

# DIESEL TORQUE

## AADS



NUMBER 60 – DECEMBER 1999

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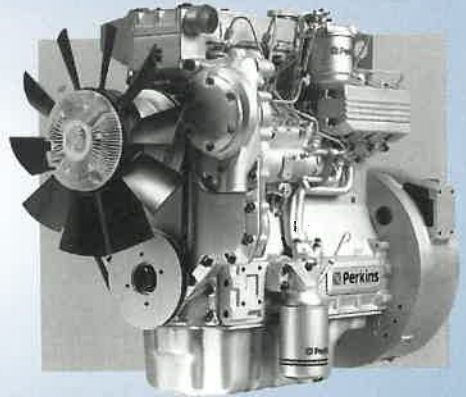
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# EDITORIAL

If we assume that the 31st of December 1999 is the last day of the Century and the Millennium, some argue that this actually does not occur until 31/12/00, then this will be the last issue of *Diesel Torque* in this time period. It is the 60th edition and represents a period of 15 years since its inception.

I would like to take this opportunity to thank all those who have contributed to the success of the magazine. In particular the late Tom Beesley, for the many interesting articles, both technical and topical, that he sent in for so many years. To all the Branch chairpersons, Presidents, and Executive Officers, the late Lance Hosking, Don Blanksby, and to most recent contributor, Rod Walford.

The support from the advertisers enabled the magazine to grow to its present format and assisted the AADS in bringing the magazine to its members at a reasonable cost. I thank you all for this continuing support.

The many technical articles contributed by our Manufacturing members has helped to keep us up with the latest in industry technology and is one of the main reasons the magazine enjoys such widespread support.

At the next Convention in Auckland we will be celebrating 25 years of the Association's history. To mark this special occasion an audio-visual presentation is being produced to show the many amazing people, conventions, schools and awards that have helped create the history we can now look back on with a sense of justifiable pride. This promises to be a highlight of the convention and will show the younger members where we have come from.

Most of the information for this presentation has come from the sixty issues of *Diesel Torque*, but unfortunately we are missing a lot of pictures and information on the first ten years before the first edition of *Diesel Torque*

was produced. Therefore I appeal to all members who have any information covering this period, or for that matter the last fifteen years as well, please forward it on to me so that it may help to make this presentation a combined effort by us all.

Please make sure that anything you send has your name and return address with it, and that any photographs have the details clearly written on the back. If anyone has any video of past conventions, meetings or schools, these could be of great assistance also.

So let us make the first convention of the next century one to be remembered. This will only happen if we all get enthusiastic about being there, so fill out your registration forms and encourage your fellow members to attend.

Some members have said that they would like to see more convention photographs that include a wider range of Branch representation. I could not agree more, but please - you must take them and send them to me for this to happen. Some of the photographs I do get, do not have the names of the people written on the back, and although I know a great number of you, there are still a lot of faces I do not know and therefore have not been able to put them into the magazine.

I would like to take this opportunity to wish all of you a very Happy Christmas and a great and safe celebration of the next century and I look forward to being with you in Auckland to celebrate the silver anniversary of this great Association.

Mick Rankin  
Editor, *Diesel Torque*,  
AADS Inc.



## AADS Board of Management

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South Australia ..... Trina Wilkey

Queensland ..... Andrew Bourne

Western Australia ..... John Moir

New Zealand ..... Mike Hurley

Executive Officer ..... Don Blanksby

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Editor, *Diesel Torque* ..... Mick Rankin

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Technical information contained in this magazine is obtained from sources deemed reliable within the industry. However, AADS accepts no responsibility for the accuracy of this information.

# Silver Anniversary



## AADS CONVENTION '25 YEARS ON'

### KIA ORA!

IT gives me great pleasure to invite you to the **Silver Anniversary, 25th AADS Convention** in Auckland, New Zealand, 23-26 March 2000.

Auckland is New Zealand's premier convention destination, with a diverse range of hotels, attractions and touring options. We promise an array of experiences rarely found in such a compact geographical area.

We have the **America's Cup Challenge** village within walking distance of the hotel, which has seen the waterfront redeveloped into a vibrant busy area. The city boasts the 328 metre Sky Tower (one of the tallest buildings in the Southern Hemisphere). Auckland is a city that will satisfy your craving for shopping, dining and sightseeing.

