

January 2013

## From the Secretary-General

Happy New Year!

First of all, I would like to express my thanks to our 2012 Conference hosts AZT and KTI! Their planning and organization team, led by host representatives Christoph Lauterwasserr and Frank Leimbach, spent considerable time and effort to ensure a successful Conference, and I am sure you will agree with me that our 2012 Conference in Dresden was a complete success.



The current Newsletter, as usual, contains a wide variety of interesting and informative articles submitted by our members. In this issue, you will find a submission from Cesvi Colombia on treatment of end-of-life-cycle vehicles; a pair of articles from IIHS on some surprising crash test results and Volvo crash avoidance features; a study of the advantages of water-based paints from Cesvi Brasil; a trio of features from IAG on small car wrecks, car rear vision, and sustainable insurance; three more submissions from Cevvimap on their new DS Check application, motorcycle repair, and Cevvimap activity in Poland and Turkey; two features from Cesvi Argentina on accreditation of Cesvi's laboratory, and Cesvi's safest car awards; two more from Centro Zaragoza on child car seat safety and auto insurance education; an additional two from MRC Malaysia on the upcoming 2013 RCAR Conference in Kuala Lumpur, and MRC's new Abbreviated Injury Scale (AIS); a series of articles on recent seminars and conferences sponsored by JKC; an offering from Samsung on whiplash injury research; a pair of articles from KART on recent visits by Thatcham Thailand and Australia CASR; a trio of offerings from Thatcham on autonomous emergency braking, Euro NCAP accreditation, and vehicle security; plus two reports from Cesvi Mexico on their recent Mexico road audit, and the upcoming Automotive Repair Expo; plus results of a crash test on a Formula 1 nose from AZT.

If you need to contact me for any reason, please use one of the following e-mail addresses:

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In closing, I hope you enjoy this latest Newsletter!

*Wilf Bedard*

### Of Special Interest:

- *From the Secretary-General* 1
- *The RCAR Network* 42
- *Dates for your Diary* 42
- *Important Notice to Members* 42

### Inside this issue:

<i>End-of-Life-Cycle Vehicles</i>	2
<i>Frontal Crash Test Results</i>	6
<i>Volvo Crash Avoidance</i>	10
<i>Water v. Solvent Paints</i>	12
<i>Small Car Wrecks</i>	15
<i>Car Rear Vision</i>	16
<i>Sustainable Insurance</i>	17
<i>DS Check for iPad &amp; Android</i>	18
<i>Motorcycle Repair</i>	19
<i>Cevvimap in Poland &amp; Turkey</i>	20
<i>Lab Accreditation</i>	23
<i>CESVI Safest Car Awards</i>	24
<i>Child Car Seat Safety</i>	25
<i>Auto Insurance Education</i>	26
<i>Over to You MRC Malaysia!</i>	27
<i>Abbreviated Injury Scale</i>	29
<i>Technical Seminar</i>	30
<i>Body Repair Conference</i>	30
<i>Adjusting Conference</i>	31
<i>Insurance Conference</i>	31
<i>Whiplash Injury Research</i>	32
<i>Thatcham Thailand Visit</i>	33
<i>Australia CASR Visit</i>	33
<i>Introduction of AEB</i>	34
<i>Euro NCAP Accreditation</i>	35
<i>Security Success</i>	36
<i>Mexico Road Cesvi Audit</i>	37
<i>Auto Repair Expo 2013</i>	39
<i>Formula 1 Nose Crash Test</i>	40

## ***From Cesvi Colombia:***

### ***Cesvi Repuestos – The First Center in Colombia for Treating End-of-Life-Cycle Vehicles***

The environmental problems that Colombia currently suffers from associated with vehicles at the end of their life cycle are not minor. In fact, lack of public awareness and the absence of a comprehensive policy that takes the issue seriously have caused rivers to become contaminated, arable land to be lost, and some cities to suffocate under polluted air.

At the end of their service life, vehicles will, at best, be abandoned outdoors in parking lots or vacant lots, with a second perverse consequence: more pollution because of negligence.

Given this reality, Cesvi Colombia shareholders authorized the execution of a project to establish the first center in the country for treatment of vehicles at the end of their life cycle, which has now been operating for about two years outside Bogota.

#### **A Large Contribution**

Cesvi undertook this project with the aim of fostering a culture of environmental protection in the automotive industry, and to implement best practices in logistics, production, inventory management, and use of resources in the disassembly of vehicles.

It also aims, by promoting reuse of worthy parts and proper disposal of recyclable and hazardous waste, to create a formal secondhand auto parts market for motor vehicles, ensuring and certifying that the parts had a good origin.

The dismantling process consists of four stages: legal, environmental, technical, and commercial. From a legal standpoint, Cesvi acquires vehicles from insurance companies without legal or tax debts, with registrations canceled; this control law ensures transparency from the start of the operation.



**Step One: The End-of-Life-Cycle Vehicle is Legally Acquired**

For the decontamination process, Cesvi removes hazardous and recyclable waste, such as oil, fuel, brake fluid, air conditioning, coolant, and battery acid.



**Step Two: Hazardous & Recyclable Materials are Removed**

The next step is disassembly, in which the vehicle is dismantled and its parts classified between recoverable and non-recoverable for subsequent storage and sale or disposal to recyclers by type of material. Vehicle bodies are then delivered for re-casting, stating the vehicle identification numbers. Destruction certificates are required and properly filed.



