

News From The Centres

CESVIMAP—Spain

CESVIMAP Launches Its Virtual Classroom For Training On Line

CESVIMAP has been characterised by its significant activity in the field of training since it was set up in 1983. Since then more than 2,200 automobile repairs courses have been run, training over 25,000 professionals. CESVIMAP is now launching its virtual classroom, a new type of distance learning which overcomes the problems of time and location through the use of new technology. It is aimed at that sector of the population which, although extremely interested in receiving training, has been unable to attend courses due to geographical location or because it is impossible for them to leave their place of work.

The CESVIMAP virtual classroom offers numerous advantages: 24 hour availability, flexible training which is constantly monitored by tutors, interactive tools providing the opportunity for contact between students in forums and debates, constant communication with the teaching staff, adaptation to evolution in the sector, etc.



With a view to the future, CESVIMAP looks forward to an expansion in this method of training with the incorporation of new qualifications into its programme. The virtual classroom will open its doors with the On Line Introduction to Automobile Loss Adjustment Course, which will provide students with information about the types of damage resulting from accidents and repair and assessment techniques. Professionals in this sector, manufacturers, etc, are the potential students on this course. With all the places for the first round of the course reserved, enrolment for a second round is already open.

New Recycling Centre For End-of-Life Vehicles



As already announced at the RCAR Conference in Sydney last September, CESVIMAP has opened its new Recycling Centre for End-of-Life Vehicles (ELV). This centre promotes the re-use of parts from disused vehicles as the best solution to environmental problems. Its modern installations house decontamination, disassembly, sales and dispatch areas and a warehouse of over 60,000 cubic metres. Supported by a powerful computer program, all the activities in the centre, from the arrival of vehicles to the sale of parts, are completely controlled.

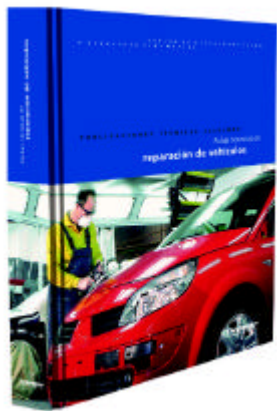
The first stage in the process is the decontamination of the vehicle, eliminating waste materials considered to be dangerous to the environment. Next, in order to provide better customer service, the parts considered suitable for sale are disassembled and stored automatically, with an individual reference number identifying each part and the model to which it belongs. At present the Recycling Centre for ELV houses over 80,000 references.

The sale of spare parts, both to vehicle repair workshops and private customers, is carried out by phone but in the future it will also be possible to make purchases on line.

News From The Centres

CESVIMAP—Spain (continued)

Technical Files 2004



The new Technical Files 2004 (Fichas Técnicas 2004) collection is now available. This is the eighth year of this highly successful publication which includes 54 files with their corresponding technical specifications, step-by-step descriptions of repair processes, results of tests carried out on new vehicles at CESVIMAP, and repair processes and systems. The files are divided into sections on Bodywork, Paintwork, Electromechanics, Industrial Vehicles and Motorbikes. This publication is aimed at vehicle repair workshops, professional training centres, loss adjustment consultants and a wide range of professionals working in the sector.

Monographs: Welding



“MIG/MAG Welding in Bodywork Repair” and “Resistance and Diffusion Welding in Bodywork Repair” are two new titles to be added to the collection of Monographs published by CESVIMAP. In a convenient 22 x 20 cm format they bring together the basic principles of these types of welding, execution parameters, graphic illustrations and the necessary health and safety measures. These two monographs are distributed jointly.

(CESVIMAP is at: www.cesvimap.com)

IIHS—USA

The January issue of Status Report covered high speed crash testing, bumper testing, crash compatibility and deer collisions. At the request of Ford Motor Company, the Institute carried out a high speed off-set crash test on a 2004 model of the popular Ford F-150 pickup and compared it to the 2001 F-150. The 2004 version earned the highest overall rating and a “best pick” designation—a dramatic improvement over the 2001 version, which was rather poor overall. However no such improvement was evident when testing bumpers on the same models where damage sustained in a low-speed (5 mph) crash test exceeded \$5,000.