The **2000 Convention** offers technical training courses on RLDK, R801 Governor, and an Australian GST programme that will take the mystery away and show you how, in our

industry, this can mean gain with no pain.

Tours for sightseeing, a game of golf, and a pump room tour that will let you see how the innovative Kiwis do it and come up smiling.

The **Young Guns** are having their wish list addressed with **How to Create Wealth, Cash Flow Budgeting, E Commerce and Information Technology and Your Business.**

The 'Old Guns' can soak up the nostalgia of the audiovisuals and attend the retirement planning seminar.

We promise to adopt you as a visitor to make sure you have a great time.

**See you in Auckland!**

Mike Hurley  
Chair  
New Zealand  
Convention Committee



## CONVENTION INFORMATION

### About the AADS Office

If you have any queries concerning registration, the Convention, AADS membership, or any other AADS matters, please contact Caron Langford or Don Blanksby at the AADS Office in Melbourne:

**Phone:** 61 3 9536 3121  
**Fax:** 61 3 9525 3656  
**E-Mail:** [info@aads.com.au](mailto:info@aads.com.au)  
**Homepage:** <http://www.aads.com.au>  
**Mail address:** AADS  
P.O. Box 6027

Melbourne  
Victoria 3004  
Australia

### About New Zealand

New Zealand is an English-speaking country with a population of 3.6 million. Auckland's

population is 1 million. This picturesque country is a hidden jewel which you should not miss visiting. You are encouraged to extend your stay and see more of this magnificent country.

**Auckland** - It is no surprise that there are more boats per head of population in Auckland than anywhere else in the world. Auckland is the home of the yachting's most elite prize, the America's Cup, which will take place in the weeks leading up to our convention. New Zealand's largest city, it offers a mix of cultures from east to west.

### About Visa Requirement

Visas are only required by people intending to work, study, or have medical treatment.

### About Currency

Registration for the Convention is in Australian Dollars (\$AUSD). Local currency is New Zealand

dollars (\$NZ). Foreign exchange is freely available in Auckland and standard credit cards and travellers cheques accepted at most venues. A link on our web site will give you exchange rates.

### About Quarantine

As an island continent, New Zealand has strict quarantine restrictions on food, plant and animal matter. Check with your travel agent for specific details.

### Climate

Auckland has a warm coastal climate with an average daily maximum temperature in March of 20 degrees Celsius, 60 Fahrenheit.

### Convention Venue

The Carlton Hotel Auckland is an outstanding

five-star hotel located in the heart of Auckland and in walking distance to the America's Cup Village, Shopping Centre and other venues.

Features include:

- Fully equipped gymnasium
- Heated lap swimming pool
- Specialised business centre with secretarial services
- Terraced garden for guests' enjoyment.

Check the facilities through the link on the AADS Website.

Don Blanksby  
Executive Officer  
AADS Inc.



## CONVENTION PROGRAMME

### Thursday 23 March 2000

- 0800-1600 Exhibitors erect stands
- 0900-1600 Registration
- 1000-1630 Optional local tour of Auckland Surrounds
- 0900-1600 Training Course - RLDK
- 0800-1000 AADS TEEC Meeting
- 1000-1600 AADS Board Meeting

### Friday 24 March 2000

- 0800-1230 Golf at Manukau Golf Club
- 0900-1600 Registration
- 0915-1200 Pump room tour
- 1000-1600 Exhibition viewing
- 0900-1630 Training Course - R801 Governor
- 1300-1600 Australian GST Seminar
- 1900-2300 Welcome Dinner, Traditional Maori Welcome

### Saturday 25 March 2000

- 0830-0900 Opening Address
- 1000-1630 Partners Tour - This Fabulous Island Waibeke
- 0900-0945 Session 1 - Keynote Address - *25 Years On and The Future*
- 0950-1030 Session 2 - *E-Commerce, IT and Your Business*
- 1030-1040 Exhibition viewing & Morning Tea
- 1040-1100 Session 3 - *Denso, Past Current and the Future*
- 1110-1150 Session 4 - *Emissions - the future*

- 1200-1240 Session 5 - *Turbocharger Technology Developments*
- 1240-1400 Lunch & Exhibition viewing
- 1400-1440 Session 6 - *Bosch, Past Current and the Future*
- 1450-1530 Session 7 - *Test Bench Technology Developments*
- 1540-1620 Session 8 - *New Pump Developments for Light Diesel Engines*
- 1630-1700 Annual General Meeting
- 1700-1730 Happy Hour & Exhibition viewing
- 1730-1900 Free Time
- 1900-2330 Dinner Dance