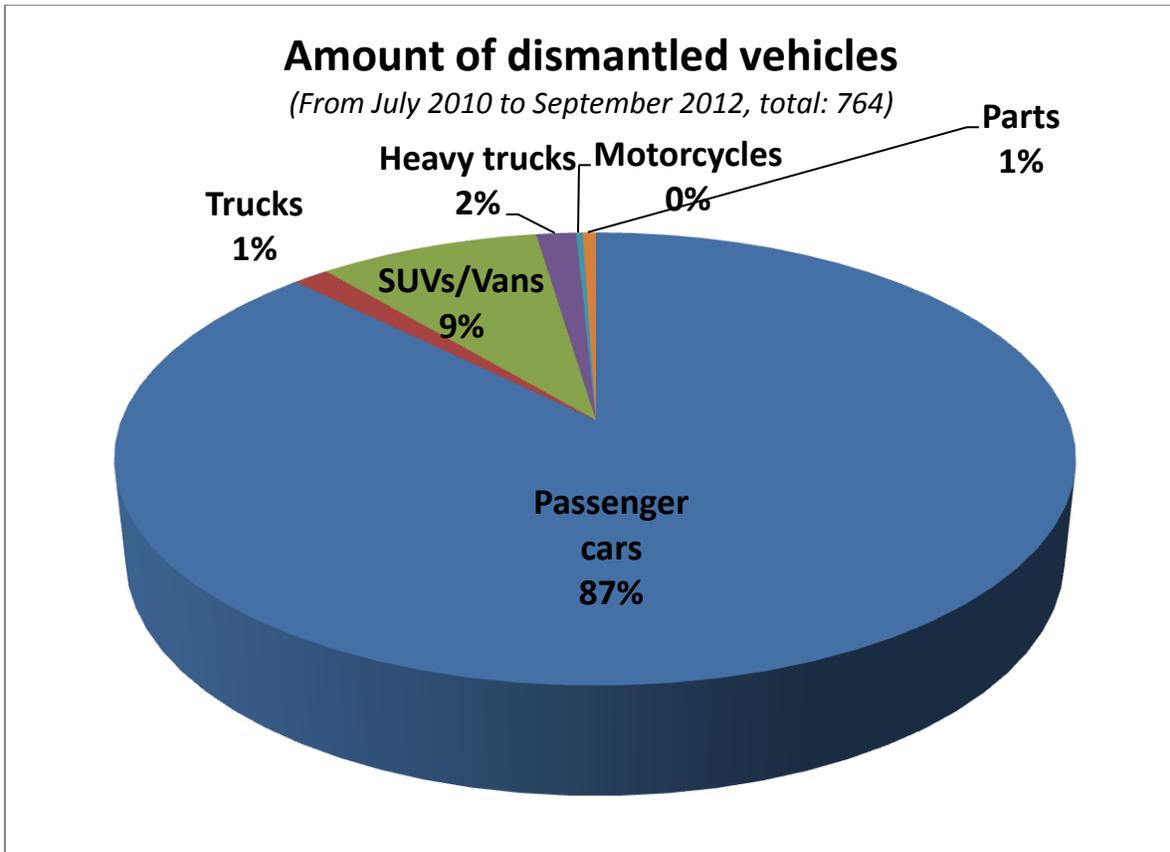
### **Step Three: The Vehicle is Dismantled**

The cycle restarts. The good parts go through an inspection process where they are labeled and classified according to their condition, then passed through the stages of costing, storage, and marketing.



### **Step Four: Good Parts are Stored for Marketing, Completing the Cycle**

Cesvi has an online store where anybody can easily find used parts and accessories for all kind of vehicles, sorted by category and brand. Purchases can also be made on-line. On the next page is a graph showing the results of the first 26 months of operation.



Cesvi Repuestos EMP waste recovery			
	2010	2011	2012 (up to Sep)
Usable waste*	18.086	119,382	230,961
Toxic waste**	514	1,292.07	4,603.09
* In tons. ** In kgs.			

**From IIHS:**

***Midsize Moderately-Priced Cars Outperform  
Luxury Cars in Small Overlap Test;  
TOP SAFETY PICK+ Award Recognizes Superior Overall  
Performance***

The Insurance Institute for Highway Safety (IIHS) released ratings for vehicles in the latest round of its challenging small overlap frontal crash test with surprising results. A group of midsize moderately-priced cars performed better overall than most of their luxury counterparts tested earlier in 2012.

Of the 18 midsize family cars evaluated, the best performers are the Honda Accord 4-door and Suzuki Kizashi. Both earn a good rating. Another 11 cars are rated acceptable, three earn marginal, and two are poor. In contrast, just 3 of 11 midsize luxury and near-luxury cars evaluated earlier in the first round of small overlap tests earned good or acceptable ratings.



**Honda Accord Undergoing Small Overlap Frontal Crash Test**

Building on its long-running vehicle ratings program for consumer information, IIHS introduced the small overlap test to further improve occupant protection in frontal crashes. The test replicates what happens when the front corner of a car collides with another vehicle or an object like a tree or utility pole. Twenty-five percent of a car's front end on the driver side strikes a 5-foot-tall rigid barrier at 40 mph. A 50th percentile male Hybrid III dummy is belted in the driver seat.

Most automakers design their vehicles for good performance in the IIHS moderate overlap frontal test and the U.S. government's full-width frontal test, but many haven't addressed the problem of small overlap crashes. In a 2009 IIHS study of vehicles with good ratings for frontal crash protection, small overlap crashes accounted for nearly a quarter of the frontal crashes involving serious or fatal injury to front seat occupants.

For many vehicles, a 25 percent overlap frontal impact misses the primary structures designed to manage crash energy and results in crash forces going directly into the wheel, suspension system, and firewall. Such crashes often have high levels of occupant compartment intrusion. Real crashes of this type result in head injuries from contact with interior structures or intruding objects such as trees or poles.



**The Toyota Camry Showed Significant Intrusion into the Driver's Space**

The poor performance of two Toyota models – the Camry and Prius v – illustrate what can go wrong in a small overlap crash, despite good ratings in other IIHS tests. In the Camry, the force of the impact shoved the front wheel back into the foot well, bending the windshield pillar and pushing the parking brake pedal and the left outer edge of the instrument panel rearward into the driver's survival space. Likewise, there was significant intrusion in the Prius v, along with high forces on the dummy's legs and feet. The Prius v is the only car in the midsize test group to earn a poor rating for hip and thigh protection.



**The Toyota Prius v Also Showed Significant Intrusion into the Driver's Space**

The Camry's driver airbag and side curtain airbag deployed, but the steering wheel moved so far to the right that the dummy's head made only minimal contact with the front airbag. The side curtain airbag didn't extend far enough forward to help prevent the dummy's head from hitting the instrument panel. In the Prius v, the side curtain airbag deployed too late in the crash to offer protection.

To reward vehicles that excel in the small overlap test, IIHS has created a new award called *TOP SAFETY PICK+*, with the + indicating good or acceptable performance for small overlap crash protection. *TOP SAFETY PICK+* winners must earn good ratings in at least 4 of 5 evaluations, with no less than acceptable in the fifth test. IIHS rates vehicles good, acceptable, marginal, or poor based on performance in a moderate overlap frontal crash, small overlap frontal crash, side impact, and rollover, plus evaluations of seat/head restraints for protection against neck injuries in rear impacts.

The first winners include the Acura TL; Dodge Avenger and its twin, the Chrysler 200 4-door; Ford Fusion; Honda Accord 2-door; Honda Accord 4-door; Kia Optima; Nissan Altima 4-door; Subaru Legacy and its twin, the Subaru Outback; Suzuki Kizashi; Volkswagen Passat and Volvo S60.



For more information, go to [www.iihs.org](http://www.iihs.org) or email [publications@iihs.org](mailto:publications@iihs.org)

## *Volvo Owners Give Thumbs-Up to Crash-Avoidance Features*



Owners of Volvos with advanced crash avoidance features find the systems useful, and the vast majority would want the technology again, a new IIHS survey shows. The positive results are in line with an earlier survey, but this time the participants were not limited to early adopters questioned several years ago when the technology was new.

Researchers interviewed nearly 500 owners of Volvos with crash avoidance features. Some had City Safety, a low-speed forward collision avoidance system standard on certain models, some had an optional technology package that includes forward collision warning, lane departure warning and other features, and some had both.

