JUNE 2018 NEWSLETTER

From the Secretary General

www.rcar.org

At the time of writing this, we are now less than 100 days from our meeting in Madrid Spain. I can say this with confidence because our host Cesvimap has an excellent countdown timer on the front page of the 2018 RCAR conference website. I would urge those of you who have not yet visited the website, do so as soon as possible in order to register your attendance. The earlier you register the easier it will be for us to reserve the necessary hotel accommodation. If necessary, your flight and arrival times can be added at a later date.

To remind you, the website is https://www.rcar2018cesvimap.es/ and note that we have also sent out the call for presentations and we would like the names and topics of your presentations by July 20.

In May, I travelled to Madrid to review the conference preparations and I am pleased to report that the plans for a very successful conference are well underway. CesviMap last hosted the RCAR conference in 1999.

My contact for any feedback or questions is rmcdonald@rcar.org

In this June Newsletter, 8 RCAR members have contributed articles. I'm sure you'll agree that there are many items of great interest:

ARTICLES FROM AZT (GERMANY)

AZT requirements for Virtual Vehicle Keys

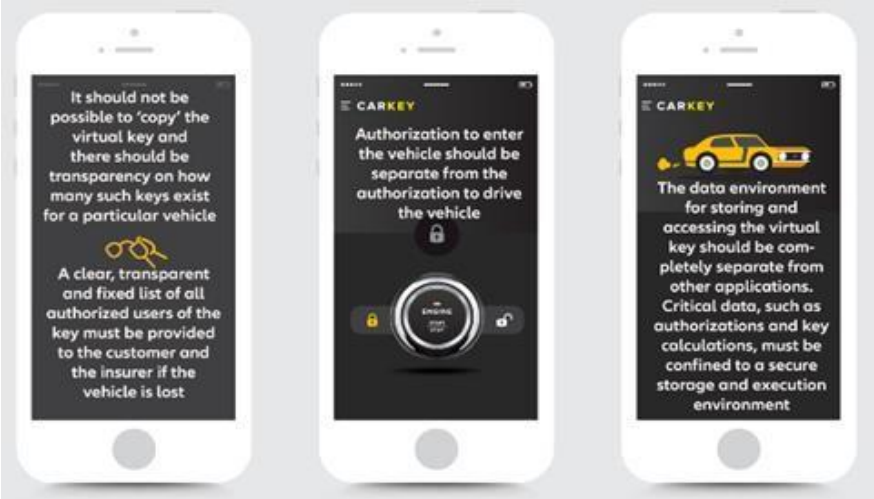
The standard vehicle key becomes an application on a smartphone

Nowadays, the development of electronic components in the automotive industry is taking on a new dimension as more and more innovative functions and connected services are launched on the market. Now the physical vehicle key becomes an application on the customer´s smartphone. A smartphone with integrated NFC (Near Field Communication) chip can be used for access and driving authorization to the car. The Virtual Vehicle Key takes over the full functionality of a conventional vehicle key; it can either replace the physical key or the car owner can decide to use them both.

Daimler AG has been offering their customers a Digital Vehicle Key in the Mercedes-Benz E- and A-Class. Audi AG has implemented the Audi Connect Key in the latest A8 model and offers their customers the next level of this innovative development - sharing up to five virtual vehicle keys per vehicle for friends and family. This concept is known as car sharing and can be used in private life or in fleet management.

AZT requirements for Virtual Vehicle Keys

Recent developments in the automotive industry make new vehicle models with connected features very attractive for hacker attacks. To prevent these cyber attacks the AZT analyzed the entire system of the virtual key and defined the AZT requirements for Virtual Vehicle Keys from an insurance company's perspective, which are intended in particular to make the access and driving authorizations secure. The technical guidelines are designed to be independent of the concrete technology. The entire document is available on AZT's website[1].



Exemplary requirements for Virtual Vehicle Keys

Source: https://www.allianz.com/en/press/news/business/insurance/180507_Allianz-AZT-key-to-virtual-car-keys/

The AZT requirements for Virtual Vehicle Keys are based on the technical guidelines of the German Federal Office for Information Security (BSI), which specify the IT baseline security in Germany through necessary IT measures and methods. As a counterpart to the BSI, the National Institute of Standards and Technology (NIST) in the USA, for example, is responsible for standardization processes in IT security.

With the new guidelines AZT addresses two very important issues in total theft:

1. to ensure the good level of theft protection that was achieved with the electronic immobilizer, an AZT requirement that is effective for 21 years now. That requirement significantly helped to reduce passenger car theft in the German market to steadily beneath 20.000 p.a. since 2006 from a number as high as 105.543 in 1993.

2. to enable a correct claims handling and protect the customer by requiring a transparent documentation of all Virtual Keys in case of total theft.

Cooperation with German OEMs, VDA and VDIK

In general the AZT is actively involved in a dialogue with German and European car manufacturers and international importers. The AZT is a member of different VDA working groups and participates in various VDIK events.

As part of the meeting of the VDA working group "International Insurance Requirements" on March 1st in Berlin the AZT requirements were presented to VDIK and VDA. Thereafter, they were officially forwarded to German OEMs and international importers. This has sparked an intense exchange of expertise on the manufacturer-specific implementation of Virtual Vehicle Key with German OEMs.