### Sunday 26 March 2000

- 0830-0900 Exhibition viewing
- 0900-0930 Session 9 - *New pump testing technology*
- 0940-1010 Session 10A - *Young Guns Ways to Create Wealth*
- 0940-1010 Session 10B - *Retirement Planning*
- 1010-1040 Exhibition viewing & Morning Tea
- 1040-1110 Session 11A - *Young Guns Cash Flow Budgeting*
- 1040-1110 Session 11B - *Training for the future NZ MITA*
- 1120-1200 Session 12 - *Diesel - the future*
- 1200-1230 Exhibition viewing
- 1230-1430 Farewell lunch & Industry Awards
- 1430-1530 *Young Guns* Planning Session
- 1430-1700 Dismantle Exhibition stands

## PRESIDENT'S REPORT

Congratulations are in order to Mike Hurley and Shona on the birth of their son Max William. By the time you read this I expect to be a Grandfather. Normally this is not the way I would start my President's report, but with the end of the century and beginning of the second millennium, my mind has been heavily focused on what the future holds for our children and grandchildren.

This century we have come through two world wars, seen man land on the moon, planes and cars reaching a level of technology undreamt of 80 years ago, and being able to travel around the world in hours instead of days and weeks.

What will they have to face in the very near future? Men on Mars, no diesel powered vehicles? All electronics powered by solar energy machines? Only factory supplied change over units to repair our methods of transport?

We only have the Y2K bug, the introduction of the GST, and electronically controlled injection pumps to worry about, and living long enough to see them successfully into the next century.

The 25th Anniversary convention in Auckland next March is shaping up as our best yet. Mick Rankin is working on an AudioVisual presentation of our history that is not to be missed. There will be schools on RLD and R801 governors and for the Australians a seminar on the GST. Maybe our Kiwi members can help us with this one too.

I would like to thank the National Board members for their support over the year, and Don Blanksby and his team for their efforts in making things happen with such a minimum of fuss. Well done.

*To all AADS members, their Staff and family members I wish you a Merry Christmas and a very successful new Century.*

John Brook  
President,  
AADS Inc.



## WESTERN AUSTRALIAN BRANCH REPORT

A MEETING that was scheduled for November did not eventuate due to the majority of members having other priorities at this time of year. This meeting will now be held in early January.

Reflecting on the past 12 months of the industry in W.A, I feel it has been one of the toughest.

The OEM's are retaining in house as much of the repairs of their product as possible, including fuel pump adjustments and injector repairs. Information on the internet is available to the everyday mechanic to fix those low power problems. These include diagrams on how to adjust max fuel and boost compensators. With no penalties in place to address this problem, it

will only increase. With the environment and emissions being the buzzwords of the moment the board of the AADS is making every effort to ensure that we as an industry are fully represented in any decision making. Only by supporting your local branch and association can this effort continue you will not survive on your own.

*At this time, I would like to wish all members a Merry Christmas and a prosperous New Century.*

John Moir  
Chairman, W.A. Branch  
A.A.D.S. Inc.



**Christmas Cheer** When the workshop started up after the Christmas break, John asked his staff how they liked the bottle of wine he had given each of them for their Christmas gift.

"Er, well, it was just right Boss", one replied. "What do you mean, 'just right'?" John asked. "Well, if it was any better you wouldn't have given it to us - if it was any worse we couldn't have drunk it."

## NEW SOUTH WALES BRANCH REPORT

Our last meeting was held at idyllic Port Macquarie on November 6, and members attention was held by Mr Darren Jenkin from Denso Australia, who gave us an introduction to the two spring injectors that are supplied to the market by Denso. This was a surprise as to the penetration of the market obtained by Denso, and to the number of these products that we will see for service in the future. These injectors are becoming more prevalent to allow the current design engines to meet the emission and pollution levels demanded by the country today, and even stiffer regulations are coming in the future, and Denso will be there to meet these levels.

Port Macquarie is a beautiful place and has been the meeting place for our last meeting of the year for many years now and those who did not attend missed out on a very good weekend. Just ask Jim Lister.

We are still being involved with the emissions programme and endeavouring to get our voice heard at government level.