For each feature, more than 80 percent of respondents said they would want the system again on their next vehicle. This update shows positive reactions were not limited to drivers who eagerly snapped up brand new safety technology.

Most reported driving with crash avoidance systems turned on. Only the use of lane departure warning declined. Less than 60 percent of drivers said they left the system on at all times, a drop of 10 percent from the earlier survey. The lower use rate may be related to the annoyance factor: One-third of respondents said they found lane departure warning chimes annoying.

Based on insurance data, these systems appear to be reducing crashes. The Highway Loss Data Institute (HLDI) has found that the rate of property damage liability claims for Volvos with standard City Safety is lower than for other vehicles in the same class and for Volvos without the technology. HLDI, an IIHS affiliate, also found lower claim frequencies with the optional technology package.

“The survey results bode well for the future of crash avoidance,” said Anne McCartt, IIHS senior vice president for research. “With more driver interest, more manufacturers should understand that it pays to invest in these systems and will offer them in more vehicles.”

For more information go to [www.iihs.org](http://www.iihs.org) or email [publications@iihs.org](mailto:publications@iihs.org)

**INSURANCE INSTITUTE  
FOR HIGHWAY SAFETY**

***From CESVI Brasil:***

***Study: Water-Based Paints or Solvent-Based Paints?***



**Technician Applying Paint**

Manufacturers have now developed automotive paints that follow the American and European rules concerning volatile organic compounds (VOC) emissions. In Brazil, environmental regulations will soon also force body shops to use less aggressive products. And water-based paint seems to be the option of choice, because of its low amount of VOCs. In fact, some body shops have already noticed the benefits of working with water-based paints instead of solvent-based ones. This makes the complete adoption of this kind of product seem just a matter of time.

That's the reason CESVI BRASIL undertook a study to compare both products and methods, revealing the differences between quantities involved as well as the times needed for preparation and use of each model.

The methodology created situations similar to those we see in actual body shop work, so that CESVI could come up with results that reproduced the true reality of this activity.

CESVI used a standard piece for all the tests. And it also developed an instrument to ensure that the damage in question was standard in all the pieces.

The study involved 48 painting works using products from three large suppliers of repair and painting products in Brazil. And it adopted the most-used colors in the Brazilian market: white, black, silver and red.

The same painter also worked on all the tests.

CESVI studied the times involved in the preparation of the surface and application of the paints, as well as those involved in the cleaning of the equipment. It also measured the amount of products used: bases, varnish and primer.



**The Same Painter Was Used in All the Tests**

## **CONCLUSION**

CESVI found that the water-based painting of both new and repaired pieces had many advantages.

- It is less polluting, so it is less dangerous to the painter's health and the environment.
- It is compatible with solvent-based painting. Therefore, a car painted with solvent-based products can be repainted with water-based paints, and vice-versa.
- It requires less product to paint the same area.



### **Reviewing the Quality of the Finished Product**

-Its shelf life is longer than that of solvent-based paints, meaning that the paint not used can be stored for future use.

-The final results of water-based painting were astonishing, including great quality of topcoat and easy, fast application. Times involved were very similar to solvent-based painting: 1.5% more in painting a new piece, and 1.3% more in painting a repaired piece.

Some years ago, virtually all paint was solvent-based. Today, advances in paint technology mean that modern, water-based paints are increasingly replacing organic solvents across a broad range of paint applications and surface areas.

A longer version of this overview will be presented in CESVI BRASIL's magazine on February.



**From IAG:**

## ***Small Cars – Walking-Pace Wrecks***



### **IAG's Low-Speed Crash Test Program in Progress**

IAG put the spotlight on the nine top-selling small vehicles in Australia to see how their bumpers performed when involved in a collision. A range of top-selling small cars can cost up to 70 per cent of their new purchase price to repair when involved in a walking-pace speed collision.

When comparing damage for a front and rear collision, the Toyota Yaris and the Honda Jazz were the most expensive to repair. The Yaris cost \$13,440 to repair — 70.8 per cent of its new purchase price — and the Jazz cost \$13,754 — 69.5 per cent of its new purchase price.

The best performer in the test was the Holden Barina (Chevrolet Sonic), which had a repair cost for a front and rear collision of \$2,574, or 14.3 per cent of its new purchase price.

The RCAR low-speed crash test program was designed to urge car manufacturers to make improvements to bumper bar design to help keep the cost of collision repairs affordable. Poorly-designed bumpers can slide under other bumpers on impact, causing more damage to both vehicles in a collision. Because of its effective bumper design, the Holden Barina did not suffer structural damage, and the damage was isolated to the bumper components.

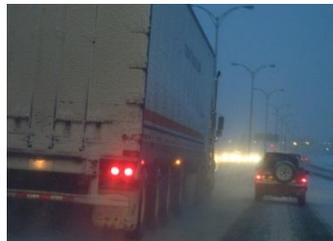
It should be noted that the IAG low-speed crash test program is a collision repair cost test, and is not an indicator of vehicle safety features. All of these cars, except the Nissan Micra, have been awarded five stars in ANCAP safety rating.

### Small car front- and rear-bumper collision test results:

Type of vehicle	Front and rear bumper repair cost	Repair cost as percentage of purchase price
Holden Barina (5 door hatch)	\$2,574	14.3%
Nissan Micra ST-L (5 door hatch)	\$6,056	35.6%
Ford Fiesta LX (5 door hatch)	\$8,850	42.2%
Suzuki Swift GL (5 door hatch)	\$8,929	48.6%
VW Polo 77TSI Comfortline (5 door hatch)	\$11,037	51.4%
Hyundai i20 Active (3 door hatch)	\$9,031	53.2%
Mazda2 Maxx (5 door hatch)	\$11,320	58.5%
Honda Jazz VTi (5 door hatch)	\$13,754	69.5%
Toyota Yaris YRS (5 door hatch)	\$13,440	70.8%

\*Purchase price based on Recommended Retail Price (including GST) as quoted from Glass's Guide July 2012 publication

## *Car Rear Vision on the Rise*



The IAG 2012 Reversing Visibility Index tested 241 cars and gave 24 per cent of them a five-star rating, up from 14 per cent last year. Of the cars tested, 29 per cent had reversing cameras (up from 20 per cent in 2011) and 28 per cent had reserving sensors (up from 22 per cent).

The study assessed the visible area and distance across the rear of a vehicle and if a camera and sensors were installed. Cars were then rated on a scale of one to five stars. Fifty-eight cars received the top rating, while 11 per cent of vehicles received a zero-star rating.

The study dispelled a belief that SUVs have poor visibility: almost 40 per cent earned a five-star rating. Reversing cameras and sensors in small vehicles are increasingly important. Rear visibility, in hatchbacks in particular, has become an issue because vehicle designs with larger pillars and smaller rear windows are now more common.

