

End of Life Safe Repair of ADAS Enabled Vehicles

Thatcham Research

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SAFER CARS. FEWER CRASHES

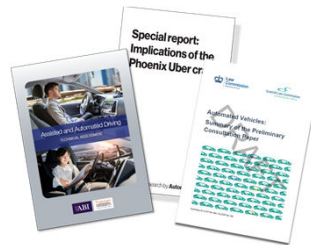
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Why is this required? Highly Assisted Driving Technology

Today's reality

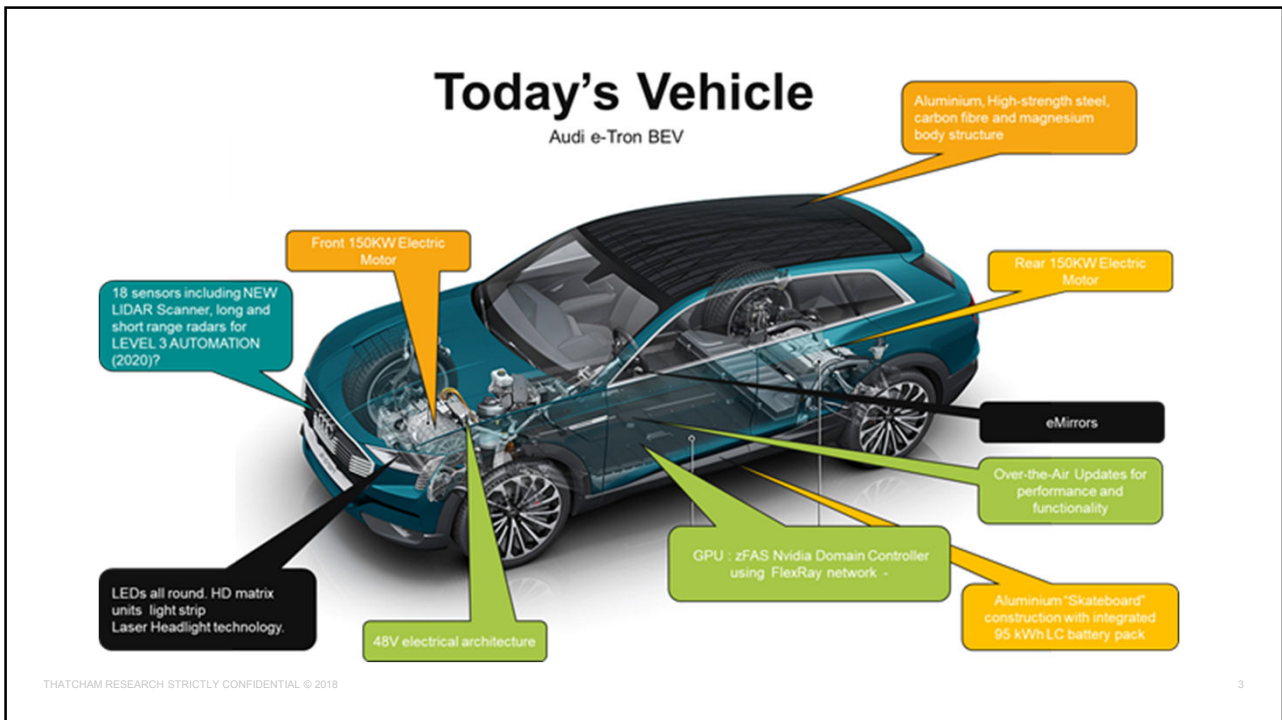
- The fully autonomous vehicle is
someway in the future – Too far to
concern us today.
- However, the highly assisted
vehicle is here today and it is
common place on vehicles built in
the last 5 years.
- How does this effect the
remarketing or refurbishment of
vehicles?



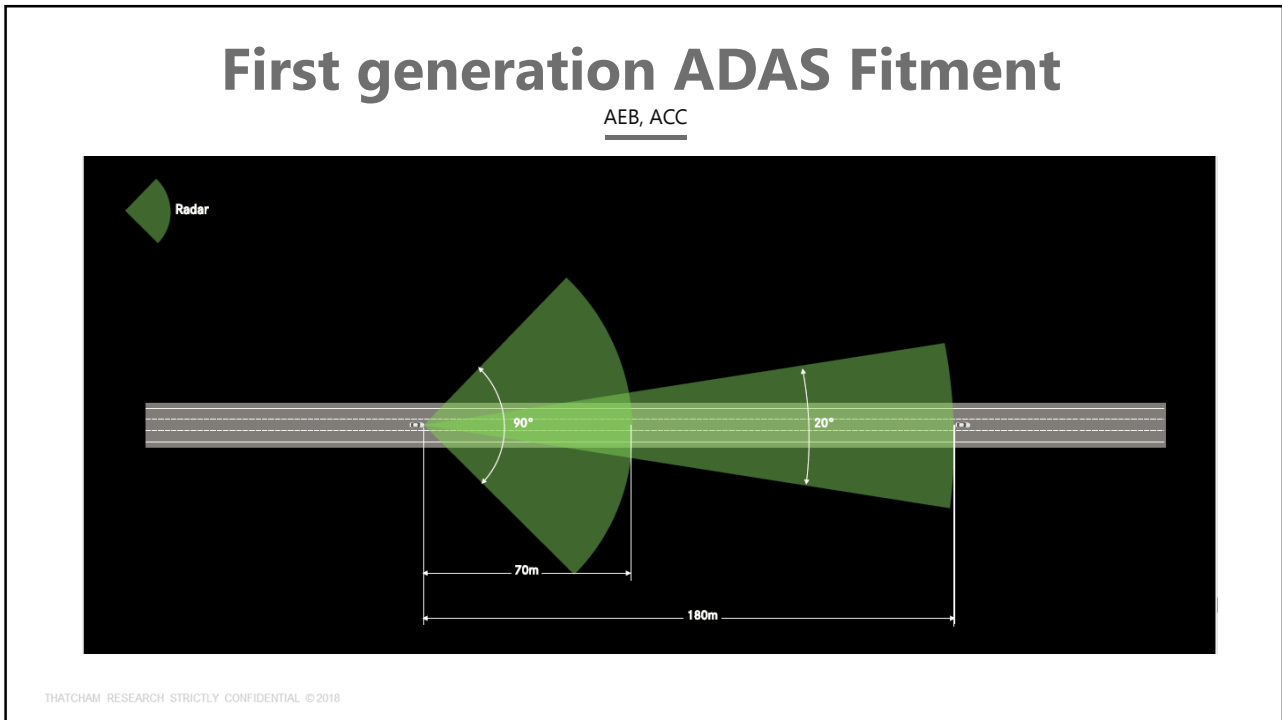
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The effects of additional turns of the fixing screw at 1.2m.