The voluntary process where Automakers have pledged a series of steps to improve crash compatibility was outlined by the Institute (see also earlier 2003 Status Reports from 26 April, 28 June and 26 August). The underlying reason to adopt the voluntary approach is one of speed: the growth of SUVs or pickups having risen from 19% registered in the 1980s to 23% a decade later and now standing at 37% underscores the magnitude of the compatibility problem. The Alliance of Automotive Manufacturers (15 of

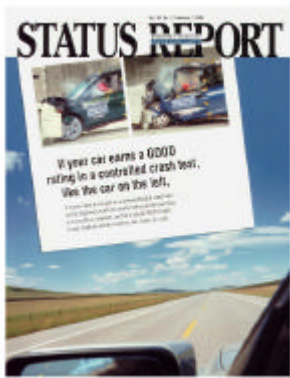


News From The Centres

IIHS—USA (continued)

the main automakers less Porsche) are working on front-into-side impacts and front-into-front impacts. A key element for pickup and SUVs is the use of energy absorbing structures overlapping the federal mandated zone for bumper protection on cars. If this is not possible manufacturers may install secondary energy absorbing structures such as “blocker beams” overlapping car bumper zones.

The January issue concludes with a piece on the reduction of deer collisions. The Institute has carried out a review on what seems to work and what does not. They conclude that there are too few successful methods, a lack of data and research. Temporary signs do provide promising results and this is reported. For a copy of “Methods To Reduce Traffic Crashes Involving Deer—What Works and What Does Not” by J H Hedlund et al, write to the Institute.



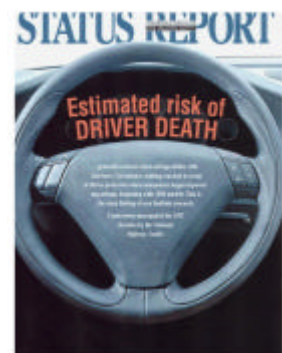
The value of crash test ratings for vehicles was underlined again in the 1 February Status Report. In a recent study researchers compared fatality risk in crashes where two similar vehicles impacted head on (car to car, pickup to pickup, etc). After controlling for such effects as differences in vehicle weight, driver’s age, gender, etc, it was found that drivers with vehicles with good ratings were 74 percent less likely to die than drivers of vehicles rated poor. For a copy of “Relationships of Frontal Offset Crash Test Results to Real World Driver Fatality Rates” by C M Farmer write to the Institute.

The first major scientific investigation into the effects of centre line rumble strips is reported. The study showed that overall there was a 14 percent estimated reduction. Head on and opposing direction side swipe crashes decreased by an estimated 21 percent, and injury crashes of the same type decreased by about 25 percent. For a copy of “Crash Reduction Following Installation of Centre Line Rumble Strips on Rural Two-Lane Roads” by B N Persaud et al write to the Institute.

The Institute also reported on a study of traffic violations and traffic school and concluded “Diversion programs like traffic school not only fail to reduce crash risk but also undermine the predictive value of driver records and can actually harm the overall safety picture by preventing the accumulation of violations on the records” say A T McCatt, co-author of “Tracking traffic citations through Court adjudications to posting to public driver records” A T McCart and M G Solomon. Write to the Institute for a copy.

By concluding with a short monograph of seat belt use for truckers, the Institute points out that half of all truckers do not belt up whilst driving. Now there is a move to encourage more truckers to belt up. Education is fine up to a point, but there is a need to enforce existing laws and here the Transportation Department has a major role to play.

The March issue of Status Report focuses on the key areas of automobile safety, depowered airbags, vehicle size and safety, and rollover criteria. The Institute comments on the reduction of inflation forces post 1997 and concludes the estimated risk of driver death is generally lower when airbags inflate with less force. Their support for the NHTSA decision to modify airbag compliance tests for unbelted dummies which enabled automakers to reduce inflation power is borne out judging from recent research. The move to reduce power was principally designed for low speed situations but Institute research shows a reduction in fatalities for both low speed and high speed situations. With the exception of pick-ups fatality risks reduced by 11%. However there was a 35% increase in pick-ups which lowers the overall figure to 6%. For a copy of “Driver Mortality in Frontal Crashes: Comparison of Newer and Older Airbag Designs” by ER Brauer et al write to the Institute.



The Institute comments on a recent National Highway Traffic Safety Administration (NHTSA) study analysing fuel economy/vehicle weight and crash compatibility. This comprehensive new study shows that weight does matter and with the exception of SUVs the heavier the vehicle the lower the death rate. An example for 4-door cars is that very small cars show a death rate of 11.6 per billion miles, 1996-99 models during 1996-2000, whereas large cars show a death rate of 3.3 on the same basis. For a copy of “Vehicle Weight, Fatality Risk and Crash Compatibility of Model Year 1991-99 Passenger Cars and Light Trucks” by CJ Kahane, go to www.nhtsa.dot.gov/cars/rules/regrev/evaluate/pdf/809662.pdf.

The Institute concludes by commenting on recent new rollover ratings from NHTSA. These reflect dynamic testing but these tests do not affect overall ratings very much. The ratings are on a star basis. NHTSA estimates that a 5 Star model vehicle has less than a 10% chance of rolling over in a single vehicle crash, a 4 Star vehicle has a 10-20% chance, etc. NHTSA tested 19 SUVs and Pick-Ups, all 2004 models.