Press conference at AZT

The press conference on the topic of virtual keys took place on April 16th at AZT in Ismaning. Jochen Haug, Chief Claims Officer of Allianz Germany and Christoph Lauterwasser, Managing Director of the AZT and Chairman of RCAR's steering committee, presented the AZT requirements for the Virtual Vehicle Keys and answered the questions of journalists from the German national press and technical newspapers.

"We have to ensure that we can reimburse our customers without complication in the case of theft, even if a virtual key is used," says Jochen Haug (see Figure 2).

International approach

During the RCAR WG meetings in Ismaning on February 1st the AZT has submitted the document to the RCAR Vehicle Cyber Crime Working Group to consider adopting these guidelines as an international RCAR standard.

ARTICLES FROM CENTRO ZARAGOZA (Spain)

Motorland and Centro Zaragoza open up new channels of collaboration to boost research activity at the race track.

The new management teams at MotorLand Aragón and Centro Zaragoza have sealed a collaboration agreement between both institutions to work on automotive sector research and development projects. The common starting point that has served to build bridges between the two entities lies in the interest and determination of Centro Zaragoza, a vehicle research institute, to undertake its trials and component tests and develop its models at the complex's race track. A plan that marries with the firm desire of MotorLand to boost, as stated in its new business plan, the development of the Aragonese race track as a testing track for R+D+i industrial trials for the automotive sector.

The agreement was signed at the Aragonese centre by Santiago Abad, the manager of MotorLand, and Carlos Arregui-Dalmases, the new managing director of Centro Zaragoza, during the Aragonese stage of the world Superbikes championship. Thus, the importance MotorLand attaches to being seen as a benchmark in the world of competition, and the power of these great international events to inspire ideas for new projects linked to the complex, is clearly evident.

The signing of this agreement is also the result of the conviction of both companies to join forces and maximise any synergies that may arise. Both between MotorLand and Centro Zaragoza, and the rest of the companies and institutions linked to MotorLand. Among the new projects that will be developed in the short term through this collaboration, integrated into the daily activity at the track, micro-research projects will emerge. These will be focused on the generation of on-site work groups at the race track itself.

Santiago Abad, Manager of Motorland and Carlos Arregui, Managing Director of Centro Zaragoza.

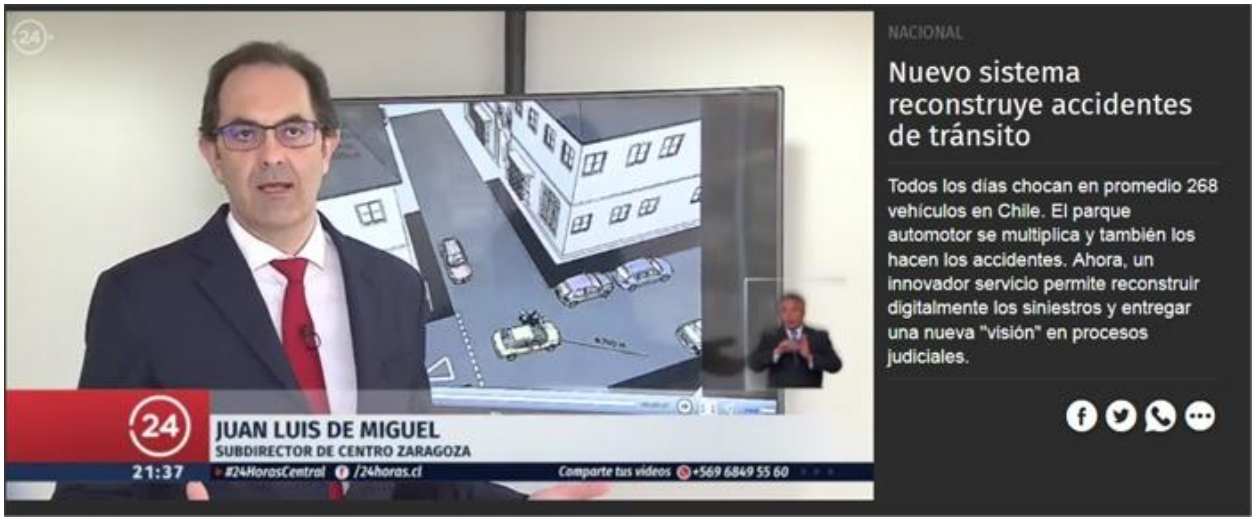
Centro Zaragoza launches its Traffic Accident Reconstruction service in Chile

The collaboration between Centro Zaragoza and CEA from Chile started in May 2016, when deputy director, Juan Luis de Miguel, was invited to give a conference on accident investigation at the SUMMIT organised by the Chilean Mutual Insurance Company (summit-2016). Stemming from this first contact, a framework collaboration agreement between the two entities was begun to be drafted which, after analysing the needs of the Chilean market, Centro Zaragoza's Road Safety and Accident Investigation part-time courses catalogue was commercialised (https://www.ceadechile.cl/seguridad-vial/cursos).

