

AUSTRALIAN AUTOMOTIVE AFTERMARKET

AUSTRALIA'S LEADING AUTOMOTIVE PARTS & ACCESSORIES INDUSTRY MAGAZINE

CENTURY YUASA: AUSSIE-MADE PRIDE

IN THIS ISSUE

TECHNICAL PAPERS: READ ABOUT ALL
THE INNOVATIONS IN THE INDUSTRY



THE LATEST IN AUTO AIR-CONDITIONING:
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DECEMBER 2011

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REGULAR DEPARTMENTS

AAAA Report	4	HR Matters.....	46
Calendar and Members.....	5	PRTC	66
News	6	4WD	67
Products	14	Retail.....	70

KEEPING YOU INFORMED

RepcO presents its awards	6
Exedy opens new Queensland offices.....	6
Call for AAAA members to attend Automechanika Middle East.....	7
Point of sale innovation for Dyno Dynamics.....	8
KT Cables launches unique customer rewards program	8
Next SAE-A President named.....	10
RepcO Authorised Service Joins AAAA	11
Bosch and Beissbarth secure strategic arrangements	12

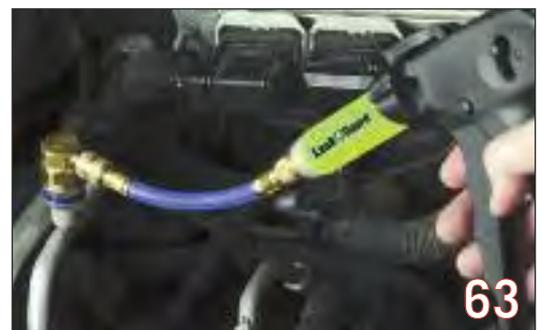


MEMBER FEATURE

Century Yuasa: Aussie-made pride.....	44
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FEATURES

Technical – the latest in the data sharing challenge	42
Technical Papers – the innovations in the industry.....	46
Milestones – celebrating birthdays and anniversaries	52
Finance Feature – optimising profit in a service business	58
Air-conditioning – get ready for the summer rush.....	59



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DECEMBER 2011

Vehicle Service and Repair

In the September 2011 edition of the Australian Automotive Aftermarket Magazine we advised that the Federal Government was conducting an inquiry into the sharing of repair information in the automotive industry.

Specifically, the Government is trying to determine if access to vehicle repair data is being restricted by the vehicle manufacturers and if so, if this is resulting in consumer detriment.

The inquiry is being conducted by the Commonwealth Consumer Affairs Advisory Council (CCAAC), an independent expert panel that provides the Government with advice on competition and consumer policy.

It is anticipated that the CCAAC will make their recommendation on the need for Government intervention (if any) to the Parliamentary Secretary for Consumer Affairs and Competition Policy David Bradbury MP by the end of this year.

The inquiry has received a range of submissions that address this issue from both a mechanical and collision repair industry perspective.

To view all submissions received visit the inquiry website: <http://www.treasury.gov.au/contentitem.asp?ContentID=2178&NavID>

To facilitate open dialogue on this issue the VACC held a conference on Vehicle Service and Repair Information in Melbourne on September 6.

The conference consisted of keynote presentations by the VACC, Australian Automobile Association, Federal Chamber of Automotive Industries, Australian Automotive Dealers Association and the Australian Automotive Aftermarket Association.

This was followed by a panel session chaired by Richard Dudley, CEO of the Australian Motor Industry Federation, which included questions from the floor.

The Australian Automotive Aftermarket Association initiated the CCAAC Inquiry via a direct approach to Parliamentary Secretary Bradbury in November last year.

Our submission calls on the Federal Government

to follow the precedent set in the European Union and intervene to ensure that vehicle manufacturers provide independent aftermarket repairers the vital information (technical manuals, VINs, fault codes, service campaign bulletins, software patches and equipment) needed for the repair and maintenance of vehicles in a non-discriminatory manner, at a fair price, and in a useable form.

We are calling on the Government to develop and implement a Mandatory Code of Conduct for the Vehicle Repair Sector, which would bind all industry participants and ensure unrestricted access to all equipment, tools and training required to effectively repair and maintain modern vehicles.

To complement this code we are also recommending that Australia follows the European precedent and incorporate mandated access to repair and service information into the Australian Design Rules.

This would mean an OEM would risk losing type approval to sell a vehicle if they restrict access to data.

In our opinion access to technical data is one of the most critical issues facing our industry in the future and this inquiry is our best chance at securing meaningful change that will assist in maintaining a high degree of competition and a level playing field in the automotive retail repair and service, parts and accessories sector.

And most importantly, it will preserve the basic right of the car owner to choose who repairs their vehicle and what parts are used – after all, it's their car!

We will keep you updated on progress with the inquiry via this column.

A more detailed overview of the issues surrounding the sharing of repair and service information can be found in our technical editor's column on page 42.

In closing on behalf of the National Council and staff of the Australian Automotive Aftermarket Association I would like to wish you all a very safe and happy Christmas and a prosperous new year.



David Fraser
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CALENDAR

2011

Performance Racing Industry Trade Show

Orange County Convention Center
Orlando, Florida, USA
1 - 3 December 2011
www.performanceracing.com

Automechanika Shanghai

Shanghai New International Expo Center,
Pudong, Shanghai, China
7 - 10 December 2011
www.automechanika.messefrankfurt.com

2012

INAPA 2012

JIE expo Kemayoran, Jakarta – Indonesia
28 - 31 March 2012
www.inapa-exhibition.net

AutoTronics Taipei

Taipei World Trade Centre
NanGang Exhibition Hall, Taipei, Taiwan
11 - 14 April 2012
www.autotronics.com.tw

Taipei AMPA Trade Show

Taipei World Trade Centre
NanGang Exhibition Hall, Taipei, Taiwan
11 - 14 April 2012
www.taipeiampa.com.tw

Automechanika Middle East

Dubai International Convention
and Exhibition Centre
22 - 24 May 2012
www.automechanika.messefrankfurt.com

Automechanika Frankfurt

Frankfurt, Germany
11 - 16 September 2012
www.automechanika.messefrankfurt.com

2013

Automechanika Malaysia

Kuala Lumpur Convention Centre,
Kuala Lumpur, Malaysia
21 - 23 March 2013
www.automechanika.messefrankfurt.com

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NATRAD GRANVILLE CELEBRATES DIAMOND MILESTONE

Paul Stirton, the Store Owner/Manager at Natrad Granville, joined the Natrad franchise in 2004, won the Franchise of the Year the very next year in 2005 and won the NSW State Award at the Natrad National Conference in 2011.

Ray Wheeler and Wally Blight, who originally worked for National Radiators, started the business 60 years ago.

Neville Stirton, Paul Stirton's father, purchased the business in 1985 after Ray and Wally decided to retire.

Paul started working for Neville in 1996 after selling his very successful building business.

Neville decided that he wanted to retire last year and Paul is now the owner of the Natrad Granville store.

To what do they owe their success? "Hard work, attention to service and great staff, who are loyal and really committed to training to keep their skills up to date, to deliver the best to our customers - we'd really like to thank them!" Paul said.

THREE DECADE COMMITMENT TO AUTOMOTIVE INDUSTRY ACKNOWLEDGED WITH AWARD

David Lyall has been awarded the prestigious Repco Authorised Service Team Member of The Year Award for 2011.

"Dave is an integral member of our team and a shining example of the varied and successful career that the automotive industry can offer those who have the willingness to continue to develop skills and seek out opportunities," National Manager of the Repco Authorised Service (RAS) program, Peter Webb, said.

Mr Lyall's association with RAS began close to 20 years ago when he made the decision to align his highly successful automotive workshop with what was then Repco Authorised Repair.

He and his wife Annie quickly became a key part of the network in South Australia, always ready to offer advice and support to the program and fellow members.

In 2002 Mr Lyall sold his workshop in Adelaide so he and Annie could relocate permanently to Melbourne.

Mr Webb was quick to recognise the value that Mr Lyall could bring to the ever growing RAS network and thus began a distinguished career with Repco Australia, first as an RAS BDM, then several years as a Repco Regional Manager where he learned the ins and outs of the trade business from the store operations side.



In 2007, armed with new skills and an extensive knowledge of the industry, Mr Lyall returned to the RAS fold and is currently using his considerable expertise to assist independent mechanical workshops develop and expand their businesses as the RAS Business Development Manager for Victoria.

Mr Webb said, like always, it was a hard decision to pick a winner.

"The quality of business people that the Repco

Authorised Service program attracts is outstanding," he said.

"Dave's unwavering dedication to helping members, the management team and the program as a whole by providing a rational sounding board and practical advice is second to none.

"He is always ready with support and guidance through challenging times and quick to recognise and celebrate the good times.

"Not one member of the RAS network who has come in contact with Dave would dispute any of the above.

"David Lyall is a most deserving winner of the 2011 Team Member of the Year and we congratulate him."

BRAND NEW QUEENSLAND OFFICE LOCATION FOR EXEDY

EXEDY is pleased to announce its Queensland office has relocated to a brand new and much larger site to accommodate the needs of the expanding business.

The new EXEDY QLD office is located conveniently near the previous office at 12 Chapman Place in Eagle Farm and services the Queensland and Northern Territory markets.

EXEDY Australia has three warehouse and distribution outlets nationally.

The head office and warehouse is located in Melbourne and services the requirements of Victoria, South Australia, Western Australia, Tasmania as well as Fiji and some other export markets.

A state branch in Sydney has also been established to specifically cater for the NSW and ACT.

Drop in and say g'day to the EXEDY team at the new QLD site or give them a call if you have an enquiry on 1300 366 592. To quickly and easily find your nearest EXEDY distributor, visit the online EXEDY distributor locator <http://www.exedy.com.au/DistributorLocator.aspx>



PROMOTE YOUR PRODUCTS TO THE MIDDLE EAST

Following the tremendous success of the 2011 mission, AAAA is offering its members the chance to take part in an Australian Pavilion at the 2012 Automechanika Middle East, which will be held in Dubai on May 22-24, 2012.

The 2011 Middle East Exhibition involved 1100 aftermarket exhibitors from 52 countries.

More than 17,300 visitors came from 130 countries.

Dubai Statistics advised that the total trade value in automotive aftermarket including imports, exports and re-exports is now AED 8478 million (AU\$ 2355 million) for the first quarter of 2011, an 11 percent increase over the last year, indicating clear growth in the sector.

The Department of Statistics, Dubai World, advises that 60 percent of the goods that land

in Dubai are transhipped GCC and MENA destinations.

The top three destinations are Iran (US\$1087m), Iraq (US\$221) and Saudi Arabia (US\$215m), clearly demonstrating Dubai as a commercial trading hub.

The 201 square metre Australian Pavilion was centrally located in Hall 5.

AAAA co-ordinated the pavilion design and build, incorporating distinctive Australian graphics.

As was the case in 2011, Australian exhibitors taking part in 2012 will be offered a 'turnkey' package with supporting activities.

A pre-mission briefing will provide exhibitors with presentations on local commercial law, payment matters and distributor agreements, as well as a general overview of the Dubai automotive sector and local trading conditions.

The following member companies participated in the 2011 Australian Pavilion:

Airbag Man, Alloy Race Components, Australian Clutch Services, Australian

Ultimate Suspension, AutoTest Products, Automotive Parts Australia, Black Widow Enterprises, Crow Cams, Couplertec Electronic Rustproofing, Dyno Dynamics, Fleetfinder (Neltronics), King Springworks, LED Technologies, Mackay Consolidated Industries, Mainline DynoLog Dynamometers, Precision Parts, TJM Products and Whiteline (Redranger).

The exhibition gives exhibitors the opportunity to participate in the growing replacement parts market of internationally sourced passenger vehicles, including Australian built Camry and Lumina (Commodore) vehicles.

Australian aftermarket accessory product, particularly 4WD, has a competitive advantage in this market area, with rugged Australian conditions testing.

A post show survey of 2011 exhibitors indicated 47 percent of exhibitors received orders at the exhibition and 53 percent received more than 10 new leads.

For more information or to book your place for 2012 please call Ben Bartlett at AAAA on 03 9545 3333.



VALE: GEORGE HENRY WEATHERSTONE 1930 - 2011

It is with great sadness that the Australian Automotive Aftermarket Association (AAAA) mourns the recent loss of one of its forefathers, George Weatherstone, who passed away on Tuesday 11th October.

George was the second Executive Director of the AAAA, which was a job he held for six years and undertook with great distinction.

He was also instrumental in the growth and success of AAAA member company, Brown & Watson.

"George was a very important part of the Brown & Watson family and could do any job we handed to him... we relied heavily on George's engineering background as most employees of Brown & Watson at the time were sales or marketing driven and had little knowledge or understanding when it came to technical issues, but always George was there to help us out," Brown & Watson Managing Director, Steve Waterham, said.

"George was instrumental in visiting our suppliers in Thailand and China on many occasions ensuring that the products which were produced for us were of the quality standards specified and gave advice on calibrating, tooling, production and engineering matters which were areas close to his heart."

George, a mechanical engineer by trade,

migrated to Australia from Newcastle Upon Tyne England in 1973 to take up the position of Manufacturing Manager for Eaton Transmissions.

In the early 1980s George joined Brown & Watson when the company had just moved into a small warehouse and office in Mulgrave, Victoria, and he helped forge the path for the business to become the large corporate company it is in today.

In 1987 he took on the role of Executive Director of the AAAA and his knowledge of the industry and contacts in government helped the Association to become the organisation that it is today.

"If it wasn't for people like George our Association wouldn't exist today," AAAA Executive Director, Stuart Charity, said.

"His tireless efforts to develop contacts and credibility with Government and to ensure that every member company had a real opportunity to grow and prosper formed the foundations for the strong and influential association we have today.

"George always set a great example and his



legacy will be the ongoing success of our Association.

"The Directors, staff and members of the AAAA extend their deepest sympathies to his loved ones. George's significant contribution at the AAAA will always be remembered and appreciated."

George was the husband to June (dec.); husband to Joan; father and father-in-law to Stephen and Judith, Emma (dec.), Greg and Wendy, Peter and Merrilyn, Andrew and Joanne; and grandfather to Joshua and Sarah, Matthew and Aaron, Tenara and Joel, Rebecca, Daniel and Naomi.

DYNO DYNAMICS HELPS MECHANICS SELL BENEFITS OF DYNO TUNING

Dyno Dynamics has just announced the development of a new point of sale information kit to help mechanics inform their customers about the benefits of dynamometer tuning.

The Dyno Dynamics Customer Care Program provides a variety of marketing collateral developed specifically for workshops including pull up banners, posters, counter cards, flyers, and more, to help mechanics sell the benefits of a dyno tune to the everyday customer.

"In this highly competitive world, we want to make sure that our customers can maximise the advantages of a Dyno Dynamics Dynamometer, giving them a competitive edge," Dyno Dynamics Managing Director, Alan Evans, said.



"We are committed to developing more innovative ideas to help our customers market their services.

"The benefits of dyno tuning are that you can diagnose more problems in the safety and security of your workshop, saving mechanics both time and costs.

"You can do in the workshop what you can't do on the road; you can turn your services into a premium product for your customers."

The Customer Care Program will be available for all current owners of Dyno Dynamics and Dynotech dynamometers and new customers will be able to purchase the kit as an add-on.

The marketing collateral will provide mechanics with a low cost means to promote their premium tuning services to customers.

The collateral will outline the fuel benefits, tuning accuracy, vehicle safety, improved performance, lower emissions, quicker service and cost benefits of a dyno tune.

The Customer Care Program is part of Dyno Dynamics' greater strategy to offer the best after sales support in the industry for its customers, both within Australia and overseas.

Dyno workshops can order the Customer Care Program kit by contacting the Dyno Dynamics Sales Team on 03 9735 8900.

KT CABLES LAUNCHES INNOVATIVE CUSTOMER REWARDS PROGRAM

This year's winner of the AAAA's Terry Mahoney Excellence in Marketing Gold Award, KT Cables, has launched a new customer rewards program using Quick Response (QR) codes.

These were first developed by Denso Wave, a subsidiary of Toyota, to track vehicles during the manufacturing process.

QR codes are widely used in overseas countries such as England and Japan and are already making their appearance in Australia.

From November 1, all customer orders shipped by KT will have a custom QR code attached to the shipping box as part of the KT Scan and Win promotion.

The codes are readable using a free QR scanner app available from KT's website at www.ktcables.com.au

Once the app is installed on a customer's smart phone, it's just a simple matter of taking a photo of the QR code and the app does the rest.

A text message notifies the customer whether they have been successful in

winning an instant prize, which will be shipped with the customer's next order.

Prizes include a range of KT Premium gifts which customers continue to request.

All participants are automatically entered in a 'second chance' draw for a major prize.

KT Cables General Manager, Adam Middleton, said the idea for the Scan and Win promotion came as a result of the hundreds of entries they received in their recent 'Show Us Your KT' competition, where customers could win a KT Pocket bike simply by sending their photos using KT products.

The incredible range of entries can be viewed on the KT Facebook page at www.facebook.com/ktcables

"The next step will be the application of QR Codes to our packaging with purchasers being led to KT Tube videos on how to use each product," Mr Middleton said.



This Quick Response code takes you to the KT Cables website

"In our industry, it is important to be innovative and deliver information to customers in a quality and consistent manner.

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VS/VT from L351557/VX/VY Commodore/Calais (95-04)

VS/WH/WK Statesman/Caprice (95-04)

VS/VY Ute (95-04)

V2 Monaro (02-04)

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NEW SAE-A PRESIDENT

The Society of Automotive Engineers-Australasia (SAE-A) has elected automotive engineering consultant Bill Malkoutzis to the role of president.

On accepting the SAE-A presidency, Bill Malkoutzis said his first task is to recognise the visionary leadership and diligent commitment of immediate past president, Patrick Ross.

"During his two years as president Patrick Ross led the Society through a very challenging period resulting from major changes in our industry," Mr Malkoutzis said.

Founded in 1927, the Society remains a member driven not-for-profit organisation representing automotive engineering professionals.

SAE-A grew rapidly with the expansion of vehicle production in Australia mid last century.

Then Australia hosted manufacturing facilities for the BMC, Chrysler, Ford, Holden, Nissan, Toyota brands plus a range of trucks, and many of their component suppliers.

Mr Malkoutzis said that years ago locally produced vehicles accounted for more than 80 percent of sales.

"Now local vehicle manufacturing has declined sharply as Australian consumers select almost 80 percent of their purchases from a range of over 50 imported models of cars and light trucks," he said.

"The result is that Society members have endured more than 50 years of plant closures and job losses.

"Members continue to face the challenging scenario of reduced manning levels for engineers in the automotive industry, on both the



manufacturing and supplier side, as sales of imported vehicles increase.

"Similarly, as the engineering in vehicles becomes more sophisticated, they become more reliable.

"Service intervals increase and maintenance and repair work becomes more modularised.

"So demand for automotive service and repair technicians is declining."

With work experience at two international companies and more recently as an independent consultant, Mr Malkoutzis is familiar with the wide range of needs of SAE-A members.

He worked in Australia and in the USA for Ford Motor Company for 13 years and for 13 years at PBR and has a Bachelor of Mechanical Engineering degree.

Specialist needs for specialist members

Mr Malkoutzis said the dramatic changes faced by members have also affected SAE-A operations and, like all industry stakeholders, the Society must adapt to changes in the structure and culture of the industry.

"Today, smaller teams of engineers develop vehicles for Australian buyers," he said. "We also have some teams of specialists contributing to global vehicle platforms for the Asian, European, Middle East and USA markets.

"With powerful on-board computers controlling modern vehicles, service technicians need specialist electronics and diagnostics skills.

"While measures have been taken to minimise the impact of industry change on the Society, we must do more to adapt to the new paradigm of reduced membership and fund raising opportunities."

Mr Malkoutzis said that in his term as president he wants the Society to again be the industry platform for debate about engineering excellence in safe and sustainable transport.

"We want to reinstate our position as the 'go to' place for information about state of the art technologies to ensure our members are at the leading edge of their professions," he said.

"To meet the needs of our 21st century automotive industry professionals, we will ensure the Society engages more closely with members.

"We will offer activities and events related directly to their needs for personal and professional development.

"While developing new programs for members, we will continue to deliver the Society's key annual industry events, including the Automotive Engineering Excellence Awards, the international Change by Design Conference and the engineering education experience in a race car - the international Formula SAE-A competition for engineering students."

The 2011 Formula SAE-A competition will be held at Victoria University's Werribee Campus near Melbourne from December 15-18 with 28 teams competing in 11 events in vehicles powered by RON 98 PULP, Ethanol E85 and electric motors.

Host company GM Holden will welcome teams from Australia, Germany, India, Japan, Malaysia, Pakistan and New Zealand.

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Drivers and passengers in vehicles can breathe easy with the arrival in Australia of one of USA's leading air conditioner evaporator unit cleaners.

Whilst Australian motorists are known internationally for their attention to car care grooming and maintenance, what is not generally accepted is the importance of maintaining a clean vehicle air conditioning system to keep drivers and passengers healthy. This is particularly important for children and seniors who are more susceptible to the air they breathe than the average person.

DWD2 Evaporator System Cleaner removes and washes off up to 12 types of fungi plus bacteria mould and mildew breeding and growing in the vehicle's ventilation system. The anti-bacterial foam which is injected directly into the evaporator case of the air conditioning system completely fills the evaporator case before turning into a liquid that flows through the normal drain hole, completely eliminating the pollutants and bad odours at the source.

DWD2 technology, proven over more than a decade, is endorsed and used exclusively by some of the world's leading vehicle marques. The availability of DWD2 in Australia opens up new business opportunities for dealer service workshops, air conditioning specialists, auto electricians and the garage trade, providing a new level of customer service and health safety.

Whilst deodorising and anti-bacterial sprays are available, air conditioning systems are generally treated via the air ducts, far removed from the actual source of the problems gathering on the evaporator core deep in the bowels of the system. From this distance and even under pressure it is virtually impossible to reach the build up of bacteria on the core in

contrast to the DWD2 advanced treatment. Excess moisture from sprayed products being administered this way can also impact on the vehicle's electrical system.

The new evaporator cleaner is promoted for professional use by the trade as it requires the air sensor plate or fan speed resistor to be removed or a 3/16-inch hole to be drilled between the evaporator and the blower fan assembly. A small probe with a directional nozzle is then inserted and a flexible hose is attached between the probe and the aerosol can. The DWD2 cleaning, expanding foam is then injected onto the evaporator core leaving the air fresh with a slight smell of citrus.

Once the system has been cleaned the directional nozzle and plastic tube can be left in place for easy access for future treatments or it can be removed and the small plastic plug that is supplied inserted into the hole.