(IIHS is at: www.highwaysafety.org)

The Challenge Ahead

New Vehicle Technology and its Effect on the Accident Repair Industry

By **Kenneth Roberts** I Eng FIMI AMIRTE LAE Hon Assoc IAEA

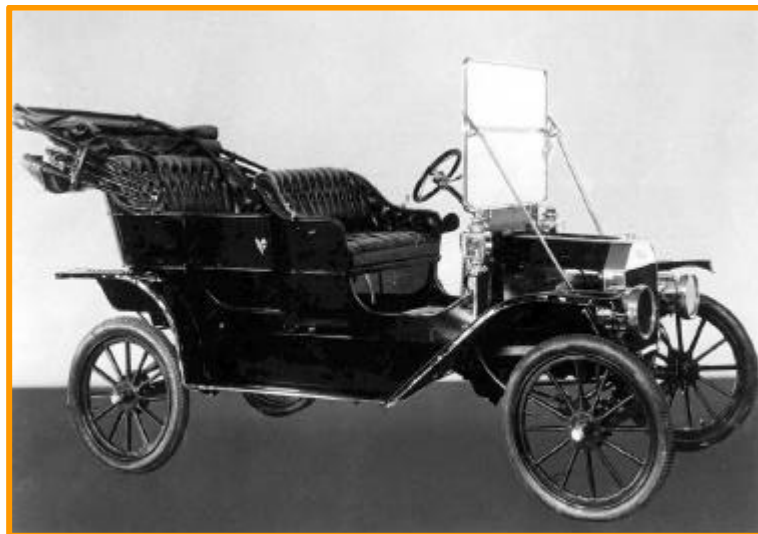
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Abstract: The modern vehicle is becoming increasingly complex, particularly in respect of its electronic components and systems. Currently some 20% of the vehicle content is made up of electrical and electronic systems, and this is expected to increase dramatically over the coming years, particularly with the introduction and wider use of 42 volt systems. This paper reviews some of the technical and legislative features that will apply to the new breed of vehicles and the effect these will have on the accident damage repair industry. The conclusions drawn are not in any way surprising. Training, and therefore a comprehensive knowledge of the product, will play a vital role in ensuring that safe, efficient and technically correct repair procedures are employed by experienced and well educated repairers in order to return the vehicle to its pre-accident condition.

Evolution of the Car

Henry Ford introduced the Model T to the world in 1908. By 1927, when production ceased, over 15 million Tin Lizzies, as they were known, had been manufactured. Only the Volkswagen Beetle has been produced in greater numbers since the advent of the motorcar in the 1880s.



The Model T boasted a 4 cylinder 724 cc, 20 hp side valve engine. Its transmission had two forward speeds and one reverse. The brakes operated on the rear wheels only, in addition to a transmission handbrake. The suspension was simple semi-elliptic springs, front and rear, and it sported oil lamps as standard equipment. All this for \$850 when the average price of a car in those days was \$5000 or more. By 1925, the price had dropped to \$360. Contrary to popular belief, the Model T was available in colours other than black, but only from its introduction in 1908 until 1911, at which time Henry Ford discovered that black lacquer dried faster than the coloured lacquer, enabling him to produce one more car every day. When we consider the skills necessary to keep the first of the model Ts on the road, it is clear that the ideal body repairer at that time would have been a skilled carpenter, upholsterer and blacksmith.

The Model T revolutionised transportation in the US and changed people's lives for ever. It set the standard for mass production throughout the industrialised nations, and the manufacture of motor cars brought a prosperity never dreamed of to millions of workers. The car, and the support industries that have grown around it, never ceases to amaze us with innovation and technology, and this has been the case for over 118 years. We can be sure that the industry will continue to amaze and delight us for many more years to come.

The Challenge Ahead

New Vehicle Technology and its Effect on the Accident Repair Industry (continued)



Compare the Model T with the new BMW 7 Series, first launched in Europe during 2002. It has a 4.4 litre V8 330 bhp engine with twin overhead camshafts providing variable valve lift and valve timing. It has a unique variable intake manifold system for power optimisation. Transmission is a 6-speed automatic ZF gear box, incorporating a shift by wire arrangement, meaning there is no mechanical connection between the shift lever and gear selection. There are disc brakes on all four wheels and a four wheel park brake that can be operated from a simple switch on the steering wheel for maximum convenience in traffic. The vehicle is equipped with dynamic drive suspension, electronic damping, and a self-levelling rear axle to control body roll on corners and pitch under acceleration and braking. The vehicle is fitted with powerful Xenon headlights. Most of these innovative features are controlled by computers, since they are far too complex for mere humans to control. Compare the skills necessary to repair this technological wonder with that of the Model T and we see that in addition to the advanced body repair skills of the 21st Century, the ideal body repairer must be a well educated, IT literate, highly skilled technician, well versed in electronics and requiring constant training updates to keep pace with the technology being employed.