In April 2018, after training accident prevention technicians from various passenger transport companies, with important urban and inter-urban fleets, Centro Zaragoza broadened its collaboration with CEA by taking its accident investigation and reconstruction service to the Andean country. To launch the activity, the deputy director of the Centre, who is responsible for this activity, travelled to Santiago de Chile in order to hold meetings with important passenger transport companies, insurers and mutual accident companies from the country, as well as attending to the media. The social interest in this activity was evident in the great media coverage achieved, with appearances on news programmes and articles alluding to the new service in the most widely-distributed national newspapers (https://presslatam.cl/ y http://www.emol.com).

In just one month since this new service was commissioned in Chile, an average of one accident reconstruction per week has been achieved, mainly serious accidents involving buses or coaches and vulnerable victims, such as pedestrians, cyclists and motorcyclists, and so it is forecast that this Centro Zaragoza activity may achieve the same sort of success in Chile as that achieved in Spain.

More information at:
https://www.ceadechile.cl/
https://www.ceadechile.cl/servicios/investigacion-de-accidentes
https://www.iso-39001.cl/blog/49-cea-realiza-un-curso-sobre-reconstruccion-de-accidentes-de-transito



Juan Luis de Miguel, Deputy Director of Centro Zaragoza

Centro Zaragoza broadens collaboration with Interpol General Secretary regarding illegal vehicle trafficking

CENTRO ZARAGOZA (CZ) has travelled to the offices of Interpol's General Secretary in Lyon (France) to renew and broaden its collaboration agreement with this Organisation regarding illegal vehicle trafficking.

Carlos Arregui, General Director of CZ, could observe for himself the day-to-day operations of this worldwide body, participating in the new lines of work that are being developed.

Of particular note was the presentation of new cooperation projects, in which CZ is involved, with the clear objective of preventing and combatting illegal vehicle trafficking.

This fact reinforces the commitment of CZ's "Stolen Vehicles" Committee to Interpol, within an international framework, for these new projects to help, both sectorially and socially, tackle the growing difficulties this type of delinquency entails.

Attendees

Cesvi Colombia provides a solution to the need of the automotive industry

Years ago, the area of repair in the automotive industry was adapted to empirical knowledge, despite the low educational offer of personnel in the repair sector. The training based on practice and experience, could solve the challenges that come with many of the repairs derived from a collision.

The lack of educational offer in the areas of automotive repair, has led to this type of techniques become an activity that can be done by anyone, which in a large percentage have low level of schooling.

The demands in the repair after the new technologies and the constant evolution in the manufacture of vehicles, led us to create the theoretical-practical program for the development of capacities in body repair, which after 6 months of training. They integrate the productive sector through supervised practices, thus completing a year of learning. This allows students to enter the automotive companies complying with the requirements of compulsory apprentices, made in partnership with the Colombian State as the program's financier.

The need to update and professionalize the technique, using adequate methodologies based on reducing the time and costs involved in the repair processes resulting from a collision, made Cesvi Colombia design this pedagogical solution, which is consolidated as an update to the needs of vehicle manufacturers. With this group, there are already more than 1,000 new technicians that Cesvi graduates, in response to the demand of skilled labor to the market, with all the quality and safety standards that the development of the activities implies.

The training of people who are integrated into the repair of the automotive industry, allows them to acquire methodologies to execute the operations with the highest quality and efficiency possible, applying an adequate balance between productivity in terms of personnel, adding equipment and tools.

Cesvi Colombia as an education entity designs effective solutions and methodologies for the automotive sector, optimizing production areas to significantly impact profitability, efficiency and quality in the repair process in Colombia. The dealers, workshops and automotive assemblers present in the country, benefit from qualified personnel, which allows them to improve quality, efficiency and productivity in the processes, thanks to our management.

WorkShop connects technology and management

Cesvi Colombia designed a year ago the WorkShop, an academic event where experts and automotive technology brands present in Latin America, share with workshop managers alternative technology for repair, as well as demonstrations of return on investment and impacts on productivity, efficiency and quality.

In the first version carried out in 2017, there were 12 exhibiting brands and 80 participants, where topics related to the new management tools were divided into five aspects: managerial and administrative theory, human management, organization of workshop, time management, costs and profitability.

The new manufacturing materials in the vehicles, lead to a constant updating in technology for the workshops. The goal of Cesvi Colombia to create the academic event, is to establish a space where technology providers, managers and repairer shop owners connect, achieving an exchange of knowledge and experience for the continuous improvement of the repair sector in Colombia, taking into account the purchase of technology based on the need and commitment to achieve the return on investment, increasing the productivity and profitability of the workshop.

The second edition of the WorkShop will take place on July 24 and 25, 2018, the knowledge will be provided to those responsible for automotive workshops, which will help improve the efficiency and quality of their processes, as well as the economic and financial results, customer satisfaction, through the presentation of success stories, where managers know good management practices, continuously improving the services provided in the workshop.

All lectures and exhibitions will be broadcast in real time. We hope to count year after year with international assistants who will potentiate their management in the workshop, improving the attention and services in the automotive industry.

Expo CESVI 2018 breaking records

The 16th edition of Expo CESVI performed on March 8, 9 and 10 in the World Trade Center of Mexico City a total of 11,122 visitors, the maximum number of attendees in its history.

Such amount of repair enthusiasts was reflected in the spirit of the 72 exhibitors who expressed their who expressed their satisfaction for the negotiations they were able to make as well as for the products and services they managed to offer during the 3 days of exhibition in the more than 18045 sq. feet of sale floor.

