

# UNDERSTANDING THE KNOWLEDGE GAP

Evaluating UK Driver Awareness and Attitudes towards ADAS Technologies and Calibration



# Summary

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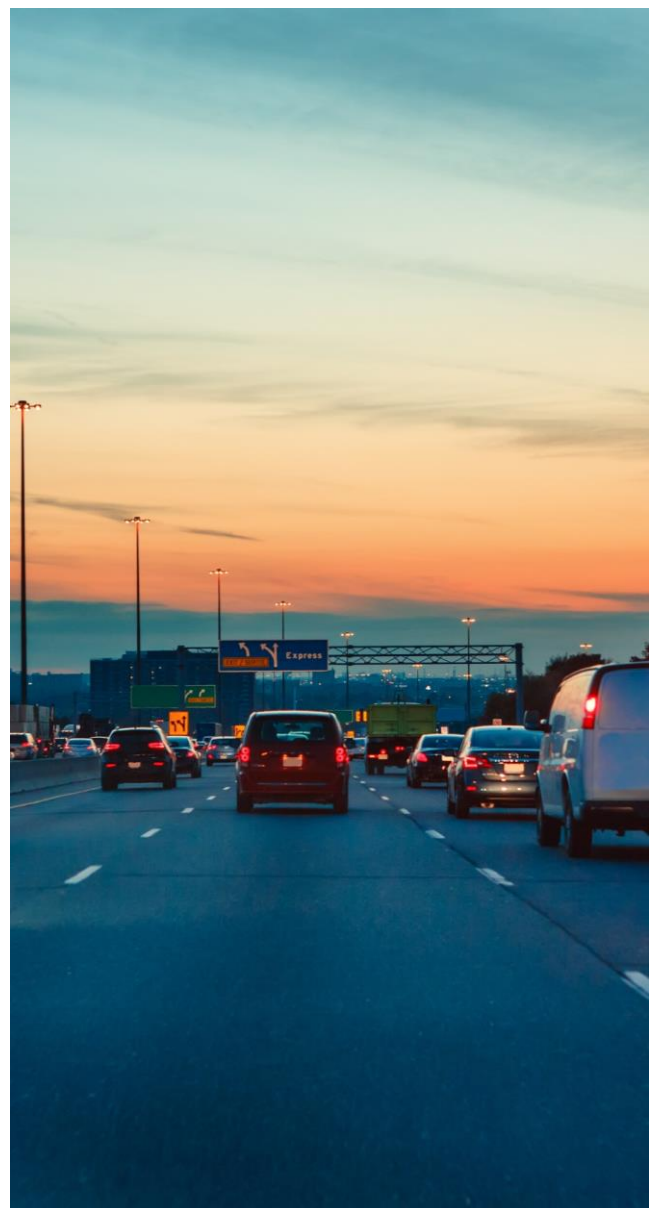
Advanced Driver Assistance Systems (ADAS) encompass a wide range of technologies that enhance road safety, from basic features like lane departure warning and rear-view cameras to more advanced systems like adaptive cruise control and autonomous emergency braking.

The prevalence of ADAS in new vehicles is increasing rapidly and it is important that not only do we have skilled technicians to service, maintain, and repair these vehicles, but that drivers and vehicle owners are aware of ADAS functionality that may be on their vehicles, in some cases without them even knowing.

Drivers need this knowledge to understand the importance of regular maintenance and calibration for optimal performance and safety. Neglecting these tasks can lead to inaccurate readings, false alerts, and malfunctioning, compromising the vehicle's safety.

Our research shows that ADAS technologies and calibration are not currently well understood by drivers, only 18% knew what ADAS is and correctly identify it. However, 86% of drivers have ADAS technologies on their car. 39% of drivers think ADAS calibration is done during an MOT, and only 47% of drivers say the ADAS calibration, if required, is an urgent job.

ADAS technologies are now common in cars and including it in the MOT is under consultation at the time of this report. The UK car parc is currently younger compared to European counterparts. The increased reliance on technologies means inspections could be more key, our research also reveals that 68% of drivers would like to have ADAS calibration checks included in the MOT testing inspections.



# Introduction & Background

## What is ADAS and why is it important?

Advanced Driver Assistance Systems (ADAS) encompass a range of technologies and systems that assist drivers and enhance road safety, from simple features like lane departure warning and rear-view cameras, to more sophisticated systems like adaptive cruise control and autonomous emergency braking. The prevalence of ADAS technology in new vehicles is rapidly increasing, with the expectation of further autonomous features to reduce road fatalities and injuries to be included in the near future.

The maintenance and repair of autonomous vehicles require skilled technicians due to their complex systems, which include advanced electronics, sensors, and software. It is crucial for technicians to have specialized knowledge and expertise to diagnose and resolve issues with autonomous systems to ensure the safety and reliability of the vehicles. Moreover, with the continuous integration of autonomous technology in vehicles,

technicians must undergo regular training and education to stay up-to-date with the latest advancements in the field and have a deep understanding of how various systems interact and work together.