No equipment is required for the professional application of DWD2. Once cleaned, the system can then operate with a noticeable decrease in operating temperatures, regaining its original optimal efficiency level along with fuel savings also achieved as a result. Re-application of the DWD2 Evaporator Cleaner will depend on the use of the vehicle; however, it is recommended that this be done every six to 12 months.

For further information and distribution enquiries contact Simdikoff & Sons on 1300 73 74 99 or visit www.simdikoff.com.au

REPCO AUTHORISED SERVICE JOINS AAAA

Repco Authorised Service (RAS) has announced that all 330 independent automotive workshops in its network have joined the Australian Automotive Aftermarket Association (AAAA).

RAS National Manager, Peter Webb, believes AAAA membership will further reinforce the RAS group.

"As a group we are always seeking ways to grow the resources and facilities that can help strengthen our members businesses," Mr Webb said.

"Joining the AAAA, the only truly independent aftermarket industry body, will help archive this objective. The AAAA is working tirelessly to secure the future of the service industry through the Choice of Repairer campaign and RAS fully support its efforts.

"As independent business owners, RAS members appreciate the fact that AAAA membership provides not only a voice that will petition Governments on their behalf, but it also delivers easy access to a host of valuable resources, such as HR advice and relevant news in one informed body that is dedicated to their industry."

AAAA Executive Director, Stuart Charity, believes the RAS membership is a real boon for the Association.

"Having a group the size of Repco Authorised Service commit this level of support for the Association is fantastic," he said.

"It is clear that the services we offer will also fill a need within this group of workshops; however, we know that a range of new initiatives, yet to be announced, will add further value," Mr Charity concluded.

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BOSCH AND BEISSBARTH SECURE NEW AGREEMENTS

Bosch, and its tyre service equipment arm Beissbarth, will wrap-up 2011 with an inventory of agreements completed with some of Australia's largest companies in automotive – Michelin, Hyundai, Beaufort and Pedders.

Each of these companies is investing in the latest in equipment for 2011 and beyond and will do so from the range of Bosch and Beissbarth products.

"We are very pleased to have secured these agreements for our equipment and greatly appreciate the commitment these companies have provided," Bosch Regional Director – Automotive Aftermarket, Phil Robinson, said.

Michelin installs training equipment from Bosch

In August, Michelin and Bosch came together to announce the refurbishment of the Michelin training facility in Port Melbourne, Victoria.

At the Michelin head office and training centre, a partnership that was forged between Bosch and Michelin in Europe came to fruition for Australia.

Bosch Automotive Aftermarket Regional President, Asia Pacific, Ken Ford, said two years ago Bosch and Michelin's top management confronted their go-to market strategies in the aftermarket.

"They came to the conclusion that a combined package offer for our products, software, equipment and training could add a lot of value," he said.

Bosch is now seeing the first results of this worldwide co-operation.

After a successful start in Europe, the two companies have been forging closer links throughout the world.

In Asia Pacific the partnership has been successfully launched in countries like China and Thailand, and now Australia.

In Australia, this represented a significant investment to equip the facility with the latest models of Bosch branded truck and car wheel aligners, tyre changers, wheel balancers, hoists and scan tools.

Mr Ford, alongside Marco Brindesi of Michelin, cut the ceremonial ribbon in front of



around 50 guests to officially launch the newly equipped training centre.

New Hyundai Training Centre – new Beissbarth equipment

Hyundai Motor Company opened its new Victorian regional office in late August 2011, located in the Melbourne suburb of Mount Waverley.

Part of this new facility is a state-of-the-art training centre to train everyone from sales staff through to dealership technicians and apprentices.

In order to provide the facility with the right equipment, Hyundai chose to fit Beissbarth's Easy 3D wheel aligner, the Beissbarth MT 865 wheel balancer as well as a 4.5 tonne scissor lift and two two-post hoists.

In this facility the company will be starting a new program in Victoria that aims to train 30 apprentices per year in-house.

Hyundai Regional After Sales Manager for the Southern Region, Colin McLachlan, said the company had to look at this training to develop the company.

Hyundai chose the Beissbarth equipment for a number of reasons, including its quality and ease-of-use.

As an example, Hyundai cars with wheel trims have these mounted in a unique way utilising the wheel studs, this makes some types of wheel aligners difficult and time consuming to use.

With the Beissbarth 3D aligner it is not only a reliable and easy method but quick as well.

Hyundai dealerships have already recognised the benefits of using Beissbarth and so have chosen to install the tyre balancing and aligning equipment.

Hyundai dealers check and adjust wheel alignment and balance on all new vehicles to ensure the vehicles are of the highest quality prior to delivery.

Beaufort rolls out refurbishment program

Over the remainder of 2011 and during 2012 Beaufort will roll out a program to refurbish many of its stores with new equipment.

As a national provider of specialist wheel servicing, the company deals with everything from car, motorcycle, light and heavy commercial vehicles to agricultural and industrial wheel servicing.

It provides a complete service from supplying the right tyres to fitting, balancing and aligning.

With this in mind, it is vital the equipment is high quality and reliable.

Earlier this year after a national request for proposals, Beissbarth was appointed as Beaufort's 2011 sole preferred supplier of capital equipment such as Beissbarth wheel aligners, passenger and truck wheel balancers and passenger and truck tyre changers, as well as two and four post hoists and platform lifts.

Stores will have new equipment including the Beissbarth MS65 tyre fitting machine, the ML1800 – 6R wheel aligner, the MT 845 ADP car wheel balancer and the MT787 truck wheel balancer.

Pedders Invests in new test lanes

Pedders is best known for its expertise in the supply and fitment of suspension components, but also offers additional services.



Pedders stores - of which there are around 121 stores nationally - employ wheel alignment facilities with many already utilising Beissbarth wheel alignment machines.

One such store, Pedders in Moorabbin, Victoria has added a new piece of Beissbarth equipment, the TL600 test lane for passenger cars, to assist in providing its well-known Pedders 28 Point Check and Report.

This report includes an under car inspection, drive on shock absorber test and brake inspections and tests.

The Beissbarth TL600 will assist the stores with providing a roller brake test, suspension test and side slip test.

Currently a number of Pedders stores throughout Australia have been equipped with the Beissbarth TL600 test lane and the roll out will continue during 2012 to all Pedders outlets.



What's a QR Code?

A QR Code (Quick Response Code) is a type of matrix barcode (or two-dimensional code) first designed for the automotive industry and is arguably the fastest growing form of linked advertising in the world today. Clutch Industries plans to progressively use the QR code system to provide direct links to web and text based promotions and advertising for many of its products. So how do you read a QR Code?



DOWNLOAD A QR READER APP TO YOUR SMART PHONE IF YOU DO NOT ALREADY HAVE THIS SOFTWARE



OPEN THE QR CODE READER SOFTWARE



POINT YOUR CAMERA PHONE AT THE QR CODE



THE QR CODE WILL DECODE IMMEDIATELY



YOU WILL INSTANTLY GO TO THE QR WEBSITE

 **Clutch Industries**
"Engineering Innovation"

To fully utilize QR Codes you need a mobile phone (with a camera), QR code reading software and internet access.

TRW D-TEC's next generation

Australian Truck and Auto Parts (ATAP) has announced the TRW D-TEC pad has undergone technological improvements to achieve a considerable reduction in dust while still providing great performance.



TRW is recognised globally for innovation and engineering excellence, bringing you OE matching, top quality aftermarket parts.

D-TEC Next Generation is the natural progression for the friction range.

TRW engineers through extensive research and development bring you these pads with the same high friction and wide heat range as before, only now they have been proven to work with significantly less dust than the European OE friction formulation.

It is easy to identify the D-TEC brake pad with the distinctive appearance.

There is a silver label on the widely recognised TRW red box and can be identified by the unique silver colour of the backing plate.

D-TEC continues to provide the excellent levels of comfort everyone has come to expect from TRW, with accessories and shims included to ensure products are in line with Original Equipment.

"Along with less dust, the improved wear rates, stopping power and performance make this ceramic pad one of TRW's best yet," ATAP's Gideon Segal said.

"Releasing this upgrade gives us the confidence this pad can deliver its excellent friction abilities every time, with less dust."

The D-TEC Next Generation pad range covers Japanese, Korean and all the top Australian references, including the latest models from Ford, Toyota and Holden. Like the European friction formulation range, D-TEC is exclusively available through ATAP.

"With our national network, D-TEC Next Generation represents a great opportunity for resellers and workshops to really impress their customers with a great all round brake pad," Mr Segal said.

Contact your local ATAP Warehouse for more information.

Compac High Quality Workshop Presses

Following on from its highly successful launch of new workshop equipment at the AAAA Expo in Melbourne, Calfinn has continued to add more quality products to its already extensive range.

The latest additions are the Compac High Quality Workshop Presses covering 25, 50, 70 and 100 tonne applications available with a choice of hand, foot or electro-hydraulic operated models.

Designed in Denmark by Compac, which was established in 1946, these units are an investment providing high quality long service life and outstanding features covered by a three-year guarantee.

These features include fully welded frames, hard chromed pistons, movable cylinders with long strokes and quick approached systems.

Calfinn imports world leading brands including the Compac Hydraulic Jacks which also feature a three-year warranty, the original American made Go Jak range, Danish made Scangrip Spring Compressors and the Powerhand range of workshop tools from Serenco in Holland.

Calfinn's customers include Australia's market leaders in the automotive aftermarket, automotive refinishing, tyre industry, towing and motor racing industries.

Together with an efficient sales, service and distribution network covering all states in Australia; Calfinn has well-established service centre and major warehousing facilities located in Sydney.

For full details of the range visit www.calfinn.com.au contact Calfinn on 02 9548 5350 or email sales@calfinn.com.au



Nolathane proud of its human answering service

At Nolathane, customers constantly comment on how they can easily pick up the phone, dial the toll free number and have a customer service representative answer the phone immediately to take an enquiry.



In this day and age of technology, many companies have switched to the impersonal automated answering service to direct sales and technical enquiries - and for most this a frustrating and slow process.

Nolathane Marketing Manager Andy Nolan noted the company was a goods and services company.

"And by services I'm referring to all the key marketing elements that occurs pre, during and post sale that can really improve customer satisfaction and overall loyalty," he said.

"So having a human being and not a machine answering incoming calls just builds on the positive experience for our customers."

Nolathane also puts its team through extensive new product training and recognised customer service courses to ensure a very high standard of sales and technical support to its customers.

Designed to integrate and offer a fully balanced handling solution, Nolathane suspension offers replacement bushings and alignment products.

So for a catalogue, brochure or technical information on any of the Nolathane products contact the Redranger team toll free on 1300 882 355 or visit www.nolathane.com.au

Bilstein SteerTec Aftermarket steering gears now available

Brand new – no re-con parts.

Now on sale also in independent aftermarket are original equipment Bilstein SteerTec rack-and-pinion steering gears.

With this offer, Bilstein provides for the first time ever brand new OEM steering racks for the aftermarket.

Available part numbers include selected passenger car and light-commercial vehicle applications for the renowned brands Mercedes-Benz and Volkswagen, in particular, meaning first-class 'Made in Germany' OE quality steering feel and safety on Australia's roads.

All Bilstein SteerTec steering racks will be supplied as a complete and ready to install system, including tie rod ends, the rubber boots and grease.

A core charge is not applicable as all parts are brand new.

Suspension specialist Bilstein has been adding original equipment rack-and-pinion steering gears to its product range just this year in Europe and is now making these quality products available to Australian dealerships.

The Bilstein SteerTec steering gears are exclusively new parts which are manufactured to OEM quality standards and series specifications.

Bilstein trading partners can now get shock absorbers, suspensions, springs and steering gear in original-equipment quality from a single source.

The new Bilstein SteerTec references are also available on TecDoc and in the Bilstein online catalogue on www.bilstein.com

Thorsten Schwippert, head of Sales and Marketing at Bilstein in Germany, said Bilstein SteerTec's uncompromising adherence on advanced technology and quality in the aftermarket is attributable not



only to its experience as an original equipment manufacturer.

"When it comes to spare parts, Bilstein customers are fully confident in top product performance made in Germany," he said.

"Adding steering gear part numbers to our portfolio, is a big benefit to our trading partners."

The Bilstein SteerTec rack-and-pinion steering gears have been designed for passenger car applications and vans, complying with front-axle loads of up to 30 kN. As with any Bilstein product, the steering systems meet the highest standards of safety and driving comfort, with a variable steering ratio to reduce the steering effort and improve overall vehicle handling.

This range extension is exclusively available from Bilstein and offers all new products straightly coming from Bilstein's affiliated ThyssenKrupp Presta SteerTec OE manufacturing lines.

The completely new manufactured steering gears contain 100 percent newly produced components, making the full system identical to the original OE part in accordance with OEM specs.

Careful inspections are carried out at the manufacturing plant in Germany, always in line with the stringent OEM quality requirements.

The original equipment quality parts from

Bilstein are available in three different versions – standard steering gear, parameter steering gear and for Electric Power Steering gears (EPS).

Martin Hyar, Regional Sales Manager at Bilstein, noted that the Mercedes-Benz Sprinter and, the identical VW Crafter are well known with Australian van drivers.

"For these delivery vans the steering rack demand is relatively high due to the high mileage these vehicles achieve, the unprotected in front position of the steering rack, and the white van man driving attitude of some drivers," he said.

"But also for the top end luxury vehicles, such as Mercedes-Benz passenger cars, there is a good sales potential as the owners like to take advantage of this offer of brand new OEM steering racks rather than installing some dubious reconstructed parts.

"Workshops preferring re-con parts often have to deal with a badly damaged steering rack that will not qualify as a core.

"In this case our latest offer of brand new steering racks also provides new options."

The Bilstein SteerTec rack-and-pinion steering gear part numbers (ZS 045/048/050/054, LZS 1/2/3) are available for aftermarket trade and listed in the Bilstein online catalogue at www.bilstein.com

Is it DIS Coil failure or CAM/crankshaft component failure?

Distributor-less Ignition Systems (DIS) in today's modern cars have eliminated much of the maintenance that used to be associated with the ignition system.

No distributor means there is no distributor cap or rotor button to replace and no vacuum or mechanical advance components to cause ignition timing issues.

Therefore, this type of ignition system is much more reliable, but this does not mean it is not without issues.

Failures can occur for many reasons and understanding how to identify and diagnose common DIS problems can save you a lot of time when faced with an engine that cranks but refuses to start, or one runs that is either missing or misfiring on one or more cylinders causing poor drivability.

If an engine cranks and will not start, it is fuel, ignition or compression related.

Ignition is usually the easiest of the three to check because on most engines, all you have to do is pull off a plug wire (where applicable) and check for spark when the engine is cranked.

With engines using coil-on-plug DIS systems there are no plug wires, so you have to remove the coil and insert a well insulated plug wire or adapter to check for a spark.

If there is no spark in one cylinder, try another, if no spark in any of the remaining cylinders would generally indicate that the DIS module (Fig A) or the Crankshaft Positioning (CKP) sensor (Fig B) has failed.



Fig A

Magnetic crank position sensors produce an alternating current when the engine is cranked so a voltage output check is another simple test that can be performed.

With the sensor connected, read the output voltage across the appropriate module terminals while cranking the engine.

If you see at least 20mV on the AC scale the sensor is good, meaning the fault is probably in the module.

If the output voltage is low, remove the sensor and inspect the end of it for rust or debris (magnetic sensors will attract iron and steel particles).

Clean the sensor, reinstall it and test again.

Make sure it has the proper air gap (if adjustable) because the spacing between the end of the sensor and the reluctor wheel or notches in the crankshaft will affect the sensor's output voltage.

If the air gap is correct and the output is still low, replace the sensor.

Hall Effect crankshaft position sensors typically have three terminals, one for current input, one for earth or ground and the remaining one for signal output.

The sensor must have voltage and a good earth or ground to produce a signal, so check these terminals first with an analogue voltmeter.

Sensor output can be checked by unplugging the DIS Module and cranking the engine to see if the sensor produces a voltage signal.

The voltmeter needle should jump each time a shutter blade passes through the Hall Effect switch.

If this is observed on an



Fig B

oscilloscope, you should see a square waveform.

No signal would tell you that the sensor has failed.

The CKP sensor is also used to trigger the fuel injectors, so if there is no spark and no injector activity, the problem is likely to be in the Crankshaft Position Sensor.

The Automotive Components and Accessories (ACA) CAM and crank angle sensor program features high quality circuit board modifications, improved internal sensor design and resin encapsulated.

ACA's CAM and crankshaft sensor range covers more than 1285 application listings with a total of 199 crankshaft sensors and 109 camshaft sensors.

The ACA CAM and crankshaft sensor range offers an Australian-wide warranty for 12 months or 20,000km.

For technical advice, contact the ACA Sales Team on 1300 ACA EFI or 1300 222 334 between 8am and 5pm Monday to Friday.



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Bosch products are available to service engine management, electrical, diesel, braking and wiping systems. For a comprehensive list of products call Bosch Customer Service on 1300 30 70 40. www.bosch.com.au



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Smart-O plug intelligent drain plug launches in Australia

Smart-O plug, the intelligent drain plug, has launched in Australia and is available to auto service chains, garages, fleets and auto part retailers via auto performance parts company, Phenix Industries Australia.



Smart-O is one of the most advanced drain plug programs which Phenix Industries claims offers the safest sealing and retention mechanism ever devised for this product category.

The Smart-O plug range has been consolidated to only 17 plugs, which covers more than 90 percent of the automotive market.

The engineered O-ring specially developed by Parker and DuPont self-expands up to 10 percent upon contact with engine oil.

The plug achieves superior sealing performance and protection against oil leaks, self-loosening of the plug while offering oil pan thread protection, environmental protection and an extra profit item for service operators and retailers.

The Smart-O plug was originally invented and patented in the USA and later internationally to counteract what the inventors witnessed as frequent failures of drain plugs in garages to high-end certified dealerships.

Failures appeared in terms of oil leaks, problematic sealing when oil pan threads were worn, or even negligent installation of service mechanics causing the plugs to fall out with sudden oil loss and engine damage as a result.

For service operators the implication would be liability costs, increased insurance premiums, engine replacement costs, damage to corporate image and lost customers.

For end-users, the Smart-O plug offers piece of mind while reducing the risk of the unpleasant discovery of oil leaks under the car or on the driveway, and the inherent risk of damage to their engine, environmental cleanup costs, protracted and uncertain negotiations about engine replacements and compensations from the service operators.

The market conditions are ripe for a complete, simple, eco-friendly and highly marketable sealing solution for the oil pan.

For further information visit www.smart-o-plug.com

Bremtec Euroline – brake pads engineered for European applications

The requirements of European brake system manufacturers to provide a brake system that performs yet provides a level of comfort and safety is now a standard when it comes to European vehicles.



Bremtec Euroline's patented formulation is specifically engineered for European applications and incorporates the latest CMC technology (Ceramic-Matrix-Composites) to ensure the optimum balance of performance and durability.

From the formulation of the Ceramic Matrix Composites Bremtec Euroline offers exceptional braking characteristics due to the brake pads dissipating heat, ensuring greater performance, even after repeated hard stops, while still providing a high level of comfort and safety.

Bremtec Euroline also comes fitted standard with Exclusive Advanced Wolverine Cold Noise Insulators, a shim specifically engineered to solve brake noise challenges at low temperatures while still providing excellent noise attenuation performance across a wide temperature range.

For your next European brake job don't risk it, fit Bremtec Euroline.

Call 1300 FRICTION (1300 374 284) for your nearest Bremtec Euroline stockist.

More catalogues from Premier Auto Trade

Premier Auto Trade has announced further updates to its comprehensive product catalogue series with the early 2012 release of Catalogue 8, Edition 2.

This new catalogue will include more than 300 part numbers with over 7000 vehicle application listings making it one of the largest of its type in the Australian aftermarket.

This catalogue features a huge range of products including coolant temperature sensors, air temperature sensors, knock sensors, oil pressure switches, relays, connector sets and other miscellaneous items.

This new Edition 2 of Catalogue 8 has also had several new product lines added including ABS modules, fuel temperature sensors, Engine Control Units (ECU), and speed sensors.

The new catalogue features more 128 new part numbers covering petrol, LPG and diesel vehicles.

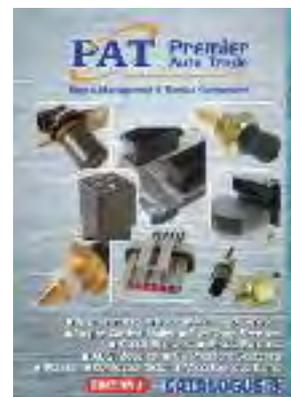
This follows the recent launch of the Premier Auto Trade Racing and Performance catalogue, and will be followed in 2012 by the release a new ignition leads catalogue to extend the already comprehensive range.

Premier Auto Trade's range of engine management and service components specialises in genuine and original equipment (OE) products from the world's leading manufacturers including Bosch, Delphi, Pierburg, VDO, Standard Motor Products, Walbro, Denso, FAE, Valeo, Hitachi, Bougicord, Bremi, Mitsubishi Electric, Walker Products Turbosmart, Fuelab, BMC Air Filters and Haltech.

Premier Auto Trade is located in Melbourne, Sydney and Brisbane and distributes products throughout Australia via a network of specialised resellers and leading automotive retail groups.

The Premier Auto Trade catalogues are available to specialist resellers and distributors.

For more information contact Premier Auto Trade on 1300 4 PAT SALES (1300 472 872) or visit www.premierautotrade.com.au.





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A Supaloy from SuperPro with Grip Dynamics

Supaloy is a new innovation and design from the R&D team at SuperPro.

A blend of high-stress, corrosion resistant and hard-anodised metal alloy coupled with the proven SuperPro polyurethane delivers this innovative metal-alloy hybrid called Supaloy.

This new leaner, lighter alloy solution helps lower weight, fuel usage and running costs while improving service life and reliability.

The first product to be released in this fantastic new design are replacement lower control arms for VW, Audi, SEAT and Skoda, providing a 44 percent reduction in unsprung weight, better alignment geometry and improved safety with alignment enhancements.

These include improvements in positive caster and critical changes to anti-lift characteristics that are part of SuperPro's Grip Dynamics system that aims to improve grip for better handling and performance outcomes.

The use of Supaloy also helps with better steering feel while the alignment changes

contribute to a significant reduction in body roll.

The SuperPro development team has spent a lot of time looking at low-cost high-value ways of improving real world performance.

Nearly 30 years of experience with suspension has shown that it's possible to get great dynamic results with improved handling and grip by paying attention to the details.