It is clear from the comparison that the motorcar has come a long way since those early designs of Henry Ford. However, all vehicles, regardless of make or model, will continue to be involved in accidents, mainly as a result of human error, and will have to be repaired (Telematics may well reduce the incidence of crashes, but the technology will never eliminate the possibility altogether). What is, and what will be, the effect of all this technology on the repair industry? First we should look at the legislative aspects concerning the modern vehicle before considering the safety requirements and the future that electronics will play in the development of the modern vehicle.

Legislative Considerations

Many governments throughout the world have introduced legislation to control the operation and use of vehicles. Most of it is aimed at safety for obvious reasons. However, there are some rules that have been, or are about to be introduced that have nothing to do with safety and everything to do with freeing up the manufacturing industry and providing the customer with more choice. The European Union has recently introduced two important pieces of legislation, both of which will have an effect on the way in which cars are purchased, repaired and disposed of at the end of their useful life. Other highly motorised countries may well follow the EU example or have their own version already in force.

The EU End of Life Directive

European legislation now demands that vehicle manufacturers take responsibility for the vehicle from production line to salvage yard and beyond, and this will have a great effect on the way in which vehicles are serviced, repaired and owned. Although not yet fully implemented, the legislation is likely to ensure that the manufacturers will not leave the lifelong care and final disposal of a vehicle to the ordinary motorist; they will wish to control every aspect of the vehicle's existence from birth to death. It is possible that in the future a member of the public may not be able to actually buy a vehicle. Instead, it will be leased, title remaining with the manufacturer, in order that he can fulfil his responsibilities to the Directive. This will have major implications for the repair industry, and particularly the independent sector, because the manufacturer will have total control over where the vehicle is repaired, how it is to be repaired and with what materials it will be repaired.

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What will become of the independent repairer and how the Directive will affect the current work providers (insurers) should manufacturers adopt this method of “selling” their products is still being contemplated, and is, no doubt, invoking mixed thoughts about the future in the Board Rooms of both parties. Clearly repairers and work providers will need to review their business position and their work procedures in the light of the possibility of such dramatic changes.

The EU Block Exemption Directive

This new European legislation draws to a close the longstanding manufacturers’ monopoly in selling, servicing and repairing their vehicles through franchised dealers. The implication of this legislation could also be far reaching in that technical information will have to be made available to anyone and everyone with an interest in repairing vehicles. The availability will probably be by means of the vehicle’s OBD (on board diagnostics) and the internet. Repairers will have to be fully equipped and trained in order to retrieve this vital information. It is thought likely that in the future vehicles will be sold (or leased) from supermarkets and on the world-wide web, with no service or body repair department to fall back on in the event of problems. Arrangements will have to be made with local repairers and bodyshops to ensure customer satisfaction. This is something that is currently being developed in several countries in Europe and elsewhere.

When considering the End of Life Directive and the Block Exemption rules in detail, they appear to work against each other. However, the legislation is still in its infancy and therefore this aspect is something that the EU Ministers in Brussels will have to monitor diligently to ensure the rules provide the desired and original intent. Clearly the repairers and the work providers will need to match the development of technical information distribution and their business methods, and react accordingly. Manufacturers are sure to set very high standards of tooling and training for anyone wishing to repair their vehicles. Inevitably costs for the repairers will rise dramatically for accessing and using the technical information which will be sold at a high premium by the manufacturers, but will nevertheless be available to one and all as required by the Directive.

The Safety Aspects of the Modern Vehicle

Airbags and SRS Systems



Almost every car produced in the world now has a driver’s and, more often than not, a passenger’s airbag. Many have side airbags, rear seat airbags and curtain type airbags to protect the head from injury on the A and B posts. It has even been suggested that vehicles will have external airbags to protect pedestrians. Modern seat belts are almost exclusively fitted with grabbers and pretensioners to keep the occupant restrained during the impact. For the most part these devices rely on Pyrotechnics which are operated by electronic control units (ECUs) and mini computers, further complicating the vehicle’s electronic system. It is vital, therefore, for those involved in the repair of a vehicle thus equipped to follow the rules to ensure that there are no unwanted and dangerous deployments during the repair process and that after the repair the systems work properly and promptly when required to do so.