-3 turns	difference
-2 turns	4.32m difference
+1 turn	0.01m difference
0 turns	0m difference

The effects of additional turns 2 turns of the fixing screw at 1.2m, 10m, 100m and 250m.

1.2m	0.022m difference
10m	0.186m difference
100m	1.857m difference
250m	4.642m difference

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Vehicle Refurbishment/Repair

But what if -

- Following a repair the camera isn't facing directly forward.
- Repairing a bumper reduces the range of a radar.
- Repairing a chip in a windscreen distorts the camera's view.
- Wheel alignment or body alignment is not accurate post repair.

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Mainstream ADAS Fitment

Highly assisted driving

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Growth in ADAS Enabled Features

Forward Collision Warning **Adaptive Cruise Control** Evasive Steering Assist Emergency Lane Keeping
Remote Active Park Assist Lane Keep Assistance Adaptive High Beam Assist **Reverse AEB**
 Traffic Sign Recognition **Head Up Display** Adaptive Forward Lighting **Intelligent Speed Assist** Parking Aid **Driver Monitoring System**
 Rear Collision Warning **High Beam Assist** **Acceleration Control** Lane Departure Warning
 Active Park Assist with Surround View **Rear Cross Traffic Auto-Brake** Autonomous Emergency Braking

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Used Vehicle landscape

- 7.9 Million used cars sold in 2018 vs 2.37 Million New
- By 2020 Nearly 40% of cars will be fitted with ADAS
- impact on safe repair with ADAS fitted cars
- New cars tested under Euro NCAP will not receive 5 stars if not fitted with AEB systems
- Increase in cost for minor repair

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Published ADAS Repair Position Paper

Managing Vehicle Repairs Involving Advanced Driver Assistance Systems

If ADAS sensors, or parts that are in proximity to ADAS sensors, are included in a repair specification, calibration post repair must be completed to confirm sensors are functioning to the vehicle manufacturers' specified tolerances - unless clearly stated otherwise.

- The presence, or not, of ADAS on a vehicle must be proven and recorded.
- Where ADAS are present, repair procedures must clearly identify if calibration is required and why.
- The calibration must result in confirmed functionality of the sensor/s within Vehicle manufacturers tolerances.
- The calibration must be carried out by a competent technician.
- Fully auditable records must be retained.
- Certified evidence confirming that the calibration result means the sensor/s are operating within the Vehicle Manufacturers tolerance.

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Managing Advanced Driver Assistance Systems in Repair

Code of Practice

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Steps to Support the Industry

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Advanced Driver Assistance Systems in Repair
Code of Practice

Enhanced repair sector products to improve understanding of fitment and calibration requirements

New and improved training products to increase competence

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ADAS Position Paper

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Managing vehicle repairs involving Advanced Driver Assistance Systems (ADAS)

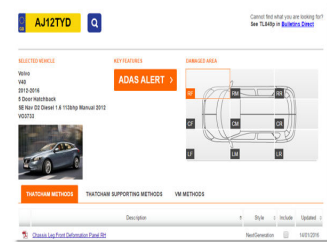
May 2019

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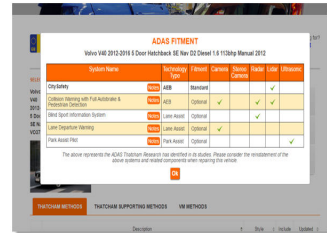
ADAS data in escribe

Supporting repairers with technical information

- › Key features of the instant alert include:
- › **Fitment (Standard or Optional fit)** Lets you know if ADAS technology is fitted, or potentially fitted to the vehicle
- › **Sensor type** – Defines the instruments on the vehicle driving the ADAS features e.g. camera, stereo camera, radar, LIDAR, ultrasonic sensors etc..
- › **Technology types** – Identifies the technology type that may require calibrating e.g. AEB, Reverse AEB, Lane Assist, Park Assist etc..
- › **System attributes** – Expanding notes identifying key system attributes and additional information that will help identify the ADAS technology fitted
- › **Methods** – Repair, calibration and reinstatement procedures accessed directly from the ADAS alert feature



Clicking on ADAS alert...



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Thatcham Research Practical Training, and Online learning



Thatcham Certified
ADAS & Calibration 1 day awareness course



ecademy
Online technical eLearning programme which includes ADAS awareness & ADAS Calibration modules



Coming soon
IMI accreditation ADAS calibration

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- highly experienced, knowledgeable, technical trainers
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- parts pricing module now available as standard, to further reduce the time you spend on each job
- "Ask our Expert" services providing technical advice

Apprenticeships

Training

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Thanks for listening