

ON THE MOVE

The Newsletter of PBR International Limited

July 2004



New home for future technology

4

Inside this issue: (click on links below)

Thumbs up in Europe for PBR electric parkbrakes	2	New home for future technology	4
Australia's first brake-by-wire car	3	PBR flexes brake muscle	5
Setting new quality standards	3	Click here for Performance	5
China production opportunity	4	University of Wollongong defends world title	6
New Australian business reaches export market	4	Oz industry update	6
		Senior appointments	6

Want to know more? Join us online www.pbr.com.au
or click here to subscribe to *ON THE MOVE*



Toyota President's award 2

Introduction



Grant Anderson
President PBR International

Welcome to the latest edition of *On The Move*. Recent months have seen a flurry of activity surrounding the further development of PBR's brake-by-wire systems. Our new technical centre is now complete, we have a vehicle fitted with by-wire parkbrake systems being demonstrated throughout Europe, North America and Japan, and we launched the first vehicle in Australia to be fitted with a complete eMB by-wire system.

In this edition of *On The Move*, we also take a look at the release of the new PBR Performance product range in the Australian aftermarket, which has received

an extremely positive response and is a key step in the ongoing development of performance brake options for the industry.

In the Australian Original Equipment market, we take a sneak peek at some of the newer contracts through Toyota, Ford and Holden, which underpin the company's continued success in this region.

Once again we hope you enjoy reading this latest issue.

Grant Anderson

Thumbs up in Europe for PBR electric parkbrakes

PBR's electric parkbrake program literally took to the road recently with a road show covering more than 27,000km in Europe.

The latest versions of PBR's two electric parkbrake options were fitted to an Australian-built Ford Falcon for demonstration to automotive manufacturers in Germany, Austria, France, Italy, Sweden and England.

"Every manufacturer visited was impressed by the qualities of PBR's electric parkbrakes, citing that they were well ahead of their European rivals."

Every manufacturer visited was impressed by the qualities of PBR's electric parkbrakes, citing that they were well ahead of their European rivals.



PBR electric parkbrakes being demonstrated in Europe.

The two versions demonstrated are an integrated caliper/electric parkbrake and an electrically actuated cable puller version. The PBR products are much smaller and lighter than rival products, are quieter and meet the highest performance standards.

Following the successful tour of Europe the car has been shipped to North America where it will undertake a similar road show before heading off to Japan and then back to Australia.

PBR receives Toyota President's Award

On the 8th of April Toyota Australia held their annual President's Awards, which recognised and rewarded suppliers providing outstanding customer service during 2003.

PBR is proud to have received the President's Award in the OE Large Business category in recognition for outstanding performance in the areas of supply, quality and price.

PBR International President, Mr Grant Anderson, said the award acknowledged the dedicated efforts of the PBR team across all key areas of the business in maintaining a high customer focus.

Grant Anderson accepts the Toyota President's award on PBR's behalf.



Australia's first brake-by-wire car

PBR International Limited recently unveiled Australia's first brake-by-wire car at the official opening of the new Research Centre for Advanced By-Wire Technologies (RABiT).

The Hon. John Brumby, Victorian Minister for Innovation, who officiated at the occasion, congratulated the company on driving the project, which places Australian technology at the forefront of the global automotive industry's by-wire development race.

The BMW 3series used as the benchmark development vehicle has been fitted with a fully functional Electro Mechanical Brake system (eMB) which has the capability of delivering additional safety related features and replaces the conventional hydraulic brake system used on today's vehicles.

"The PBR eMB system represents a major breakthrough for the company's expansion into the development of brake-by-wire solutions for the automotive industry"

Incorporating technology developed through the RABiT facility, the PBR eMB system represents a major breakthrough for the company's expansion into the development of brake-by-wire solutions for the automotive industry.

PBR has already developed brake-by-wire solutions for park brake applications through



David Fisher explains the benefits of PBR's brake-by-wire to Minister Brumby.

their highly innovative ePark electric parkbrake actuator and their Electric Park Brake Hydraulic Caliper (ePBHC) system, which incorporates a combined hydraulic brake and an electrically actuated park brake. Both of these systems have been applauded by engineers at recent showings in Europe.

The integration of PBR's expertise in lightweight aluminium brake systems and their ability to develop braking solutions focusing on reduced complexity have positioned PBR's brake-by-wire offering at the leading edge of the market.

The eMB system is seen by the industry at present as the ultimate brake-by-wire

solution. It will offer a range of consumer, industry and environmental benefits such as: the elimination of brake fluid, increased fuel economy through vehicle weight reduction, quieter braking, reduced maintenance costs and the ability to tailor brake response to driver preferences.