## Why drivers should know about ADAS.

It is important for drivers to be knowledgeable about the ADAS installed in their vehicles. Regular maintenance and calibration of ADAS technologies are essential to ensure that these systems operate effectively and efficiently, which is critical for the overall safety and performance of the vehicle.

If drivers are not aware of the ADAS features installed in their vehicles, they may not understand the importance of maintaining and calibrating these systems. Failure to maintain and calibrate ADAS systems can result in inaccurate readings, false alerts, and malfunctioning, which can compromise the safety of the vehicle occupants and other road users, the most vulnerable road users being at the most risk.

Additionally, if drivers are not familiar with the proper use of ADAS features, they may inadvertently cause damage to the system or the vehicle. For example, if a driver attempts to replace a damaged windshield without considering the impact on the ADAS camera, the camera's position and calibration could be affected, resulting in incorrect readings and poor performance.

Therefore, having knowledge of ADAS features and their maintenance requirements is crucial for drivers to ensure that their vehicles are safe and roadworthy. It is recommended that drivers read their vehicle owner's manual to understand the maintenance and calibration requirements of the ADAS systems installed in their vehicles and seek professional assistance when necessary.

In the UK, it is ultimately the responsibility of the vehicle owner to ensure that any ADAS technology on their vehicle is maintained properly. This includes regularly checking and maintaining the ADAS features, such as cleaning sensors, ensuring proper alignment, and calibration. Ultimately, ensuring the proper maintenance and calibration of ADAS technology is crucial for the safety and reliability of the vehicle, and vehicle owners should take all necessary steps to fulfil this responsibility.

## Methodology and Approach

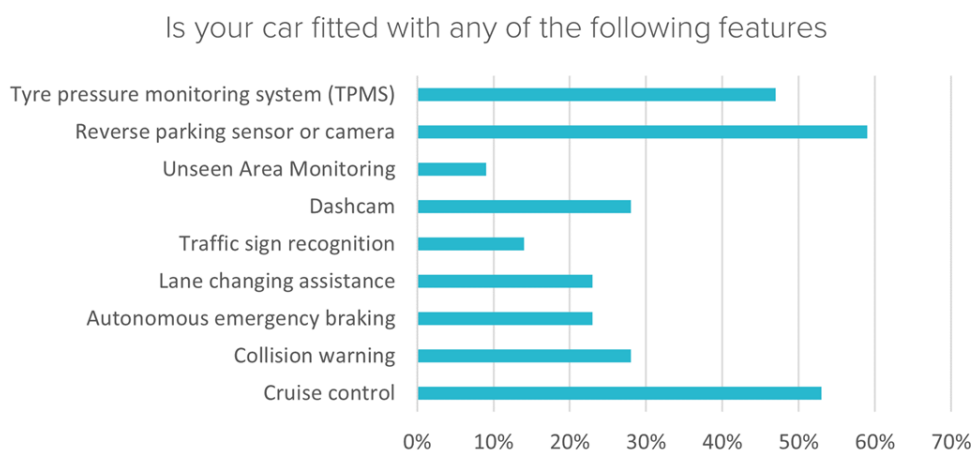
Working with GiPA – automotive aftermarket intelligence organisation, we undertook a quantitative online survey with over 1000 UK drivers that are responsible for the maintenance of their vehicle. A significant part of this survey was to quantify drivers current understanding of ADAS. The panel survey was consistent of questions probing drivers understanding of ADAS, when it should be repaired or maintained and how ADAS is or not



# Research findings

## Knowledge of the term 'ADAS'

While 24% of drivers claimed to know about ADAS, less than 1 in 5 drivers truly know the meaning of ADAS. 73% of those who said they knew what ADAS identified the correct definition (a group of driver assistance technologies), 17% believed it was a new type of powertrain, 8% thought it was a type of licence technicians need to work on a vehicle, and 2% thought it was a new type of car shape. However, when asked 86% of respondents said they had at least one of 9 ADAS features outlined to them. This clearly indicates a disconnect between drivers understanding of ADAS and features they have already had on their vehicles.