The Challenge Ahead

New Vehicle Technology and its Effect on the Accident Repair Industry (continued)

Anti-Theft

All European vehicles are, by law, fitted with an engine immobiliser, and many have an alarm to protect the immobiliser. Many other countries throughout the world have similar legislation designed to protect the consumer from vehicle theft. The great improvements that have been made in vehicle security were largely driven by the unacceptable levels of theft experienced in Europe, and particularly the UK, during the 1990s. Now we are seeing keyless entry, with the old style starter buttons reappearing on the dashboard as entry is facilitated using a credit card type transponder. Modern anti-theft measures involve complex electronics and require a complete understanding of the system if repairs are to be undertaken successfully.

NCAP Safety Testing

NCAP (New Car Assessment Programs) testing is used widely to determine the safety of modern vehicles. The proliferation of this kind of testing has prompted manufacturers to introduce new innovative designs, build procedures and materials to cope with the terrific forces released during the 64 km/h offset impact into a deformable barrier. Stars are awarded for occupant protection and pedestrian protection, and there are now several vehicles that have achieved three stars out of four for pedestrian protection, a goal which many manufacturers will be chasing vigorously. Notwithstanding the many vehicles that achieve the maximum five stars for occupant safety, the pedestrian protection aspect will further complicate the front of vehicle design by the introduction of special materials for energy absorption, pop-up bonnets and new scoop type bumper systems. The reinstatement of these features will require great care and attention on the part of the repairer to ensure the pedestrian protection element of the design is retained post repair.



Depending on policy wording, insurers will continue to be responsible to their policyholders for the correct reinstatement of the vehicle after accident damage, and may wish to introduce new monitoring systems and duties for their assessors to ensure absolute compliance. New materials, such as boron steels, will further complicate the repair procedure due to the unique and non-traditional handling and joining methods demanded by the manufacturers.

Whiplash Research

Thattham is aware from the results of its research that, generally speaking, vehicles are becoming stiffer in their construction, the reasons for which will be considered later. Thattham and other research institutes are aware that this, together with inadequate or incorrectly adjusted head restraints, has led to an increase in whiplash claims. Research undertaken at Thattham and other research institutes indicates that manufacturers must produce seats and head restraints that are compatible with and tuned to the new level of stiffness and torsional rigidity of the modern vehicle. The research carried out thus far has convinced many manufacturers of the need for more effective head restraints, and we are seeing their introduction with almost every model change. However, a vehicle's ability to continue providing protection in this respect could be compromised by a poor or incorrectly executed repair.

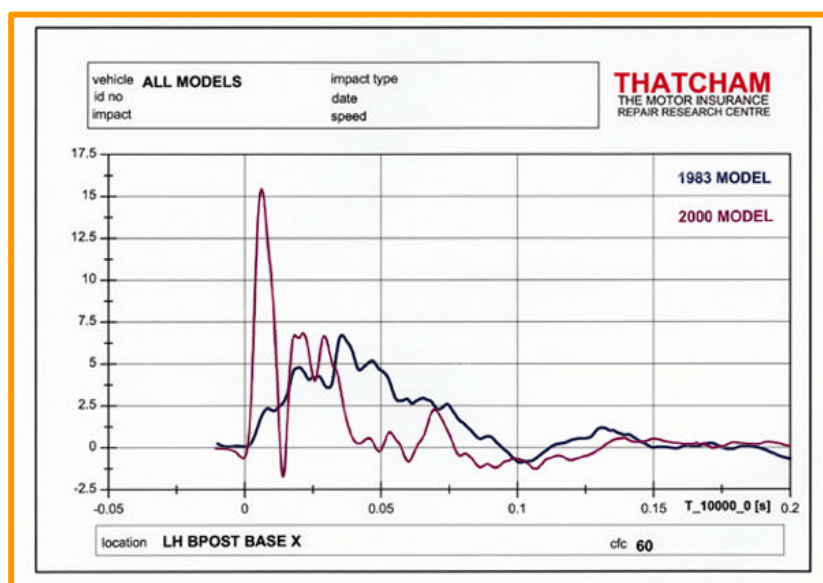


The Challenge Ahead

New Vehicle Technology and its Effect on the Accident Repair Industry (continued)

Damageability and Reparability

As mentioned before, modern vehicles are becoming stiffer, and the research being carried out at Thatcham and other research institutes has shown this conclusively. When comparing the crash pulse created as a result of a 1000 kg mobile barrier striking the rear of a 1983 model year car at 15 km/h and 40% offset with that of the pulse from the same strike on a similarly constructed current model year car, the peak g is 170% greater, and the duration of the pulse is 25% shorter than that of the 1983 model. This tendency to greater stiffness has been brought about for many reasons. Manufacturers' requirements to score well in the offset deformable barrier test (NCAP), noise, vibration harshness (NVH) considerations, ride and handling issues, and the insurers' own damageability and reparability 15 km/h test have contributed to this trend, and therefore the level of damage seen in urban collisions today tends to be more cosmetic than structural in nature, the latter being more prevalent with earlier vehicles. Modular front and rear end assemblies are now favoured by many manufacturers, particularly with small city or commuter type cars. This trend may migrate to larger touring vehicles in order to closely control the crush characteristics, and this will inevitably result in more cost effective and faster repair procedures.