The automotive industry is expected to move to the first stage of brake-by-wire adoption around 2007/8 through the introduction of electrically actuated rear brakes and then followed by full brake-by-wire around 2009/10.

Setting new quality standards

The QS9000 quality system, originally created in 1995 by Ford, GM and Chrysler in the USA, is scheduled to be made redundant on 14 December 2006. In its place will be the "process focussed" ISO/TS16949, the first truly global quality system.

Whilst 2006 might be the ultimate deadline, PBR has been aggressively working to a mid 2004 timetable in line with the most demanding expectations of the automotive manufacturers.

In line with this expectation, PBR's Australian operation has recently been accredited to TS16949 and the remaining PBR global facilities are on track to undertake their certification audits later this year.

The shift to TS16949 has resulted in a total review of business processes with specific attention being drawn to customer, management and support processes. The new standard also underpins the company's continued work towards the ultimate goal of zero defects.





Around the globe

CHINA PRODUCTION OPPORTUNITY

PBR's parent company, Pacifica Group Limited, has recently announced plans to establish a joint venture manufacturing operation in China.

The new facility, to be located in Dalian, provides an excellent opportunity to enter the rapidly growing Chinese OE automotive market.

Many of PBR's existing international automotive customers have operations in China and Pacifica's intended joint venture partner is an American automotive components manufacturer with expertise in foundry operations in China.

PBR already has an established presence in Asia through manufacturing operations

in Thailand and Malaysia and licensees in Japan, Korea and China. The development of production capabilities in China will underpin future growth in the region.

Production is scheduled to commence in March 2005.

New Australian business reaches export markets

As the Australian automotive industry continues to set new sales records, PBR Australia has been successful in growing their own slice of the market.

Toyota Australia has recently recognised PBR's ability as a true global brake system supplier by ensuring that the next level export Camry will be equipped with a PBR brake system. Almost 60,000 left hand drive Camrys are shipped from Australia

to the Middle East annually. From 2006 the export Camrys will be fitted with a PBR foundation brake system.

PBR has also taken a further step towards the expansion of their brake module business with Toyota assigning them responsibility for the production of steering knuckles and rear suspension carriers on all Australian built Camrys from 2006.

Other Australian automotive manufacturers have also given PBR the "thumbs up" for new business. Ford has given the go-ahead for a PBR higher performing brake system, consisting of larger disc rotors and brake calipers, on up-spec models due for release in 2005.

The face-lifted VE Commodore scheduled for release by Holden in 2006 will also feature a complete PBR foundation brake system.

New home for future technology

Construction is now complete on the new technology centre in Melbourne, Australia which will become a focal point for future developments in lightweight and by-wire braking technology for the global automotive industry.

The new centre consolidates the diverse range of engineering disciplines required to develop this new technology and also brings together

"The new centre will play an increasingly important role in developing high-tech solutions for the automotive industry"

key sales, manufacturing and purchasing personnel to further streamline the cross functional development of new products.

Incorporated in the new facility is the Research Centre for Advanced By-Wire Technologies (RABiT) which is a consortium between Pacifica Group Limited, University of Melbourne, Swinburne University of Technology, Bishop Technology Group Ltd and the Victorian Government's Science, Technology and Innovation initiative.

The RABiT centre engages a team of electronics engineers, software development engineers and mechatronics engineers dedicated to the development of by-wire technologies.

As the global demand for PBR's lightweight brake system technologies, including the popular Banksia park brake and Slimline aluminium calipers, continues to grow, the new centre will play an increasingly important role in developing high-tech solutions for the automotive industry.



Product spotlight

PBR FLEXES BRAKE MUSCLE



pbr PERFORMANCE
FULL-ON BRAKE MUSCLE



"In addition to the massive stopping distance gains, PBR Performance brake systems are designed to deliver superior brake pedal feel, reduced brake fade and cooler braking"

The market for "go-fast" cars and accessories continues to grow at a phenomenal rate. Wheels, exhausts, engines, sound systems and brakes are just some of the components gaining increased attention as vehicle owners scramble to personalise their car.

Where engine modifications are involved it often leads to a need for improved brake performance and PBR has just released a range of brake upgrade kits under the PBR Performance brand to help fill that need.

The initial range of PBR Performance brakes has been developed specifically for Ford and Holden enthusiasts including the Monaro and its U.S. counterpart the Pontiac GTO. As a complete vehicle upgrade these ADR compliant systems incorporate larger twin-piston front calipers, performance friction material

front and rear, larger grooved and vented rotors and steel braided brake hoses.