## Knowledge of calibration and instances when needed.

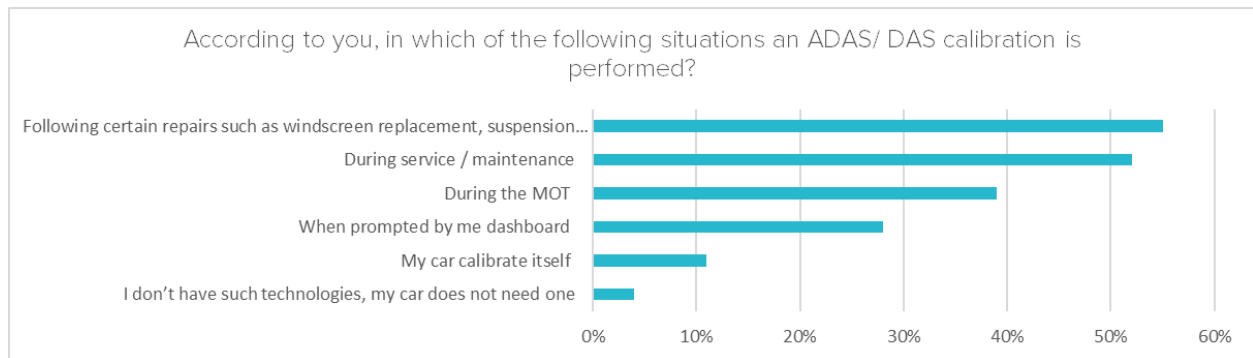
We asked respondents if they know what an ADAS/ DAS calibration<sup>1</sup> is, 61% of drivers claim they are familiar with calibrations.

ADAS calibration, refers to the process of adjusting and verifying the functionality of sensors and cameras installed in modern vehicles. These systems use sensors and cameras to detect obstacles, maintain lane positioning, and control acceleration and braking, among other functions. Proper calibration ensures that these systems function accurately and effectively, minimising the risk of accidents and ensuring the safety of drivers and passengers. ADAS calibration is typically performed after a repair or replacement of a vehicle's windshield, cameras, or sensors, and may require specialized equipment and expertise to complete.

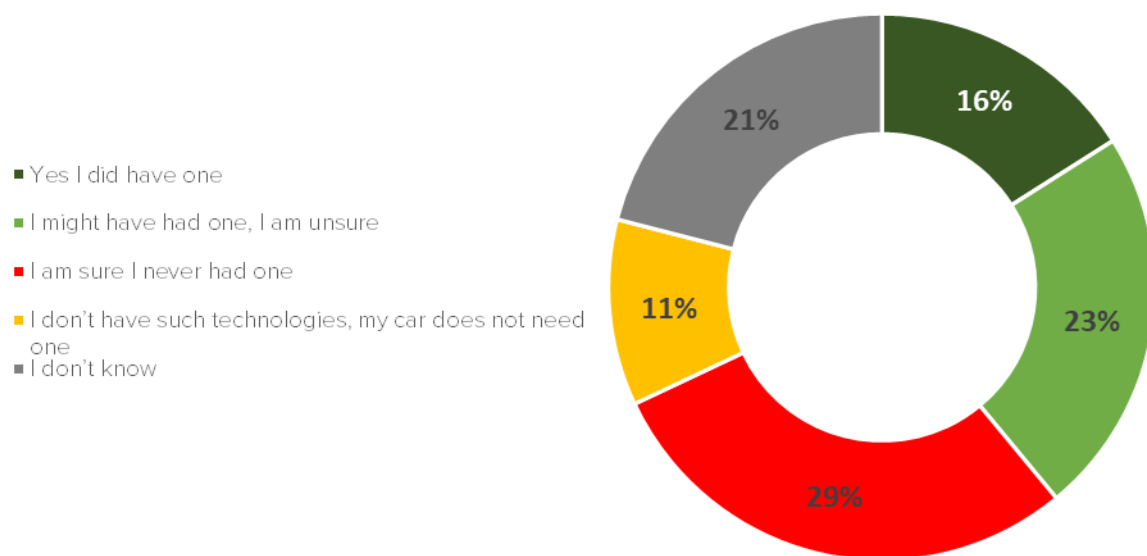
ADAS calibration is essential for ensuring the safety of drivers, passengers, and other road users. These systems rely on accurate measurements and data to operate effectively, and even slight deviations from the recommended specifications can compromise their performance. Improper calibration can result in false alerts or failure to detect hazards, leading to accidents, injuries, and even fatalities. By ensuring that ADAS systems are properly calibrated, drivers can rely on them to help prevent accidents and improve overall safety on the road. Additionally, many newer vehicles require ADAS calibration to maintain their warranty, making it an important aspect of vehicle maintenance and repair.

55% of drivers that claim they are familiar with calibrations say they are performed during a repair or service, and almost 4 in 10 drivers think they are carried out during an MOT.

<sup>1</sup> ADAS/ DAS calibrations are required whenever a sensor's aiming is disturbed in any way. This can occur in a collision, even a minor bump, or following a common operation such as windscreen replacement, suspension repairs and wheel alignment



Have you ever had an ADAS calibration on your car



Only 16% of drivers are sure they have had their ADAS calibrated on their car, and almost 3 in 10 are sure they have never had it done.