For more information, please visit [www.iagresearch.com.au](http://www.iagresearch.com.au)

## ***IAG Only Australian Insurer to Commit to United Nations Principles for Sustainable Insurance***



Insurance Australia Group Limited (IAG) has become the only Australian insurer to become a signatory to the Principles for Sustainable Insurance as part of the UN Conference on Sustainable Development (Rio+20).

The principles were developed by the United Nations Environment Programme Finance Initiative (UNEP FI), and are a framework for the insurance industry to respond to increasing environmental, social, and governance (ESG) challenges.

Around 30 insurers from Australia, Brazil, Canada, France, Greece, Germany, Netherlands, New Zealand, Norway, Japan, South Africa and Spain have signed up, committing to the integration of ESG considerations into all aspects of their operations through the adoption of a set of voluntary and aspirational global principles. IAG also welcomed the Insurance Council of Australia signing on as a supporting institution.

The principles are as follows:

- We will embed in our decision-making environmental, social, and governance issues relevant to our business ;
- We will work together with our clients and business partners to raise awareness of environmental, social, and governance issues, manage risk, and develop solutions;
- We will work together with governments, regulators, and other key stakeholders to promote widespread action across society on environmental, social, and governance issues;
- We will demonstrate accountability and transparency in regularly disclosing publicly our progress in implementing principles.

More information can be found at [www.unepfi.org/psi](http://www.unepfi.org/psi).



## ***From CESVIMAP:***

### ***DS Check for iPad & Android Tablets***



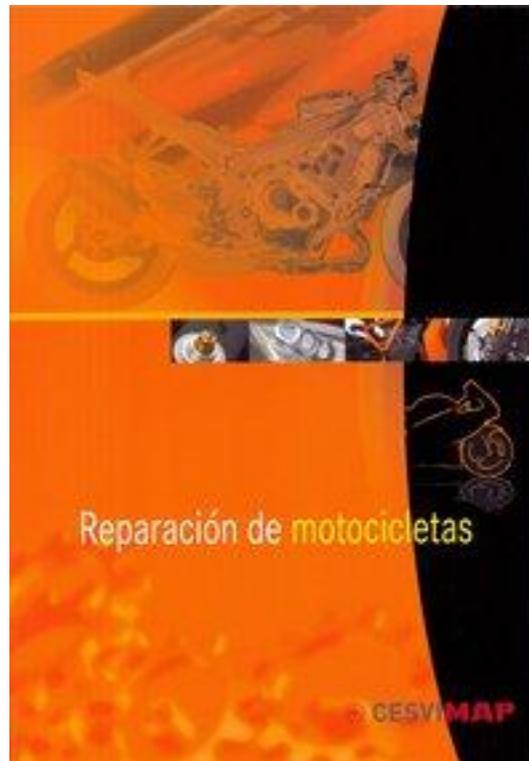
The new DS CHECK application for iPad and android tablets is now available. It can be downloaded from the CESVIMAP web page, or from Apple Store or Google Play. DS CHECK has been awarded a prize in the [First Automotion Aftersales Technological Innovation Prizes](#), organized by Reed Business Information. DS CHECK was the winner in the category of IT applications for the repair shop.

The [DS CHECK](#) programme is very easy to handle; it verifies the vehicle elements affecting steering geometry. With DS CHECK and the vehicle alignment sheet, professionals can determine if the damage lies in the bodywork or in a specific element of the suspension. Professionals can directly choose the type of suspensions to be worked with, or go with the make and model of the vehicle, automatically assigning the application of the type of rear and front suspension for that specific model.

#### Advantages:

- Inefficiencies in the repair shop are avoided: Combining DS CHECK with a process of diagnosis and verification of the alignment means that it is possible to determine if it is the bodywork that is affected or elements of the suspension. Wrong moves, and calls to the client are avoided.
- The application is very useful for repair shops and for tire workshops.
- Work without having the vehicle present is possible.

## ***Motorcycle Repair, a New CESVIMAP Technical Book***



Motorcycles are one of CESVIMAP's lines of research, and this research covers the motorcycle type and the study of their elements, damage evaluation, and repair and repainting.

The new [CESVIMAP book](#), "*Motorcycle Repair*," describes the essential points covered by all of this research. Behind the text is an exhaustive analysis of these vehicles, along with information on the tests conducted in our facilities.

Numerous colour photographs illustrate the work. Of particular note are the sequences giving a step-by-step picture of the working processes, showing the reader the procedures, equipment, tools, and products used. The book was designed to be a useful and attractive manual, providing data of great technical and documentary, all with the guarantee of CESVIMAP's extensive experience in this field.

## ***CESVIMAP Provides Training for Appraisers in Poland & Consultancy Work for Turkish Repair Shops***



**Theoretical Presentation in Progress**

CESVIMAP, through its Engineering and Appraiser Development departments, has taken on consultancy and training work in the Polish insurance sector.

The work in the consultancy area has focused on the analysis of insurance activity, with regard to everything relating to the management of automobile accident claims: premium types, treatment of the processing and management of claims, management of total write-offs, joint intervention of the appraiser and the repair shop for the repair of the accident-damaged vehicle, etc.

The result of these analyses has been the production of a consultancy report for one of the main insurance companies in Poland. This report contains a series of proposals focusing on improvements in efficiency and profitability in the technical management of accident claims, as well as in the service provided to the insured.

CESVIMAP's work has been rounded off by the training of 200 automobile appraisers. Course participants have been given information about how the different possibilities and options for repair and painting exercise influence, both on the final quality of the process and on the total financial amount to be paid in compensation. Theoretical presentations have been carried out, backed up by eminently practical sessions, which have made use of the [AUDATEX](#) valuation tool, which is established on the Polish market and used by this professional group. The demonstrations were carried out on vehicles with real damage.

Particular attention was paid to the use of the CESVIMAP bodywork and the CESVIMAP paintwork repair schedules, which are tools which make damage evaluation easier, providing speed, precision and objectivity.



**Practical Session in Progress**

### Consultancy work for Turkish repair shops

CESVIMAP has also been giving the Turkish market the benefit of its know-how, through audit and consultancy work for repair shops. CESVIMAP personnel have travelled to the clients' facilities, in the cities of Istanbul, Bursa and Izmir, to make a joint analysis of the repair market situation, and in particular, of the situation for bodywork and paintwork repair shops.

As a result, all the repair shops have been provided with the support they needed, which will enable them to continue to perform their activity at the very highest levels of quality, in a more efficient and more profitable manner; they can also adapt their activity to the requirements for repair and paintwork called for by modern vehicle bodies. And in addition to all this, they will also be able to continue to give the right response to the needs of all their clients.



**One of the Turkish Repair Shops Assisted by CESVIMAP**

To do this, a system had to be set up to deal with different issues, such as the design and layout of the repair shop, the facilities, tools, equipment and products, working processes, and the management and organization of the activity. A further contribution involved the integration of the capacities and knowledge of the staff working at each repair shop.