Please be advised of the dates and places for our upcoming meetings for the year 2000 are:

**19th February – Queanbeyan**

**19th August –**

**Parkes**  
(where the Olympic Torch will be overnight, then off to Broken Hill)

**11th November – Port Macquarie**

### **PUMP ROOM LEAK OFF**

New TD42T Nissan Patrols – complaints of misfire on one cylinder when startup from cold. Miss clears above 2000 rpm.

Check glow plug system. If one plug is faulty, this can throw whole system out. Check timing, may require slight amount of adjustment.

Glow plugs on TD42T and others pulse on and off for up to 30 seconds after engine starts.

*I would take this opportunity to wish every one of you all the best for the festive season and have a happy and Holy Christmas, and we will hope for a joyous new year.*

Alistair Weller  
Chairman, NSW Branch  
AADS Inc.



## QUEENSLAND BRANCH REPORT

THE Queensland Branch held its final meeting for 1999 on November 20th at Noosa Heads. It was our AGM, however no elections were required as this year is an odd number. Due to the exotic location, the emphasis was on a casual weekend. We were given an extremely informative talk on the upcoming GST by Jane Deshon from KPMG Accounting. We all learned something. This was followed by a unique tech forum (our best ever!) and plenty of free time.

### **Dates for 2000**

**February 5th - BRISBANE**

Meeting/Training  
Multimeter training, including Toyota Surf fault finding  
Training venue: Diesel Australia P/L  
Instructor: Reg Donoghue  
Meeting venue: to be advised.

**June 10th - CAIRNS**

Details later.

**November 18th - SUNSHINE COAST**

AGM at Hyatt Cooloom

Welcome to new members -

**Torque Power Diesel (Aust) P/L**  
(Service Member)

**Whitsunday Diesel & Marine**  
(Associate Service Member).

*In closing, I'd like to wish all members all the best for the festive season and for the new millennium.*

Andrew Bourne  
Chairman, Qld. Branch  
AADS Inc.



## S.A./N.T. BRANCH REPORT

**A**T OUR last meeting, held in July, we announced that Richard Wood was to be appointed the training organiser for SA and NT. For those who were not able to be present at that meeting I would like to invite you to contact Richard on 08 8725 1153 to discuss your training requirements, ideas or comments.

Richard contacted members during September and October to discuss needs and it resulted in running an AADS training course on two spring injectors on Saturday 20 November. Following that, in the evening, we had our Christmas dinner at the Strathmore Balcony Restaurant. The dinner was a great success and we had a record attendance. I hope everybody else enjoyed the evening as much as I did. The menu and the venue were fantastic and the band played to create a great atmosphere.

I would now like to hand the keyboard over to Richard now to make a report about the training course ...

Hello, as this is my first report to you I will make it short. Firstly, I would like to congratulate the 8 students who took part and make mention that it was good to see the members from Northern Territory participating in the training. The members enrolled for the training course were:

**Dean Ludwig** (Naracoorte Diesel)

**Damian Philp** (Berri Diesel)

**Dan O'Donnell** (C & D Diesel)

**Craig Leach** (C & D Diesel)

**Adam Norvill** (Levels Diesel)

**Rob Francis** (Southcott P/L)

**Steve Georg-Dent** (Adelaide Fuel Inj)

**Karl Venning** (Adelaide Fuel Inj)

Thank you to these people and their relevant businesses for supporting the AADS training that our TECC committee work so hard to bring to all members and thank you also to Reg for giving up his Saturday to run the course for us.

Next I would like to take this opportunity to thank Trage and Don for allowing the course to be run at Adelaide Fuel Injection's workshop and for supplying lunch and refreshments for the students (and the training organiser).

With all the thanks done, as Trina said above I would be happy to hear from you with any ideas, comments or questions about AADS training and your requirements. I am new to this job but I will try my best to answer or find out the answers to your questions.

We are going to try to run more AADS courses in the new year but I need your help to know which courses will be of most interest to the majority of our members so we can get the numbers we need to have to run the courses.

Richard Wood,  
Gambier Diesel Centre.