This focus on the key alignment and dynamic elements that lead to more grip and better handling are used in the new Grip Dynamics technology system

Extensive development testing has shown significant improvement in on-road performance with positive changes to steering feel, handling and safety.

"The handling is much more precise, instantly noticeable... very much improved," Guy Harding from the VAG tuning powerhouse APR said after testing the new Supaloy arm.

As with most SuperPro innovations, this



Supaloy solution for VW Golf helps uses Grip Dynamics technology for better handling and grip

is only the beginning, with many more applications and designs set for the future.

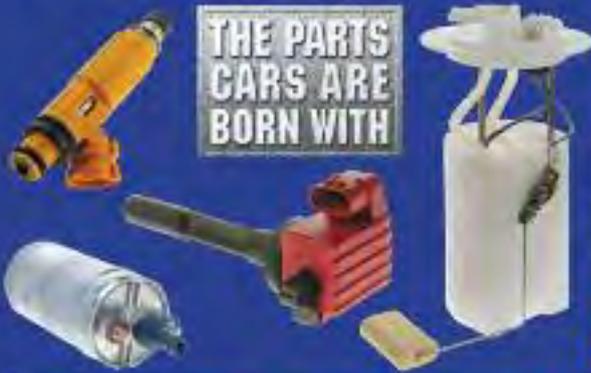
The obvious Supaloy benefits will make their way through the SuperPro range and continue the long and proud development tradition.

You can read more about SuperPro Grip Dynamics technology and the Supaloy products at www.superpro.com.au or call 07 3892 9000.



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Inawise Tyre Pressure Monitoring System

We all know that tyre monitors play an important role in a vehicle's safety and performance.

Low tyre pressures can severely increase braking distances and reduce handling.

Low tyre pressures will also create havoc with your vehicle fuel economy, especially while towing.

The temperature of the air in your tyres is also something that needs monitoring.

Not only do these variables affect a vehicle's performance and tyre wear, they are also very important safety issues.

A price can't be placed on your family's safety, so having a system to monitor these variables is definitely invaluable.

The Inawise Tyre Pressure Monitoring System (TPMS) is a simple, effective tool

that has the potential to save lives and money.

The TPMS constantly monitors the tyres and a built in audible and visual alarm alerts the driver to any variance in pressure or temperature.

At a quick glance, you can see exactly how your tyres are performing.

This is extremely effective because tyres can become dangerous long before any visual problems appear.

Installation of sensors into the vehicle's rims is best completed at your local tyre shop. Once they have been installed the unit can be mounted in a suitable position in the cockpit of your vehicle.

Power to the unit is either hard wired to the battery or via the cigarette lighter.

The antenna wires are then run in opposite directions across the dash and down the sides of the vehicle.



These can often be hidden behind trims or under carpet or seats.

Once installed you can sit back with the peace of mind, knowing that your tyres are constantly being monitored and you have their pressure and temperature at your fingertips.

For more information about Tyre pressure Monitoring Systems call Inawise on 03 9330 4998 or visit the website at www.inawise.com



Why Use Precious Metal Spark Plugs

High ignitability. It's that Simple.

- Optimum Fuel Economy = Cost Savings
- Increased Power = Superior Performance
- Lower Emissions = Reduced Environmental Impact of your vehicle

Many people wonder why we use precious metals like Platinum and Iridium in our spark plugs and you might be surprised by the answer.

The phrase "achieving a longer service life" is thrown around a little too often in the same breath as precious metal spark plugs, but this is just a misconception. **High ignitability** is the core reason for using precious metals in superior quality spark plugs.

High ignitability means that a spark plug can ignite very lean air/fuel mixtures and this in turn ensures the complete combustion cycle occurs. The result is **minimum fuel economy, increased power** and a reduction in the level of emissions that an engine will expel. This is a bonus as car manufacturers also rely on precious metal spark plugs to help reduce emissions.

Ok, it's true that both platinum and iridium spark plugs have higher melting and oxidation points than the nickel electrodes used in conventional spark plugs. This certainly helps to increase service life and is an added advantage to using precious metal spark plugs, however the key reason is the high ignitability.

So the next time you install a set of NGK Precious metal spark plugs, use them for the right reason. **High ignitability. It's that Simple.**

www.ngk.com.au

NAME: Barry Wilson
 OCCUPATION: Workshop Mechanic
 HOBBIES: Self-Confessed Car Nut

Schaeffler Automotive Aftermarket and Tecdoc

An alliance that ensures accurate and fast parts identification.

Schaeffler Automotive Aftermarket's co-foundation and ongoing involvement in TecDoc, a world leading automotive aftermarket information system, came into being as the company sought to find new ways of providing its automotive repairer customers worldwide with regular and improved access to the latest data resources.

TecDoc was established in Germany in 1995 and is owned by a consortium of 26 aftermarket parts manufacturers, that along with Schaeffler Automotive Aftermarket brands LuK, INA and FAG, includes the largest and highest quality aftermarket brands in the world.

TecDoc supplies the independent aftermarket with current and extensive data for the identification of spare parts for private and commercial vehicles all over the world.

The system consists of a database, with current comparison numbers of co-operating parts manufacturers that is used by some 30,000 resellers and repairers worldwide to accurately allocate spare parts to vehicle types.

The standardised product data generated by TecDoc is updated every quarter and offered as a DVD or as an on-line catalogue.

The TecDoc database currently includes approximately 2.9 million parts for private and commercial vehicles sourced from some 300 parts manufacturers worldwide. The TecDoc service also includes an online ordering system to ensure that repairers have fast access to parts located via the TecDoc on-line cataloguing system.

According to Schaeffler Automotive Aftermarket Business Development Manager for Australia, Pierre Marshall, "The co-operation between Schaeffler Automotive Aftermarket and TecDoc Australia has resulted in the production of the first Australian and New Zealand aftermarket focussed LuK Clutch catalogue this year, which is probably the most comprehensive of its type ever released in Australia."

"TecDoc also allows Australian manufacturers of aftermarket components to take their products to the global aftermarket in a cohesive and standardised manner.

"We are very proud of the fact that Schaeffler Automotive Aftermarket is co-founder of this outstanding aftermarket industry resource."

The benefits of having accurate and regular broad vehicle data applicable to each country's specific car parc ensures that independent workshops have access to the best quality replacement parts at all times.

This data also ensures that independent repairers can compete on a more level playing field with dealer workshops and their factory supplied data.

To find out more about the Schaeffler Group's premium quality aftermarket product range, contact Mr Marshall on 0439 197 170 or email LuK-AS.au@Schaeffler.com

For more information about TecDoc, contact Andrew Mattock on 03 9534 7802, 0420 277 240 or email andrew@tecdoc.com.au

**Just quietly,
our brake pads are very quiet...**

- ...and keep your wheels clean***
- ...and have excellent pedal feel**
- ...and are long lasting**
- ...and deliver great stopping power**

**Now available in
OVER 210
REFERENCES**

FERODO

THERMO QUIET

NAO (Non-Asbestos Organic) Ceramic Friction Technology provides low dust with great stopping power and excellent pedal feel.

Patented BIL™ integrated sound insulator dissipates heat and vibration, extending brake pad life and reducing noise.

Laser-Shaped Fingers™ technology is designed for optimal shape to eliminate noise and vibration.

An underlayer ensures minimum heat transfer for better and longer lasting brake performance.

*This vehicle shown is fitted with Ferodo™ Ceramic Friction™ brake pads.

For more information call **1300 FERODO** (1300 337 636) email ferodo@motospecs.com visit www.justquietly.com.au

The most advanced display trailer

Invision Sales, one of Australia's leading lighting specialists, has designed and built a lighting display trailer that is so advanced it displays work lights at heights up to three metres.



The lights are mounted to a rack on a telescopic ram that elevates out of the roof of the trailer and can be adjusted to any height.

"The ability of the trailer to display the work lights at any height means we can show customers exactly what they'll see when the lights are mounted to their own machinery," Invision Sales Managing Director, Wayne Blackman, said.

"This feature on the trailer helps customers make an informed decision to find a lighting solution that best suits their needs."

The trailer has been wired so every product can be switched on individually, making it easy to compare different lights and combinations.

With more than 100 products from small step lights to the world's most powerful LED scene light to emergency and trailer lighting, the trailer covers all markets and will allow customers to make an informed decision about the lights they require.

To find out when the new display trailer will be in your area, contact Invision Sales on 03 9330 2299.

Drivetech launches innovative, easy-read Power Steering Catalogue

Trawling through weighty catalogues in search of the right power steering replacement part is a thing of the past thanks to Drivetech, which has just published the 2011 Power Steering catalogue.

The new Power Steering Catalogue is just 40 pages, making it easy to handle, read and refer to.

Finding the relevant part is also much simpler, thanks to the new catalogue's clear, concise layout.

Drivetech's Power Steering Catalogue is divided into the product groups of power steering pump assemblies, pulleys and drive gears, power steering rack assemblies, low and high pressure hoses and tools and accessories.

The catalogue also features a 16-page identification guide, complete with colour photos.



Absolute ease of use

According to Product Manager Power Steering (Motospecs), Adam Pace, the new publication has been designed with ease-of-use in mind.

"Nothing like this has been produced for the industry before," he said.

"This is a very manageable catalogue, designed to simplify things for the end-user. "It's easy to read, it's clear simple and covers most popular models."

Mr Pace said ordering the right part has never been more straightforward.

"It's a 'glossy' publication with a very sturdy cover, so it can cope with life in a workshop environment," he said.

"Aimed at general workshops, it's designed for mechanics needing to replace a power steering part, not rebuild the whole assembly.

"It features replacement parts with complete assemblies only."

Be assured of quality with Drivetech

When you order power steering parts through Drivetech, you can be confident you are purchasing high quality products.

All Drivetech's replacement power steering parts are built to exacting specifications using quality new components, sourced from industry-leading suppliers and manufacturers.

Such high standards are crucial when you consider the radical advancements in steering technology in recent years.

For more information regarding Drivetech's new Power Steering Catalogue call your local branch on 1800 463 646 or visit www.motospecs.com.au

Is your cooling system prepared for summer?

Summer is fast approaching so ensure that your cooling system performs as it should by installing Tridon cooling system products.

Tridon's range of cooling system products include radiator caps, hose clamps and thermostats, all of unrivalled quality in the market.

Leading into summer it is vital that all of these components are in peak condition to avoid breakdown or worse still, major engine damage.

At the heart of your vehicle's cooling system is the thermostat.

Your vehicle's thermostat acts as the engine's temperature valve, opening and closing to ensure consistent temperature no matter the conditions.

Leading into summer, it is vital that your vehicle's thermostat is ready for the heat.

When it comes to thermostats, Tridon is at the forefront of technology.

Fully factory calibrated, Tridon's thermostats are designed to meet or exceed OE specifications.

The Tridon Thermostat catalogue contains in excess of 500 numbers covering more than 13,000 vehicle applications.

Tridon's cooling catalogue also features more than 175 High Flow thermostats which are specially designed to improve your cooling system's efficiency. Tridon's High Flow range allows over 30 percent more coolant flow than a standard thermostat.

For a copy of the most up to date and comprehensive thermostat or automotive cap catalogue contact Tridon Australia on 1300 362 263 or visit www.tridon.com.au

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FOR ABSOLUTE CONFIDENCE IN EVERY BRAKE CHANGE
BENDIX ANCILLARY SOLUTIONS

MINIMISES
BRAKE WEAR
MAXIMISES
RESULTS



Ceramic High Performance Synthetic Brake Lubricant

Reduces wear, corrosion & noise.

- Non-melting
- Extreme temperature protection to 1650°C
- Lasts the life of the brake job
- Prevents rust & corrosion
- Insoluble, waterproof & chemical resistant
- Silences callipers

High Performance DOT 3 & DOT 4 Brake Fluid

Minimises brake part corrosion.

- Suitable for hydraulic & conventional systems
- Extreme temperature protection
- Long lasting formula maintains performance
- Inert to both natural & synthetic rubber
- Minimises corrosion of metal components
- Meets Australian & International specifications



Brake/Parts Cleaner & Degreaser

Fast acting Cleaner & Degreaser.

- Ozone friendly, contains no CFC's
- Effectively removes impurities from brake components
- Leaves no residue
- Non-corrosive to metals and non-staining
- Cleans disc rotors after machining, before brake pad installation
- Cleans instantly to stop squeaks and squeals in brakes
- Use on brake parts and other cleaning or degreasing applications



FOR MORE INFORMATION

Freecall the Bendix Brake Advice Centre on
1800 819 666 (8am-5pm Monday to Friday EST)

or +61 3 5327 0244 from overseas.

Or visit bendix.com.au or bendix.co.nz

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with confidence



CENTURY YUASA BATTERY RECYCLING...

— +
making a
positive
change

The Century Lead Acid Battery Recycling program provides a solution which enables councils and businesses to responsibly dispose of hazardous used lead acid battery waste and to realise the value of this resource.

The Program is backed by Planet Ark and is supported by a dedicated website, freecall national phone number, printed material and collection service.

To make a positive change contact a Century recycling specialist on 1300 362 287 or visit recyclemybattery.com.au



It's back! Pure motorsports excitement

The 2012 Bilstein motorsports calendar will be a surefire hit with all motorsport fans.

The spectacular international motorsport pictures compiled here by the suspension, shock absorber and spring specialist Bilstein are guaranteed to whet the appetite for the 2012 season.

For just EUR 9.50 plus shipment costs, the new Bilstein motorsport calendar is a genuine eye-catcher, featuring the most exciting scenes from the best race series' month after month.

Bilstein once again manages to conjure up that spine-tingling motorsports atmosphere in your home, office or workshop.

The main focus of this year's color pictures is on the Audi R8 LMS at the 24-hour Nürburgring race.

The track also features in the month of May, with a bird's-eye view of the legendary motorsports venue, while September offers a rare picture of the Truck Grand Prix at the Nürburgring.

Further highlights are images of the Ultra 4 American Rocksports Challenge, the Rolex 24 Hours of Daytona with the Turner Motorsport BMW M3 and the Ferrari 458 Italia in the classic 24 Hours of Le Mans.

The Bilstein calendar will bring the entire year of international motorsport to life once again in 2012.



The 2012 motor sports calendar is now available to order from the BILSTEIN fan shop at <http://www.bilstein-shop.bd-group.de> or email info@bilstein.de

Small and powerful LED worklight

The JW Speaker 4410 series is a very small work light, designed to deliver a powerful 1100 lumens of bright, white light for mounting and illuminating where space is limited.



The lens pattern gives a tight flood beam, making it ideal for applications such as reversing light, illuminating specific danger areas such as ladders on mine vehicles, at the rear of prime movers and on taxi light bars.

The construction is a heavy-duty die-cast aluminium housing with a single bolt mount universal bracket and a UV-resistant polycarbonate lens.

The electronics are solid state and designed to withstand shock and vibration while the whole lamp is sealed to IP67, making it suitable for the toughest conditions.

To add to the lamps versatility, it is suitable for 12 to 48 volt applications and comes complete with an integrated two pin Deutsch weatherproof socket and mating two pin Deutsch weatherproof plug.

At a diameter of just 75mm (three inches) and the LED features such as over 50,000 hours of life and current draw of between 0.2 to 1.2 amps, the JW Speaker 4410 series needs to be seen to believe its small size and powerful light output.

For complete specifications on the Speaker 4410 Series visit www.speakerlighting.com.au or contact Invision Sales on 03 9330 2299.

Karmot expands

Since being established in 1985, Karmot has become synonymous with high quality, innovative workshop equipment and automotive parts.



In July the company released the new Partech glow plug catalogue, giving you up-to-date listings on today's vehicles as well as dimensions, cross references and pictures of the product, making the job of identifying the right product for the job easier.

The Partech glow plug is now available in pack sizes of 12 allowing the servicing of three sets of four or two set of six.

Ask a Karmot representative for a hard copy or alternatively download a copy from the website.

Karmot is also expanding its range of quality workshop and service equipment.

These new products are specifically designed to suit the general automotive and dealership workshop, including industrial off road, materials handling and motor cycle segments of the industry.

Some of the innovative new products that are being introduced include Sherpa roller brake testers, Liftech tyre changers and wheel balancers, Ritch digital tyre inflators, Liftech ride on mower lift and ATV/motorcycle lift.

Sherpa roller brake tester is manufactured in Germany and is European TUV standards approved.

Sherpa roller brake testers accommodate cars and commercial vehicles up to 13,000kg per axle.

For the wheel and tyre sector Karmot is releasing easy to use and technically advanced tyre changers and wheel balancers.

These will include semi to fully automatic units with power assisted arms.

Both the tyre changers and wheel balancers are available in sizes to suit motorcycles, cars and trucks.

For more information on all of Karmot's new products, email sales@karmot.com or call 1300 KARMOT (1300 527 668).



Throttle Position Sensors – don't you want to throttle it?

This important fuel input sensor is generally located on the throttle body and provides a voltage signal that relates to the position of the throttle spindle/ butterfly from an idle condition and up to full throttle.

There have been many changes in the requirements from this sensor since it was introduced on the early EFI systems right up to the current fly by wire systems.

1. TPS with contacts only

This unit generally incorporates two sets of contacts:

- a. The "foot off" accelerator idle position contacts - used to enrich the mixture during idle and to cut out the injector operation when decelerating. Note it is important that the idle contacts are closed during the "foot off" accelerator position and opens as the butterfly moves from the rest position.
- b. Full Load Contacts – used to supply extra fuel during high engine load conditions, generally before full throttle e.g. 60-70 percent throttle.

2. Potentiometer type TPS (three wire)

This is a commonly used TPS that monitors the accelerator position from idle, all the way to fully opened position.

A varying voltage generally from approximately 0.5V up to approximately 4.5V would indicate the throttle position. This is achieved by a simple potentiometer.

3. Combination of contact and potentiometer TPS

This is a potentiometer type TPS with an integrated idle contact to monitor the "foot off" accelerator idle position.

This type is identified by an extra fourth pin, however not all four pin TPS units are of this type.

Note it is similar to the "contact type" TPS and the idle contact must be closed during the "foot off" accelerator idle condition, and opens as the butterfly just moves from the rest position.

4. Combination of contacts and potentiometer

This is a potentiometer type TPS with integrated idle and full load contacts, generally identified by two separate three pin connector plugs.



- a. One plug for the potentiometer that is utilised by the engine management system.
- b. One plug for the contacts that is generally utilised by the transmission system

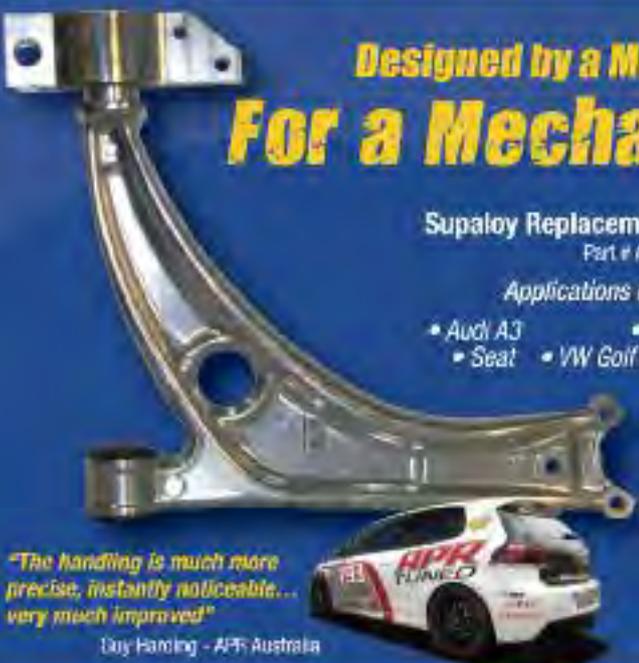
5. Dual Potentiometer TPS

This is a common TPS required by the fly-by-wire systems to monitor the throttle butterfly movement.

Note that even though this TPS has a dual potentiometer it may have as little as four pins at the connector plug.

For more information contact Premier Auto Trade by visiting www.premierautotrade.com.au

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**Designed by a Mechanic
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Supaloy Replacement Arm
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Applications include:

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- Skoda
- Seat
- VW Golf / Jetta

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Featuring the new "Grip Dynamics" system which improves grip for better handling and performance outcomes by focussing on key alignment and dynamic handling elements.

- ✓ **Fast and easy remove and replace**
- ✓ **Integrated solution – 44% weight saving**
- ✓ **Instantly noticeable performance upgrade**
- ✓ **Better turn in - More precise steering**
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Hot Devil Fast Flame

Hot Devil's range of propane and Map/Pro torches provides premium performance for the professional tradesman.

The new release of the Fast Flame series is sure to bring out the professional in all of us.

The torches have been engineered to produce a larger and stronger flame, featuring automatic ignition, anti-flare and adjustable flame control all with stainless steel nozzles.

Not only are these torches a plumber's tool but they are also ideal for use on mechanical repairs such as loosening seized or rusted nuts and bolts and repairs to exhaust systems.

Available as kits or individual cylinders the Hot Devil propane and Map/Pro range is competitively priced and is the perfect addition for any tool box.

For more information contact Hot Devil on 03 9775 0713 or visit the website www.hotdevil.com.au to view the complete range of products.



Davies, Craig launches Universal Fan Mounting Brackets

Iconic Australian automotive cooling technologies manufacturer Davies, Craig has produced a Fan Mounting Bracket Kit offering a variety of simple, sturdy and tidy fan mounting options.

The black powder coated universal mounting brackets are designed to accommodate two 9, 10, 12, 14 inch fans or one 16 inch fan for most vehicle applications.

The kit features two simple slot-adjustable, vertical or horizontal mounting bars allowing for first-rate flexibility when positioning fans close to the radiator core.

This mounting bracket kit will assist you to quickly and easily install and rigidly support your thermatic fan or fans without the need to interfere with the radiator core.

The Thematic Fan Mounting Bracket Kit is a much stronger and more secure way to mount your electric fan than through the radiator or using nylon quick-fit ties.

This kit has been designed to withstand the rigors of everyday driving.

The kit consists of two strong steel fan mounting brackets, the appropriate fan and bracket mounting hardware.

For more information phone 03 9369 1234.



NEW POWER STEERING CATALOGUE OUT NOW!



Steering you in the right direction...

Finding high quality power steering products just got a whole lot easier...

Drivetech
...driven by quality

To order a Drivetech catalogue or for more information call 1800 463 646 (toll call) or visit www.motospecs.com.au

Drivetech's new comprehensive Power Steering catalogue is simple and clear making it easy to find the right part. Contents of the catalogue include power steering pump assemblies, pulleys, drive gears, rack assemblies, hoses, tools and accessories. And when you order Drivetech Power Steering parts, you can be confident you are buying quality. Ordering the right power steering part has never been more straightforward.





