



Managing vehicle repairs involving Advanced Driver Assistance Systems (ADAS)

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Thatcham Research's position on ADAS repair

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 following principles must be applied to ensure the effective repair and management of ADAS sensors:

The presence, or not, of ADAS on a vehicle is to be proven and recorded.

Where ADAS are present, repair procedures must clearly identify if calibration is required and why.

Calibration must result in confirmed functionality of the sensor/s within vehicle manufacturers tolerances, unless stated otherwise in the repair specification.

Any 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.

Direction for Vehicle Repairers

The ADAS systems on a vehicle provide critical safety functions. Repairers, therefore, must ensure that any repairs that directly involve, or impact ADAS sensors, are carried out so that the safety and functionality of the vehicle is not compromised.

The following applies when a vehicle repairer is:

Repairing, removing, refitting, aligning or replacing parts within the vicinity of ADAS sensors.

Making any geometry changes, or changes to the vehicles' suspension or ride height.

Realigning, replacing or refitting any ADAS sensors or associated vehicle parts.

To ensure identification and safe repairs involving ADAS, vehicle repairers must:

- Assess for the presence of ADAS sensors and record the outcome clearly.
- Research and seek guidance from relevant repair methods and calibration instructions.
- Ensure all calibration activities are completed by currently competent technicians.
- Complete system calibration in accordance with the relevant repair method / instruction.
- Be able to demonstrate that the calibration of all affected sensors have been completed and the results of the calibration confirms functionality within the vehicle manufacturer's specified tolerance – unless stated otherwise in the repair specification.
- Where no specific repair guidance exists, and functionality cannot be proven through systemised calibration, then advice should be sought from the vehicle manufacturer's dealership network and appropriate action taken prior to vehicle release.
- If vehicle manufacturers' information states dynamic calibration, this should be completed and confirmed prior to vehicle release.

Calibration process data capture and recording

During and following successful calibration, the following details should be captured and retained, with other repair process records in accordance with clause 4.5 of BS10125. If required, they should also be shared with the work provider / customers manufacturers should:



- Name and address of the repairer.
- Name and address of 3rd party contracted to complete the calibration if outsourced.
- Vehicle make and model.
- Vehicle registration.
- Vehicle identification number (VIN).
- Vehicle mileage.
- Date of calibration.
- Technician name and means of proof of competence.
- Equipment used to calibrate the vehicle systems.

Industry Implications

Vehicle Manufacturers

Where a vehicle has, or might have ADAS features, vehicles manufacturers should:

Provide data that allows for easy identification of whether ADAS sensors are fitted.

Provide clear and consistent advice around which repair scenarios would result in ADAS calibration being required.

Provide calibration procedures, and certify that successful calibration will ensure that ADAS are operating to specified tolerances.

Provide, or support, training with assessed outcomes that provide a proof of competence for vehicle repair technicians.

Industry Implications

Equipment/ Software Suppliers

Any supplier that provides equipment/software to support sensor calibration should:

Ensure equipment/
software is auditable
and provides verifiable
evidence of a successful
calibration.

Provide calibration
procedures, and certify that
successful calibration will
ensure that ADAS sensors
are operating to specified
tolerances within the vehicle
manufacturer's operating
tolerance.

Maintain up to date lists
of the capabilities of their
calibration equipment/
software, at a vehicle make
and model level including
which sensors can be
calibrated.

Retain records that
are available for audit
purposes.

Industry Implications | Work Providers

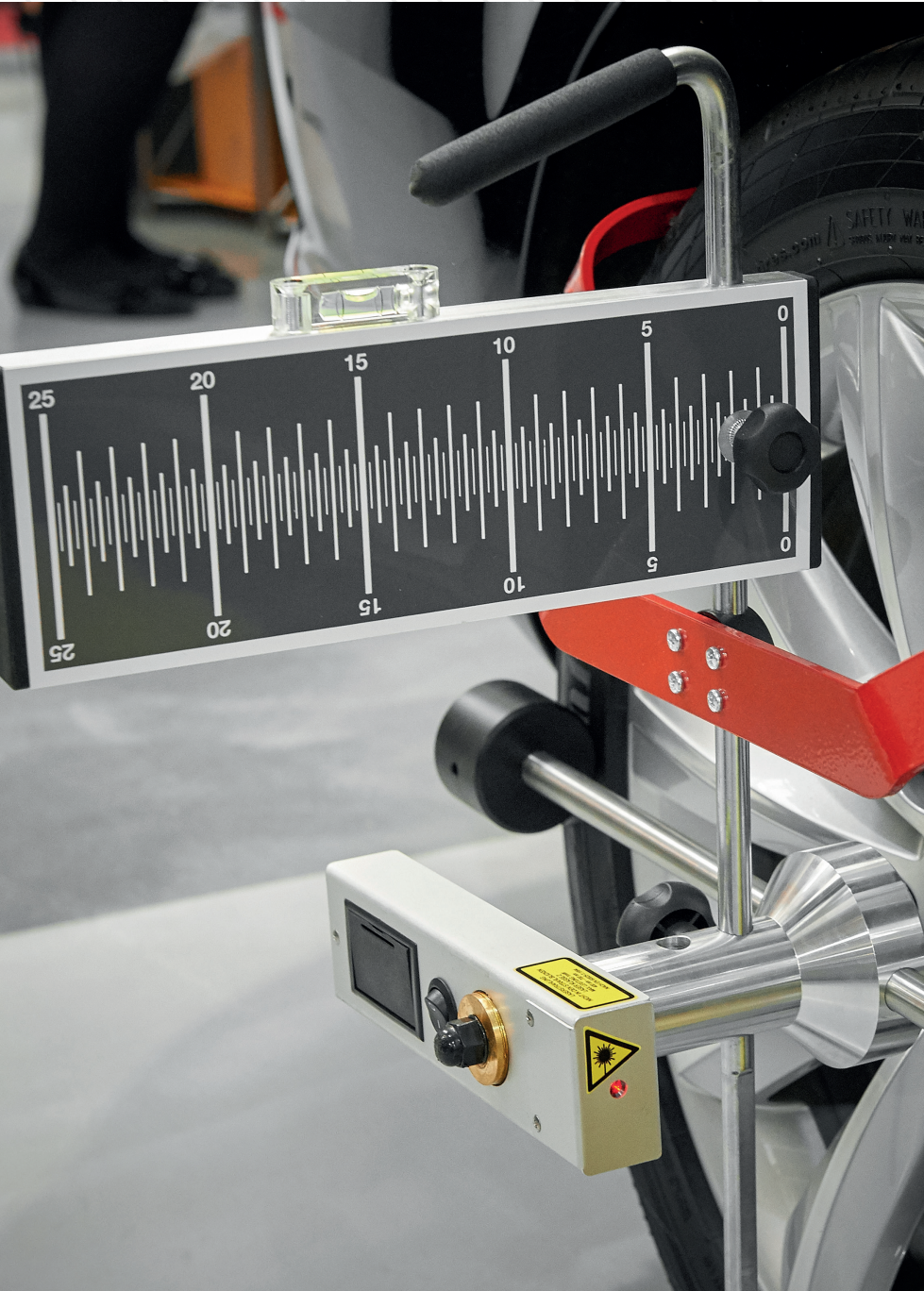
When directing repairs that do, or could, include ADAS repair, work providers must be confident of the ability of the service supplier to manage the repair and should:

Have a record of the capabilities within their existing network.

Where possible at triage, establish if ADAS is included on a vehicle.

Direct work according to the capability of the network.

Provide, or support, training with assessed outcomes that provide a proof of competence for vehicle repair technicians.



For further information and guidance please contact:
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