In addition to the commercial area, two practical demonstration areas were installed and seminars were given as well as lectures on the best express repair practices, workshops for insurers and the 4th Cycle of Road Safety Conferences that brought together dozens of stakeholders in the management secure transport of cargo, with the speakers being senior executives of transport companies as well as international consultants of CESVI Mexico.

Car modification and raffle

One more attraction for Expo CESVI 2018 was the raffle of a 2010 Dodge Avenger car, Daytona version that was reconditioned by the technicians and suppliers of CESVI Mexico. It must be said that the car was invested over 400 thousand pesos (close to 20,000 USD) and dozens of hours to deliver a vehicle which original color had been changed, seats, vestment, wheels, tires and an spectacular sound system was installed as well.

According to the director of Mopar (Dodge's original spare parts brand) **Jerode Padilla**, the car was better than when it was sold on the dealer's showroom floors.

All the visitors of Expo CESVI received a participation ticket that they deposited in an urn. On Saturday, March 10, at 4:00 p.m., the raffle was held and the lucky person was contacted by phone to return to the venue to receive his prize.

Interaction in social networks

It should be noted that Expo CESVI 2018 was characterized by having an intense interaction in social networks, the days leading up to the event, achieving an increase of 20% in the number of followers as well as millions of people reached in an organic way besides to the marketing strategy that consisted having a branding influencer who reported the progress in the repair of the Dodge Avenger.

CESVI Mexico collaborates in improving the mobility of your industrial community

According to official figures, each year more than 16 million people lose their lives due to a traffic accident on the streets and highways of the country, while in the State of Mexico they register 1500 deaths due to accidents.

Given these very serious figures, the Association of Owners of the Toluca 2000 Industrial Park, which is located on the side of the Toluca-Naucalpan highway at kilometer 52, in the metropolitan area of the City of Toluca; It took the decision to work with CESVI Mexico to implement a Comprehensive Road Safety Plan, which aims to provide better mobility for all TIP 2000 users. This plan follows five strategic axes of action:

Road infrastructure more secure. Its objective is to maintain the streets, avenues and accesses of the Toluca 2000 Industrial Park in good condition to provide security to those who use the roads inside the TIP 2000.

For the development of this strategic plan, a road safety audit and a horizontal and vertical signaling plan were carried out, identifying the main red spots that can generate a traffic accident, either by the measures of action to mitigate or eliminate these red spots.

Accessible and safe mobility. The purpose is to create a more efficient and safe mobility inside and at the access points of the Toluca 2000 Industrial Park.

In this strategic axis the feasibility of building a bikeway in the TIP 2000, derived from the large number of cyclists entering the park at peak hours, was evaluated, likewise, the bus stops were also studied so that bus stops are made safely and in established places and do not create points of conflict. This project continues in technical-economic evaluation.

Road Regulation. Due to the complexity of the transfers to the interior of the Industrial Park, an internal traffic regulation has been developed with the purpose of regular circulation, the manoeuvrers of the heavy vehicles drivers and the security system for the users of the TIP's streets and accesses.

Education and road awareness. The OATIP 2000 (Owners Association of the Toluca Industrial Park 2000) has promoted a road culture inside and outside the Park. In this strategic axis, a training plan for those in charge of the security of all the companies that are inside the PIT 2000 has been developed by CESVI, with the purpose of the persons in charge of the security reply the information inside their companies developing a safety road culture.

Communication and information of Road Safety. It has sought to sensitize the users of the TIP 2000 on the main risk factors that generate road accidents. For this, a LED screen has been installed to transmit prevention messages at the entrance of the park.

A road safety campaign has been developed, addressing the main risk factors that exist during driving, such as: speeding, alcohol and driving, distractions when driving, pedestrians as vulnerable users, importance of the use of the safety belt and the use of the safety helmet for motorcyclists.

ARTICLES FROM CESVIMAP (SPAIN)

20/20 Trends

Perception in driverless vehicles; aftersales in Spain and trends; alternatives to electrification in vehicles and the future of an aging vehicle fleet are the topics to be examined in the 19th edition of the *Universidad Católica de Ávila* CESVIMAP Chair Lecture Series.

With the title *20/20 Trends,* Fernando García, visiting professor at the **Universidad Carlos III**, spoke about vehicle perception systems, which enable the vehicles to know and understand what is going on around them and inside them. He commented on the advances in perception systems - cameras, radars and laser scaners - which have made it possible to move forwards towards the creation of intelligent and autonomous vehicles. Likewise, he showed the main challenges for the upcoming years, to succeed in bringing this technology to our roads with full security and reliability.

José Armenteros, president of **After Market Club**, AMC, presented the mobility model studied in the "White Paper for Aftersales in Spain". Through relevant variables on the automobile - number of registrations, accidentability, vehicle fleet, number of repairs... - a recovery is foreseen in real invoice volume of the combined total for automobile sales and aftersales for the period 2017-2025, until it reaches the maximum levels attained at the height of the building bubble in 2007.

Javier Arboleda, Service Senior Manager at **Hyundai**, spoke about the energy and environmental motivation of the manufacturer for the electrification of vehicles. He took us on an interesting tour, studying the wide range of technical alternatives which are available: hybrids, plug-in hybrids, purely electrical, and fuel battery-powered.