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New all-purpose cleaner eliminates need for multiple solutions

The unique formula of Oil Eater Original cleaner-degreaser eliminates the need for multiple cleaning products.

It quickly dissolves oil, grease and grime on engines, tools, garage floors, walls and much more and will not harm the skin.

This eco-friendly, non-flammable cleaner is water-based, biodegradable and fresh scented.

It contains no acid, abrasive or petroleum solvents.

It penetrates rapidly and rinses off easily and leaves no residue.

It can also be used in a parts cleaning and pressure washing machine.

The formula is a unique mixture of non-ionic surfactants, emulsifiers, water softeners and other biodegradable ingredients.

Oil Eater is available in a 946ml spray, 3.78 litre bottle and 18.9litre bucket.



For more information visit www.oileater.com or call 07 3256 2414.

Just quietly... technologically advanced Ferodo ThermoQuiet

Across the world, Ferodo ThermoQuiet (TQ) brake pads enjoy a reputation for high performance braking that is not only reliable but incredibly quiet.

It's no wonder Ferodo ThermoQuiet is recognised as the preferred choice of brake pad by countless mechanics and workshops here in Australia.

Reflecting the product's popularity, the Ferodo ThermoQuiet range has just been expanded.

The Ferodo TQ range now has more than 210 references available to suit up to nine out of 10 vehicles in the Australian carpark.

The broader range now covers popular late model vehicles such as the Volkswagen Golf and Passat, Chrysler Voyager, Toyota RAV4, Nissan Tiida and Micra, Hyundai Accent and Honda Odyssey.

Motospecs Global Brands Manager, Richard Smith, said the expanded Ferodo ThermoQuiet range reflects Motospecs' commitment to the brand in Australia.

"We're really taking Ferodo ThermoQuiet to the next level," he said.

"It's an exciting time for mechanics and workshop owners because in the past, they would have encountered situations where they wanted to fit Ferodo ThermoQuiet pads but the range didn't support the make or model or vehicle they were servicing.

"Now, workshops can be confident that most of the cars they service can be fitted with high quality Ferodo ThermoQuiet."

As one of the most technologically advanced brake pads available in Australia, it's no surprise Ferodo ThermoQuiet has earned such a strong reputation for performance, reliability and longevity.

"As well as being incredibly quiet, Ferodo ThermoQuiet are a low dust pad so they help to keep customers' wheels clean," Mr Smith said.

"They offer excellent OEM pedal feel, long lifespan and of course great stopping power."

The Ferodo ThermoQuiet brake pad range is manufactured and engineered to world-class specifications and represents years of research into quiet, high performance braking.

"Ferodo ThermoQuiet pads are unique in that they are designed so that the callipers push onto the brake pad material rather than the pad being fixed onto the backing plate," Mr Smith said.

"The result is less vibration and less heat production and the end result is less noise."

Ferodo ThermoQuiet is only available through Ferodo Authorised Partners and Brake Specialist resellers.

"To reflect the calibre of Ferodo ThermoQuiet, it's important to us that our stockists are experts in braking and brake technology," Mr Smith said.

"In return, we offer them the opportunity to stock a highly regarded and very reliable product, backed by exceptional marketing support, plus the confidence that they can enjoy profitable sales."

Ferodo is currently looking to expand its network of Authorised Partners.



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Brake specialists interested in becoming a Ferodo Authorised Partner should contact 1300 FERODO (337 636). More information about Ferodo ThermoQuiet brake pads can be found online at www.justquietly.com.au or www.ferodo.com.au



Made in Melbourne
AUSTRALIA



Part No. 275R6RWM



AUSTRALIAN MADE

MaXiLED
Rear combination

- A First for Australian Manufacturing.
- The First LED rear combination lamp made in Australia.
- Unconditional 5 Year Warranty.
- ADR compliant for Horizontal and Vertical applications



Part No. 275G6RWM

LED Technologies, manufacturers of LED Autolamps, have begun manufacturing the all new MaXiLED Stop/Tail/Indicator and Reverse lamp. A first in Australia and certified to proudly carry the "Made in Australia" logo. Using only quality components and plastics sourced from overseas suppliers and utilizing our own full SMD/component assembly line to fit out, solder and testing of circuit boards. The finished boards are then fitted to the base, fully potted and sealed against water and dust ingress then assembled with specially designed chrome inner reflectors, honey comb designed lens with reflex reflectors. The finished lamps are then fully tested and packaged into the LED Autolamps blister clamshells.



- Australian designed
- Premium components
- SMD LEDs
- Multi voltage
- High quality plastics
- Superior sealing methods
- Fully submersible
- Intelligent manufacturing
- Manufacturing control
- Quality control
- Tests exceeds standards



CREATING THE FUTURE IN LIGHTING

For our full range and distributor list visit our website at www.ledautolamps.com or Ph 03 9404 5939



There'll come a time when your customers will be glad you chose TRW brake pads.

This is it.

When it comes to driving, safety is everything. TRW is a global leader in the design and manufacture of safety critical components for original equipment and the aftermarket. Our brake pads exceed all global safety standards and are manufactured using the finest materials and latest manufacturing processes. But it doesn't stop there. Extensive testing, both in the lab and on the road, allows TRW to deliver brake pads that continue to set the standard for safety. For customer safety without compromise, choose TRW.

For more information on TRW brake pads, please contact ATAP on 03 8369 1300.

Pedders new Air Assist Heavy Duty Kits

Pedders Air Assist now has another helper with the release of its new Air Assist Heavy Duty Kits.

Pedders' new Air Assist Heavy Duty Kits add a whole new dimension of durability and load carrying assistance.

Featuring an Air Assist Air Bag and High Pressure Sleeve, these new kits are built tough to withstand heavy load conditions.

The key feature of the kits is the new high pressure sleeves, which are designed to wrap around the entire Air Assist air bag that can then be installed into the spring.

Pedders Air Assist Heavy Duty Kits are now available from your local Pedders outlet to suit selected Ford Maverick, Nissan Patrol and Mitsubishi Pajero models.

Key features and benefits include high strength, high tensile fabric sleeve for extra durability, higher than normal inflation pressure with the sleeves fitted creates an even stronger lift under load and improved load carrying capability.

Pedders Air Assist Heavy Duty Kit includes two Air Assist Air Bags, two Air Assist Heavy Duty Air Bag Sleeves, air lines, cable ties, two inflation valves and vehicle specific protectors and spacers.



For more information contact your local Pedders Suspension specialist or check out www.pedders.com.au

Ashdown-Ingram's new Alternator and Starter Motor Catalogue out now

Ashdown-Ingram is renowned for its industry leading catalogues and the pressure to deliver on the new Alternator and Starter Motor Catalogue was even greater.

With its well-known mantra of continually raising the bar to deliver benchmark setting catalogues, the company was determined that the Alternator and Starter Motor catalogue would be better than any of their previous catalogues, a big ask considering that its air conditioning catalogue took home the highest honour at the 2011 AAAA Awards to Industry with Best Trade Catalogue.

With 1400 of the latest and most popular alternators and starter motors covering more than 4000 applications to suit a Yanmar small engine through to Caterpillar Industrial applications, this new catalogue is a must-have for your workshop.

The new Alternator and Starter Motor Catalogue's extensive dimensional and technical data combined with an impressive product range provide a reliable source of information to enable the most accurate product selection.

Features and benefits include 200 new units included this year, a selection of exclusive units, industry leading iconic brands including OEX, Leece Neville, Bosch, Denso, Delco Remy and CE Neihoff, high level of technical information and full colour, high quality pictures.

New colour-coded sections provide easy location, there is a Fast-Find index, clean layout and logically categorised sections allow for quick find and the catalogue is information rich and easy to understand.

The new Alternator and Starter Motor Catalogue is now available.

For more information or to request a copy of this must-have catalogue, contact your nearest Ashdown-Ingram branch today.

Visit www.ashdown-ingram.com.au for a full branch listing.



4.2 million extra sales opportunities

New automotive battery sales in Australia exceed 4.5 million units each year and the Australian Battery Industry Association estimates that 95 percent of batteries replaced are recycled.

That's more than 4.2 million opportunities to bring customers to your door and over 4.2 million potential sales.

Century Yuasa's battery recycling program is a national battery recycling scheme which provides motorists, homeowners and businesses with a national network of outlets and resources to recycle their used batteries responsibly.

Through the Century Yuasa Recycling scheme businesses can establish themselves as a local battery destination, providing customers with a complete service offer including battery sales, advice, recycling and enjoy the additional sales this can bring.

In addition to receiving a regular scrap battery collection service, participating businesses receive extensive exposure through a national recycling website www.recyclemybattery.com.au and a national contact number 1300 650 702, dedicated building signage, access to an extensive range of marketing collateral and access to locally placed battery recycling specialists.

The scheme is proving extremely popular and attracted the support of leading resellers, TV media and environmental groups including Planet Ark, which is supporting the scheme through National Recycling Week and its website www.recyclingnearyou.com.au

To learn more about the scheme and understand how your business can benefit from the Century Yuasa Battery Recycling program speak to your Century Recycling specialist on 1300 362 287 or visit www.recyclemybattery.com.au



Proudly Australian and family owned since 1926, Penrite Oil company are leaders in product and technology innovation. Penrite has always been at the forefront of product innovation, and continues to blend to the latest industry and manufacturer specifications, receiving Original Equipment Manufacturers (OEM) approvals.

Penrite once again shows its strength in technical innovation by being first to market with smart device technology to provide product recommendations when and where your customers need it, everytime.

7 Days a week Technical Support



Penrite are the market leaders in engine oil, having over 85 years of experience and knowledge. For any technical issues or product recommendations you can contact our Technical Support team. Our Technical telephone hot line is now available 7 days a week, visit www.penriteoil.com.au for operating hours.

FIRST TO MARKET

Information when you need it



Recommending or using an incorrect oil can be an extremely costly mistake. Being able to access the correct information when and where you need it, is a large part of getting the "right oil for the right application".

You can now access the Penrite Lube Guide on your mobile device.

Go to www.penriteoil.com download the link or save this link <http://www.datateck.com.au/lube/PenriteAusMobile/> to your favourites.

FIRST TO MARKET

Penrite Lube Guide Touchscreen

To assist your customers further in finding the right lubricant, Penrite, in conjunction with InfoMedia have designed and developed the very first Lube Recommendation Guide Touchscreen.

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The New improved Full Synthetic HPR 5 **NOW** replaces Everyday Synthetic 5W-40. In addition the new improved Full Synthetic HPR 10 **NOW** replaces Everyday Synthetic 10W-40. Stocking an oil with wider applications will ensure your core range covers a greater percentage of the car park. The new improved Full Synthetic HPR 5 and HPR 10 will **NOW** be available in a handy 6 & 10 lt pack, as well as 1, 5, 20, 60 & 205 litres. HPR 15 will **NOW** be available in 10 lt packs, as well as 1, 5, 20, 60 & 205 litres. HPR 5, 10 and 15 remain at the same buy price, offering sensational customer value.

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Penrite's new and upgraded product range

Engine Coolants

Available in 1, 5, 10, 20, 205 lts

Our two Type A products cover over 99% of the Australian vehicle market and are made with Manufacturer Approved Technology which is 100% vehicle warranty guaranteed.

4 Year Long Drain. Is available in concentrate and pre-mix. It is a Hybrid Technology Antifreeze/Antibolt.

Meets AS 2108 - 2004 Type A, protects against rust and corrosion including in alloy engines and is compatible with plastics, seals and rubbers.



NEW
Type B Extended Drain. Is available in concentrate or a convenient pre-mix. It is an Organic Acid Technology (OAT) Antifreeze/Antibolt.

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This range of products covers both Multi-Vehicle and application specific requirements.

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SMOOTHER
SHIFT **x5**



SMOOTHER
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Available in 1 and 4 lts

This range of products is now designed specifically for modern motorcycles. These oils carry the latest Industry Specifications and offer the EXTRA TEN and FULL ZINC.

UPGRADE!

4 Stroke Oils

The 4 Stroke (MC-4ST) range includes Full Synthetic, Semi Synthetic and Mineral products for road and off road motorcycles. They are suitable for wet clutch use.

2 Stroke Oils

The 2 Stroke (MC-2ST) range includes Full Synthetic and Semi Synthetic products for road, off road motorcycles and go-karts. MC-2ST Full Synthetic is an ester based, low smoke, clean burn product and is biodegradable.



To place a product order please contact your local representative or call Penrite Customer Service on AUSTRALIA: 1300 PENRITE (736 748) NZ: 0800 533 698



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Australian made Dual Mass Replacement Flywheels

Clutch Industries has been the nation's largest clutch manufacturer since 1951.

An important part of this role is to lead the way in the introduction of new and emerging technologies.

In recent times Dual Mass Flywheels (DMF) and their aftermarket replacements have emerged as a major growth segment in the market.

Not surprisingly, Clutch Industries is leading the way in the introduction of the largest, most advanced manufacturing plant for Dual Mass Replacement flywheels (DMR) in the region.

Dual Mass Flywheels have been fitted as Original Equipment for several years, with many makes and models using DMFs in Australia.

These include vehicles from BMW, Ford, Holden, Mercedes Benz, Mitsubishi, Nissan, Toyota and some Subaru models to name a few.

A Dual Mass Flywheel consists of two main components.

The primary component nearest the crankshaft moves independently of the secondary component to which the clutch unit is bolted, dampening moves from the clutch plate to the flywheel, reducing the transmission

of Noise Vibration and Harshness (NVH) along the driveline.

Clutch Industries provides the aftermarket with replacement clutch kit options which include the OEM style Dual Mass Flywheel, as well as a cost effective alternative, the CI DMR range.

CI's DMR (Dual Mass Replacement) kits have been engineered to best reproduce the angularity characteristics of a Dual Mass Flywheel while utilising a Solid Flywheel replacement.

DMR's kits are a cost benefit compromise in that they do not perform with the same NVH characteristics as DMF kits, however many perceive that the compromise in performance is offset by the lower replacement cost.

CI has expanded its manufacturing facility by adding four new flywheel machining cells.

A new induction heating cell has been added for the fitment of ring gears as well as balancing cells to ensure that customers have access to the best range of high quality DMR Flywheels.

Importantly there has also been an



expansion in the engineering and technical departments to support this program.

All CI Dual Mass Replacement are engineered to international standards, then manufactured to exacting tolerances.

This capability is able to develop and supply the DMRs for our region.

Currently the CI Flywheel manufacturing plant is at capacity and shifts are being extended to meet demand: another CI success story.

For more information phone 03 9463 2201.

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Unlike soft rubber bushings, which distort under heavy braking or cornering loads, Nolathane bushings maintain alignment settings and offer complete reliability.

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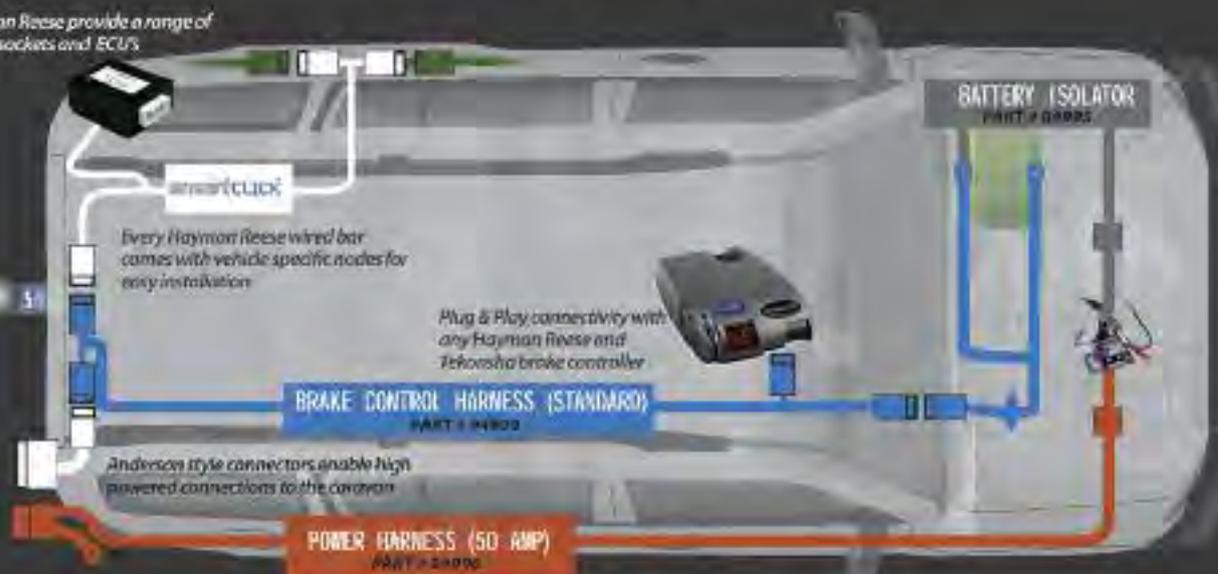


INTRODUCING THE HAYMAN REESE SMARTCLICK™ BODY HARNESS PROGRAM

Connect Brake Controllers & Auxiliary Power in a Flash

**NO MORE SCOTCH LOCKS
NO MORE SOLDERING
NO MORE PROBE LIGHT TESTING**

Hayman Reese provide a range of trailer sockets and ECUs



Brake Control Harness/Smartclick Part # 04900

Enables Plug & Play connectivity with any Hayman Reese or Tekonsha brake controller.

Brake Control Harness 30 AMP POWER Part # 04900

Enables brake controller connectivity as above. This allows up to 30 AMP auxiliary power through the use of a 12 pin tail*

Power Harness 30 AMP POWER Part # 04900

Provides up to 30 AMP auxiliary power through the use of a 12 pin tail*. Enables the operation of small 12 volt appliances like fridges and 12 volt lighting circuits in caravans.

Power Harness 50 AMP POWER Part # 04900

Supplies 50 AMP power through an Anderson style Connector. Ideal for higher current requirements.

Smart Battery Isolator Part # 04900

The "smart" battery isolator will have a voltage "cut in" of 13.2volts and "cut out" of 12.7volts. Prevents the primary vehicle battery from over draining due to load from the auxiliary circuit.

*Hayman Reese wiring cable sold separately.



Accessory
Body Harness Model
Body Harness Type

smartCLICK™
Intelligent towing



Wiring Systems Just Got A Whole Lot Easier

Every Hayman Reese wired bar comes with Smartclick™ vehicle specific wiring solutions. The body harness program will further enhance the value to installers using the same Plug & Play concept. For more information, please call our Customer Care Centre on **1800 812 017** or visit our website: www.haymanreese.com.au

FAG delivers wheel bearing sensor technology to repairers

Australian automotive repairers can now take advantage of premium quality FAG wheel bearing variants that range from types with integrated encoders and sensors, as well as state of the art multipole encoders that feature either axial or radial reading capabilities.

By selecting FAG wheel bearings for a specific make and model, you are using the original brand spare part which is accompanied with the exact technical information required for correct handling and mounting.

This ensures that the entire system will function properly and above all, safely.

Gone are the days of wheel bearings simply being in place solely to keep cars moving.

The vehicle dynamics systems that we all now take for granted, such as ABS (anti-lock braking), ASR (Anti-Slip Regulation or traction control), ESC (Electronic Stability Control) and ESP (Electronic Stabilisation Program) along with others, rely entirely on modern wheel bearings that are equipped with sensors.

Even the accuracy of your speedometer is governed by wheel bearing sensors as opposed to transmission speeds these days.

It is all pretty high tech when you look at the latest FAG innovations in wheel based sensor technology.

Sensors and encoders form a system where the encoder delivers the measured values which are then read by the sensor and converted into an electronic signal for the Engine Control Unit (ECU).

The first encoders were made of ferritic metal and installed on the axle journal, but axle vibration often interfered with the speed signal and the design was very susceptible to contamination.

To avoid this, the encoders were integrated into the wheel bearings themselves, initially outside the seal and later actually inside the seal itself.

This is where the world leaders in wheel bearing technology and manufacturing, FAG, lead the way in wheel bearing sensor technology and development.

Schaeffler Automotive Aftermarket advises that before working on wheel bearings and sensors, it is essential to precisely identify the cause of the problem.

These parts have now become essential to the safe operation of vehicle dynamic control systems.

An incorrect repair or inferior replacement component can cause system failure, which of course represents a major safety hazard.

To find out more about FAG wheel bearings and Schaeffler Automotive Aftermarket's premium quality product range, contact Pierre Marshall, Business Development Manager Automotive Aftermarket Division - 0439 197 170 or LuK-AS.au@Schaeffler.com.

Narva performance globe packaging sets new retail standard

Innovative attractive new packaging for Narva's performance globe range has raised the bar in globe merchandising with a unique customer friendly blister pack.



Designed by Narva's creative industrial design team to deliver maximum retail impact, each high quality blister fully encapsulates the globe providing the ultimate protection, presenting the globe in full view and featuring strong bold branding with eye catching graphics.

The new durable blisters provide a convenient hang-sell option and incorporate a clever perforated section at the back allowing the globes to be easily removed for installation.

New high colour graphics have been introduced to clearly define each globe type such as red for the latest Plus100 globes and blue for the Blue Plus 90 range with detailed product information on the respective globe carried on the back of each pack.

Narva's new range of performance globes can be grouped into three categories each with distinct characteristics allowing the customer to choose a globe that delivers maximum light volume, more whiter light or blue white light with a distinctive headlamp appearance.

The attractive and practical new packaging presents Narva's performance globes in a way that provides for ease of selection and a solution for every customer.

Narva Performance Globes in the new packs are now available from leading automotive, transport and auto electrical outlets.

Projecta turns a standard battery into a user friendly power station

The latest battery box from Projecta turns an ordinary battery into a convenient user friendly power station.

By simply fitting your own battery into the pre-wired box, you are ready to go.

Equipped with insulated terminals and cigarette lighter and accessory sockets, the Projecta BPE330 12 Volt Portable Battery Station is ideal for use in a dual battery system acting as a central hub for powering a compressor fridge, camping lights or a raft of other camp appliances.

The new power station features an LED battery analyser displaying the fitted battery's state of charge and comes with a battery hold down strap and fitting kit to provide a secure installation plus convenient terminals with rubberised wing nuts for quick and easy connection.

Designed to suit N70Z size batteries, the Projecta 12V Portable Power Station is now available from leading automotive, 4WD and camping outlets at a recommended price of approximately \$79.95.

Available from leading Projecta automotive, transport and 4WD outlets, Projecta State Offices or by contacting the Projecta national sales office at sales@projecta.com.au or phone 1800 113 443.



CHECK OUT THE EASY TO USE EXEDY ONLINE CLUTCH FINDER!



Visit www.exedy.com.au to view the new Clutch Finder. You can drill down by vehicle make and model to find the right application every time.