ADAS technologies are common in cars and including it in the MOT is currently under consultation.

- 86% of drivers in our research have ADAS (Reverse parking 59%, Cruise Control 52%)
- The increased reliance in technologies means regular maintenance could be more key, alas 68% of drivers state they would like to have ADAS calibration checks included in the MOT testing inspections.

- ADAS calibration is a critical component of vehicle safety. Without calibration, ADAS systems may not operate correctly, potentially putting drivers, passengers, and other road users at risk. In the same manner that all seat belts are fitted, regardless of original fitment, then ADAS as a safety critical feature should be considered.
- The correct care of ADAS is essential to maintaining road worthiness, an obligation of the motorist. Systems that are out of calibration, owing to their potential impact on road safety, would place the motorist in a position of responsibility to ensure the equipment they are operating is used correctly and





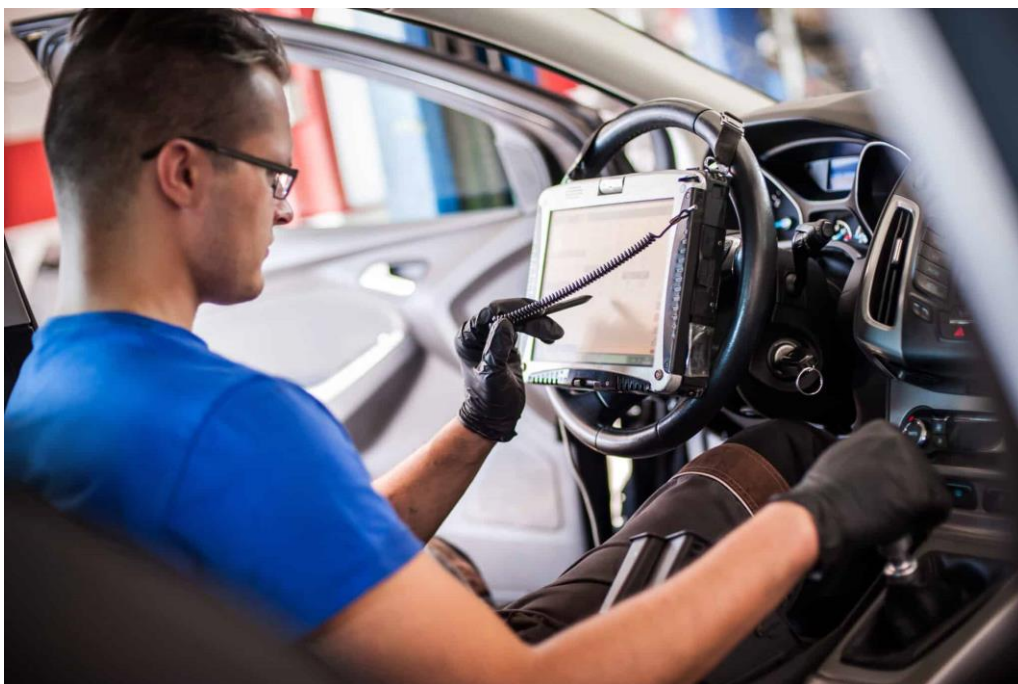
The MOT inspection does not currently include ADAS testing, and 72% of drivers are aware of this, however 68% think it should be included.

## How drivers respond to ADAS calibration advise

Almost 47% of drivers will react to ADAS calibration jobs as a matter of urgency, however 36% will wait for their next workshop visit leaving potential unroadworthy cars on the road for weeks or months.



This provides additional evidence that emphasizes the necessity for increased public awareness regarding ADAS and the significance of maintaining this technology. Including information about the presence of this technology should therefore be easily available and could be included in the vehicle's registration document and/or an online facility to check, comparable with the government's "E10 fuel checker".



# Sector Action

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Raise awareness of ADAS technologies and the scenario where calibrations are required

- Drivers simultaneously are not sure what ADAS is, but 4 in 10 incorrectly assume they are done at an MOT inspection, at the same time they think it is an urgent an important job.
- Providing clear definitions of ADAS, its importance, what technologies it affects and what instances it needs to be calibrated is key.

Highlighting the importance of ADAS calibration and vehicle technology becoming more maintenance centric

- Whilst there is a debate within the industry about the change of the MOT scheduling, there is no doubt that drivers are eager to step up their expectation of road safety.
- The reliance on technology, like cruise control and reverse parking to drive makes it important for road safety that these technologies are regularly checked

# Appendix

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Respondents' demographics and car details

- Total responses 1036
- 56% Male and 44% female
- Age profile: 26% 17-34, 39% 35-54, 18% 55-64 and 17% 65+
- Car type: 63% Petrol, 26% Diesel, 8% Hybrid/PHEV and 3% Full electric
- Average age of car 8.3 years
- Average annual mileage 6609

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