Lastly, José Luis Gata, in charge of the post-sales market at **Solera**, shared with the auditorium the consequences of having a vehicle fleet as old as the Spanish one (in 2022, more than 40% of the vehicles will be over 15 years old, as opposed to the current 30%).

2018, CESVIMAP turns 35 years old and hosts the RCAR congress for the third time

On 16th May 1983, CESVIMAP came into being, a research centre for automobile repair, first of all, and for all wheeled vehicles later, alongside the Technological Centre for Fire, and the Centre for Environmental Hygiene.

This project comprised 8 members of staff and a budget of 180,000 euros (30 million pesetas at that time), but its most important component was its high expectations, leading it to today's 110 employees and a budget of 11.76 million euros.

In these 35 years of existence, CESVIMAP has conducted research into almost 550 vehicles, but has obtained repair and paintwork times for more than 12,000, and has classified more than 127,000, paying attention to the risk they represent for insurance companies. From conducting research solely into passenger cars, nowadays research is into all types of vehicles - industrial, agricultural, motorcycles, buses, bicycles... -. The results have been communicated to more than 60,000 people through 5,000 courses, 780 videos and 104 issues of Revista CESVIMAP, its magazine, to date. With the activity of this centre 45,000 tons of CO_2 have been prevented from being released into the atmosphere, recycling the parts from 35,000 vehicles.

A great quantity of figures which when written down don't give the full picture of how keen we are to innovate, to create new centres and facilities to apply new technologies to new products.

For the third time in the 35 years of its existence, CESVIMAP is host to the RCAR 2018 Annual Conference. RCAR brings together Research Centres which are cutting edge when it comes to anything regarding the phenomenon of the automobile worldwide, always from the viewpoint of insurance companies, as a contribution to society, to make transport and mobility a safe, affordable and even recreational activity. All the knowledge and know-how that is shared in the technical sessions will be of enormous use to the insurance sector, and also to citizens in general.

CESVIMAP and MAPFRE, finalists in the 2018 EFMA-ACCENTURE awards for innovation in insurance

The CESVIMAP project "*Virtual Reality for automobile loss adjusters*" is one of MAPFRE's three candidates in the final of the 2018 EFMA-ACCENTURE AWARDS for innovation in insurance.

The CESVIMAP project, along with the MAPFRE España project and MAPFRE Puerto Rico project have been chosen from among 320 innovations presented by 45 countries.

Claims Management Category:

- Virtual Reality Training for Automobile loss adjusters: **CESVIMAP**
- Catastrophe claim payments platform–CATCLAIMS: MAPFRE PUERTO RICO

Connected Insurance & Ecosystems Category:

- myShop: MAPFRE ESPAÑA

This entails a virtual experience, similar to that which professionals will have with a physical car. The unavailability of resources (parts or automobiles) required during on-site training affects the developing of these capacities. This technology makes it possible to perform specific trainings without this cost.
It involves knowledge without occupational risks involved -trainees (loss adjusters) can practise on certain cases associated with occupational risk prevention and avoid any form of accident related to electrical hazards-. It can also improve their ergonomics.
This innovative and attractive training method will have a greater impact on the people who have participated in many other "traditional" training programmes (the so-called "wow" effect).
This new tool adapts to any professional profile. The glasses enable them to immerse themselves in a practical learning experience. They have a direct and astonishing effect on pupils.

ARTICLES FROM IAG RESEARCH CENTRE (AUSTRALIA)

General Motors' Holden brand has begun withholding all parts prices

General Motors' Holden brand has begun withholding all parts prices from all insurance companies until "information agreements" are signed.

It turns out that the wording of these agreements has not been drafted yet. The nature of any restrictions is not yet defined, but Holden seems keen to prevent price comparisons being made between parts sold by Holden dealers and parts sold by independent suppliers. Each motor insurer in Australia will be required to sign an agreement before seeing any of the new list prices.

The Holden prices in the IAG research database can't be updated until agreement is reached between corporate lawyers on both sides. This may take some time.

Holden will move to "life cycle" pricing in June. Parts for newer Holdens are likely to become more expensive, while parts for older Holdens will become cheaper. The cost of cross-subsidising this initiative is likely to be borne by motor insurers, who are the biggest customers of replacement parts for late-model Holdens. Claim costs and loss ratios are likely to be impacted.

Holden would prefer that insurers didn't use list prices as benchmarks for payments to repairers. Instead, Holden judges that the prices charged by dealers at the transactional level are competitive, regardless of the individual list prices. This of course does not resolve the insurers' issues around how to adequately to compensate repairers for their expenditures.

The "old" prices will remain in the IAG research database until they can be updated. Holden started withholding the list prices of collision-related parts from motor insurers in December 2016. Up until June, 7,016 prices were withheld from a total of 134,769 Holden part numbers.

Windscreen Prices

Windscreens are very expensive for the latest vehicles fitted with advanced driver assistance systems (ADAS) such as autonomous emergency braking (AEB).

The average price of genuine replacement windscreens in our Motor Parts Research Database has risen by $108 in the past three years, from $751 + GST to $859 + GST

There's a huge range of fitment variations. At the extremes are:

Holden Cruze CD Wagon genuine replacement windscreen part number 95134011 for just $164.24 + GST compared to a same-size Subaru Impreza Hatchback genuine replacement windscreen part number 65009FE250 for an amazing $1,822.63 + GST.