Step 1 -
Enter vehicle manufacturer and model



Step 2 -
Select vehicle



Step 3 -
Select the kit derivative you want



Sharing of repair and service information

In 2009 AAAA launched the Choice of Repairer Campaign (COR) to promote consumer choice and fair competition in the aftermarket.

This initiative was in response to widespread reports from AAAA members that the lack of access to proprietary repair and service information had a negative impact on consumer choice, and threatened the sustainability of the independent repairer network.

As a result of a direct approach by the AAAA in March this year, the Hon David Bradbury MP, Parliamentary Secretary for Consumer Affairs and Competition Policy, initiated an inquiry into the sharing of repair and service information in the automotive industry.

The Commonwealth Consumer Affairs Advisory Council (CCAAC) was requested to report on whether there was any evidence of consumer detriment as a result of the practice of manufacturers and importers failing to share information to independent repairers, the impact of the lack of proprietary repair information on independent repairers, the nature and effectiveness of international approaches and the view of industry stakeholders.

At the close of submissions on September 23, 49 responses were received, the most comprehensive of which were submitted by AAAA, Australian Motor Industry Federation (formerly MTAA), NRMA, Federal Chamber of Automotive Industries (FCAI) and VACC. The manufacturers, importers and their authorised dealers claimed that "the necessary information required by independent repairers was already available" and "that the current level of shared information relevant to motor vehicle repair and maintenance and repair is adequate and appropriate".

AAAA independent repairer, insurance and consumer stakeholder groups identified that access to vital service and repair information is already being restricted, and the situation will worsen as vehicles become more complex, forcing consumers to use authorised repairers who would be unable to meet demand.

A summary of the 73-page AAAA response is provided in this article, but access to the full submission is available on the AAAA website www.aaaa.com.au



1. Consumer detriment

The practice of manufacturers and importers failing to share information with independent repairers denies consumers freedom of choice and the opportunity to access convenient and high quality service at a very competitive price.

COST COMPETITIVENESS: For routine hand-book servicing, independent repairers are in open competition with authorised repairers and, due to lower overheads and access to independent parts distributors, are able to offer a better value proposition to consumers. A 2010 NRMA survey entitled 'It pays to shop around' found service quotes from dealerships or dealer-franchised repairers were on average \$110 more than independent repairers and \$90 more than retail chains. These results are entirely consistent with a Choice survey conducted in 2008 "which found dealerships were often the most expensive for car servicing and did not always provide the best service".

CAPACITY: According to the MTAA there were 1452 authorised repairer workshops in 2008. These are normally located within close proximity of the retail sales outlets which is not representative of the demand for vehicle servicing especially in outer urban and rural areas. Independent repairers offer significant repair and service capacity beyond that which can be provided by the authorised repairer network and a geographical 'footprint' that provides convenience to consumers. Any decline in their number will result in longer lead-times, greater travel times and associated costs and a significant increase in the cost of vehicle servicing and replacement parts for consumers.

COMPLIANCE: Under Australian law, the conformity of a vehicle to Australian Design Rules (ADRs) and state regulations throughout its lifecycle is the sole responsibility of the owner. The consumer and community benefits of stricter environmental and safety standards are only as good as the ability for the vehicle to be maintained and repaired in accordance with design requirements.

The independent aftermarket and its service network make a major and irreplaceable contribution to maintaining these essentials, and to enable this to continue provision of service and repair information is essential, as identified in Europe and USA some time ago.



Readers are invited to send technical enquiries of a general nature to rabrown8@bigpond.com

CHOICE: Any monopoly is bad for the economy and the consumer. Consumers should have the right to select a repairer on their own terms and not be dictated by those who are privileged to have access to repair information. Technological advances in the automotive industry should benefit all consumers and not just vehicle manufacturers or their franchised repairers; after all it is the consumer who is paying for the technology.

It is clear from the above that given a 'level playing field' the independent aftermarket will continue to compare favourably with authorised repairers by providing convenience and high quality service at a competitive price to consumers.

2. Impact on independent repairers

In the past, automotive control systems have almost entirely been mechanical, hydraulic or friction based. To service these relatively simple systems relied predominantly on the skill and experience of the repairer, assisted by vehicle repair information such as repair manuals and wiring diagrams which were readily available from manufacturers/importers.

In response to community expectations the predominant feature of current and future automotive design is to maximise efficiency (minimise resource utilisation) and minimise harm (road user safety, environment etc). To achieve these requirements, traditional control systems have been replaced by electronics such that repairer skill and experience is quickly being replaced by electronic diagnosis and repair.

NATURE OF REPAIR: Modern vehicles have become 'computers on wheels'. In many of today's vehicles over 50 microprocessors are utilised to provide sophisticated control of engine and safety features, to meet regulatory requirements and support passenger comfort features. On board diagnostics (OBD), a generic term referring to a vehicle's self diagnostic and reporting capability, gives a repair technician access to the state of health information for

various vehicle sub-systems allowing the rapid identification and rectification of malfunctions in the vehicle. This is not new technology as it has been around since the early nineties.

What is new is the ability to re-program micro-processors for in-service vehicles. Increasingly, as service problems and faults are recognised from in-field experience, vehicle manufacturers are able to correct these by providing downloadable software, enabling microprocessors to be re-programmed. With sophisticated electronics now controlling the most important vehicle functions, the necessity for timely and accurate technical and diagnostic information has become critical.

For example, in 1986 the VL Commodore was designed with 10 fault codes providing feedback and data on the electronic fuel injection system. In 2011 the VE Commodore is equipped with 709 fault codes covering new technology areas such as traction control, immobilisers, electronic transmission, direct petrol injection, rear view camera, park assist, electronic stability control, brake assist and curtain airbags.

Trends such as the move to diesel, hybrid and electric vehicles, and increased model proliferation will make access to information vital to the survival of independent repairers and consequently, consumer choice.



INFORMATION AVAILABILITY: Modern vehicles are too complex to repair without access to the manufacturer's diagnosis and repair information. It is impossible for an all-makes independent repairer to afford all the information for every make of car in CD-ROM or paper format, even if it were available, and have it at his premises in readiness for any repair. It is similarly impossible to purchase every manufacturer's diagnostic tool or special service tool. Internet provision of information is necessary, together with the co-operation of vehicle manufacturers and the promotion of generic diagnostic and special service tools.

The absence of any regulatory framework in Australia to protect competition in the vehicle repair and service sector, means that vehicle manufacturers and importers/distributors are not obliged to make technical and diagnostic information available to repairers outside their authorised dealer networks.

SERVICE QUALITY: Service campaigns and in-field service fixes are initiated by vehicle manufacturers via a technical service bulletin (TSB) which are only provided to authorised repairers. Should a consumer experience a problem with a vehicle, the consumer or independent repairer has no knowledge that a 'fix' exists, much less what the repair method may be.

As an example, analysis of the Toyota technical service website in USA shows in the past five years, 123 technical service bulletins have been released for the Toyota Camry. Of these 10 have since become obsolete, 44 were of a general nature (pre-delivery instructions, service instructions), 47 were mechanically based in-service fixes for various problems and 27 related to software updates and re-installations. Unfortunately this service information is not necessarily relevant to Australian specification vehicles, and therefore if a consumer has a problem with his five-year-old Camry serviced by an independent repairer, neither the consumer nor repairer is aware that a potential 'fix' is available.

At the very least, AAAA believes that all TSBs beyond the warranty period, applicable to specific vehicle defects/problems, should be freely available for distribution to independent repairers.

Observation of the service and repair market indicates that independent repairers continue to operate, despite any information advantages that authorised repairers may enjoy. But this is a somewhat superficial observation as most of the latest diagnostic service and repair technology is in its infancy and, in general terms, many consumers do not choose to have their vehicle serviced and repaired by an independent repairer until after warranty has expired – generally three years. The rate of absorption of this technology into the car parc will continue at a steady pace, as will the functions that will be controlled by this technology. The AAAA expects that the independent repair industry has a three to five year window before the lack of information sharing creates a drastic effect on the industry's survival and its continuing benefits to consumers.

3. International approaches

The specific focus of international jurisdictions is the regulatory compliance of a vehicle for its life. Regulators recognise that the consumer and community benefits of environmental and safety design improvements are only as good as the ability for the vehicle to be maintained and repaired in accordance with the original vehicle design requirements.

EUROPE: In 2002 the European Commission entered into force the Automotive Block Exemption Regulation which is a legislative framework for motor vehicle distribution and servicing agreements. Following a review launched in 2007, the Commission set out the basic competition policy applying to motor vehicle distribution and after sales services agreements which will be valid until 2023. These regulations are intended to make sure that independent repairers operate on a level playing field with the authorised networks, and in particular, that they can access technical information they need to repair today's complex vehicles. Technical information must be made available in a way that is proportionate to independent repairers' needs.

In addition, if repairs were carried out without the correct technical information, this could lead to vehicles being driven in an unsafe condition; add to air pollution and waste fuel. In this regard, the Euro 5 and 6 vehicle emission regulations (introduction due in Australia in 2013 and 2016 respectively) provide a detailed set of rules ensuring full and non-discriminatory access for such information by all independent operators.

USA: In North America, the Environment Protection Agency requires vehicle manufacturers to present repair information on their websites. The required information includes service information, training material, manuals, technical service bulletins, diagrams and charts, details of OBD monitors and associated codes. Manufacturers are also required to share enhanced diagnostic information with manufacturers of generic diagnostic tools.

The provision of service and repair information beyond EPA requirements is voluntary and so the Automotive Aftermarket Industry Association (AAIA) has launched a "Right to Repair" campaign which calls for congressional support for a "Motor Vehicle Owners Right to Repair Act". This Act prevents vehicle manufacturers and others from unfairly restricting access to the information and tools necessary to accurately diagnose, repair, re-program or install automotive replacement parts.

Acknowledgement of assistance in preparation of this article to CCAAC, AAAA and Toyota Motor Corporation.



CENTURY YUASA: AUSTRALIAN-MADE PRIDE!

Being 'true blue' (and yellow), Century Yuasa is proud that its battery products are still manufactured in this country.



At a time when many local automotive component makers are moving their manufacturing offshore, Century Yuasa is not only keeping its production operation here in Australia, it's also investing in new technologies at its Carole Park facility in Brisbane, Queensland.

"We have International parents of the company, or, if you like, shareholders. But we are very much an Australian company – employing hundreds of local workers and manufacturing here in Australia. Well over 80 percent of the volume we supply is produced here locally – and every blue and yellow battery you see comes from the Australian plant," Century Yuasa Marketing Manager, Allan Woodford, explained.

Century has invested in a new production line, which has completely modernised and streamlined the way that it produces battery grids and plates.

The company was formed in 1928 and purchased by Repco in 1978. In 1988 a joint venture between Japanese company Yuasa Batteries (now GS Yuasa) and Indonesian firm Sapta Panji Maggala invested in the company and today continue to operate the group.

"We are an 'Australian-made' company; producing here onshore. It's very important that Australian companies continue to create and protect jobs here in Australia," Mr Woodford said.

"A quality locally made product, and a very good service and distribution promise, that's probably the two decisions that have enabled us to grow and how we support our loyal customers and end-users.

"Over the last two years we've invested well over \$3 million on capital expenditure on the plant, which shows the level of commitment the shareholders and directors have to the local operations."

Mr Woodford points out that the company has three manufacturing and distribution operating divisions –

Automotive, Standby and Motive Power. The Battery World chain is also part of the Century Yuasa group, supplying batteries and power storage for just about any consumer product that needs to be powered by portable means.

"All operating divisions supply different markets and products," Mr Woodford said.

"The automotive market is predominately the standard lead acid batteries – car, truck, marine, recreational, motorcycle, and other applications for starting, lighting or ignition type uses."

He explains that the industry has had to change to survive over the past decade.

"Back 15 years, supply was heavily weighted towards the independent mechanical repairer and service station type operations, but over the last 10 years or so, the emergence of large retail and trade outlets like Supercheap Auto, Repco and the tyre chains has seen strong growth in these channels as battery destinations and our business has had to adjust to service all channels.

"We also supply (as original equipment) to the major local car and truck manufacturers, which is testament to the quality of our products."

While currently a battery is not a hard item for a consumer to fit to their car themselves, Mr Woodford believes this may be in for a change over the not too distant future.

"The battery market is fairly well split between the established 'do it yourself' and 'do it for me' markets. You could probably say that there'd be slightly more volume in the 'do it yourself' market in regards to people who will shop at shop fronts and major retailers as it's sometimes easier.

"But with the ever-changing technologies being incorporated into newer models of vehicles and their electronic systems, a certain amount of process and technical know-how is required for those fitting their own batteries," he explained.

"As a result of these changes, Century has a strategy to offer superior service to its resellers and their staff through product training and information to ensure they are fully versed and up to date with battery requirements.

"Most resellers tell us it's not only about their (buy) price, and that service and product information is equally important. To



that degree, we've taken the approach that Century will be a 'direct' service and distribution company in that, wherever possible, the person who delivers the battery to a reseller is a Century Yuasa person and not a third party freight courier or a potential competitor that's been appointed as an agent for a particular area," Mr Woodford said.

"We're a vertically integrated company and the people that call on our resellers are service and product experts – it's a face-to-face service." Century hopes this 'customer first' strategy will help it maintain its position as the most recognised brand in batteries and portable power supplies on the Australian market.

"The vision for Century Yuasa is to be the first choice for battery products and power solutions for those looking for supply and service of their equipment. That's our goal. We may not be able to deliver every unique battery, but you as a business operator or consumer, if you need battery power, you'll be able to discuss your situation with us," Mr Woodford explained.

"We want to be front of mind as resellers and consumers consider how to meet their power requirements," he said.

Mr Woodford says the biggest challenge to Century Yuasa's position, as a market leader, is the continuing introduction of new competition, particularly from companies selling cheaper, and at times, inferior products.

"One of our biggest challenges in the past has been the ability of people to import batteries without necessarily using the same rating standards in place in Australia, as overseas standards are sometimes different," he said.

"For example, batteries coming into Australia with performance ratings based on a USA-type standard may be up to 20 percent above the comparative rating applied under Australian testing methods. As an Australian company, we tend to be

more realistic when rating the performance of products to ensure they can regularly provide performance to the rated level. Consumers (and resellers) may see a large number on some products and assume this is a 'better' battery when in fact that may not be the case. We try to educate customers and the end user as best we can about the differences between certain products and be realistic with what we put on our products. If we say our product will do something, it will do it!"

Mr Woodford believes that it may not just be importers of cheap product providing new competition to Century in the future. There is a current trend from a number of well-known automotive brands to diversify into other related markets and products, and many industry experts believe this will become more prevalent when companies, which currently sell oil-related product, no longer have huge demand for their goods.

"There are numerous automotive brands that license their brand name to produce various product lines – these companies don't actually produce the products but apply their name to the product. Perhaps even some of the major oil-companies may decide to branch into battery product lines. It's not their core product but they will be in search of sales revenue dollars," he said.

Mr Woodford admits that Century has considered leveraging its own brand by pushing into other related markets.

"We've looked at ancillary products and putting the Century brand on other automotive products, but we are focused on our core products at this stage," he said.

However, Mr Woodford sees even bigger challenges for the company's own products as modern vehicles develop and become less dependent on fossil fuel and more reliant on portable power and electric power.

"Very much what happens with the car dictates what is required from a battery. Car

manufacturers have to reduce fuel usage, reduce gas emissions and lower the vehicles weight," Mr Woodford explained.

"As a manufacturer, we can't make the batteries much lighter because of the lead component, but in terms of the fuel usage and gas consumption, the battery can play a part and that's where our current range of products are assisting. We've just launched a new range of batteries using 'SmartDrive' technology.

"Now, over 50 percent of new imported manufactured cars incorporate Regulated Charge Control Systems – like a gearbox in the alternator that kicks into gear based on the movement of the car – you can actually make the battery capable of saving you fuel and limiting gas emissions – a proven technology.

"The fuel saving and gas emissions will only apply to vehicles fitted with these Regulated Charge Control Systems. The major local manufacturers are at different stages of incorporating this technology as it does provide environmental and other performance advantages.

"The other interesting thing at the moment is the move towards the EV (electrical vehicles). This is a totally different ball game in regards to battery technology; the size and complexity of the batteries required for EV (electric vehicles) are very different to the standard battery. This is certainly a changing market that we are involved in."

While focusing on the future, Century is not losing sight of its existing hurdles, and is finding innovative ways to meet these challenges head-on.

"A big challenge is led. We currently purchase this through the London Metal Exchange, which is price volatile and that has a significant impact for us as lead represents over 50 percent of the cost of a battery. We have a strategy in place that will not only allow us to remain competitive with imported battery suppliers but gives us a leadership role in the fight for to sustain the environment.

"We are the only battery supplier and manufacturer in Australia that has a national battery recycling program in place, headed under the "Century Yuasa Battery Recycling Centre" banner. We have a dedicated website and national contact number where motorists can search for their nearest Battery Recycling Centre to drop off their used batteries for recycling."

So with its continued ability to arrive at innovative and socially responsible answers to its challenges, you can expect Century Yuasa to be a brand on the Australian market for many years to come.

CHRISTMAS HOLIDAYS – YOUR EMPLOYMENT OBLIGATIONS



The festive season is almost here again. For many, this is a time for friends, family, food and presents. However, for employers, the Festive Season often means public holiday rates, staff leave requests and suspicious sickies. AAAA Employer Assist is here to help members understand their obligations and rights during this annual period of uncertainty and confusion.

Here are our top four issues you should be aware of going into the holidays –

Annual Leave Requests

December and January is a popular time for employees to request annual leave. However, you can only allow so many employees to take leave at the same time before you face significant staff shortages. The good news is that the taking of annual leave is by agreement only – employers can refuse an employee's request for leave if the refusal is based on reasonable grounds such as operational requirements.

Suspicious Sickies

It is not uncommon for employees to 'over-indulge' during the festive season. This may result in an early morning call from an employee claiming to be ill.

The bad news is that employees are entitled to take personal leave at any time.



Not only is this an employee right, but you have an OH&S responsibility to ensure all employee who arrive at work are fit to work. Employees working with hangovers do not make for a safe working environment.

However, there are ways to prevent the suspicious sickie. Employers can require a medical certificate for any day the employee is taking sick or carer's leave. Without a medical certificate (or other reasonable documentation), the employee is not entitled to be paid for their day off.

If you have had problems with sickies in the past, we recommend that all employees are informed that medical certificates will be required for any personal/carer's leave taken during December and January.

Public Holidays

In December and January, there are up to six public holidays. When public holidays fall depends on which state you are in, and what day is 'gazetted' as the public holiday. This year some public holidays fall on a Saturday or Sunday. This can mean that the gazetted public holiday either stays on the weekend, is moved to the following Monday, or is observed on both days. For more information on when public holidays should be observed this season, contact AAAA Employer Assist on 1300 735 306.

On public holidays, all employees are entitled to the day off from work. For permanent staff, this day off is without loss of pay. You can reasonably request that an employee work on a public holiday as long as you provide reasonable notice. However, employees are entitled to refuse to work on reasonable grounds, such as family commitments or prior arrangements.

Generally, an employee covered by a modern award will be entitled to penalty rates when working on a public holiday. The actual penalty rate that applies depends on the employee's classification, their ordinary roster, and when they work during the public holiday.

Awards and Agreements may identify when public holiday are to be observed and, therefore, when public holiday rates of pay apply. Usually, this will be the gazetted public holiday, but sometimes it is the

actual day. Where confusion exists, it is best to consult with your employees as to which day will be observed as the public holiday at your workplace.

Shut Downs

A 'shut sown' (or close down) is where a business, for operational reasons, doesn't trade for a few weeks. For employers conducting a shut down over this festive season, it is important you meet the following obligations:

- Employees must be given a minimum of four weeks' notice of the shut down;
 - Employees must be able to use any paid leave available to them during this time (i.e. annual leave or long service leave); and
 - Public holidays should still be observed with employees receiving payment for the public holiday on these days.
- Where an employee does not have sufficient paid leave to use over the shut down period, the employee must be granted unpaid leave. Arrangements can be made to allow employees to go into deficit on their annual leave accrual, however, please contact AAAA Employer Assist before you decide to allow this arrangement.

AAAA Employer Assist is available on 1300 735 306 to provide all members with information and advice on your festive season obligations and any other employment matter. We are available at any time across the Christmas/New Year period.

Looking forward to hearing from you.

NEED MORE INFORMATION?

The AAAA Employer Assist can provide free to members:

- Common law contract templates
- Awards and current rates of pay
- Recruitment and termination advice

Contact the friendly team at the AAAA Employer Assist on

Telephone: 1300 735 306

Email: hr@aaaa.com.au

Explaining the Hill Holder System

- fitted to the Subaru Forester 2003 5 Speed



To locate your nearest EXEDY distributor visit www.exedy.com.au or call 1300 366 592

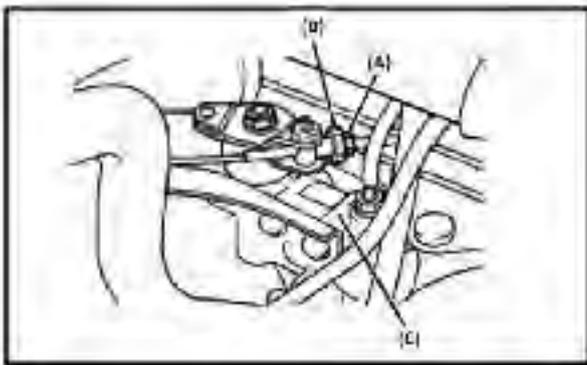
Hill Holder System: Inspection and Adjustment

Confirm the stopping and starting performance by activating the hill holder on an incline of three degrees or greater.

1. If the vehicle does not stop: Tighten the adjusting nut of PHV (pressure control valve) cable.
2. If the vehicle does not start correctly:
 - a.) If the hill holder is released after engagement of clutch (engine tends to stall): Loosen the adjusting nut gradually until smooth clutch engagement is achieved.
 - b.) If the hill holder is released earlier than engagement of the clutch (vehicle rolls down slightly): Tighten the adjusting nut so that hill holder is released during engagement of clutch (status in a). Then make adjustment the same as in a.

NOTE:

- When turning the adjustment nut, hold the inner cable with pliers to prevent it from turning.
- Replace the pressure hold valve (PHV) or PHV cable if they are defective and / or damaged.



- (A) Lock nut
- (B) Adjusting nut
- (C) Pressure hold valve

The 2003 Forester 5 speed manual transmission model is equipped with a hill holder.



Operation of the pressure control valve (PHV) is accomplished by means of a cable connected to the clutch pedal and routed through the bulk head to the PHV. The end of the cable at the PHV is adjustable.