**Interior View of Turkish Repair Shop**

These are cutting edge repair shops in their sector, client-centred, and not just automobile-centred, making them a point of reference for the Turkish market, and beyond.

**From CESVI Argentina:**

## ***Laboratory Accreditation Under 17025 Standard***



**CESVI ARGENTINA has the First and Only Laboratory Certified for Helmet Testing in Argentina**

On the 18th and 19<sup>th</sup> of October 2012, the Argentine Accreditation Agency (OAA in Spanish) held an External Audit Test of CESVI Argentina Laboratory.

As a result of that audit, we are pleased to announce that the laboratory is now accredited under standard 17025 for testing of automotive reparability up to 2.5 tons, as well as proficiency testing for protective helmets for vehicle use (tourism class).

## Safest Car Awards



The Cesvi Crash Test Safety Awards

For the sixth consecutive year, CESVI Argentina recognized those automakers who made the best effort to protect the integrity of vehicle passengers with our Crash Test Safety Awards.

The event took place on December 4 in Pilar, Buenos Aires, and had the support of La Segunga, MAPFRE, QBE La Buenos Aires, Río Uruguay Seguros, Seguros Rivadavia, San Cristobal and SANCOR (all insurance companies).

The distinctions, divided by categories, recognized the following vehicles: Fiat 500 (City Car and Gold Car), Ford Fiesta Hatchback KD (Small), Nissan Tiida (Medium), Volkswagen Vento (Medium-large), Renault Lattitude (Large), Peugeot 3008 (SUV), Volvo XC60 (Premium SUV), Citroen Picasso (MPV), Fiat Qubo (MPT), Peugeot 308 (made in Argentina) and Mercedes Benz E-Class (Safety Excellence).



Award Recipients from Fiat, Ford, Nissan, Volkswagen, Renault, Peugeot, Volvo, Citroen, & Mercedes Benz



**From CENTRO ZARAGOZA:**

## ***CZ Researches Child Car Seat Safety***



Last September, CENTRO ZARAGOZA was awarded a project to “study interventions to improve the use of Child Restraint Systems (CRS) that will prevent them from moving out of position during the sleep phase,” contracted by the Traffic Directorate General. The execution time for this project was two months from the time it was awarded, and the study conclusions will be disseminated shortly.

The aim of this project is to reduce the risk of injury to children who travel while sleeping inside a vehicle. To achieve this, the risk of injury has been quantified via computer simulation, according to the type of restraint system used, and in accordance with the child’s position. An assessment has been carried out of the improvement represented by the use of a system that would prevent the body moving to positions where the belt does not directly rest on the child’s shoulders, and may exercise too much pressure on the neck or even slide down the arm, permitting excessive body movement in the case of collision.

At the end of the project, efforts were begun to disseminate the results of this research in the most adequate forums, in order to help improve the use of current CRS and promote the improvement of future CRS, with new designs that bear in mind the conclusions of the study.

## ***Presentation of Diplomas to the 45<sup>th</sup> Class of CZ's “Higher Course for Auto Insurance Experts”***



**The Graduates of Class No. 45**

The closing ceremonies for Class No. 45 of CZs Higher Course for Auto Insurance Experts (“PS”) took place last December 12<sup>th</sup> in the Assembly Hall of the Engineering and Architecture School of the University of Zaragoza.

This iteration of the “PS” course had an important feature. The diplomas were issued by the “Centro Zaragoza Chair” of Zaragoza University (UNIZAR), contributing to the dissemination of knowledge in the course areas, and thus guaranteeing complete, prestigious, and quality training.

The training was given on a blended learning basis: ‘distance’ through the Campus CZ Training Platform, and ‘classroom’ delivered at the CZ facilities in Pedrola (classrooms and workshops). The course, lasting for 443 teaching hours, was held over two sessions from September 7<sup>th</sup> to December 2<sup>nd</sup>, and from September 3<sup>rd</sup> to December 12<sup>th</sup>, respectively, covering the following areas: knowledge of insurance theory, insurance expertise technique, specific automobile legislation, auto insurance integrated risks, specific auto insurance expert action, and practical training in insurance expertise.



**CENTRO ZARAGOZA**  
INSTITUTO DE INVESTIGACIÓN  
SOBRE REPARACIÓN DE VEHÍCULOS, S.A.

**From MRC Malaysia:**

**Over to You, MRC Malaysia!**



Recently in Dresden, Germany, KTI Managing Director Frank Leimbach handed over the bag that contains the flags of RCAR's 25 research centers from 19 countries and five continents to Managing Director and CEO of Motordata Research Consortium Malaysia (MRC Malaysia), Adjunct Professor Khaeruddin Sudharmin. MRC Malaysia is thrilled to be hosting the RCAR 2013 Annual Conference, and would like to welcome you all to our beautiful nation's capital – Kuala Lumpur. The Conference will be held at the Grand Hyatt in Kuala Lumpur from September 22 to 27, 2013.

For those of you who will be attending your first RCAR Conference, we hope that this will be an unforgettable experience for you. For the more experienced RCAR members, *Selamat Datang* – we look forward to welcoming you to Malaysia! We guarantee that RCAR 2013 will be a conference you will never forget!



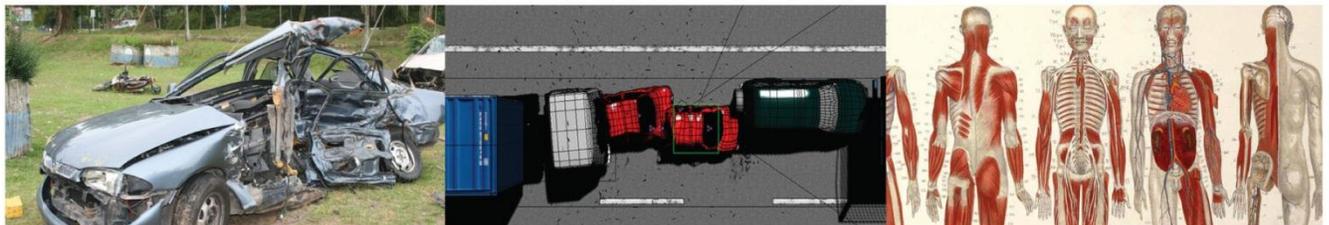
## ***Abbreviated Injury Scale (AIS)*** ***Introductory Seminar for the Malaysian Insurance Industry***



MRC Malaysia organized an introductory seminar for the Malaysian Insurance Industry on the “*Abbreviated Injury Scale (AIS)*” at the Novotel Hotel in Kuala Lumpur on November 19, which was opened by our Managing Director and CEO Adjunct Professor Khaeruddin Sudharmin.