*Participants in the training course run at Adelaide Fuel Injection Service:*  
BACK ROW L-R: Dan O'Donnell (C&D Diesel); Craig Leach (C&D Diesel); Rob Francis (Southcott P/L); Richard Wood (Gambier Diesel); Reg Donoghue (Onkaparinga TAFE); Damian Philp (Berri Diesel).  
FRONT ROW L-R: Adam Norvill (Levels Diesel); Karl Venning (Adelaide Fuel); Steve Georg-Dent (Adelaide Fuel); Dean Ludwig (Naracoorte Diesel).

In closing, we find ourselves with this millenium nearly at an end and with another Christmas and New Year's Celebration just around the corner. I would like to take this opportunity to welcome our new members and to thank all those who have supported me and helped me as the Chair of AADS SA/NT Branch throughout the year. Please have a safe and happy Christmas period with best wishes for a prosperous new year and I look forward to being of service to you as your branch chair in the next millenium.

**MERRY CHRISTMAS TO ALL**

Trina Wilkey  
Chairperson SA & NT Branch  
AADS Inc.





## NEW ZEALAND BRANCH REPORT

Our New Zealand Branch Convention was held in Rotorua back in September. We had a very good weekend with just over 100 people attending. I would like to thank John Brook, Don Blanksby and John Moir for giving up their time to attend. The presentations this year were great and we added a few new speakers to our Saturday presentation. We had speakers from Denso, Bosch, Holset, Woodward, Volvo, AADS and some in-house presentations from our local industry. On Friday night we changed things around and had a sit down dinner after an official welcome from the local Maori. On Saturday we had a Bavarian night sponsored by Bosch. This year we again had good support from our sponsors, making a great weekend for our members. Sponsors were:

- ◆ **Bosch**
- ◆ **Simms Diesel & Turbo**
- ◆ **Diesel Distributors**
- ◆ **All Tech Diesel & Turbo**
- ◆ **Rotorua Diesel Services**
- ◆ **Diesel Maintenance**
- ◆ **Pukokohe Diesel & Turbo**

On Sunday there were 12 starters for golf, after a very close finish and for the first time in ten years, there will be two names going on the cup. We hope to run this golf match next year on the Friday before the National Convention in Auckland. We may have to get another cup so that maybe an Australian could win it.

We are looking forward to a big fish up in the Auckland area early in the New Year. Plans are under way for this and more information will be sent out as dates are confirmed.

We look forward to seeing you all in the land of the Long White Cloud in March.

*Until then, have a Happy Christmas and see the New Year in safely.*

Mike Hurley  
New Zealand Chairman  
AADS Inc.



*At the N.Z. Branch Convention -  
L-R: Fateh Mohammed; Mac McCarthy; Lewis Brown; Russell Coupe;  
Brian Satchell; Michael Ovenikovas; Mike Hurley.*



*Also at the Convention -  
L-R: Steve Wilson (Holset); Russell Coupe; Grant McLean (Holset).*



*All members of AADS send their best wishes and congratulations to Mike and Shona on the safe arrival of **Max William Hurley** into the world on 5th November 1999. Weight 8lb 10oz.*

## VICTORIAN AND TASMANIAN BRANCH REPORT

Victorian/Tasmanian branch held a very successful meeting at the premises of Robert Bosch on Friday the 26th of November. A total of 33 members were present.

Honorary member Ken Hargrave attended and caught up with friends he had not seen for some time.

After the meeting agenda and general business had been attended to, Horst Schnabel delivered a presentation on the past and future developments of Bosch diesel products, in the marketing and repair industry. It was presented in the Horst Schnabel style that we have all enjoyed for many years. Thank you Horst.



*The 'Elderly Citizens' table at the Vic/Tas Branch meeting held at Bosch, Clayton.*

L-R:

*Brothers*

*Terry and Don Sims,*

*Life Members*

*Mick Rankin,*

*Kevin Cripps,*

*Don Wilkey;*

*Honorary Member*

*Kevin Hargrave;*

*Eric Bishop;*

*Percy Carvalho*

*(obscured);*

*Mick Cossich*

*(obscured);*

*John Jakob.*

*Vic/Tas Branch members at the Bosch Dinner.*

L-R:

*John*

*Townsend*

*(partly*

*obscured);*

*Steve*

*Munro;*

*Don*

*Carnie;*

*George*

*Pallasis;*

*Robert*

*Comer;*

*Ted Gilliam*

*(almost*

*out of*

*picture!).*





*The Vic/Tas Branch Committee - L-R: Geoff Rankin, Vice Chair; Robert Comer, Chair; Chris Varti, Secretary.*

Don Blanksby brought the meeting up to date with the latest news on the Auckland Convention to be held in March 2000.