If the vehicle does not hold on an incline of 3 degrees or greater, tighten the adjustment cable. If the holder releases after the clutch engagement, loosen the adjustment.



Selective catalytic reduction (SCR)

Selective catalytic reduction (SCR) is a means of converting nitrogen oxides emitted from diesel engines into harmless nitrogen and water vapour. This is achieved by injecting urea into the vehicles exhaust stream.

The first version of selective catalytic reduction of NOx used ammonia and was patented in the United States by the Englehard Corporation in 1957. Development of SCR technology continued in Japan through out the 1960's and the first large scale SCR was installed on utility boilers by the IHI Corporation in 1978.

Commercial selective catalytic reduction systems have gained popularity over the last 30 years as SCR systems reduce NOx emissions by 70-95 percent. In more recent times SCR technology has been developed to accommodate diesel engines, such as those found on large ships, diesel locomotives, gas turbines, and both commercial and passenger vehicles.

The SCR system is a simple design to reduce green house gases and increase diesel engine efficiency. Urea SCR systems use diesel exhaust fluid (DEF) as a reductant, which is also known as Urea or brand names such as AdBlue. AdBlue is typically a blend of 32.5 percent urea and 67.5 percent deionized water. The urea (Adblue) is injected in the hot exhaust gases before it enters the catalytic converter. Inside the converter the urea reacts with the catalyst, producing nitrogen and water vapour, two harmless natural components of air we breathe everyday.

The key to SCR is the chemical reaction of the urea with the nitrogen oxide within the



catalyst chamber. Before entering the catalyst chamber the urea is injected and mixed with the gases.

The chemical equation for a stoichiometric reaction using urea for a selective catalytic reduction process is: $4NO + 2(NH_2)_2CO + O_2 \rightarrow 4N_2 + 4H_2O + 2CO_2$. When the urea makes contact with the hot exhaust gases, ammonia (NH₃) is released. The ammonia initiates a reaction where NO and NO₂ molecules are broken down (reduced) into nitrogen, oxygen, and water. SCR technology is designed to permit nitrogen oxide (NOx) reduction reactions to take place in an oxidizing atmosphere. It is called



For more information or a free SCR brochure contact
Karl Dutka - Engineer
Ph: 03 9761 4416

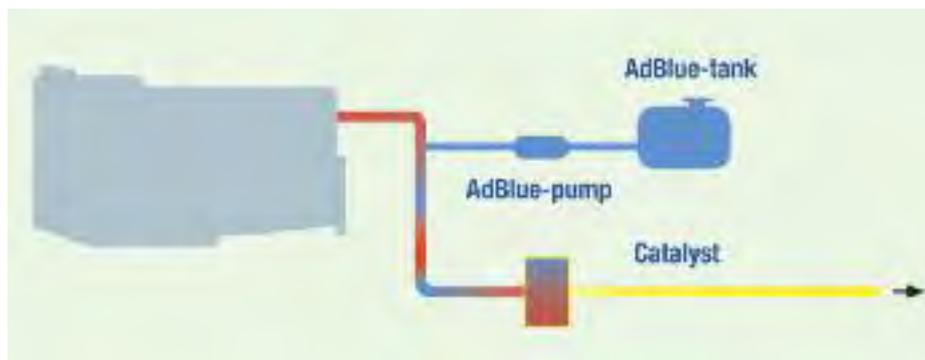
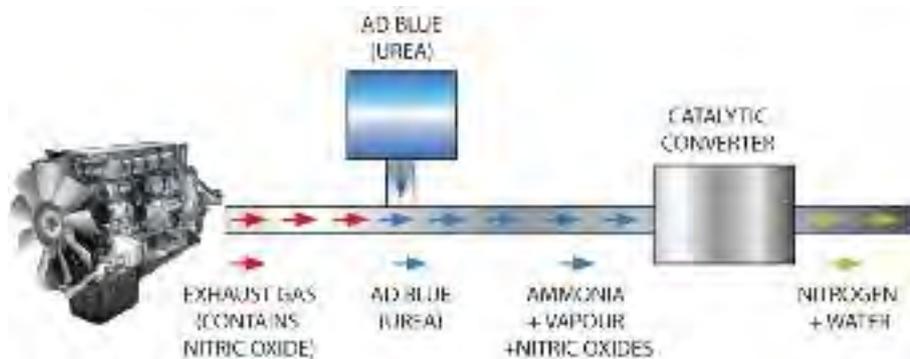
Email: karl.dutka@normagroup.com

"selective" because it reduces levels of NOx using urea as the reductant within a catalyst system. SCR technology alone can achieve NOx reductions in excess of 90 percent.

Therefore SCR is one of the most cost-effective and fuel-efficient diesel engine emissions control technologies on the market today. For passenger cars, buses and trucks, the ability to meet stricter emission guidelines such as Euro 5 and improve fuel efficiency without compromising performance is ever important. In the commercial trucking industry the ability to reduce emissions to near-zero levels while also delivering a 3-5 percent diesel fuel savings distinguishes SCR as one of the only emissions control technologies that is as good for business as it is for the environment.

Selective Catalytic Reduction (SCR) is the only vehicle emissions control technology that is proven to be as good for vehicle performance as it is for the environment. Not only is SCR the only technology that meets the strict Euro 5 standard standards at the exhaust, but improves fuel-efficiency of diesel vehicles as well as their ability to run cleaner. Australian emission standards are based on European regulations for light and heavy duty vehicles with acceptance of selected U.S and Japanese standards. On January 1st 2011 Australia introduced the Euro 5 standard, under ADR 80 for all diesel heavy buses and heavy trucks. The Euro 5 emission standard currently in effect requires heavy buses and trucks to have a NOx output of <0.4 g/k wh. Development of emission standards are coordinated in Australia by the Natural Transport Commission (NTC) and regulators Australian Design Rules (ADR) who are administered by the department of infrastructure and transport.

SCR technology is an economical solution for all new and pre Euro 5 (2011) vehicles to adopt in order to support the environment for a cleaner future. NORMA offers SCR conversion kits for various diesel engines, including tube and fittings. In Europe where the technology has been in use for several years, SCR has also been shown to lower operating costs and increase resale truck values. SCR is reliable and, with more than 500,000 SCR-equipped trucks operating in Europe, SCR is proven.





AdNO^xious



SCR solutions now available in Australia

NORMA® Selective Catalytic Reduction (SCR) connector kits are now available in Australia.

Australian emission laws introduced at the beginning 2011, legally require all heavy buses and trucks to have an NO_x exhaust output of less than 4 g/kwh.

In order to comply, the solution is easy – fit NORMA® SCR connector kits to your new or pre 2011 diesel vehicle. Our connector kits are specifically designed to suit SAE standard

spigots, and are the perfect choice for reliability and performance.

An SCR system injects AdBlue into your exhaust stream, reducing NO_x emissions (greenhouse gases) by up to 90%.

SCR is a proven emission reduction solution with over 500,000 trucks in Europe using the technology.

For more information including your free brochure, telephone **(03) 9761 4416** email sales.au@normagroup.com or visit us online at www.normapacific.com

www.normapacific.com



Bosch: Breaking news in braking



BOSCH

Invented for life

The automotive technology buffs spread throughout Australian workshops are no doubt already beginning to notice a shift in the trend of vehicle safety systems.

For more information visit
www.bosch.com.au www.pbr.com.au

Whilst the number of airbags continues to grow and ESP software calibration undergoes continuous refinement, vehicle manufacturers are progressively shifting focus toward preventative safety systems.

Driving the product development behind this emerging trend are Bosch's chassis control engineers with their recently launched emergency braking system for low speeds.

This new technology represents the enhancement of Bosch's existing predictive emergency braking system, which is already used in numerous Volkswagen vehicles.

Bosch's new technology is designed to operate at speeds below 30kph, when there is often minimal distance between vehicles — precisely the point at which many low-speed accidents occur.

In fact, Allianz Insurance 'Centre for Technology' calculated that Bosch's system could potentially prevent over 500,000 minor collisions annually, in Germany alone.

Using Bosch's 'LRR3' long-range radar sensor in the front of the vehicle, partnered with the ESP Electronic Stability Program, the distance between the car travelling directly in front is calculated and consistently monitored.

If this distance becomes too small, the brakes are primed ready for deployment — reducing the crucial milliseconds involved



with pressure build-up — and then applied immediately when the set minimum distance is reached.

The process is similar to left-foot pre-braking in a race car, whereby the braking system is 'pumped-up' by the driver tapping the pedal on the approach to critical brake markers.

Effectively, Bosch's new technology provides a level of driving skill traditionally reserved for advanced professionals, all before the average driver even knows they are in trouble.

At higher speeds, the system still offers comprehensive support to the driver. There are visual and audible warnings and even a brief automated application of the brakes to alert the driver.

This encourages them to increase their distance from the vehicle immediately in front.

In addition, if the driver does react, but their braking input is insufficient, the system will automatically maintain brake pressure until the LRR3 measures that the vehicle has retreated to an appropriately safe travelling distance.

Debuting in the latest Audi A5, Bosch's new system is set to gradually make its way through the market and become commonplace in many vehicles on our roads and in your workshops.

In the near future, the traditional brake service may focus on the testing and inspection of electrical systems, just as much as friction-based components.



Bosch Diesel: The pressure generation



BOSCH
Invented for life

As the Euro 6 emission standard draws closer and the new vehicle-buying public places greater emphasis on fuel consumption, diesel passenger vehicle sales continue to increase in Australia.

For more information visit
www.bosch.com.au

In the background, Bosch recognises this trend and works on further refining its pioneering common-rail diesel technology.

These refinements have the goal of reducing fuel consumption by a further 30 percent, almost entirely through enhancement of the combustion process.

Higher injection pressures lead to even finer fuel vaporisation, the key to cleaner and more efficient combustion.

With Bosch's prominent CRS2-16 and CRS2-18 solenoid-valve injectors currently delivering 1600 and 1800 bar of injection pressure respectively, a new piezo injector range will offer up to 2500 bar in the near future and form part of a new CRS3 common-rail system.

Even 2000 bar injection capacity is already available from Bosch's CRS2-20 injectors, reflecting the company's relentless strategy for continuous improvement.

All CRS2-series injectors allow a wide dynamic range when controlling the nozzle needle, meaning very short intervals between injection pulses are possible.

The effect of this is up to eight individual injections per cycle.

An additional development step toward the 2500 bar reality is Bosch's newly-developed CRI-20 solenoid-valve injector, which contains an integrated high-pressure reservoir, thus reducing pressure fluctuations.

Despite the efficiency of the solenoid-valve, the piezo actuator develops around ten times more power and is less sensitive to minor fuel impurities. This increases service life and performance.

A key benefit of Bosch's broad diesel injector range is that the vast majority of the diesel market is covered in nearly all price ranges.

This means that advanced technology is within reach of growth markets, such as China and India, while superior, higher injection pressures help optimise premium European vehicles, which are designed to satisfy more stringent emissions and efficiency requirements.

Even current solenoid-valve systems can be combined with eco-friendly features, such as start-stop technology which increases efficiency across the scale.

Ultimately, the combination of additional economising features with high-pressure piezo diesel systems creates the ideal scenario for low emissions and improved fuel consumption.

This is Bosch's recipe for the future of diesel passenger vehicle technology and reinforces the company's drive toward technologies that are 'invented for life'.



Forty years young

As a globally recognised supplier of automotive systems and components, it will come as little surprise that ACDelco has enjoyed its fair share of industry firsts and milestones.

Take ACDelco spark plugs, for example.

Now how many of you out there know that they played a key role in two historical global events?

Not only were AC plugs used in Charles Lindbergh's trans-Atlantic flight of 1927, they were used to propel Neil Armstrong to the moon in the Apollo mission of 1969!

But what about batteries, in particular the SMF or Sealed Maintenance Free variety?

It is here that ACDelco has an equally charged pedigree.

Following their pioneering introduction in 1971, they have developed quite a reputation over the last four decades and not just because they are recognised as the 'best dressed battery' in the business.

In reality, it's all about their outstanding features and the benefits they consistently deliver that make them such a firm favourite with workshops and customers.

Key features

And while you can catch up with the full list of features and benefits that ACDelco SMF batteries are proven to deliver on below, the top four for starters include fit and forget.

With traditional batteries maintenance is understandably overlooked, often with the dire consequences of failure and the prospects of the cost and inconvenience of replacement and sometimes vehicle recovery for one unhappy customer in the process.

Being maintenance-free, ACDelco SMF batteries do what they say on the can – you just fit and forget them and let customers enjoy miles of trouble free motoring in the process.

Coming in at number two is extended service life.

With ACDelco having constantly improved the technology of SMF batteries over the last 40 years, the lead/calcium expanded grid design extends battery life so that you and your customers can rest assured that you're unlikely to run out of charge.

And this leads us nicely into key feature number three - increased shelf life.

Being a distress purchase product, stocks will always be needed on the shelf, ready and charged to get drivers up and running.

Peace of mind comes from the fact that when compared to conventional batteries, the SMF variety enjoys a shelf life of up to 12 months without the need for charging.

This feature alone means you won't lose out on a sale.

And last but not least there is the all-



important warranty, with the confidence of a product that has proved itself for 40 years and which is backed by the resources of GM Australia-wide for a period of 30 months in private use vehicles (conditions apply).

Positive feedback

While blowing your own trumpet is always easy, it is important to establish if those on the ground share the same views.

When it comes to ACDelco SMF batteries, feedback from the marketplace indicates that their future looks equally as rosy.

"ACDelco SMF batteries have a very good reputation across Australia and are recognised for their rugged reliability and quality performance," Grant Roberts of ACDelco battery stockist, RJ Batteries, said.

"It really is a fit and forget product and one that is reported to present very few problems over what amounts to a long and trouble free service life.

"Today, their DIN and JIS application batteries are proving to be increasingly popular, however their strength also comes from the fact that there is an ACDelco SMF battery for almost any application, whether it be automotive, SUV and 4WD, marine and RV, truck and commercial, or deep cycle.

"Not surprisingly, ACDelco delivered a real winner with its SMF battery range, and

one that is likely to continue to lead the field into the future."

Representing some of the biggest selling batteries in the Australian aftermarket, it will come as little surprise that they are readily accessible across the length and breadth of the country.

In addition to being stocked in most city and regional locations by battery specialists and automotive outlets, a 23-part number range of truly price competitive SMF batteries is also being promoted via the Holden Trade Club that today has some 26,000 members.

So let us recap on what makes the ACDelco SMF battery so special.

At the heart of its design are the lead calcium expanded grills (Lead Calcium Technology) that offers proven resistance against corrosion, overcharging, excessive gassing, water usage, self discharge and thermal runaway, all of which limit the battery life of conventional lead acid batteries.

The range also includes batteries suitable for cranking/starting, high cycle, dual-purpose starting/deep cycle and deep cycle applications.

For more information on ACDelco SMF batteries or any other products in the range, contact your nearest stockist by using our easy to use locator at www.acdelco.com.au

Gates Corporation celebrates 100th anniversary

Launched with entrepreneurial spirit and driven to innovate, the company is one of the world's leading industrial and automotive manufacturers.

In 2011, Gates marks 100 years of innovation and service, and celebrates its position as a world leader in engineering, manufacturing, marketing and distribution of industrial and automotive belt and hose products.

From a modest beginning, Gates Corporation, formerly known as The Gates Rubber Company, has charted a global course that has seen the company expand into 29 countries around the world.

"We are delighted to celebrate this milestone and a legacy few companies ever realise with our employees and customers around the world, and we look forward to even greater success over our next 100 years," Gates Chairman Jim Nicol said.

Gates Australia celebrated the centennial in style at Vue De Monde located on the former observation deck on the 55th floor of Melbourne's iconic Rialto.

With Melbourne as the backdrop for an evening with delectable food and wine, in a space where every piece of cutlery and crockery is impeccably crafted and inspired by Melbourne's nature and rich history, Gates staff, customers and suppliers wined and dined together on Friday, October 7 in celebration of Gates, 100 years.

Victor Bray of Team Bray Racing, a six-time Top Doorslammer Australian Champion, was the evening's guest speaker.

Victor boasted of his long affiliation with Gates and his pleasure to be involved with a company able to supply him with belts that can withstand the extreme racing environment.

The warmth and spirit of each and every Gates team member and



customer on the night is what ultimately created what was a very memorable evening.

By the end of the event, the belief was clear in the eyes of all attendees that Gates has the platform for which to conquer the next 100 years.

Gates success is attributed to the commitment and passion of many including its employees, customers, suppliers, and the communities in which the company operates.

Pro/Race celebrates 25 years of building top quality products

Mentone, Victoria-based Pro/Race Performance Products was founded by Graham Withers and is celebrating 25 years of building top quality products.

Mr Withers was a very successful Top Fuel drag racer, who was the Australian National Champion three times in the 1960s, driving his self designed and built, 392 cubic inch blown Chrysler Hemi front engine dragster.

As Australia's first professional drag racer,

Mr Withers toured for five years and then retired to establish Graham Withers Speed Shop.

While building high performance engine packages for local racers, he recognised the need for a durable high strength crankshaft vibration damper, also known as a harmonic balancer.

Graham designed and patented the world's first 'All-Steel' harmonic balancer to suit Australia's GM V8 Holden Engines, substituting the factory OEM cast iron harmonic balancer which was not suitable for high performance racing applications.

Today, Pro/Race offers high performance harmonic balancers for a wide range of engine applications, with the main thrust towards US V8s and is proud to be a supplier to USA-based Ford Racing, Mopar Performance and other leading distributors in the USA.

Due to the success of Pro/Race SFI dampers, a logical companion product was to look toward the OEM segment of the market, where an opportunity existed to produce a high quality yet affordable replacement for the OEM dampers.

The Pro/Street range was born in the late 1990s and not only used nodular iron for the construction, which is 30 percent stronger than the gray iron used in most OEM dampers, but also features a bonded elastomer where the outer ring and inner hub are bonded to the elastomer.

This minimises the potential for the outer ring to move on the hub, losing true TDC position.

Furthermore, a key feature of the Pro/Race range was also incorporated into the design- precision machined bolt-in counterweights.

For more information visit www.pro-race.com or contact Peter Verlei on 03 9584 3522.



35 years service to the global automotive aftermarket

Schaeffler Automotive Aftermarket celebrates a major milestone in 2011, as this year represents the company's 35th anniversary of partnering with automotive repair businesses all over the world.

From drivetrain and transmission components to engine and accessory drive components to wheel bearings, Schaeffler Automotive Aftermarket provides OE quality products by LuK, INA and FAG to automotive repairers and re-sellers all over the world, establishing many highly valued long-term partnerships.

With customer proximity a key factor to ensure total efficiency for its customers, Schaeffler Automotive Aftermarket established a global network of some 11,500 distribution partners more than three decades ago to ensure the delivery of excellent service, prompt product availability and detailed product training.

Innovative repair solutions have been the hallmark of Schaeffler Automotive Aftermarket's global success over the past 35 years.

Aside from providing the best quality replacement products as designed and manufactured for the original vehicle manufacturer, Schaeffler Automotive Aftermarket has also developed dedicated workshop repair products designed to decrease labour times, improve replacement product reliability and increase customer satisfaction.

Innovations such as LuK RepSet, LuK RepSet Pro or LuK RepSet DMF and the FAG Repair Insert Unit (RIU) are just some examples of how Schaeffler Automotive Aftermarket provides repairers with new and more efficient solutions to common repair and replacement work to ensure the best results.

Detailed technical product information is also of prime importance to Schaeffler Automotive Aftermarket.

Over the past three and a half decades the company has provided technical solutions such as TecDoc, TecCom and RepXpert to further support Schaeffler Automotive Aftermarket customers all over the world.

New regional based product catalogues also ensure that local make and model applications are readily available along with the unrivalled Schaeffler Automotive Aftermarket global product range.

The most important point in the Schaeffler Automotive Aftermarket worldwide culture is that without service, everything else is irrelevant.

Customer proximity and the supply of customer specific services provide added



Schaeffler Automotive Aftermarket's global headquarters in Langen, Germany

value and long term benefit for both the company and its distribution/workshop or reseller partners.

From the outset Schaeffler Automotive Aftermarket has initiated new service concepts parallel to supplying replacement parts.

“ **The most important point in the Schaeffler Automotive Aftermarket worldwide culture is that without service, everything else is irrelevant.** ”

The company has also sought to find new ways of providing repairers and dealerships with improved access to information resources.

The company assists in optimising order and delivery processes, facilitates skills and expertise of its products and systems and supports marketing activities.

An example of this support was the creation of the communication platforms TecDoc and TecCom by Schaeffler Automotive Aftermarket, along with the RepXpert Internet-based knowledge portal.

At the same time, the company is

constantly working on implementing new ideas in order to safeguard the future of the independent automotive repair market.

With its regional headquarters for the Asia Pacific region based in Singapore, Schaeffler Automotive Aftermarket has warehousing, quality control along with sales, marketing and customer support operations located throughout the region.

Besides Singapore, these locations include Australia, Japan, China, Hong Kong and India.

Schaeffler Automotive Aftermarket has also placed important emphasis on the Australia, New Zealand and Pacific region, making parts for locally produced makes and models readily available for passenger cars, commercial vehicles, heavy duty vehicles and agricultural vehicles.

Locally produced product catalogues to cater for each region's most popular applications along with the employment of regional product managers also form a part of the company's long standing commitment to Australia, New Zealand and the Pacific region.

It has been a highly successful 35 years in the global aftermarket, with many enduring customer partnerships formed.

Schaeffler Automotive Aftermarket looks forward to many more ahead.

**Simply the most powerful
upgrade globe ever.**

X-tremeVision +100%



X-tremeVision +100% is the worlds highest performing upgrade globe range, designed to produce a high powered, bright white light, with a longer life.

Philips Quartz Glass Technology enables extremely high gas pressures which combined with the high precision filament construction, increases light output and extends the globes life, far beyond any other globe.

With 100% more light on the road and ECE certified, X-tremeVision is the most amazing headlight globe ever developed.

For further information contact Invision Sales:
Ph: (03) 9330 2299 www.invisionsales.com

PHILIPS

Warren & Brown celebrates 90 years of precision

Australian owned and operated, Warren & Brown Technologies (WBT) is currently celebrating its 90th year.

Originally established in 1921 as a tool-making factory in Melbourne, Australia, it joined the large automotive component manufacturer conglomerate Repco in 1949 and re-emerged as Warren & Brown & Staff in 1986 when five former managers bought the division from Repco's new owners.

Since that time Warren & Brown has been independently owned and has continued its development and production of precision tools and equipment including its world famous deflecting beam torque wrenches, cooling system analysers, soldering irons and hand tools.

