Reversing camera policy

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Reversing cameras are designed to provide vision of the area directly behind a vehicle to help eliminate blind spots. They are typically automatically activated when a car is placed in reverse gear. There are numerous systems available on the market including both in-built factory supplied units and after-market products that can be retro-fitted to a vehicle's dash or rear view mirror. Most factory systems feature reference lines indicating the vehicle track and steering direction.

The quality of the footage and field of view can vary greatly between products, although this is generally improving. Some new cars feature a reversing camera enhancement where multi-camera systems can project a virtual birds-eye view for improved all round situational awareness.

Research and Testing

RACV's Reversing Visibility Ratings test procedure uses a laser pointing device. This is directed through the rear window of each vehicle at the height of an average adult eye line at a test cylinder to representing the shoulder height of an average two year old child. The test cylinder is placed at multiple positions defined by a grid extended 1.8 x 15 metres to the rear of the vehicle. Those positions where the laser is visible on the test cylinder are noted. The results are analysed and an overall score is given. The best scores, translated into an easily understood star rating out of 5, are awarded to the vehicles which have the most effective rear visibility. The 2015 ratings showed that all vehicles with a five-star rating had reversing cameras fitted, which highlights that these technologies can markedly increase reversing safety.

RACV's Vehicle Safety Technologies report noted there had been limited work investigating the benefits of reversing cameras. However, a brief American study found reversing cameras would prevent more back over crashes than parking sensors alone and could reduce a vehicle's blind spot by up to 90%.

What other organisations and jurisdictions are doing

Bosch and other manufacturers are developing new and more advanced reverse warning systems including automated braking. In America from May 2018, the National Highway Traffic Safety Administration will make reversing cameras mandatory on all new cars. NHTSA hasn't yet finalised the regulation but indicated that cameras are the only technology available that could meet the congressional mandate. There are no current plans to mandate reversing cameras in Europe.

Benefits

Reversing cameras have the potential to reduce driveway injuries and fatalities, and also potentially reduce reversing crashes into objects. Cameras provide drivers with additional visual and auditory cues which are valuable if they have not sufficiently scanned the environment. In-built systems often have the added benefit of travel path prediction.

Considerations

There are many different cameras available and performance standards such as field of view, screen and processor resolution, camera mount position and the inclusion of reference lines need to be considered. Aftermarket cameras often don't have a visual guide for reversing so while retrofitting is feasible, it is variable in quality. Such variation in the market demonstrates that different systems would have different capabilities. Lighting conditions should also be a consideration to ensure technology is working optimally which may include the use of multi-spectra cameras sensitive to Infra-red.

Contrary to perception, larger vehicles tend to perform better than smaller vehicles in the visibility ratings since they have a higher rate of sensor and camera fitment. Small rear windows, head rests and higher ride heights can all limit visibility. Although SUVs generate publicity, the reversing visibility ratings do not indicate they are disadvantaged compared to any other segment.

Automated braking technology is also being investigated by manufacturers and may possibly render reversing cameras redundant.

Driver awareness

It is possible for drivers to become complacent and over-reliant on technology so it's therefore important that reversing cameras are promoted with the need for continued driver awareness as a central message.

While technology can greatly improve reversing visibility, it should not replace active supervision as drivers should not rely on parking sensors and cameras. It is important to be aware of the blind space behind a vehicle. Mirrors should be actively used and drivers should also look over their shoulder before reversing. In addition to this, play areas should be kept separate from driveways and drivers should be aware of where children are at all times around cars.

RACV policy

RACV believes that all vehicle manufacturers should fit reversing cameras as standard equipment in all new vehicles.

Factory fitted technology is by and large superior to technology that is retrofitted. Therefore car buyers should be encouraged to consider vehicles where the technology has been factory fitted over aftermarket systems. Reversing cameras are the most promising technology to address driveway incidents. There is strong evidence to support reversing cameras providing far greater visibility when compared to vehicles without reversing cameras.

Contact details

For more information contact:
Public Policy Department

Royal Automobile Club of Victoria (RACV)
550 Princes Hwy
Noble Park North VIC 3174

Email: care@racv.com.au
Web: racv.com.au
Phone: 9790 2863
ABN: 44 004 060 833

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