Chevrolet branch to launch in Australia

GM will launch its Chevrolet brand of vehicles in Australia in 2018, after an absence of 50 years. Camaro coupes and convertibles will be converted in Melbourne to right-hand-drive, along with Silverado pickup trucks. Other Chevrolet models such as Corvette are expected to follow.

It's hard to see much of a future for the Holden brand, because:

- Holden's best-selling vehicle is currently Colorado pick-up truck, but GM will end its production partnership with Isuzu next year
- GM sold its Opel factories in Germany and Poland to Peugeot-Citroen, who intend to wind up production in favour of their own designs
- GM is cutting back in in Korea, ending production of Astra sedan and Spark hatchback

This leaves Holden with hardly any right-hand-drive vehicles to sell, apart from Equinox SUV and the upcoming Acadia SUV (replacing Captiva SUV).

Australian regulatory changes

The Australian Competition and Consumer Commission (ACCC) has called for new laws to enable independent repairers to access repair information that car companies supply to their dealers. The ACCC judged that the voluntary commitments made in the past by car companies to share technical information with independent repairers have not been successful, so the ACCC now recommends regulatory intervention to mandate sharing.

Remarkably, the Australian Automotive Dealers Association (AADA) supports the ACCC, not the car companies! This situation sets up a peculiar conflict between the car companies and their franchised dealers.

The car companies pretend that the ACCC's recommendations place a huge burden on them. In fact, independent repairers simply want to be able to pay for the same information, tools and training that the car companies charge their dealers for. Many car companies are already complying with the ACCC's recommendations voluntarily, but several brands are trying to hold onto profitable monopolies on diagnosis and repairs.

For insurers, mandatory sharing makes it much easier to undertake safe repairs by enabling body shops to train people properly and use the right equipment. Dealers can see this reality. They want to be able to sell parts and services to independent operators, rather than lose the business altogether.

The Australian Government is currently considering a new Road Vehicle Standards Bill, which is intended to provide a regulatory framework for all future road vehicle imports into Australia.

This new law will replace the unique Australian Design Rules (ADRs) which were initially developed in the 1960s and have not been updated for 17 years.

It is proposed that a Register of Approved Vehicles (RAV) will replace physical compliance plates with a publicly-searchable online database. This will also provide a history of how and when vehicles were imported.

It is expected that Australia will harmonise with international standards, including global technical regulations for vehicles, equipment and parts.

The Government will also have the power to issue recalls for non-compliance, or for safety (previously the prerogative of the vehicle manufacturers).

ARTICLES FROM IIHS (USA)

Rear crash prevention ratings aim to reduce parking lot collisions

Bolstered by IIHS and HLDI research showing that park-assist systems reduce backing crashes in the U.S., the Institute has launched a program to rate the performance of rear autobrake, which is designed to prevent or mitigate the kinds of everyday low-speed backing crashes that happen in parking lots and garages. The ratings will help consumers shopping for a new vehicle identify the ones with technology that can help avoid the annoyance of these common mishaps.

IIHS engineers evaluated rear autobrake systems on six popular 2017 model vehicles — the BMW 5 series sedan, Cadillac XT5 SUV, Infiniti QX60 SUV, Jeep Cherokee SUV, Subaru Outback wagon and Toyota Prius hatchback.

Under the three-tier rating scheme, models with optional or standard rear crash prevention systems are rated superior, advanced or basic. Ratings are determined by whether the vehicles have available rear autobrake and, if so, how it performs in a series of car-to-car and car-to-pole tests with different approach angles. The availability of parking sensors and rear cross-traffic alert also is factored in.

The Outback and XT5 earn the highest rating of superior when equipped with optional rear autobrake, parking sensors and rear cross-traffic alert. The Cherokee, 5 series, QX60 and Prius earn an advanced rating with this optional gear.

The rear autobrake tests are based on the protocol developed by RCAR and published in January 2017.

For more information, go to www.iihs.org/iihs/sr/statusreport/article/53/1/1

One of the tests in the new IIHS rear crash prevention assessment evaluates rear autobrake's ability to stop a reversing car from striking a pole.

Subaru crash avoidance system cuts pedestrian crashes

Subaru's EyeSight system is cutting the rate of likely pedestrian-related insurance claims by 35 percent, a new HLDI analysis shows.

Subaru's EyeSight performs several functions, including forward collision warning, automatic emergency braking, adaptive cruise control, lane departure warning and lead vehicle start alert. It also includes pedestrian detection, enabling the system to brake automatically for pedestrians in addition to other vehicles. The system relies on two cameras mounted to the interior roof behind the windshield, a set-up that leads to lower repair costs than other front crash prevention systems that rely on equipment embedded in the vehicle exterior.

To study the system's effect on pedestrian crashes, analysts looked at bodily injury liability claims that lacked an associated claim for vehicle damage. Past HLDI investigations have found that such claims tend to represent injured pedestrians or cyclists. They compared the rate of these claims per insured vehicle year for Subaru vehicles with EyeSight to the rate for the same models without the optional system.