Insurers and Repairers will have to accept the higher cost of modular units and the shorter repair times associated with them as more manufacturers follow this route. Specific repair procedures will be mandatory, and this trend will highlight the importance of repairers adhering to correct repair procedures to maintain the energy absorbing characteristics and occupant protection features that the manufacturers' engineers design into their vehicles.

Future Electronic Systems

42 Volt Electrical Systems

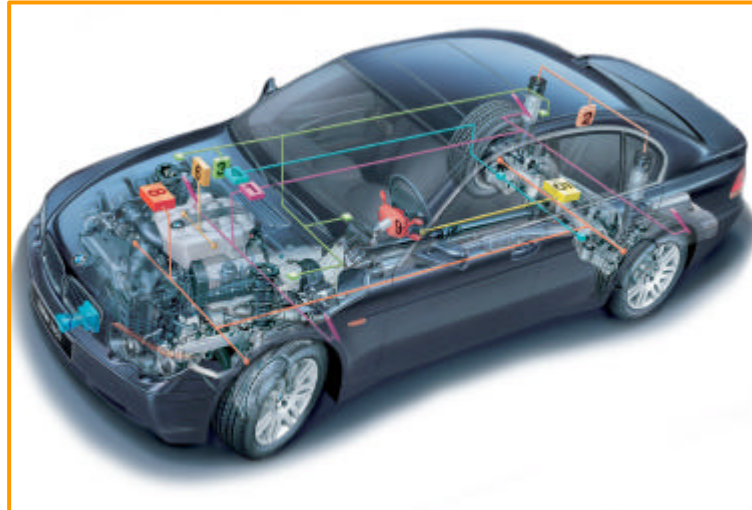
Whilst there are many innovative and unique designs on the "drawing board", some will have a greater effect on the body repairer than others. Electronic technology dominates the vehicle manufacturers' thinking and accounts for something like 90% of all innovation in the industry. Clearly this trend will have the greatest effect on the evolution of the modern car and the greatest effect on the modern body repairer. 42 volt electrical systems are due to appear in the US within the next few years. It is anticipated that European vehicles will begin moving to this efficient electrical supply system in approximately 2010, with almost all vehicles in the world being produced with 42 volt architecture by 2020. It is likely that a "hybrid" (mixed 14V/42V) system will be produced before absolute 42 volt systems become the norm. The 42 volt system offers designers the scope to introduce innovative electronic devices that are lightweight, cheap to produce and far more efficient and less demanding of amps than present 12 volt systems and components. The higher voltage saves power and reduces weight, and therefore fuel consumption can be optimised. The system generally provides for more comfort and convenience for the driver in the form of intelligent environmental control and vehicle ergonomics, and permits advanced systems associated with drive by wire to be included in the specification. When we consider that at present the heaviest and most costly item after the engine and transmission unit is the wiring loom, we can see why manufacturers are keen to capitalise on the weight and cost savings that 42 volts will offer.

The Challenge Ahead

New Vehicle Technology and its Effect on the Accident Repair Industry (continued)

Multiplexing

Vehicles are now being fitted with multiplex wiring and Bus control for the myriad of computers that now festoon the modern vehicle. This trend is likely to escalate over the next few years, particularly with the introduction of 14V/42V hybrid systems and pure 42 volt architecture. Here again, weight saving and greater electrical efficiencies are the goal for the manufacturer.



Total Security Systems

Notwithstanding the introduction of 42 volt systems, vehicle security is moving quickly towards keyless entry systems and coded components, meaning that all the major high value components that go to make up the modern vehicle will be electronically coded to that vehicle, and any substitution or exchange will be detected by the system. Unless the correct “handshake” is given to the onboard security computer, the vehicle will not respond to efforts to open or start it. The body repairer will need to be aware of such systems prior to starting work on vehicles thus equipped, and have the wherewithal to ensure the electronic compatibility of the new parts fitted and their correct integration into the security system. This trend will tend to ostracise non-original and pirate parts and bring to an end the “do it yourself” repair. Entry systems utilising the vehicle operator’s unique biological data such as fingerprints, skin sensitivity and iris patterns are being developed now, and therefore it may not be too long before completely secure and hi-jack proof systems (very important if vehicle operators are to be protected from kidnapping and mutilation as thieves become bolder) are fitted to vehicles as standard, adding further complication for the body repairer.

