not stand (or let anybody else stand) between your vehicle and oncoming traffic; and
- at night or in poor visibility, do not stand where you will prevent other road users seeing your lights.⁴

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Analysis of survey responses by gender

Overall, men were more likely to state that they know how to perform vehicle safety checks, and that they perform these every time they use their vehicle, compared with women. However, men were also more likely than women to state that they have knowingly driven a car that was not roadworthy and that they never perform vehicle safety checks. These are mixed findings and hard to interpret – they could indicate that there is a small section of the male driving population who disregard safety more than others in related demographic groups.

References

1. Department for Transport (2019), *Contributory factors: Casualties in reported accidents by severity, Great Britain, Table RAS50007*
2. Driver Vehicle and Standards Agency (2020), *MOT test results by class of vehicle*
3. Driver Vehicle and Standards Agency (2020), *MOT testing data for Great Britain*
4. Highway Code, *Breakdowns and incidents (274 to 287)*

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CHOOSING THE RIGHT VEHICLE

Brake urges drivers to choose the safest, most reliable vehicle they can. To find out the safest car models, consumers can visit the Euro NCAP website (www.euroncap.com), which tests and rates cars for safety. Before buying a second-hand vehicle, Brake advises getting it checked over by an independent, qualified and experienced mechanic, to ensure its safety.

Vehicle technology to prevent crashes and reduce the risk of death or serious injury if a crash does occur is now widely available. Some technologies will be mandatory for all new vehicles in the EU from 2021, including autonomous emergency braking, intelligent speed assistance and lane keep assist.

Tyre pressure monitoring systems (TPMS), which monitor tyre air pressure and alert the driver if it falls below a pre-set parameter, have been mandatory on new vehicles sold in the EU since 2014, and other on-board diagnostics are increasing in complexity and capability.

All these measures are helping drivers, and the professionals who service vehicles, to optimise vehicle safety. Good maintenance is essential to ensure they function optimally and should be carried out by a well-trained, competent and qualified technician.

CASE STUDY - MEGAN'S STORY

Megan Byrne, 22, was driving from Haslingden towards Blackburn on 20 February 2020 when she lost control of her car when cornering and crashed. Megan suffered catastrophic head injuries and died at the scene. Collision investigators found that Megan's car had air leaks in two tyres, with one having a PSI of half the recommended level and the other reading no recordable pressure. The coroner found that that it wouldn't have been possible for Megan to tell if her tyres were under-inflated with a visual inspection as they were 'run-flat' tyres, and that these defects would have affected the grip and handling of the vehicle.



Megan's family said: "We are beyond devastated by Megan's death. In her memory, we want to prevent tragedies like this from happening to anyone else. It is vital to improve the safety of our roads and make sure that all drivers are given information and help on the critical importance of vehicle maintenance. A vehicle can be a lethal machine and we must help drivers minimise the risk of a crash."