AIS is an anatomically-based, consensus-derived global severity scoring system that classifies each injury by body region according to its relative importance on a 6-point ordinal scale (1=minor and 6=maximal). AIS is the basis for the Injury Severity Score (ISS) calculation of a multiple-injury patient, and provides standardized terminology to describe injuries and rank injuries by severity. Current AIS users include health

organizations for clinical trauma management, outcome valuation and for case mix adjustment purposes; motor vehicle crash investigators to identify the mechanism of injury and improve vehicle design; and researchers into epidemiological studies and systems development -- all of whom may influence public policy (laws and regulations). Nevertheless, AIS promotes uniformity and consistency for injury severity coding.



The seminar was intended as a platform for insurance industry to motivate them into making injury assessment and compensation, a scientifically-based mechanism for accident injury. This is a huge step towards the development of the industry with the support of real world evidence. Participants gained understanding of the way forward and strategic plan for injury coding practices in Malaysia and its technical applications in road safety research. The seminar also offered case study discussions to help participants understand the methods and skills of conducting injury coding in motor vehicle accident cases.



Managing Director & CEO of MRC Malaysia, Adjunct Professor Khaeruddin Sudharmin opened the seminar and the session continued with presentations from invited speakers, which included the Director of Vehicle Safety & Biomechanics Research Centre, MIROS, Dr. Norlen Mohamed, the Head of Crash Re-construction Unit, MIROS, Mr. Abdul Rahmat Abdul Manap and General Manager of MRC Malaysia, Madam Diana Lee Geok Chin.

**Adjunct Professor Khaeruddin Sudharmin**  
Managing Director & CEO of MRC Malaysia

**Abdul Rahmat Abdul Manap**  
Head of Crash Reconstruction Unit, MIROS



**Dr Norlen Mohamed**  
Director of MIROS

**Madam Diana Lee Geok Chin**  
General Manager of MRC Malaysia

**From JKC:**

## ***JKC/KART Joint Technical Seminar***



**Seminar Participants from KART & JKC**

On the 15<sup>th</sup> and 16<sup>th</sup> of November 2012, JKC and KART held a two-day joint technical seminar at JKC's facility in Chiba Prefecture. This was the 14<sup>th</sup> seminar held on an annual basis. On the first day, participants from both KART and JKC made presentations on various technical subjects. Separate sessions for discussions were also arranged to increase mutual understanding. On the second day, JKC arranged for KART to visit the training center of the National Mutual Insurance Federation of Agricultural Cooperatives, located in the same Chiba Prefecture.

## ***Body Repair Conference***

JKC held the 59th Body Repair Conference on November 6<sup>th</sup> 2012 at its Chiba facility. 24 people from 10 Japanese car manufacturers and the General Insurance Association of Japan, plus 23 JKC members, attended. This Conference has been held twice a year to exchange opinions mainly about various common technical issues to make car structures more damage-resistant and easier to repair.

Some of the topics presented were Design guide, D & R, AEB, Electronic diagnostic equipment, Spot welding of ultra-high tensile strength steel, and modification of auto insurance rating schemes.



**Conference Participants in Active Discussions**

## ***Conference with Insurance-Adjusting Companies***

A Conference with the top executives of insurance adjusting companies mostly affiliated with major non-life insurance companies was held on the 9<sup>th</sup> of January 2013. Nearly 20 people from adjusting companies, insurance companies, and JKC attended this meeting.

JKC made presentations of its 2012 business activities and results of studies on electronic car thefts, which led to active discussions.

## ***Conference with Insurance Companies***



### **JKC Making Presentations before Insurance Claims People**

28 people from claims departments of non-life insurance companies gathered on 16<sup>th</sup> of January 2013 to discuss topics of concern. These topics included D & R, P-safety, Electronic diagnostic equipment and facilities of average auto repair shops.

Car body coating and anti-car theft technology were also discussed to assist in more effective identification of fraudulent claims.



**From Samsung:**

## **Whiplash Injury Research via Human Subject Impact Test**



**Low-Speed Rear-Impact Test Using Human Subject and BioRID II**

Samsung Traffic Safety Research Institute (STSRI) has initiated joint research on whiplash injury with the National Forensic Service, Seoul Sky Hospital, and Yonsei University by conducting a series of low-speed rear impact tests involving human volunteers, the first such experiment in South Korea. Other government institutes such as Korea Automobile Testing & Research Institute (KATRI), which manages the Korean NCAP, the Traffic Accident Analysis Center, and Korea Road Traffic Authority also supported this research by providing consultations.

Approved by IRB, a total of 50 dynamic rear-impact sled tests were performed with 50 human volunteers, all of whom are 30-50 year-old males. Each subject participated in only one test in which he was exposed to the impulse equivalent of the change in velocity of a real bumper-to-bumper collision at 5-8km/h. All subjects were examined by an orthopedist to qualify for the test through a medical check-up beforehand. All motions and impulses were captured and measured by motion capture systems and pressure sensors on the seat. After the experiments, the human subjects were monitored in post-medical analysis. No changes were found in in-depth MRI analysis, Neck Disability Index, and range of motion. Although no cervical spine injuries were reported, six subjects experienced minor back stiffness for no more than 2 days, and returned to normal without any medical treatment.

Recently, KATRI and Sejong University conducted further consecutive tests using BioRID II in the same condition as human volunteer tests to compare movements as well as injury criteria. In addition, Yonsei and Sejong University have planned a variety of human volunteer tests using the same impact device as above to focus on human movement in different crash configurations.

**SAMSUNG FIRE & MARINE  
INSURANCE**



**AUTOMOTIVE REPAIR RESEARCH CENTER**

## **From KART:**

### ***Thatcham Thailand Visit to KART***

Thatcham Thailand visited KART in November 2012. Dennis Means, their Managing Director, visited KART to discuss mutual interests between Kart and Thatcham.

We exchanged information on group rating systems, repair times, and repair technology in Korea, Thailand, and the U.K. Due to rapid growth of the number of imported vehicles in Korea, Kart had a great deal of interest in repair methods and repair times of imported cars. We also showed our guest the new training facility which KART just opened last August.

### ***Australia CASR Visit to KART***



CASR (*The Centre for Automotive Safety Research*) at the University of Adelaide visited KART in December 2012. Andrew van den Berg, their Vehicle Testing Laboratory Manager, visited to obtain information on KART crash testing facilities.

The Centre conducts high quality independent research that enables rational decision-making to reduce human and economic losses from road crashes. It is focused on conducting multidisciplinary research to understand how road crashes and resulting injuries are caused.

#### **CASR's First Visit to KART on December 13, 2012**

It also provides independent professional advice on road safety matters to government and non-government organizations in Australia and overseas. CASR is now conducting ANCP standard tests for pedestrian safety, and needed information on our ECV system which can simulate Car to Car crashes because they are planning to do AEB research in the future.



## ***From Thatcham:***

# ***Introduction of Autonomous Emergency Braking into UK Insurance Industry Group Ratings***



## **Press Launch of the Adoption of AEB Rewards into the UK New Car Insurance Group Rating System**

On 2<sup>nd</sup> October 2012 the Association of British Insurers announced that it is introducing important changes to the Group Rating system. As a result, motorists who buy cars fitted as standard with Autonomous Emergency Braking (AEB) technologies could immediately benefit from a one to five group drop in insurance rating, and potentially a lower premium.

