

# Subaru Forester

## *and its cutting-edge technology*

FOLLOWING THE RECENTLY HELD 2019 SUBARU FORESTER CAPABILITY EXPERIENCE NATIONAL ROADSHOW, WE TAKE A CLOSER LOOK AT THE TECHNOLOGY-BASED SAFETY FEATURES THAT UNDERPIN THIS ALL-NEW MODEL.

### Advanced driver assistance systems

Not unlike most new vehicles hitting the showroom floor, the Subaru Forester has a plethora of active and passive safety systems that operate through a combination of cameras, radar and ultrasonic sensors. It is the very presence of these driver assistance systems that not only makes the 2019 Forester the safest Forester ever, but also makes it the most complex, and arguably even more challenging for the collision repair specialist.

The backbone of the Subaru system is their EyeSight technology, which uses twin stereo cameras rather than radar to interact with and activate the various mechanisms within the vehicle. The adaptive cruise control, lane keep assist (LKA), emergency lane keep assist and automated emergency braking (AEB) are all “driven” by the EyeSight system.

These days, we are all aware of the requirement to recalibrate the various sensors, radars and cameras whenever they are removed or replaced. However, as the EyeSight’s cameras are behind the windscreen, it creates the situation that if the windscreen (or, of course, the camera) is removed or replaced, the cameras must be recalibrated.

As Technical Training Manager Gary Pearce has said on previous occasions: “A newly-fitted vehicle detection radar will still operate, although any minor misalignment during fitting may have a significant



Andrew Minns.

effect on its performance at the 120-metre detection range. Therefore, the manufacturer’s requirement is to have the radars recalibrated.”

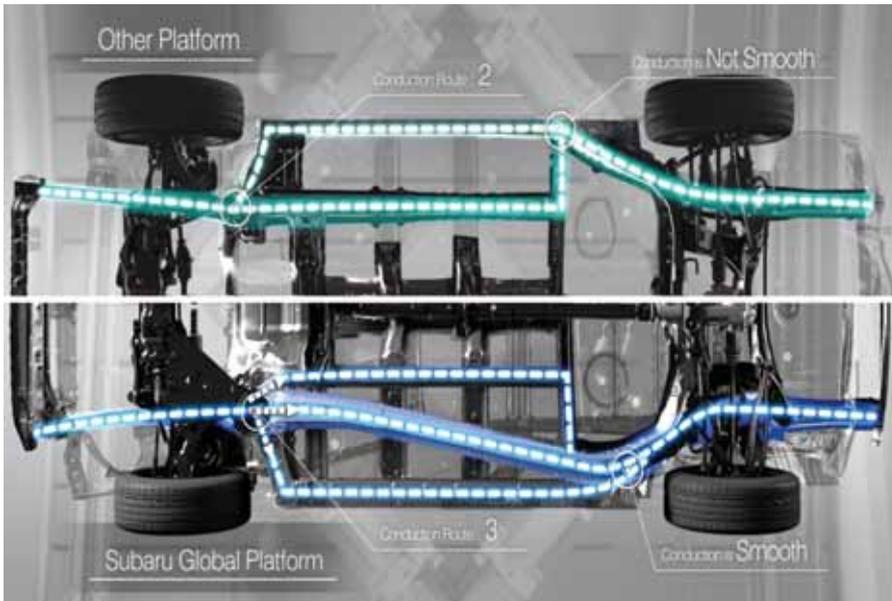
The integrated driver monitoring system (DMS) uses facial recognition software to identify signs of driver fatigue or driver distraction and works with the EyeSight driver assist technology to reduce the chance of an accident. With this DMS technology, Subaru is taking on one of the biggest issues in the automotive industry: distracted driving of both new and experienced drivers. The DMS uses infra-red technology, which adds to the complexity within the vehicle and is yet another reason why collision repairers must follow the recommended processes and procedures.

It was reinforced that this suite of technology is, as the name suggests,

to assist the driver. Environmental conditions such as weather and the absence of line markings may impact the performance of the technology. However, during dynamic testing, the driver assistance systems operated within the parameters outlined in the product information and any anomalies erred on the side of caution.

### Subaru global platform

The Subaru global platform (SGP) is essentially a modular vehicle platform, (platforms of different size but with a high level of commonality of core parts) that allows Subaru to significantly reduce complexity in the manufacturing process. However, there is so much more to this new-generation SGP, which has been designed with three over-arching objectives: to underpin the most dynamic driving



EyeSight Instrumentation.



EyeSight Cameras.

abilities in company history; to achieve the world's highest levels of safety; and to accommodate electrification.

Fundamentally, the new platform is designed to refine the dynamic feel in straight line stability, noise and vibration suppression and comfort. To achieve these, SGP has between 70 and 100 percent greater rigidity and up to 40 percent more efficient energy absorption and dissipation in the event of a collision. When combined with the horizontally-opposed flat boxer engine and its even lower position in the vehicle, the lower centre of gravity further enhances dynamic stability and pedestrian safety. With such a focus on straight-line stability, one must wonder if Subaru is looking ahead to a more “autonomous” future.

Initially launched in the 2016 Impreza, the SGP now underpins the 2019 Forester, and although the SGP will be the basis of the Subaru brand out to 2025, with the rapid developments in construction materials, further improvements in strength and stability surely must be on the radar.

Finally, the one-design concept of the SGP means that it can be adapted, not only to petrol and diesel engines, but also to hybrid vehicles, plug-in hybrids and electric vehicles. It may even be adaptable to other types of alternative power units for which

demand is expected to increase exponentially.

It is apparent that the SGP lifts Subaru's automotive technology to new heights and is the culmination of many years of development and is expected to live up to their proud traditions of dynamic performance and safety.

### Summary

We are all too aware of the rapidly changing automotive environment and the flow-on effects to the collision repair industry. The introduction of the 2019 Subaru Forester is no exception.

As we become increasingly familiar with the many driver aids that are built into the modern motor vehicle, it is easy to overlook the plethora of technology that underpins these systems and what it means when they have to be returned to pre-accident condition.

Although the Subaru Forester has many of the driving aids that we have come to expect, it is the EyeSight technology and its inter-relationship with the cameras, radars and ultrasonic sensors that make a Subaru unique. In addition, the higher-strength, lighter-weight materials of the SGP that give the Subaru Forester its incredible dynamic performance and stability also have implications for the collision repairer. Every vehicle is different (obviously) and following the recommended repair procedures is

more critical than ever before.

Interestingly, the launch of the all-new 2019 Forester coincides with Subaru Corporation's recent announcement of its new mid-term management vision, “STEP”, developed with the aim of becoming a company that is trusted by, and resonates with, its customers. Under this management philosophy Subaru “aims to be a compelling company with a strong market presence built upon its customer-first principle.” STEP is an acronym for: speed, trust, engagement and peace-of-mind”, which are the four elements of the new vision. Whilst each element is important in its own right, it is in the “trust” and “peace-of-mind” elements that we in the collision repair industry have a role to play.

Subaru customers must trust the outcome of the repair process and maintain their peace of mind with Subaru. They must have confidence that the inbuilt enhanced safety features, connected car technologies and intelligent EyeSight technologies are all as they should be. As they say in Tokyo: “Just stopping isn't enough – it's all about comfort and peace of mind for all drivers and passengers.”

With the 2019 Forester, Subaru has taken a quantum leap with its technology that will no-doubt go a long way to achieving the STEP vision for the organisation.