During the mid-90s, Warren & Brown began its foray into the telecommunications industry by developing a range of copper and optical fibre management products.

Working with the largest network carriers



over a number of years including Telstra, the ultimate success of this diversification was realised at the beginning of the 2011 when it was awarded a \$110 million contract to supply optical fibre management equipment for the Australian National Broadband Network (NBN).

Much of the heritage and legacy that is WBT today stems from its history in precision tools and machinery.

WBT continues to manufacture and supply its range of tools for the industrial and automotive markets and you will be certain to find a Warren & Brown tool in any workshop.

To celebrate Warren & Brown's 90 years of precision, it is bringing out a limited release 'signature' gold edition of its deflecting beam torque wrench.

A limited number of the 323500 torque wrench (20-220ft.lbs / 30-300Nm – ½" square drive) will be manufactured to celebrate this milestone.

With a gold chrome bar and black arm and wedge this tool will certainly stand out and is a must for any serious workman.

**For more information phone
03 9318 5844**

SuperPro and 30 years of suspension development - that's a milestone!

There are many brands and manufacturers with long histories and 30 years is not the longest.

However, the range and scope of development in the SuperPro suspension parts range in that time represents a significant achievement and an important milestone for this innovative Australian manufacturer.

Starting at the end, we can track back through the significant development steps that have lead to one of the biggest ranges of suspension parts and poly bushings in the world.

It's a range that helps both specialist suspension and parts dealers to better service their customers.



Supaloy, lighter and tougher

Supaloy is the newest design innovation from the research and development team at SuperPro.

A blend of high-stress, corrosion resistant and hard-anodised metal alloy coupled with the proven SuperPro polyurethane delivers this innovative metal-alloy hybrid called Supaloy.

This new leaner, lighter alloy solution helps

lower weight, fuel usage and running costs while improving service life and reliability.

The first product to be released in this fantastic new design are replacement lower control arms for VW, Audi, SEAT and Skoda, providing a 44 percent reduction in unsprung weight, better alignment geometry and improved safety with alignment enhancements.

Grip Dynamics technology

SuperPro Grip Dynamics aims to improve grip for better handling and performance outcomes.

The SuperPro development team has spent a lot of time looking at low-cost high-value ways of improving real world performance.

Nearly 30 years of experience with suspension has shown that it's possible to get great dynamic results with improved handling and grip by paying attention to the details.

This focus on the key alignment and dynamic elements that lead to more grip and better handling are used in the new Grip Dynamics technology system.

DuroBall metal poly hybrid

Vertical pivot bushes are now very commonly used by OEM engineers to precisely locate control arm pivot points to the chassis.

This solution provides great benefits in location precision but has its own inherent weaknesses that can lead to premature failure.

SuperPro has developed a unique metal and polyurethane hybrid design for this demanding application.

Combining the core strengths of SuperPro's engineered polyurethane coupled with a specialised metal ball joint, the DuroBall design delivers all the benefits of a vertical pivot solution with greater durability and service life.

What about the other 29 years?

These last three significant technical milestones are the culmination of many years of suspension development and though just released, stand on the shoulders of the innovations that came before them.

Unique SuperPro design features like tangential grease grooves, material voiding, knurling and the use of a double helix for better lubrication and grease retention make this range the reliable choice for suspension professionals and parts sellers alike.

Strong export sales in demanding markets like Europe and Japan suggest that these technical innovations also deliver some key sales milestones for this iconic Aussie brand.

SuperPro is still proudly designed, engineered and manufactured in Australia.

You can read more about these milestones and SuperPro products at www.superpro.com.au or call 07 3892 9000.

Bosch celebrates 125 years

This year Bosch will celebrate its 125th anniversary as well as the 150th anniversary of the birth of its founder, Robert Bosch.

On November 15, 1886, Robert Bosch established his Workshop for Precision Mechanics and Electrical Engineering in Stuttgart, Germany.

Since then, the company has grown to include more than 300 subsidiaries and regional companies in over 60 countries, with more than 280,000 employees in 150 countries.

From the very beginning, Bosch played a decisive part in shaping the evolution of the automobile.

In 1913, Bosch launched its automotive lighting system with its own power supply from a generator and a battery.

It was followed by innovations such as electric starters, horns, windshield wipers, power-assisted brakes and indicators.

With the establishment of Bosch Service in 1921 and the development of its network of salesrooms and branch offices in other countries, Bosch created an extensive repair service for its customers.

At the same time, it laid the foundations for a comprehensive international automotive aftermarket business.

1920-1940s

In 1927, the diesel injection pump was launched. It was initially for use on trucks, but was eventually installed in the first diesel-powered passenger cars in 1936.

1950-1960s

In 1951, Bosch introduced gasoline

injection for the two-stroke engine of the compact Gutbrod Superior car.

This paved the way for the development of passenger car gasoline engines that combined higher performance with lower fuel consumption and emissions.

Three years later, gasoline injection for four-stroke engines debuted in the legendary gull-wing Mercedes-Benz 300 SL.

In the latter half of the 20th century, semiconductors became the key components of new electronic systems, featuring in everything from engine management systems to driver assistance systems.

The first Bosch product to feature electronic components manufactured in-house was the Bosch alternator regulator introduced in 1958.

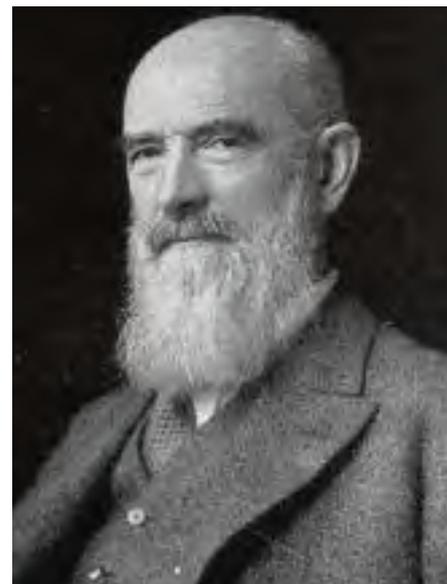
It was followed in 1967 by the Bosch Jetronic fuel-injection system, the first-ever electronic fuel-injection system to be manufactured on an industrial scale.

1970s to present

Without Bosch's innovative semiconductor technology, the lambda sensor (1976), which allowed a catalytic converter to be used to make exhaust cleaner, would not have been conceivable.

Nor would the ABS antilock braking system (1978) or the ESP electronic stability program (1995) have been possible.

Today the company's parallel full hybrid technology, which allows vehicles to run solely on electricity, has already gone into



series production at Volkswagen and Porsche.

Bosch does not forget the past, though, and still offers a selection of more than 50,000 spare parts for classic and vintage cars – just one way in which the company helps to keep the history of mobility alive.

Keeping the wheels of industry turning for 70 years

Tecalemit has been a name synonymous with lubrication equipment since the 1920s and commenced manufacturing operations in Australia in 1941.



Tecalemit vehicle hoists and lubrication systems can be observed in many leading light and heavy vehicle workshops Australia-wide.

Tecalemit understands the importance of reliability and safety and built its reputation around providing only quality products.

The company can also assist with the design and lubrication equipment specification to provide a state-of-the-art workshop development.

Not only a major supplier to the Australian automotive industry, Tecalemit is a leading supplier for critical and sophisticated lubrication systems for the

mining industry, managing many complex fixed and mobile plant lubrication projects.

Tecalemit celebrated its milestone by attending major trade exhibitions such as Australian Auto Aftermarket Expo in Melbourne and AIMEX in Sydney.

Tecalemit has also employed V8 Supercar driver Mark 'Frosty' Winterbottom as its Brand Ambassador.

Whatever your lubrication equipment needs, Tecalemit can provide equipment based solutions that safely deliver reliability, durability and improved productivity, making your job easier.

For more information visit www.tecalemit.com.au



Optimising performance in a service business

Service based business can be the most difficult in which to measure profitability.

All kinds of issues can impact the difference between what is charged to a client and the cost of delivering the service.

The most challenging types of services are those engagements that are 'fixed quote', involving a 'scope' of services.

These are becoming more prevalent as clients become savvy and there is more competition.

Examples of these types of services providers are accountants, solicitors, surveyors, allied health such as occupational therapists, architects, town planners, engineers (civil, environments etc.), IT consultants, web designers, graphic artists and many more.

How do these types of businesses quantify performance levels? When someone mentions their performance has been good or bad, how are they forming that opinion (good or bad relative to what)?

- Last year's performance plus a fudge factor?
- The owner's required level of drawings?
- Some other arbitrary number?

The best way to ensure profit in a service business is to apply the 3x model. Put simply the 3x model is:

Revenue earned from charging staff time should be equal or greater than three times salaries paid.

For example: A firm pays salaries to its staff of \$450,000. Revenue earned for services provided by staff should be at least \$1.35m (which is \$450,000x3).

This could be considered as the revenue 'target' or budget for the firm.

Here's an example:

- Industry: IT consultancy (IT network services)
- Salary: \$60,000 pa (excluding superannuation)
- Chargeable rate: \$120 per hour (excluding GST)
- Hours at work pa: 52 weeks less four (annual leave) less two (public holidays) less one (personal leave) x 40 hours per week = 1800
- Productivity: 80 percent (meaning 20 percent of time at work is spent on tasks that are non-billable)

The revenue equation is therefore:

Expected revenue from staff
= 1800 x 120 x 80 percent
= \$172,800

Our 3x model suggests revenue should be three times salary, which equals \$60,000 x three = \$180,000

The business income statement should look like this:

Revenue (income) \$3x (three times salaries)
Cost of Goods \$1x (salaries)
Gross Profit \$2x (66.7 percent gross margin)
Overheads \$1x (for efficient firms)
Net operating profit \$1x (profit target)

An extension to this form of income statement can also be useful:

Month of xxx	Empl A	Empl B	Empl C	Empl D	All Empl
Revenue	23,400	14,500	15,200	13,300	66,400
Cost (salaries)	7500	6200	5000	5000	23,700
Gross Profit	15,900	8300	10,200	8300	42,700
Gross Margin	67.9%	57.2%	67.1%	62.4%	64.3%
3x Multiple	3.12	2.34	3.04	2.66	2.80
Overheads					26,400 (1.11x)
Net Profit					16,300 (0.69x)

Performance measurements using the 3x model should be done using an 'isolationist' approach.

That is, for each period being measured (month; quarter etc.), the performance measurements should be 'isolated' to work completed during that period only.

The major benefit in this isolationist approach is that useful comparisons and analysis becomes possible and very useful (apples to apples).

This sounds simple enough and it is, except when the work done during the specific period is not all billed in that period. What is left is known as Work in Progress (WIP).

In a service business, WIP is the billable hours worked up to a point in time, that have not been billed.

It is an asset of the business and should be shown in the balance sheet.

The movement in the value of WIP from one period to the next is accounted for on the income statement.

The 'ageing' of WIP should be under constant review. A client is unlikely to pay for work that was completed 12 months ago.

Business who assess their performance during a period, without understanding and accounting for WIP, often become confused at the volatility of their performance.

When looking at the results of the 3x model the following questions should be asked:

- What was the revenue multiple (to salaries) for the firm as a whole?
- Which staff, were above and below the firm's score?
- What were the reasons for differences

between individuals (productivity, write offs/downs, quotation over-runs etc.)?

- What was the overheads multiple? What was the three month average of the overheads multiple? Which overheads were higher than expected?
- What WIP is older than three months and why hasn't it been invoiced prior?

Examples of reasons for lack of performance:

Quoting inadequacies

- Not enough thought given to quotations re the actual work required to deliver.
- Lack of understanding between quote givers and service deliverers.
- Projects not 'de-briefed' sufficiently. Not enough 'after-the-fact analysis' of what transpired relative to what was expected.
- Client's expectations from scope different to service providers.

Write offs/downs

- Billable tasks written off/down due to perceived lack of value provided.
- Low time tasks written off due to perceived lack of value e.g. administrative work.

Productivity

- Staff billable hours less than peers. Often due to systemic issues such as lack of defined job description.
- Expectations not clearly communicated.

Systems to handle management of the above may seem expensive but probably cost a lot less than the extra profit from improved productivity.

CFO On-Call regularly runs webinars/events on business improvement strategies - visit the website

www.CFOonCall.com.au/events/webinars.html to register. Or call 1300 36 24 36 to chat with one of the advisors.

Cliplight electronic leak detector

Because all vehicles are currently being designed with smaller A/C refrigerant charges and tighter seals, there is a need for an improved class of electronic refrigerant leak detector capable of finding very small leaks.

Leak detectors that comply with J2791 will identify smaller refrigerant leaks when servicing all motor vehicle A/C systems and will deliver stable performance without false-triggering distractions.

SAE J2791 has become the standard by which all probe-type leak detectors should be measured.

The 580951 electronic leak detector is compliant with J2791 and EN 14624.

The instrument was certified to comply by a qualified independent laboratory.

The instrument has superior sensitivity to HFC refrigerants including R134a, as well as the newer refrigerant blends.

It will also detect the proposed R134a substitutes such as R152a and HFO1234yf. The solid electrolyte heated sensor technology is superior to the older corona discharge technology in detecting refrigerant gas leaks.

The design includes the use of four disposable AA batteries to eliminate the drawback of using rechargeable batteries that can make an instrument useless when the battery pack becomes discharged and requires several hours to be recharged. Although the solid electrolyte sensor technology is heated, it is run cool enough to draw very little power and allows for about eight hours of continuous use. Additionally, the long life and stable sensor will not be poisoned by excessive exposure to refrigerant gas or become unstable over time and it is guaranteed to perform to its design specification for two years.

No other supplier of leak detectors, according to Go Distribution, provides a warranty on their refrigerant sensor.

The 580951 is designed with a unique numeric leak size indicator.

This feature enables the user to quickly and accurately find the source of a leak as well as to provide the size of the leak.

Finding the source of the leak and to have an idea about the size of the leak is the ultimate goal.

The 580951 incorporates an accurate and useful numerical LED display that provides a number from one to nine depending on the size of the leak.

The LED display is independent of the audio alarm and the sensitivity settings. Without changing sensitivity settings and by simply watching the numbers on the display increase or decrease as the probe tip is moved closer or further from the leak source, the user can easily hone in on the leak source.

The audio alarm of the 580951 incorporates three levels of sensitivity that changes the intensity of the alarm depending on the size of the leak detected further allowing the user to pin point the leak source.

The flashing LED alarm light at the probe tip of the 580951 is positioned directly where the technician is looking when leak checking.

The LED gives the instrument one more added feature to be sure the user can find the leak source as quickly and as reliably as possible.



Regular inspection a must

Behr Hella Service advises that regular air-conditioning inspections protect against unexpected failures and rising fuel costs.



According to the thermal management experts at Behr Hella Service, regular inspection and servicing of commercial vehicle air-conditioning units, (at least every six months), not only saves on costs and time-consuming repairs, but also reduces idle times and downtimes. Regular servicing also reduces the fuel consumption caused by the air-conditioning system.

Air-conditioning units, which are not serviced properly, or not at all, are veritable "gas guzzlers". Behr Hella Service research has revealed that a commercial vehicle air-conditioning unit consumed around 0.6 litres more fuel per 100 kilometres when not serviced regularly. A commercial vehicle that travels 125,000 kilometres each year and uses the air-conditioning unit 60 percent of the time on average, will consume up to 450 litres more fuel each year. Regular servicing not only helps to reduce running costs, it also prevents high repair costs. It also reduces the need for expensive spare parts if the air-conditioning system breaks down prematurely or suffers serious damage.

As an example, the oil circulating with the refrigerant lubricates the air-conditioning compressor. Every year, up to 10 percent of this refrigerant escapes through natural evaporation, which can cause compressor failure due to lack of lubrication.

Also, the evaporator can become the cause of many problems given that it is a significant part of the air-conditioning unit. Condensation forms in its fins and over time, bacteria, fungi and micro-organisms accumulate and can endanger the driver's health. The evaporator must therefore be disinfected regularly. A regularly serviced and proper functioning air-conditioning unit keeps drivers more relaxed and as a result they are proven to have better reflexes and are able to concentrate more on road and traffic conditions, making them safer drivers.

Behr Hella Service provides the Australian automotive aftermarket with a vast range of premium quality vehicle air conditioning and engine cooling parts.

To find out more contact the Behr Hella Service customer service team on 1800 061 729, or by email at custservice@ha.hella.com

For more information contact Go Distribution Managing Director Gary Osborne on 02 6026 4886 or 0428 448 878 or email goborne@bigpond.net.au

Alemlube keeps you cool

Now that the air conditioning season is upon us, what a great opportunity to provide your customers with a value adding air conditioning system service while at the same time generating an effective incremental profit centre for your business.

Two of the major benefits of equipping your automotive workshop with the Alemlube 47081A fully automatic air conditioning fluid recharger are that the machine is extremely easy to use and requires minimal labour, allowing you to spread valuable servicing time across all your workshop functions.

Technically advanced and with a specification database of 600 vehicles, simply enter the vehicle make, model and year of manufacture, press start and all the following processes are automatically performed: gas recovery in the vehicle, moisture evacuation from the system, leakage testing, oil injection and gas recharging.

An audible alarm will indicate completion



of the process and the onboard printer then produces a comprehensive system diagnosis including gas recovery, oil injection and gas filled in the vehicle.

Already the number one choice of many in the automotive industry, and with a significant number of the 47081A fully automatic air conditioning fluid recharger in service, the feedback in regard to performance and reliability from users on the workshop floor is positive and further endorsement that the machine proves to be a solid investment in workshop efficiency and productivity.

Technically speaking, the Alemlube 47081A is suitable for use with R1349

refrigerant, has a vacuum pump capacity of 72LPM, incorporates an 18kg refillable refrigerant bottle with automatic heater, performs a recovery speed of 400 grams per minute in liquid phase, operates between a range of 110°C and 49°C and allows the data base to be upgraded through the RS232 port.

Additional acoustic and visual service alarms alerting the operator that maintenance and filter replacement are required ensures that the 47081A is reliably ready to perform at any time.

Keeping your cool has never been easier.

Contact Alemlube in your state or territory to invest in the 47081A fully automatic air conditioning fluid recharger and be confident that your automotive service centre is fully equipped to handle the demands of a long hot summer, and provide complete customer satisfaction.

For more information visit www.alemlube.com.au



REFRIGERANT GAS LEAK DETECTOR

Detects all refrigerants and blends: CFCs, HCFCs, HFCs

A sensor with a digital display that is independent from the audio alarm and sensitivity level, allowing the precise pinpointing of the leak source.



PART No. 580951

CERTIFIED En14624 & SAE J2791

FEATURES:

- Long life, stable sensor
- Unique numeric leak size indicator
- Automatic calibration and reset to ambient levels
- 3 adjustable sensitivity levels
- Visual LED leak alarm located near sensor
- True mechanical pump
- Low battery indicator
- Audio mute function
- Comfortable neoprene grip
- Uses 4 AA alkaline batteries
- 2 - year warranty includes sensor

OTHER 'GOOD TO KNOW' INFO

Sensitivity .05 oz/yr R-134a
Sensor Life > 3000 hours
Response Time Instantaneous
Battery Life 8 hours continuous
Warm up time < 20 seconds
Probe length 430 mm
Weight, lbs 3.3 kg
Numerical Display
 7 segment digital display (1 to 9)



CONTROL PANEL

- ← Digital Leak Size Indicator
- ← Low Battery Indicator
- ← Sensitivity
- ← Audio Mute & Sensitivity level
- ← Power ON/OFF

GO Distribution - 02 6026 4886 - gary@godistribution.com.au - www.clight.com

Mastercool Digital Diagnostic Manifold

The Mastercool Digital Diagnostic Manifold (TOX99772) is the most advanced and user friendly on the market, according to Ashdown Ingram.



This manifold is used to charge the air conditioning system and read pressure and refrigerant temperatures.

It offers a large easy to read LCD that displays pressures, saturated temperatures, actual temperatures, superheat and subcooling temperatures for more than 60 refrigerants.

When used with the Clamp-on Thermocouple connector it will display the actual pipe temperature and automatically calculate the superheat or subcool temperature, ensuring a correct charge.

When the vacuum sensor cable is attached to the manifold it will display deep vacuum.

To ensure lasting performance and durability the manifold case is constructed of ABS material and protected by a rugged rubber boot.

It also comes with a fold away hanging hook for easy storage.

Contact your local Ashdown-Ingram Representative for more information or to place an order today.

Visit www.ashdown-ingram.com.au for a full branch listing.

Desiccant for HF1234YF

With the new refrigerant HF1234YF already planned for introduction in the near future, the product managers taking care of the Jayair range have already taken the necessary steps to ensure its driers will be compatible for use with this refrigerant.

Rest assured that CoolDrive only uses desiccant manufactured by UOP in all the Jayair driers. UOP, the world's leading manufacturer of desiccants, has tested and confirmed that its XH7 and XH9 desiccants are suitable for HF1234YF.

Desiccant is often not given due consideration or importance.

Many manufacturers cut costs by using inferior product and reduce the quantity specified by the system builder.

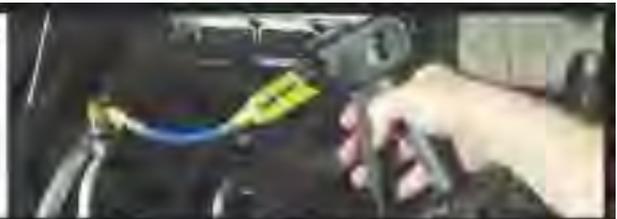
With Receiver Driers, it really is a case of you get what you pay for.

Using a drier with inadequate quantity, poor quality, or chemically unsuitable desiccant will not be obvious on installation.

Sometimes it takes a year or more for system malfunction to result. Is that worth the risk?

For details on the Jayair range of air conditioning products, contact your nearest CoolDrive branch or Jayair stockist.

Leak + Guard™ Professional A/C Sealer



- Completely safe - Leakguard is a professional A/C oil based sealer that does NOT react with moisture and will not harden / crystallize or block A/C systems or your expensive recovery equipment.
- Rigorously tested for stability and compatibility: leak rate testing, wear testing, viscosity effect testing, stability testing, refrigerant decomposition testing & non-metallic materials compatibility. The only A/C sealant on the market that is certified to meet SAE J2670
- Easy to use using our unique Junior A/C injection system - can be added on the fly through the service port to a fully charged A/C system.
- Use Leakguard as a preventative maintenance service to ensure against future leaks and extend the life of the A/C system. LeakGuard will remain in the system as a high quality lubricant until such time as a leak occurs.