Drive by Wire

Finally, there is the concept of steer by wire and brake by wire, where there is no mechanical connection between the steering wheel and the steered wheels or the brake pedal and the brake callipers at the wheels. These systems are available now, indeed accelerate by wire is standard on many family cars today. The only problem that faces manufacturers is public acceptance and the requirement for more electrical power to ensure efficiency and reliability. However, we can expect to see by wire brake and steer systems being introduced within the next three to five years.



The Challenge Ahead

New Vehicle Technology and its Effect on the Accident Repair Industry (continued)

Summary

So what does all this technology, which, on the face of it, has nothing to do with changing panels or painting a vehicle, really mean to the body repairer?

- It means that the successful body repairer of the future will require a high level of knowledge in subjects other than body repair techniques, and this can only be achieved by regular and appropriate training.
- It means that the successful body repairer must keep up with the advances in vehicle technology, especially the electronic systems, and here again this can only be achieved through regular and appropriate training
- It means that the successful body repairer will need to observe all the rules of repairing the structure of these advanced vehicles as they are introduced by the manufacturers. There will be no room for error, and this means learning more about specific vehicles through regular and appropriate training.
- It means that the successful body repairer will need to exercise much more vigilance during the rebuild and road test phases of the repair process to ensure that vehicles with advanced systems are subjected to quality control procedures designed to detect all possible malfunctions.
- It means that the successful body repairer must embrace information technology. He should not be afraid to “look in the book”. The “book” of course can be a CD ROM version of a workshop manual or direct access to manufacturer data via a third party, an Intranet or the Internet. Contrary to repairer folklore, consulting a source of information is not a sign of weakness or ignorance; it is precisely the contrary.
- It means that everyone involved in the reinstatement of vehicles after accident damage must abandon the old maxim “If all else fails, read the instructions” – it’s no longer acceptable in a modern vehicle repair industry.

This has been but a brief preview of the new technology available today and that which will be available very soon. It does not take into account the many technological opportunities open to manufacturers through telematics, smaller more powerful computers and ECUs, or the myriad of new construction materials that are available now and will be available in the future. It does highlight the greater responsibilities that repairers and work providers (insurers) will have to accept in the wake of the new technologies employed if repaired vehicles are to be safe, secure and functioning correctly when they are returned to the operator.

The role of the repair technician and, to a slightly lesser extent, the insurance assessor, will change and this should be recognised and acted upon in good time. Training at all levels must be pursued with vigour, and young, well educated people must be encouraged to join the industry to refresh and replace the ageing workforce. It is already acknowledged that the chronic skills shortages throughout the world are a real threat to the very existence of the vehicle repair industry. As vehicles become more complex only the most highly trained, skilful, forward thinking and receptive repairers and insurers will be successful and profitable in the vehicle repair industry of the future.



Ken Roberts is currently Strategic Development Director at the Motor Insurance Repair Research Centre, Thatcham, UK. He is the UK Member of the CEA (European Insurers) Technical Committee and for the last ten years has been Chairman of the RCAR Steering Committee. He plans to retire from Thatcham in October 2004. (See also RCAR People Page 2 of this newsletter.)

From The Secretary General

Welcome to the March 2004 Newsletter. It is some time now since we all met up in Sydney for our Conference last year and I very much hope that this Newsletter will help in keeping you in touch. It is a full issue with news from eleven of our twenty-four centres covering news of people, research and management issues. There is also a technical article from Ken Roberts, who has been Chairman of the RCAR Steering Committee and steps down on retirement in about seven months' time. Ken has chosen to write on the broad topic "New Vehicle Technology and Its Effect on the Accident Repair Industry".

I have just returned from the SAE World Congress held annually in Detroit at the Cobo Centre. One cannot help being impressed at the sheer scale of the undertaking where automotive equipment manufacturers showcase their latest technology and concurrently papers are presented on a range of automotive issues. These issues cover development of technologies, materials, automotive safety, structures and the various divisions of the automobile such as transmissions, engines, heating, lighting, NHV, etc. A veritable Aladdin's Cave for the engineers/researchers/designers that make up the bulk of the delegates. It is some four years since I last attended (which is probably too long a gap) and I witnessed a smaller but nonetheless vibrant offering this year. Parts of the industry are finding business particularly challenging economically so some of the regulars and larger exhibitors of the past, eg Delphi Vestreon, were not there. Nevertheless I found the Congress worthwhile. Important papers were presented by RCAR centres, namely Tech-Cor/ICBC/IBC/State Farm on "Designing for Insurability: Best Practices to Achieve Lower Vehicle Repair Costs" and IIHS on "Crash Incompatibilities Between Cars and Light Trucks: Issues and Potential Counter Measures".