Mick Rankin asked members present for any photographs or video they may have of past meetings, schools, and conventions, that could be used in the audio visual presentation being

prepared on the 25 year history of the association. This presentation will be shown at the Auckland convention.

The committee would like to thank Jack Holstein and staff for making their premises available, for what turned out to be a very enjoyable evening. The dinner and catering staff were excellent.

The committee and members would like to congratulate Geoff and Veronica Rankin on their recent marriage, and wish them all the best for the future.

*The committee and I wish all members, their staff and their families a happy and safe Christmas and a prosperous year 2000.*

Robert Comer  
Chairman, Vic./Tas. Branch  
AADS Inc.



## **Thanks from Denso - Change of Millennium**

The end of one year leads to the beginning of another. This beginning should be seen by everybody as an opportunity to re-evaluate our goals and set new levels of achievement. This change of millennium occurs once every 33 generations, so in this scheme of circumstances we are very lucky to bear witness to this experience.

Denso has existed in Australia since our humble beginnings back in 1972. In the 27 years since, Denso's market share has grown from almost zero to more than 20% of the diesel engine market and this couldn't have been achieved without the industry's support.

Denso would like to extend our thanks and appreciation to the Association of Australasian Diesel Specialists, Distributors, Dealers and everyone associated with the industry for repairing Denso Fuel Injection equipment for our customers since Denso Japan Corporation began back in December 1949. This year Denso celebrates a 50-year anniversary, which will launch us towards the new millennium and a new beginning.

We hope the previous 52 years have been prosperous for all involved in our industry and look forward to an even more prosperous future for the years to come.

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## **KEITH JURGS AWARD**

Nominations for the **Keith Jurgs Award** are to be in writing, seconded and submitted to the AADS Executive Officer (AADS PO Box 6027, Melbourne, Victoria 3004, Australia) by 31 December 1999.

Nominees must be or have been a Service Member who produced significant benefit and advancement to the industry.

## **AADS Service Company Wins Business Excellence Awards**

**TURBOCHARGERS NZ LTD.** has won the Port Nelson Large Business Award and was presented with the Air New Zealand award as Overall Winner of the 1999 Commerce Nelson Business Awards.

A Nelson company now exporting 65% of its turnover, Turbochargers NZ was established in 1990 and has grown along with the increasing use of turbochargers that are used to boost engine efficiency in ships and automobiles. The company is one of only several world-wide able to service all frame sizes of these high-precision units, which range in size from 1 Kg. up to 12.5 tonnes.

Besides its Nelson base which services the marine and automobile markets, Turbochargers NZ also has a workshop in Henderson set up to service the Auckland and South Pacific Turbocharger market.

Turbochargers NZ's long-term success is attributed to its highly skilled technicians, and a commitment to do the job right in as short a time as possible. Manager Peter Williams says, "In the marine sector, where engine problems in a large vessel can lead to hundreds of thousands of dollars worth of lost revenue to its owners, we have a reputation for fast efficient service, with the reassurance of Lloyd's ISO 9002 accreditation. We couldn't have achieved that, or the Commerce Nelson Business Awards without the hard work and dedication of our staff."



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## Your Partner for Better Service

INPAC has been operating for two years, successfully serving both the Australian and International markets. During this period, INPAC has completed a second series of Caterpillar diesel fuel injection training at its Sydney premises, introduced numerous new quality products and strived to provide excellence in service.

The crew at INPAC thank clients for the support given to INPAC, especially during difficult times being experienced by the diesel fuel injection industry. The INPAC organisation continues to be committed to providing superior products, knowledge and service of the greatest possible value to our clients, who we view as an important stakeholder in INPAC.

*To all those involved in the diesel fuel injection industry the INPAC organisation wishes you an enjoyable Christmas/holiday and a prosperous New Year.*

Ted, Greg and John from **B&E Diesel Spares** would like to take this opportunity to thank you for your continued support during 1999 and wish you all a merry Christmas and a happy, safe New Year.

**Diesel Systems Australia** wishes all their customers a Merry Christmas, a Happy New Year and a peaceful transition into the 21st Century and beyond.

We also take this opportunity to thank our loyal customers for their continued support.