Based on the demanding AMS testing some applications really flexed their brake muscle recording stopping distance improvements of up to 20metres compared with standard brakes.

AMS (Auto Motor und Sport) is a European standard derived from motorsport. This is an ultimate abuse test for brake systems, where the car is driven at wide-open throttle to 100kph and then brought to a stop under maximum braking. This is repeated, as rapidly as the vehicle will permit, over 10 stops and the braking performance for the last stop is compared to that of the first stop as a measure of braking capacity/consistency.

In addition to the massive stopping distance gains, PBR Performance brake

systems are designed to deliver superior brake pedal feel, reduced brake fade and cooler braking.

The upgrade system's have also been designed with ease of fitment in mind and include all the necessary hardware to make the transition from standard to Performance brakes.

Initial response to the new range, from both distributors and workshops, has been extremely positive.

Click here for Performance

Introducing the PBR Sports and PBR Performance product ranges has brought PBR much closer to the consumer end of the brake market.

This is a world dominated by car enthusiasts, many of whom have a passionate understanding of vehicle performance. Always on the lookout for the next improvement, they are hungry for information about the latest products and what they can deliver.

With that in mind, PBR has recently released a new performance focussed website, which not only discusses PBR's

performance products, but also the reasons why people might need a brake upgrade in the first place. The new site is weighted towards technical content because there are so many questions people want answered regarding performance brakes and what makes them better.

The site also provides an opportunity for enthusiasts to interact on a more personal level by providing access to competitions, an exclusive news service and the opportunity to have their cars showcased in the owner's gallery.

The new site can be viewed at www.pbrperformance.com.au.



University of Wollongong defends world title



In 2003 the University of Wollongong became the first Australian team to win the world Formula SAE competition in the United States.

In May this year, the team boxed up their 2004 challenge car, nicknamed Sergio, and returned to defend their title.

The event didn't go as well as planned but the team finished a creditable 11th out of 140 teams making them the top international team with the University of Western Australia finishing not far behind them in 13th place. Not a bad effort considering the event was interrupted by a tornado which meant they had to complete the autocross section in the wet. But despite the adverse conditions,

Sergio held up well and the team finished 2nd out of those teams who were forced to compete in the wet.

There was some consolation for the team, however, who took the opportunity to also compete in the Saginaw Valley State University Grand Prix which was held following the Formula event. With a fine display of driving by Dave Auterson, the Wollongong team went head to head with Wisconsin-Madison University and came out overall event winners.

PBR is an active sponsor of the Australasian Formula SAE competition and extended their commitment to the University of Wollongong to assist them with their title defence.



Oz industry update

Australian auto industry analysts have been reluctant to predict that sales would continue to escalate above last year's record 909,811 – until now.

With half year sales sitting at 6.3% higher than the first half of 2003, the industry is now well on track to achieve record figures of around 960,000 vehicle sales for 2004 according to the FCAI.

Traditionally, sales in the second half year are stronger, giving rise to the suggestion that maybe the industry is poised to break the magical one million mark – although nobody is prepared to call that for sure.

Toyota is leading the charge, becoming the first brand to sell more than 100,000 vehicles in the first six months of a year. But it is still the Holden Commodore which

heads the bill as Australia's top selling car.

Newer SUV additions to the market are also grabbing some attention with overall sales up by 15.3% on June 2003 and Ford's new Territory posting 1,372 sales for June.

Senior appointments

Vice President Sales and Marketing
PBR International

Mr Vince Joy has been appointed to the position of Vice President Sales and Marketing PBR International.

Vince joined PBR in 1994 following experience with a variety of motor manufacturers in Europe. During his time at PBR Vince has held a number of senior positions in both Engineering and OE Sales, most recently as General Manager OE Sales Asia Pacific.

Vince will be based in PBR International's headquarters in Melbourne, Australia where he will play a significant role in developing PBR's growth strategy in North America, Asia and Europe.

Vice President Sales and Marketing,
PBR International USA Ltd

PBR's North American sales operation has recently undergone a facelift with the appointment of Gordon Daig to the position of Vice President Sales and Marketing, PBR International USA Ltd.

Gordon comes to PBR with a wealth of automotive experience in North America through companies such as General Motors, Ford, Daimler Chrysler and the Japanese OEMs.

Gordon's previous role was Vice President Sales for ADVICS where he gathered significant experience in the brake industry.



Mr Vince Joy (above) and Mr Gordon Daig (below).

