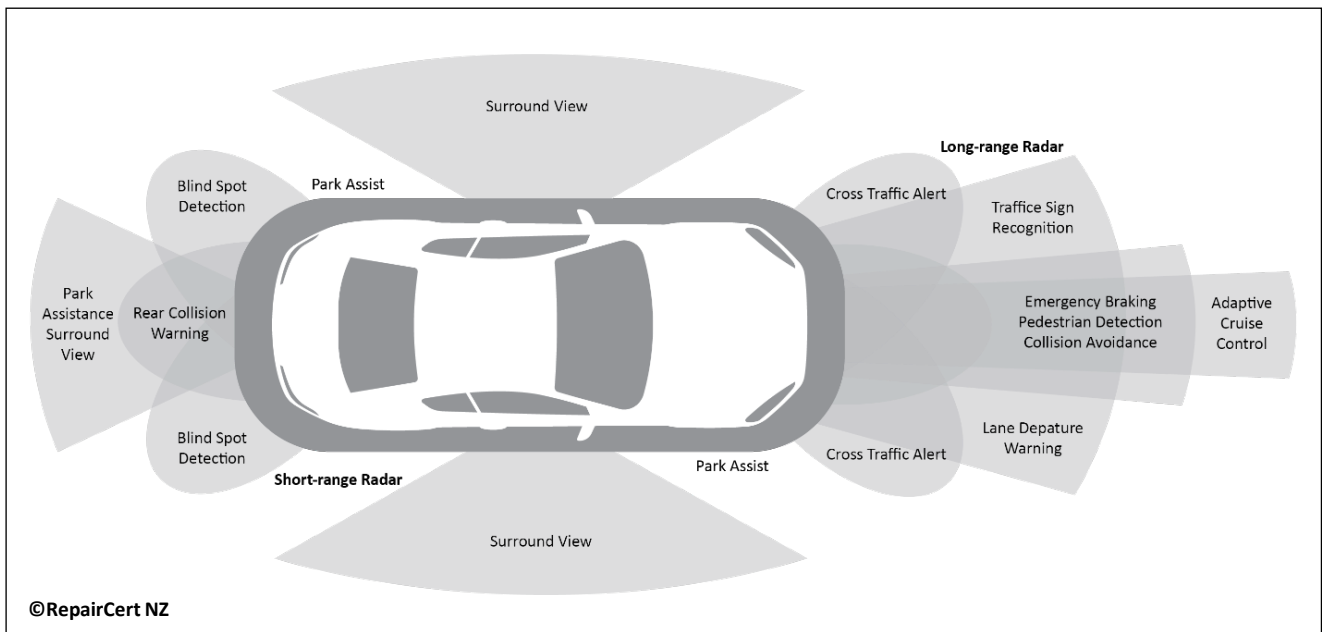


## Advanced Driver Assistance Systems (ADAS) Some Guidance in Navigating the ADAS Declaration Form

Supporting New Zealand's Repair Certification Industry



## Fundamentals of ADAS

All Advance Driver Assistance Systems (ADAS) operate in real-time to prevent or mitigate a collision event occurring and as the name suggests, 'assist' the driver in operating a vehicle more efficiently and safely. These are referred to as 'active systems'.

## Basic ADAS Components

ADAS relies on input from an ever-increasing number of 'sensors' located around the vehicle. These sensors are typically:

- Cameras (video projection).
- Radar (radio waves).
- Lidar (light waves).
- Sonar (sound waves).

The common denominator with these sensors is that they all operate by sending out and receiving back signals that are constantly measuring the distance and volume of objects or features (e.g. landscape or road signs) from the vehicle, whilst being operated. These signals are relayed to various other systems within the vehicle to provide a response (a warning signal, sound, or some form of direct intervention).

After accident damage (in many instances, even minor damage), ADAS systems are required to be checked and inspected. In some cases, ADAS features may require re-calibration simply because parts have been removed, refitted, or replaced.

Checks/inspections are required to confirm that:

- sensors are working or operating correctly (**scanning**); and
- sensors are aimed correctly (**calibration**).

## Why Calibration Accuracy is so Important

New generation vehicle platforms have more advanced electronic technologies than any other form of transportation. Many ADAS features now include semi-autonomous systems (those that react with or without driver interaction).

These systems, irrespective of their level of autonomy, require extremely accurate alignment (calibration) to ensure they respond or react in the way in which they were designed by the original equipment manufacturer (OEM). Guaranteed alignment can only be achieved with approved calibration equipment that is operated (statically) in environments that are appropriate (e.g., calibration workshop layouts that have dedicated space). Additionally, many calibration procedures will require dynamic calibration (driving the vehicle over specified terrain and conditions).

As the public becomes more familiar with the ADAS features fitted to their vehicles, there is an expectation that ADAS will perform consistently. Accordingly, ADAS will increasingly be relied on to prevent or avoid accidents, and 'assist' in everyday driving.

Obviously, there is a high level of responsibility/duty of care imposed on anyone carrying out ADAS calibrations to ensure the system is operating correctly and providing the appropriate level of safety, as intended by the OEM, to avoid possible collisions, or mitigate the extent of collision damage.

## Responsibilities of a Repair Certifier

Part of the responsibilities of a Repair Certifier is to identify when ADAS is present, to determine if any calibration of the ADAS is necessary, and to ensure that an appropriate calibration expert has taken responsibility for this highly specialised work.



## Declaration Form Explained

The first two sections of the Declaration ('Certifier details' and 'Vehicle details') are consistent with other Form-sets and must be filled out completely by the Repair Certifier. The last box 'Reason for inspection' must note that the vehicle has ADAS equipment fitted. The remainder of the Declaration must be filled out by the company performing the calibrations.

Details of Company Performing Calibrations	
<b>Company Name</b>	Company name to be provided here.
<b>Technician's Name</b>	Technician's name to be provided here.
<p><i>Note: it is critically important that the company and the technician are suitably qualified and experienced to perform the calibration work. It is expected that a Repair Certifier will request and hold on file relevant information about the company and the technicians (including qualifications, training, and endorsements) who are engaged in this work. This information would only need to be provided once for each company and technician.</i></p>	
<b>Address</b>	The full physical address of the business.
<b>Phone Numbers</b>	The best contact numbers of the business entity and/or owner/manager.
<b>Scanner/Calibration Equipment Used</b>	<p>Accurately record the brand name of the calibration equipment being used if not OEM equipment.</p> <p><i>Note: currently there are three internationally approved calibration systems: Bosch, Hella-Goodwin, and Texa.</i></p>
<b>Date Program Last Updated</b>	<p>Record the date of the <u>latest version</u> of the software being used in the calibration equipment.</p> <p><i>Note: a Repair Certifier is <u>not</u> expected to know if the recorded date of the version is suitable (or not).</i></p>
Components Inspected	
<p>Accurately identify the appropriate sensor systems that are being checked and calibrated on the vehicle. For supporting information visit the ADAS Experts website <a href="https://adasexperts.co.nz/system/">https://adasexperts.co.nz/system/</a>.</p>	
Declaration	
<p>Record again the name of the company and the technician. The declaration must be signed and dated by the technician and/or the business owner.</p>	

## Supporting Information

More detailed information about ADAS can be found on the ADAS Experts website <https://adasexperts.co.nz>. ADAS Experts are the recognised industry experts within New Zealand, and have provided technical support to RepairCert NZ in the development of this Technical Bulletin.



FOR FURTHER INFORMATION PLEASE CONTACT REPAIRCERT NZ.