With warm regards, Simone, Michelle, Chris and John.

All of us at **Kingaroy Machinery Centre** would like to thank our valued customers for their patronage over the years and extend our best wishes for a very safe and happy Christmas and a very prosperous and millennium bug free Year 2000.

It's been 9 months now since John Fresser retired and left us a big pair of shoes to fill. His ready knowledge is missed greatly as we're sure everyone in the industry would appreciate. John still keeps in touch so we have not lost him completely.

With the backup of Brad in our Pump Room we will endeavour to continue to provide an efficient and friendly service to our valued customers.

Seasons Greetings from Rhonda Fairbrother, Brad Trace and Chris Brandon Kingaroy Machinery Centre Pty. Ltd., Diesel Injection Section.



Robert Kogoi, Darren Jenkin and all at **Denso** would like to extend Season's Greetings to all our friends, distributors and service dealers

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**Your help will be much appreciated!**

# The Ten Commandments

## of Diesel Maintenance

1. Thou shalt keep thine engine clean and in adjustment that thy life in its company shall be long and that the owner shall increase thy job longevity.
2. Know thine engine and all its parts and functions, else thou shalt be up some tributary without means of locomotion.
3. Be not wise in thine own conceit. Remember thine factory instructions and keep them holy, lest false repairs be thine undoing.
4. Be not loose in thy jaw hinges for no man knoweth all about diesels. The truly wise absorbeth much knowledge and exceedeth little, and he who so doeth shall gain repute among his fellows and favors among his superiors.
5. For all things in this life that thou desireth, thou shalt also pay plenty, and for the wisdom of experience, no less. Advice from the multitudes costeth nothing and usually worth as much.
6. In the books thou mayest read what to do and when, but only the voice of experience may tell thee why and how, else reading of what and when shall but plague thee with smoke.
7. God maketh the earth rotate endlessly without bearing or oil, but not thy diesel.
8. Curse not thine engine when it turneth not. Curse rather thine own neglect.
9. Steam engines and gas engines may long turn over though sloppy: a diesel not so. With gauges and micrometers be thou ever busy.
10. The eternal eye watcheth universal operations, but thou shalt not rely upon it as to thy diesel. Thine own vigilance is the price thou payest for thy job.



John Townsend was born on 6 August 1945 in Melbourne, Victoria. In his early years he lived with his Mum and Dad in West Preston. The first school he attended was Newlands Primary and later on he completed his secondary education at Preston Technical College.

John left school in 1960 and started his first job in the local grocery shop. Unfortunately around this time John's Father died. In 1961 John was accepted as an Apprentice Motor Mechanic with Ansett Pioneer. It was here that his long time association with Dario Valencich began, as Dario was his boss in the Ansett Pioneer workshop.

Just as John completed his Apprenticeship in 1966 he was drafted into National Service training for two years. He did his training in the RAEME corp, as this was the corp that men with mechanical training were inducted into.

At the completion of his National Service, in 1968, John worked for a short time as a mechanic in a local Service Station, until a position became vacant in the Ipec Transport Company workshops. John worked there until 1973 when he joined the Lucas Company where he worked in spare parts; this was his first connection with diesel fuel injection, which was to play such a big part in the rest of his working career.

Intrigued by Diesel Injection John left Lucas in 1974 and went to work for Bronya Diesel in Northcote. He stayed there for five years but with the tragic deaths of Gil and his son Sigg, John returned to work for

# Personality Profile

JOHN TOWNSEND



*John and Sandra Townsend*

Lucas, the business was sold to Mick Cossich and renamed Able Diesel.

John stayed with Lucas for four years, then went to work in the diesel injection industry again for Bob Dowell, at Dowell Diesel, who specialised in Cummins fuel injection equipment.

Seven years later John was on the move again and he spent a year working for a chain manufacturing company, Pitt Waddell, in Grimshaw Street, Bundoora. It was while working there that he was contacted by Keep Bros, & Wood, later Carparts, now Atkins

Diesel, offering him a position in their spare parts department selling Diesel Fuel Injection parts, a job he still carries on today, with his friend and workmate Don Sims.

On 14 September 1968 John married Sandra at St Matthews church in Glenroy and after living in various rented flats they finally moved into their own home in Bundoora in 1971. In 1975 their first child, Hayley was born, followed by son Glen in 1977.