These changes were available to the insurance industry for the first time from 20th October 2012 and will be updated as car manufacturers continue to introduce further AEB systems to models as a standard fit. The technologies use various highly developed laser, radar, and camera sensors to monitor the road ahead, warn drivers of a potential hazard, and, ultimately, apply full braking pressure independently of the driver to help prevent a collision or mitigate the severity of the impact.

AEB has been identified internationally by road safety and insurance organizations as having the potential to massively reduce the number of low-speed front-to-rear shunts, and accidents involving pedestrians. Analysis of research studies in Europe and the USA suggests that once widely adopted in the UK, the technology could lower both the number and the cost of collision claims. Additionally, the latest generation AEB systems have the potential to prevent some 2,700 pedestrian casualties annually in the UK as well as some 160,000 whiplash injury claims, which have added significantly to insurance costs in recent years.

While developing the tests, Thatcham has also accumulated and analyzed data from around the world, sufficient to convince the UK insurance industry that it could reduce premiums for cars fitted with AEB without running extensive field trials. In particular, the Insurance Institute for Highway Safety (IIHS) in the USA ran a major study on Volvo's XC60, the first car to be fitted with standard AEB – its City Safety System.

For more information, please contact Matthew Avery, Head of Research [matthew.avery@thatcham.org](mailto:matthew.avery@thatcham.org).

## ***Thattham Research Celebrates Euro NCAP Accreditation***

On 22nd November 2012, Thattham celebrated its accreditation as a Euro NCAP testing laboratory, marking a significant milestone in its 43-year history. It has become only the eighth European laboratory to be recognized for having the facilities, expertise, and rigor required to carry out the crash testing programs that lead to vehicle manufacturers being awarded the much-valued safety star ratings.

Senior automotive industry figures, vehicle safety specialists, and journalists gathered at Thattham's Berkshire headquarters for a series of presentations on the organization's involvement with Euro NCAP. They heard how its new status is in harmony with Thattham's primary work in reducing claims costs by helping manufacturers design safer vehicles that help to reduce personal injury. Euro NCAP Secretary General Dr. Michiel van Ratingen unveiled a plaque to mark the day.

Thattham has been a member of Euro NCAP since 2004. Engineers contributed considerable knowledge to the design of seats and head restraints to reduce whiplash injuries, and helped the European body design a specific test for safety rating evaluation. More recently, Thattham has provided significant research and a rating system for Electronic Stability Control (ESC) systems – also now part of the Euro NCAP star rating system – and data on the effectiveness of Autonomous Emergency Braking (AEB) technology, sufficient to convince the ABI to reduce insurance group ratings for equipped vehicles.

For Euro NCAP assessments, Thattham will conduct three specific crash tests on each vehicle model it handles – a 40% offset frontal crash at 64 km/h; a 50 km/h side crash into a moving barrier; and a 30 km/h crash into a static pole. In addition, it will undertake ESC testing, using robotic equipment and whiplash testing using a Hyper G sled that accelerates a test seat backwards to simulate a rear-end shunt in its first full year as an accredited centre,

To prepare for Euro NCAP testing, Thattham has invested in both equipment and staff. With the test crash facilities already in place, the barrier test track's drive motor has been upgraded and, in addition, new lighting systems, high speed cameras and crash dummies have been installed.



**Peter Shaw, Thattham CE, congratulated by Michiel van Ratingen, Secretary General, Euro NCAP**

For more information, please contact Andrew Miller, Director of Research [andrew.miller@thattham.org](mailto:andrew.miller@thattham.org).

## ***Winning Vehicle Manufacturers Celebrate Security Success***

Vehicle manufacturers were celebrating nearly a decade of achievement in vehicle security, as the winners of the ninth British Insurance Vehicle Security Awards (BIVSA) were announced at Thatcham on 11<sup>th</sup> October 2012.

In the presence of Jeremy Browne, Minister of State for Crime Prevention, Volkswagen UK was presented with the overall best car manufacturer award for the 3rd year running with the Beetle, Phaeton, and Sharan among its category winners, while Nissan scooped the LCV equivalent with the Nissan Primastar winning outright in the Heavy Van category.



### **Volkswagen receives the award for Overall Best Car Manufacturer from Jeremy Browne (left)**

Since its launch in 2004, BIVSA has come to be recognized as the pinnacle for vehicle manufacturers in terms of recognition of their work in making vehicles more secure and reducing vehicle crime. Supported by the UK Government Home Office, the UK Department for Transport, and other key stakeholders, the awards represent an opportunity for manufacturers to demonstrate to their customers the efforts they are making in minimizing the disruption and anxiety caused by becoming a victim of crime.

In the nine years of the BIVSA awards, Thatcham has presented over 150 awards to nearly 20 different manufacturers, and, thanks to their efforts alongside law enforcement, government, and the insurance industry, vehicle crime has fallen by approximately one third during that period.

For more information, please contact Andrew Miller, Director of Research [andrew.miller@thatcham.org](mailto:andrew.miller@thatcham.org)

# Thatcham

## ***From Cesvi Mexico:***

### ***Mexico Road Cesvi Audit***

In order to highlight aspects of road safety where attention must be paid as part of the Mexican strategy for road safety, Cesvi Mexico was given the task of auditing a stretch of the Mexico-Toluca's road, one of the largest in the country. The stretch was studied between kilometer 35 +000 and 42 +000.

Mexico City currently has 5 outlets by road to the rest of the country, and moving toward the west is the one that links with the city of Toluca - in the first instance - and is about 65 km, of which 7 kilometers are critical since they have curves and steep grades. Sadly, this segment has been the scene of multiple accidents, many fatal. Following are some recent examples:

- A trailer carrying 30 tons of sugar struck 10 vehicles on the Mexico-Toluca highway, leaving one person dead and at least 14 wounded.
- A double tractor container with 60 tons of wheat went out of control and rammed into a school bus at the National University (UNAM), killing five students and a teacher.
- A tanker with 40,000 liters of LPG lost braking and failed to stop at the emergency ramp, causing an explosion that consumed everything within 100 meters, damaging several homes and businesses.

The study detected twelve high-risk aspects, ranging from lack of infrastructure, through poor signage, to omissions of compliance with Federal Highway Traffic regulations regarding the placement of advertisements around the track. (It was also found that most of the drivers exceeded the speed limits!)



**'Before Audit' Photo**

## Proposals made

Aware of the urgent need to act, Cesvi Mexico through its road safety specialists was given the task of analyzing and proposing the following actions in order to safeguard the lives of users of this road.