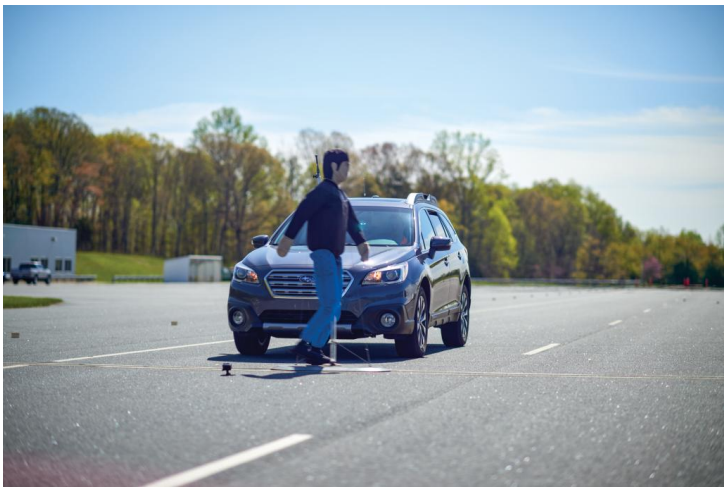
The first generation of EyeSight, which used black and white cameras, was available in the U.S. on the 2013–14 Legacy and Outback and the 2014–16 Forester. The second generation, introduced on the Legacy and Outback in 2015 and on the Forester in 2017, uses color cameras and has longer and wider detection ranges and other improvements.

EyeSight was offered for the first time on the Crosstrek and the Impreza sedan and hatchback in 2015. Only the second-generation system was offered on these vehicles.

Looking at the Legacy, Outback, Forester, Crosstrek and Impreza individually, HLDI found claim-frequency reductions of 18 to 57 percent for each of them, though only the Legacy and Outback results were statistically significant.

HLDI also separated out first-generation and second-generation results for the Legacy, Outback and Forester. The first-generation system reduced claim frequency 33 percent, while the second-generation system lowered it 41 percent, but this difference was not statistically significant.

For more information, go to www.iihs.org/iihs/sr/statusreport/article/53/3/2



A HLDI analysis shows that Subaru EyeSight trims the rate of likely pedestrian-related insurance claims by 35 percent.

Panoramic roofs contribute to higher glass claims

New research from HLDI sheds light on how the high cost of claims associated with panoramic roofs is fueling a rise in glass-claim severities.

Glass losses make up roughly two-thirds of claims filed under comprehensive coverage, which insures against theft or vehicle damage that occurs for reasons other than crashes. While glass claims are common, they only comprise 14 percent of payouts under comprehensive coverage, with approximately $350 spent to settle a glass claim.

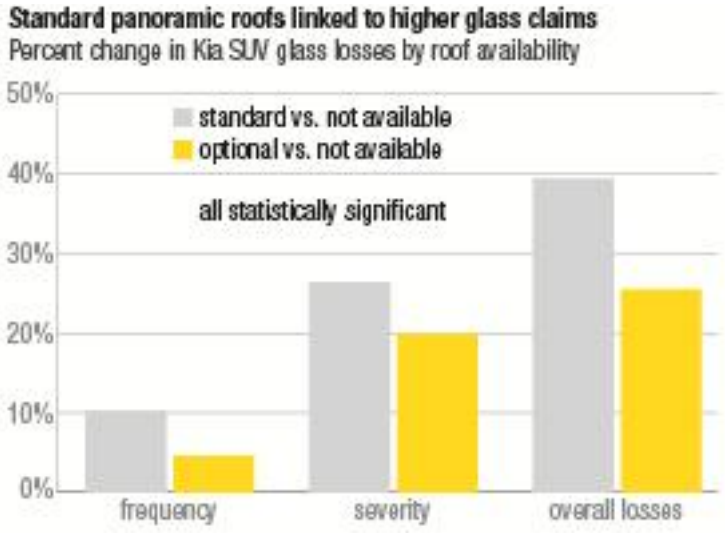
During the past five years, however, glass claims have grown costlier. Since 2010, glass claim severity has risen about 27 percent, or $75, for an average claim. Severity is the total of all payments made on claims divided by the number of claims.

HLDI examined the loss experience of the 2014–15 Kia Sorento and the 2016 Kia Sportage to see if panoramic roofs may be contributing to the rise in glass-claim severities. Analysts picked these midsize SUVs to study because information about the availability of a panoramic roof as standard, optional or not available, is tied to a trim level discernible in the vehicle identification number. In addition, these models don't have any windshield-mounted crash avoidance sensors that could affect the cost of glass claims.

Glass losses for Kia SUVs with standard or optional panoramic roofs were significantly higher than Kia SUVs without panoramic roofs. The frequency of glass claims for vehicles with standard panoramic roofs was 10 percent higher than for vehicles without such roofs available. Claim frequency is the number of claims filed relative to the number of insured vehicle years. Glass claim severity was 26 percent higher, and overall losses were 39 percent higher.

For models with optional panoramic roofs, the frequency of glass claims was 5 percent higher, glass claim severity was 20 percent higher, and overall losses were 26 percent higher than for vehicles without available panoramic roofs.

For more information, go www.iihs.org/iihs/sr/statusreport/article/53/1/3



Standard panoramic roofs linked to higher glass claims Percent change in Kia SUV glass losses by roof availability, all statistically significant.