A/C Performance Treatment Solution

- Using our A/C oil checkers the oil level in an A/C can be tested for quantity and quality in seconds
- A High quality A/C lubricant with high performance additive package designed to enhance and restore the quality of the A/C oil by reducing friction, quieting noisy compressors, extends compressor life and rejuvenates rubber components (preventing leaks)—Ideal oil top up service.
- Ideal for preventative maintenance—Improves the performance of A/C systems, restores tired seals & restores the lubrication properties PAG oils that have been degraded by normal use.

WHY TOP UP OIL?

Automotive Air Conditioning Systems lose oil and refrigerants every day. New vehicles from factory have an average acceptable leak rate of 25grams of refrigerant per year and 7ml of oil. Once the vehicle is 2 years old the leak rate will double on average. Manufacturers are decreasing the charge amounts of oil and refrigerant in new vehicles which accelerates the overall percentage of oil and refrigerant lost.

- For full details on our Air Conditioning product range go to...

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HR-371 Fully Automatic Air Conditioning Service & Refrigerant Recycler

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- **SAFETY SYSTEM:** A user can work in a safer environment thanks to the unique safety measures. i.e. system check, excessive pressure preventative system, cylinder safety valve system, refrigerant leakage preventative system, low refrigerant warning system from supply cylinder.
- **FEATURES:** Auto & Manual function, Auto air purge, 140 litre per minute vacuum pump, 20Kg internal bottle, 2.5 metre hose length, Easy oil injection, Self diagnosis, as well as an Auto leak test function.
- **EASE OF USE:** Large diameter high/low pressure gauges, Digital pressure gauge and one-touch keypad with an easy to use menu.



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Not all A/C products are the same

Ensure your A/C additives and dyes have been laboratory tested to meet industry standards or they could be doing more damage than good.



SAE J2670 Stability and Compatibility Criteria for Additives and Flushing Materials Intended for Aftermarket Use in R-134a (HFC-134a) and R-1234yf (HFO-1234yf) Vehicle Air-Conditioning Systems is one such industry standard.

A/C additives meeting the criteria for SAE J2670 have been laboratory tested for stability and compatibility with A/C system materials and components.

SAE J2297 Ultraviolet Leak Detection: Stability and Compatibility Criteria of Fluorescent Refrigerant Leak Detection Dyes for Mobile R-134a and R-1234yf (HFO-1234yf) Air-Conditioning Systems is another standard.

Fluorescent refrigerant leak detection dyes meeting the criteria for SAE J2297 have been tested to ensure they meet the criteria for stability and compatibility with mobile air conditioning systems.

Prostream is pleased to inform that its A/C additives have been tested to meet the criteria for SAE J2670 and its high quality oil based dyes have been tested to meet the criteria for SAE J2297.

Feel safe knowing these products are tested to meet industry standards ensuring they are fully compatible with the A/C system.

Call 03 5251 1268 or visit the website www.prostream.com.au for more information.

Rid Odor A/C service program arrives in Australia

Essential Service Programs has added the Rid Odor brand to its stable of fast growing automotive products and services.

The Rid Odor Pro A/C cleaning service is used by thousands of workshops, hire car fleets, emergency services, taxis and even airlines across the USA.

The Rid Odor Pro service comes with a no quibble one-year effectiveness guarantee and free point of sale marketing support.

With a cost to the motorist of just \$60 plus GST, the Rid Odor Pro treatment is available in both 'New Car' and 'Leather' formulas.

Workshops and service departments adopting the program before December 31, 2011 qualify for free application equipment.

View the Rid Odor Pro demonstration video at: <http://www.ridodor.com/videos.php>

For more information call Essential Service Programs on 02 9911 4096.



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*No license required to handle natural refrigerants. A license is required to use or recover the potent global warming gas R134a.

European Parliament calls for rapid HFCs reduction

The European Parliament has adopted a Motion for a Resolution calling for a rapid phase-down of hydrofluorocarbons (HFCs), according to the Beyond HFCs website.

In the discussion that preceded the vote, the Members of the European Parliament (MEPs) highlighted the lack of attention paid to non-CO2 climate-relevant gases and emphasised that the weight of these gases on the total global warming emissions is rapidly increasing, Beyond HFCs reported.

The Motion for a Resolution endorsed by the European Parliament by a large majority calls for a rapid phase-down of the production and consumption of HFCs and notes that fast-action legislative acts can be considerably implemented in five to 10 years.

A number of MEPs stressed that the reduction of HFCs would be much cheaper than the cut of CO2 emission, while the effect can be delivered faster and by greater extent.

"The global warming potential of non-CO2 gases is higher than that of carbon dioxide," MEP Theodoros Skylakakis, one of the authors of the resolution, said.

"Destroying these gases is very important because they will make up 20 percent of global gas emissions by 2050."

EU to set an example for the rest of the world

Finnish MEP Satu Hassi said restrictions could be implemented through the Montreal Protocol.

"But the EU is the largest market in the world and it can also make its own decisions and show the way and thus phase out these gases," he said.

The EU should set an example in reducing HFCs for other countries and take a more proactive approach in tackling climate change at international level, MEPs have concurred.

"Regulations, can push forward the pace of innovation, and the Commissioner should be aware that, even though her staff may say there is no alternative to what we do at the moment, if she pushes the boat out it is amazing what industry can achieve," underlined MEP Chris Davies during the discussion with Connie Hedegaard, European Commissioner responsible for Climate Action.

Moreover, a number of MEPs stressed in the discussion that the EU should take responsibility in encouraging the industries to use alternatives to HFCs that are already available on the market.

Connie Hedegaard welcomed the Motion for a Resolution and reaffirmed her intention to put forward a legislative proposal revising and strengthening the existing EU regulation addressing fluorinated gases (F-Gas Regulation) within 2012.

"I can assure the whole Parliament that I have given a very clear message to all my services that the review we are going to make must be as ambitious as it can sensibly be," she said.

For more information phone 03 9728 5055.

EQX6900 Multi-Refrigerant Recovery System

The Marstercool EQX6900 Multi-Refrigerant Recovery System is a must have for an air con specialist's workshop.

This high quality system is ideal for use on automotive, residential, commercial HVAC and refrigeration equipment and is multiple refrigerant compatible.



The system's clever design with a built-in high volume cooling fan allows for maximum cooling efficiency.

This means that the compressor can work at high capacity even in the middle of the scorching Australian outback.

It also has a high and low auto shut-off feature which eliminates the risk of compressor failure and reduces the user's need to monitor the entire recovery process.

Protected by a reinforced hard plastic case, the system is lightweight and designed to work with all refrigerants.

Contact your local Ashdown-Ingram Representative for more information or to place an order today.

Visit www.ashdown-ingram.com.au for a full branch listing.

Innovation in Automated Air Conditioning Service Equipment

The new generation of AC recharging and maintenance stations, fully compatible with R134a and R1234yf refrigerant!

Konfort 700 Series is made up of four different models, configured to satisfy the needs of all workshops

- The Konfort 720 is the basic model. It can be purchased to operate with either R134a or the new R1234yf. Thanks to an optional retrofit kit, your workshop can easily convert a R134a Konfort to a R1234yf Konfort.
- The Konfort 760 can also be purchased pre-configured for either type of refrigerant, but provides numerous additional features for the more demanding mechanic and is fully automatic to minimise the time taken by the mechanic.
- The Konfort 760 Bus is specially designed to charge the large volumes needed by air conditioning systems on buses and coaches.
- The Konfort 780 Bi-Gas can work with both R134a and R1234yf refrigerants. Though no larger than the other models in the series, the 780 Bi-Gas lets you recharge both types of air conditioning system without laborious preparations. It only takes a minute to switch between refrigerant types.

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Vacuum and Refrigeration Process Technology



FERODO GOES V8 RACING

Ferodo racing brake pads are synonymous with high performance, durability and reliability even in the toughest conditions.



With a long and successful association with racing, premium Ferodo racing brake pads work hard across race tracks throughout the country, as well as on countless Australian on-road vehicles.

One person who can attest to the incredible performance of Ferodo DS Performance Brake Pads is Greg Evans, co-owner and operator of V8 Race Experience, the largest driver experience provider in Australia.

V8 Race Experience offers regular drivers the chance to drive a racing car in an authentic race environment.

With operations at major raceways in six states, Mr Evans said the performance of Ferodo DS Performance Brake Pads underpins the success of the business.

"We have been using Ferodo brakes exclusively for seven years now and we've never had a single problem with them," he said.



"The Ferodo DS Performance Brake Pads are faultless, despite the gruelling conditions they are put under day in, day out."

Promising a "thrilling yet safe experience" drivers get behind the wheel of a V8 Falcon or Commodore muscle car that V8 Race Experience has transformed into an authentic race car.

"People who come and drive the V8 Race

Experience cars are looking for a real race drive experience," Mr Evans said.

"After a pre drive briefing, they drive as fast as they possibly can, so it's absolutely critical for us that we give them a car that handles well and is fitted with a brake package that's totally reliable."

Form on the board

Mr Evans said V8 Race Experience cars work much harder than actual racing vehicles because they are driven continuously at high speed for up to eight hours each day.



"A single car can do the entire length of Bathurst in a day, and we run them for 90 days each year," he explained.

"Each V8 Race Experience vehicle is driven by a large number of drivers each day, so the brakes are continuously working at high temperatures with very little recovery time.

"Customers can opt to drive the car as hard as they can themselves, then sit as a passenger while an experienced racing car driver takes them on a few 'hot laps', putting the car and the brakes under incredible pressure to perform.

"At other times, groups of up to four ride together in the one vehicle, so there's huge additional wear on the brakes due to the extra weight.

"We would have serious doubts about operating our business safely without the quality and reliability of Ferodo DS Performance Brake Pads. They simply never fail."

Number crunching

The V8 Race Experience team routinely records brake pad performance as part of their business and safety evaluation procedures.

As Mr Evans explained, the results attest to the reliability and performance of Ferodo DS Performance Brake Pads.

"A set of Ferodo DS Performance Brake Pads on one of our V8 Race Experience cars, being driven by 45 different drivers, regularly delivers 1500 full-on, hard brake applications during 300 laps flat out at Eastern Creek Raceway," he said.

"If the pads deliver consistently and safely with that sort of punishment, with very little rotor wear, imagine how safe and confident you'd feel with them on your car."

Mr Evans said V8 Race Experience customers "always comment on how the car handles, and how the brakes perform."

"When customers realise the brake package we use is something they can buy for their own car they are very impressed.

"It's a great demonstration of what they should be putting on their own vehicles."

Ferodo DS Performance brake pads apply race technology to meet the specific needs of high-end road users.

They are engineered for low- and high-speed braking efficiency, reduced stopping distances and consistent brake pedal feel.

"Ferodo DS Performance Brake Pads are ideal for serious drivers on regular roads, because they're a pad that works in extreme conditions, but still feels like a road pad," Mr Evans said.

Ferodo DS Performance brake pads are available from Ferodo Authorised Partners.

For more information on Ferodo DS visit www.ferodo.com.au or call 1300 FERODO (337636). For details on V8 Race Experience visit: www.v8race.com

TERRAIN TAMER RELEASES NEW CLUTCH KIT RANGE

Well known 4WD parts brand, Terrain Tamer, has added a new line of regular and heavy duty clutch kits to its product catalogue, available for an extensive range of 4WD vehicles.

The kits include the clutch plate and cover assembly, as well as both the thrust and spigot bearings and all components are made and tested to Terrain Tamer specifications for quality and precision engineering.

Regular Terrain Tamer Clutch Kits are designed to meet OEM standards and offer valuable features such as premium quality friction facings and advanced dampening mechanisms, affording the smoothest and most consistent transmission of engine torque and power.

The Japanese made Heavy Duty Clutch Kit range has been taken a step further, having been purpose built above original specifications to further ensure the ability to withstand Australian four wheel driving conditions.

Offering a minimum of 25 percent increase in clamp load and anti burst casting, coupled with an anodised cover assembly and extra strength damper

springs, Terrain Tamer's Heavy Duty Clutch Kits are designed with the demands of serious 4WD enthusiasts in mind.

This range of kits aims to deliver improved performance and reliability in the harshest of off road conditions an is ideal for heavy loads and towing

Terrain Tamer's Clutch Kits are a testament to the 40 years experience the company has in manufacturing, modifying and designing 4WD parts for the extreme Australian environment.



For more information call
03 9329 8200 or visit
terraintamer.com

MCC RELEASES MODERN BAR

MCC 4x4 has been a leading bull bar manufacturer for Australia for more than seven years.

The company's products have mostly been rebranded and sold under different brands but MCC has now brought the logo back and is selling under MCC.

To celebrate, the company has come up with the next generation MCC Bull Bar.

Earlier this year MCC decided there were too many bull bar companies offering the

same plain old looking bull bar and after months of design and development has a great new style of bull bar that is ADR approved, air bag tested and winch compatible.

The new bar is called the Falcon bar and can be made to suit the majority of 4WDs on the market today.

The new bar incorporates larger fog lights which is great for foul weather conditions.

Driving light mounts and aerial mounts are all in place for easy installation and there are hi-jack points up front.

Winch compatibility is standard, so you don't have to purchase any additional brackets.

A split air pan system ensures the radiator gets the most airflow.

All MCC 4x4 bull bars are produced using the latest CAD/CAM programs, and also use the most advanced laser cutting machines, robotic welders and CNC benders to meet the highest quality control standards for every bar.

There are other options available as well including under body plates for more protection, light protection covers with an internal LED strip for that European look and a round LED indicator and park lamp gives the bar a more modern appearance and the bonus of increased reliability.

With prices starting from \$1290, MCC 4x4 has come up with one very smart looking bar at an exceptional price.

For more information on a complete range of products or your nearest dealer contact
03 9460 4495, email sales@mcc4x4.com or visit www.mcc4x4.com



Option: LED protection covers

POWERFUL 4X4 LEADS THE WAY IN THE 4X4 INDUSTRY

Things for Powerful 4x4 have come a long way since it opened for business back in 2004.

From a humble importer of vehicle accessories, Powerful 4x4 is now one of Australia's premier manufacturers of 4x4 accessories.

In 2010, Powerful 4x4 invested a vast amount of money into its research and development program, with the hope of marking 2011 as its time to shine in the Australian 4x4 community.

Fast Forward to 2011 and Powerful 4x4 has released what it claims is the world's first commercially designed bull bar that has the ability to slide in a tow hitch, making lives easier for those tens of thousands of boat and caravan owners who find it hard to reverse their rigs into position.

Another first for Powerful 4x4 was its side airbag rockslider/side steps for the 150 Prado, 200 series Landcruisers and the SR5 Hilux.

Capable of taking the full weight of the vehicle without buckling, the Rockslider steps are an essential item for any 4X4 Tourer.

For more information visit www.powerful4x4.com.au or call 1300 554 923.



NEW TOYOTA HILUX 2011 TJM T15 ALLOY DELUXE BULL BAR

TJM was founded in 1973 by three mates in a rented Queensland shed and now has more than 50 outlets across Australia and supplies 4WD equipment to every continent in the world.

At TJM you'll find great designs, quality tested airbag compatible products with professional chrome finish and customer service second to none, all at very competitive prices.

The T15 alloy deluxe bull bar shape for the latest Toyota Hilux is signified by a strong centre loop, accompanied by two refined side loops protecting the headlights. This bar is lightweight, strong and looks the part too.

Adding guaranteed class to your four wheel drive, the T15 alloy deluxe is sure to make others green with envy.

Every TJM product has been quality tested and precision engineered to fit perfectly.

Product is available for delivery now.

For your nearest retailer call 07 3865 9999 or visit www.tjm.com.au



ARB CABOOLTURE AND ARB MAROOCHYDORE

ARB Caboolture and ARB Maroochydore covers all your four wheel drive needs, stocking Old Man Emu suspension systems, ARB bull bars, ARB canopies, ARB recovery equipment, ARB fridges, IPF lights and a full range of GME communications and Thule roof racks.

They also do tow bars, Outback Solutions draw systems and Mickey Thompson and Cooper Tires.

The sales staff are all experienced four-wheel drive enthusiasts who love nothing better than setting up your four wheel drive for a trip up the beach or a trip around Australia, towing a caravan or just a weekend away with family and friends.

Each store has a fully equipped workshop with all the most up to date equipment and the workshop staff have years of experience and take pride in their work.

Being a family owned business you will always get the best customer service and quality work.

ARB Maroochydore is located at 127 Sugar Road Maroochydore and can be contacted by calling

07 5475 4011 or visiting www.arbmaroochydore.com.au

ARB Caboolture is located at 135 Morayfield Road Caboolture and can be contacted by calling 07 5499 1955 or visiting www.arbcaboolture.com.au



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Trade Helpline: 1800 545 609

AUSTRAL EXPANDS WITH GABRIEL, STRONGARM AND AUTOLITE

The Austral engine and suspension parts group has reported a good expansion of its business since adding Gabriel shocks, StrongArm lift support struts and Autolite spark plugs.

The Sydney-based distribution specialist insists sales are booming from its warehouses in Sydney, Melbourne and Brisbane.

"First we took on Gabriel and StrongArm last year which quickly proved a great fit to our suspension business," Austral's John McMenamin said.



Austral's Jim van Goozen.

"And now the recent addition of Autolite to our engine parts customers has really taken off. All three are now growing strongly.

"We've found our customers appreciate top quality when it comes with real value.

"But it's the StrongArm range which is really going well.

"It's proving the best available and a real winner for us.

"New applications are being added all the time, so we've always got what the customers' request."

National distributor, Brandlines, reported the Austral group in Queensland, New South Wales and Victoria has expanded its business considerably since taking on these three ranges.

"It's proven the trade appreciate what these brands really mean," Brandlines' Maurice Luksich said.

"This is definitely all about delivering a full range of top quality at a value price; works every time."

KMART TYRE & AUTO SERVICE INVESTS \$25M INTO REBRANDING OVERHAUL

Kmart Tyre & Auto Service, a division of Kmart Australia Ltd, is investing \$25 million into the revitalisation of the brand.

The investment will see over 250 Kmart Tyre & Auto Service stores refurbished and reimagined over the next 12 months. The refurbishment of the existing stores includes new branding and signage as well as interior and exterior upgrades.

An additional 20 brand new stores will also be opened over the next financial year, with two others having opened recently. The first was in Parramatta and the second in Queanbeyan.

John Sink, Kmart Tyre & Auto Service Managing Director, said: "Kmart Tyre & Auto Service is dedicated to providing customers with the best possible service and experience every time they visit one of our stores and this means having state-of-the-art equipment, comfortable and modern surroundings and fantastic customer service. We believe the \$25 million investment will enable us to realise our vision of being Australia's largest and most respected automotive service, repair and tyre retailer."

Kmart Tyre & Auto Service General Manager of Marketing, Tony Skallias, added: "This is a significant investment by the company and we're really aiming to pass the benefits on to our customers. We see this investment as a



catalyst for positioning the brand as a market leader within the industry. It also supports our Winning the Customer for Life strategy, which seeks to grow our business organically through building engaging and sustainable relationships with our customers."

One of Australia's largest automotive service, repair and tyre retailers, the new and revitalised Kmart Tyre & Auto Service centres offer a full range of automotive services including, scheduled servicing, tyres, brakes, suspension, batteries and general mechanical repairs.

A GREAT FAMILY BUSINESS

Paul and Adrian Calvi are a father and son duo with a great business.

Together they have just celebrated their third year in their premises on Centre Road, Springvale, Victoria, and the 10th year since Adrian joined his father in the business.

Paul has spent much of his working life with cars and was based just over the road for eight years before moving to the bigger and brighter premises.

In those three years, their ABS has been substantially upgraded with the latest equipment.

"The re-equipping of this business in the past few years has been a big undertaking but our customers have been with us all the way," Paul said.

"Our investment with the best tools ensures our customers are professionally cared for as well as handling parts.

"ABS is one of Australia's larger brake and service groups. This gives us the expertise and backing to do an excellent job, which ensures our customers keep returning. And we back this with our local knowledge and now the latest equipment."



Adrian and Paul Calvi

ABS Springvale is at 1695 Centre Road and is open six days a week: Monday to Friday 8.30 to 5.30pm and Saturday 8.30 to 12.30.

www.aaaa.com.au

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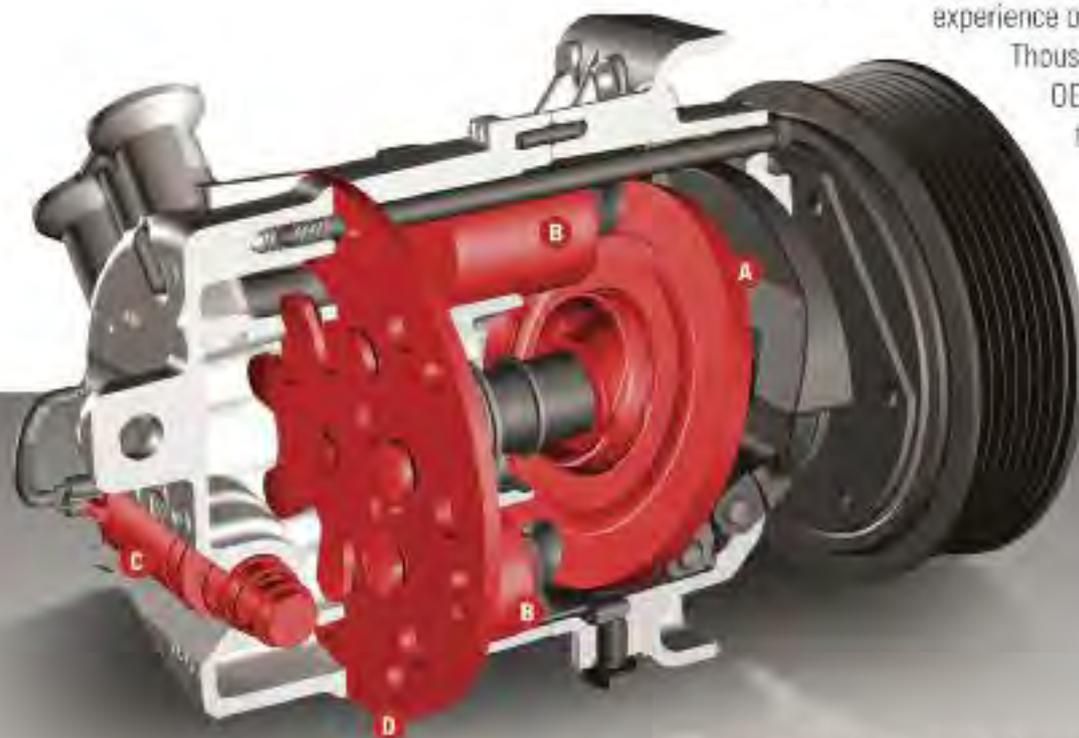


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