Wilf Bedard and Will Kukulko (MPI), John Gane (ICBC), Charles Sollars and Steve Schmidt (State Farm), Jack Ribbens and Nancy Calvin (Allstate/Tech-Cor), and RCAR Secretary General visit VW Audi, Auburn Hills With their hosts Steven Jonas, Raymond Solt, Mark Kadrovach, Volkmar Neudoerffer and Matthew McCabe

One of the great advantages of attending the SAE Congress is the opportunity to network with RCAR colleagues and others. Seven RCAR centres attended the Congress: IBC, ICBC, IIHS, MPI, State Farm, Tech-Cor and Thatcham. I was also able to spend time visiting each of the main US OEMs with the North American delegates to discuss co-operation on Reparability, Damageability and Vehicle Security. I found this particularly valuable in reviewing the different approach to the OEMs in Europe and the USA. I have written a separate report on the Congress for Members and I very much hope that more Members will attend in future.

I shall be putting together a compendium of papers presented at the last four RCAR annual meetings and will publish this in April. At the same time I will send out our Annual Report and Financial Statements.

With very best wishes,

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The RCAR Network

Of the 24 RCAR Centres in 17 countries, 21 have web sites. Addresses are to be found on www.rcar.org. However, for convenience, web sites are also listed below.

AZT	www.allianz-azt.de
Centro Zaragoza	www.centro-zaragoza.com
Cesvimap	www.cesvimap.com
Cesvi Argentina	www.cesvi.com.ar
Cesvi Brasil	www.cesvibrasil.br
Cesvi Colombia	www.cesvicolombia.com
Cesvi Mexico	www.cesvimexico.com.mx
CESTAR Italy	www.cestar.it
Folksam Auto	www.folksamauto.com
ICBC	www.icbc.com
IIHS	www.highwaysafety.org
JKC	www.jikencenter.co.jp
KART	www.kidi.co.kr
KTI	www.k-t-i.de
Lansforsakringar	www.lansforsakringar.se
MPI	www.mpi.mb.ca
NRMA/IAG	www.nrma.com.au
State Farm	www.statefarm.com
Tech-Cor	www.tech-cor.com
Thatcham	www.thatcham.org
VIC/IBC	www.vicc.com

News, News...

It is not the intention to provide the latest automotive or insurance industry news in this Newsletter. However there are some excellent sources available on the Web and members may find the following sites useful.

Automotive Online.	http://www.automotive-online.com
Automotive.com	http://www.automotive.com
AM-online	http://www.am-online.com
Associated Press.	http://www.ap.org
AutomotiveNewsWire.	http://www.brgtownsend.com
CMGI	http://www.cmgi.com
CNN.	http://cnn.com
Far East Newsletter.	http://www.feer.com
Fleet NewsNet.	http://www.automotive.co.uk
JUST-AUTO	http://just-auto.com
New York Times.	http://www.nytimes.com
Newspage.	http://www.newspage.com
PRNewswire	http://www.prnewswire.com
REUTERS.	http://www.reuters.com
Roadtransport.	http://www.roadtransport.net
Silicon.	http://www.silicon.com
Wired.	http://www.wired.com
Wall Street Journal.	http://www.interactive.wsj.com
ZD.	http://cgi.zdnet.com

Images of SAE Detroit



Above: A view of the TEST Group Area with First Technology Safety Systems in the foreground.

Below: A general view of the exhibition area.



Dates For Your Diary

FISITA 2004 World Automotive Congress will be held in Barcelona, Spain, 23-27 May 2004.
Details: www.fisita.com

International Bodyshop Industry Symposium (IBIS) is to be held in Montreux, Switzerland, 2-4 June 2004.
Details: www.bodyshopmag.com

Annual RCAR Conference 2004 is to be held in Berlin, Germany, 5-10 September 2004 and will be hosted by Allianz Zentrum Für Technik GmbH (AZT).

48th Annual Conference of the Association for the Advancement of Automotive Medicine (AAAM) is to be held in Key Biscayne, Florida, 12-15 September 2004
Details: www.carcrash.org

Automechanika will be held in Frankfurt, Germany, 14-19 September 2004.
Details: www.automechanika.messefrankfurt.com

48th STAPP Car Crash Conference is to be held in Nashville, Tennessee, 1-3 November 2004.
Details: www.stapp.org

NACE 2004 is to be held in Las Vegas, Nevada, 3-6 November 2004.
Details: www.naceexpo.com

SAE 2005 World Congress is to be held in Detroit, Michigan, 11-14 April 2005.
Details: www.sae.org/congress