Body Deformation Measurement by Three-Dimensional Optical Scanner

JKC has been measuring the amount of deformation of major frame parts in order to grasp the damage situation by our crash tests.
The deformation amount is calculated from the moving quantity of the absolute coordinates obtained from a number of measurement points set on the major vehicle parts before and after the collision. The instrument used in the measurement is Articulated Three Dimensional Coordinate Measuring Machine (Product name; VECTRON) shown in Fig. 1.

Meanwhile, as for damages of outer panel parts, we compared the photographs taken before and after the crash tests. The result, however, was insufficient from the viewpoint of quantitative data analysis.
Therefore, this time we installed Three-Dimensional Optical Scanner (Product name; ATOS) shown in Fig. 2.


Fig.1

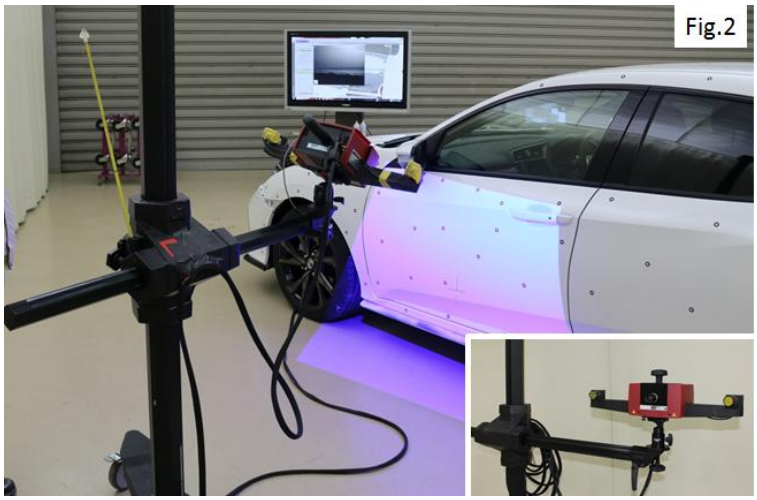


Fig.2

This “ATOS” consists of a projector that irradiates light toward the object to be measured, a high-performance stereo camera, and a frame that allows setting the position of the camera freely. The stereo camera records the multiple shapes of objects as digital data and synthesizes the digital data on the computer to reproduce the vehicle appearance.

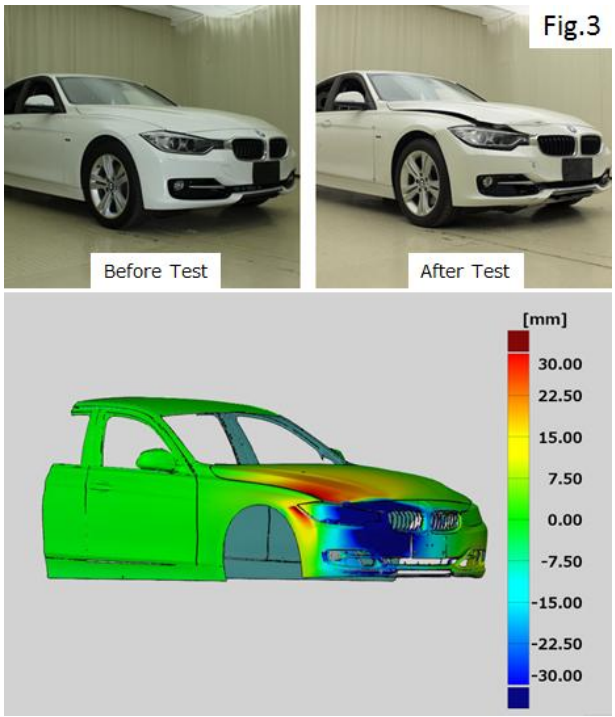


Fig.3

By performing this process before and after the crash tests, we were able to obtain the digital data on outer panels of the vehicle. The amount of deformation of the outer panels was measured by calculating the variation of each measurement point on the corresponding body, (the result is shown in Fig.3).

As we started providing this data to OEMs and car insurance companies, we received many positive feedbacks from them, such as it became much easier to understand the vehicle’s deformation conditions. As such, JKC will continue making efforts to improve the vehicle’s D&R performance by providing more useful data.

New JKC website and company logo

This July will be JKC's 45th anniversary as it was established in July 1973.

Taking this opportunity, we are going to launch our new website and the company logo.

1. New JKC website

Over a decade has passed since we renewed our website in 2007, and during this decade, internet environment and web-dependence of the society has evolved dramatically.

Under the circumstances, we have decided to renovate our website in order to improve its usability as well as to represent contemporary corporate image.

The major changes are;

* Renewing the entire design and colour to reflect the image of our new CI.
* Improving its usability by reorganizing the contents and adopting a convertible layout more optimized for both PCs and mobile devices.
* Providing new contents about repair techniques for the repair and the insurance industries.
* Enhancing the security of SSL and WAF connections.

The new website is to come on up as from July and to welcome your visit, on which English pages are also available.

https://www.jikencenter.co.jp/en/

2. New JKC company logo

We also introduce a new company logo along with this renewal of official website. The new logo aims to represent futuristic and progressive corporate image, as the national-flag research center of Japan.