1. - Remove the more spectacular signs from the road in the area within the scope of the study.
2. - Undertake leveling of the right lane asphalt in the study area.
3. - Establish monitoring points for weights and dimensions, as well as respect for speed limits.
4. - Close left returns as recommended in the study area, and build returns (higher or depressed) on the right side of the road, with lanes allowing for corresponding acceleration and deceleration.
5. - Place speed bumps where appropriate, and change signs warning of poor conditions.
6. - Replace damaged sections of metal safety barriers.
7. - Place visual speedcams at strategic points.

To present the Road Audit, Cesvi Mexico summoned the responsible authorities, representatives of the insurance and repairer sectors, as well as the media to its facilities. Ironically, that same day other smaller mishaps highlighted the urgency to act accordingly.

The press gave unprecedented coverage, turning it into a media issue of note for several days, giving it the highest audience and national impact.

## Response by Government Authorities

Given the scenario, the Department of Communications and Transportation of the Federal Government of Mexico allocated a budget of US 15 million dollars for remedial work in the area.



**'After Audit' Photo**

# Automotive Repair Expo 2013

WORLD TRADE CENTER  
Salón Maya 1 y 2

**11ª EXPO**  
**Reparación**  
Automotriz

Agiliza tu entrada registrándote en línea  
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y participa en la rifa para ¡GANARTE un IPAD!  
\*Consulta las bases de participación en el sitio

**14 y 15 Marzo**  
**2013**

**ENTRADA LIBRE**

**Acércate a los Expertos**

Conoce los últimos avances tecnológicos en el mantenimiento y reparación automotriz, en donde encontrarás los mejores productos, equipos, herramientas, refacciones y servicios, a través del trato directo con fabricantes y distribuidores de las marcas líderes a nivel mundial

**HORARIO:**  
**11:00 a 20:00 hrs.**

Revolucionando los sistemas de reparación  
de las marcas líderes a nivel mundial

Evento organizado por: **CESVI MEXICO**

Evento para profesionales, sólo mayores de 18 años

Te invitan:

RCAR GNP MAPFRE Seguridad

## Official Invitation to the 2013 Cesvi Mexico Trade Show

Cesvi Mexico is working enthusiastically to realize the eleventh Automotive Repair Expo 2013, which is unique in Latin America, and comparable in quality to the world renowned NACE Show and the Italian Autopomotec Fair.

In 2013, the Expo repeats its location, no less than the World Trade Center in Mexico City. We can say that the Automotive Repair Expo is the event that kicks off a new business cycle for suppliers of consumables, equipment, tools, paint, and services related to auto collision repair.

This eleventh edition of Automotive Repair Expo 2013, scheduled to take place March 14<sup>th</sup> to 15<sup>th</sup>, will feature 5,500 square meters of exhibition space, and will have the participation of international companies from Germany, Spain, the USA, and Italy, among others.



**From AZT:**

## ***Crash Test of Formula 1 Nose at AZT Automotive***



**Fast and constant energy absorption for minimizing the load for the driver.**  
The Video clip can be seen at: <http://www.safetyfirst.tv/videos/leicht-und-sicher>

AZT has crashed a Formula 1 nose to demonstrate energy absorbing capabilities of high-tech carbon fibre materials in comparison to technologies used in normal road cars. The idea was to highlight the importance of good deformation behaviour with regard to passenger loads and demonstrate the potential of carbon fibre materials. With a weight of only 3.5 kg, the Formula 1 nose dismembered during the 46 km/h impact, and allowed for fast and constant energy absorption, minimizing the load for the driver.

“Our engineers were stunned by the perfect crash performance of this high-tech component, the sled with more than 780 kg come to a very smooth stop and did not even bounce back”, says Christoph Lauterwasser, Managing Director of AZT.

Good energy absorption, rigid safety cells, and the use of safety belts are among the key elements when crashes occur in normal road traffic. Allianz uses Formula 1 to draw public attention to the importance of these topics.

During a road safety event with Christian Danner and Nico Rosberg, in which both Formula 1 experts highlighted the importance of safety on the road and on the track, these important safety messages were brought to the attention of the media.



**From left to right: TV Moderator Wolfgang Rother, Formula 1 Driver Nico Rosberg, Formula 1 Expert Christian Danner, CEO of Allianz Versicherungs-AG Severin Moser, and Dr. Christoph Lauterwasser at the Allianz Safety Event at AZT Automotive in September 2012**

**Allianz** 

## The RCAR Network:

AXA-Winterhur Switzerland	<a href="http://www.winterhur.com">www.winterhur.com</a>
AZT Germany	<a href="http://www.allianz-azt.de">www.allianz-azt.de</a>
Centro Zaragoza Spain	<a href="http://www.centro-zaragoza.com">www.centro-zaragoza.com</a>
CESTAR Italy	<a href="http://www.cestar.it">www.cestar.it</a>
Cesvi Argentina	<a href="http://www.cesvi.com.ar">www.cesvi.com.ar</a>
Cesvi Brazil	<a href="http://www.cesvibrasil.com.br">www.cesvibrasil.com.br</a>
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ICBC Canada	<a href="http://www.icbc.com">www.icbc.com</a>
IIHS USA	<a href="http://www.iihs.org">www.iihs.org</a>
JKC Japan	<a href="http://www.jikencenter.co.jp">www.jikencenter.co.jp</a>
KART Korea	<a href="http://www.kidi.co.kr">www.kidi.co.kr</a>
KTI Germany	<a href="http://www.k-t-i.de">www.k-t-i.de</a>
LVK Finland	<a href="http://www.liikennevakuutuskeskus.fi">www.liikennevakuutuskeskus.fi</a>
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Thatcham UK	<a href="http://www.thatcham.org">www.thatcham.org</a>

## Important Notice:

If you need to contact us for any reason, please be sure to use one of the following e-mail addresses:

[rcarorg@hotmail.com](mailto:rcarorg@hotmail.com)

or

[wilf\\_bedard@hotmail.com](mailto:wilf_bedard@hotmail.com)

## The RCAR Newsletter

Publisher: Wilf Bedard

Editor: Larry Roberts

Technical Coordinator:

Alida Meyer

## Website Report



[www.rcar.org](http://www.rcar.org) Research Council for Automobile Repairs

The total number of 'visits' to the RCAR Website ranged from 1,960 in October 2012, to 1,723 in November, to 1,152 in December, while the number of 'total pages viewed' during that same period ranged from 4,859 in October, to 4,005 in November, to 2,648 in December. (The December stats were impacted by the fact that the RCAR Website was down for 7 days in December).

## Dates for your Diary

Feb 4 2013:	RCAR P-Safe Working Group Meeting, Universal Hilton, Los Angeles
Feb 5 2013:	RCAR Strategic Initiatives Meeting, Universal Hilton, Los Angeles
Mar 14-15, 2013:	Automotive Repair Expo 2013, World Trade Center, Mexico City
Sep 22-27 2013:	RCAR 2013 Annual Conference, Grand Hyatt, Kuala Lumpur, Malaysia