John played a fair game of squash until he was afflicted with Rheumatoid Arthritis, but he took up Lawn Bowls and enjoys the game as often as he can. He likes to go fishing and enjoys going out to dinner with Sandra and his friends.

John has been a great contributor to AADS at meetings and conventions over the years and is highly regarded by his friends in the industry. His help in getting those spare parts on time is much appreciated by us all.



*Young John with a trophy won as a member of the Ansett Pioneer Bowling Team during his apprenticeship.*

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## VALE – GORDON DANGERFIELD

**I**N 1938, Gordon Dangerfield was employed as an apprentice printer in Launceston, Tasmania. His hobby at the time was motor bike racing and inventing and fitting improvements to his racing bike, which eventually enabled him to beat his good friend and rival George Wade, who at the time worked as an engineer for Repco.

In 1941 George persuaded Gordon to join Repco and assist him in engineering projects for the Repco company.

In 1945, Jacksons, the Ford earthmoving equipment agents in Launceston, asked Repco if they could repair the fuel injection pumps fitted to their machines. This challenge was given to Gordon, thus beginning his interest in Diesel Fuel Injection.

In 1948 Gordon was sent to Melbourne to Pyrox, where he worked with Joe Gillitzer and Horrie Esmond who gave Gordon instruction on Bosch equipment. While Gordon was there he used his skills in technical drawing to sketch the test bench in use by Pyrox at the time. On his return to

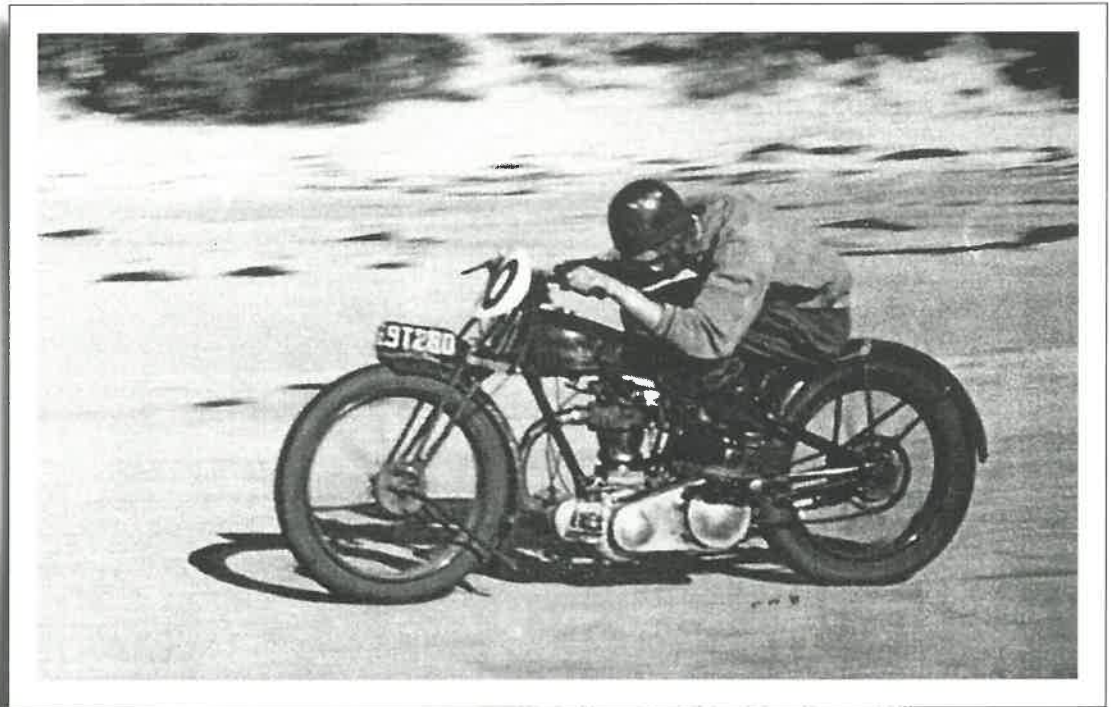
Launceston, he built a test bench from these specifications and also incorporated in the bench, a system for testing speedometers.

In 1950 Gordon was sent back to Melbourne to start off the Repco Melbourne diesel fuel injection shop. Gordon remained in charge of this section until 1958.

During this time, Mick Rankin, Jack Trickey, Leo Kull, Bill Hall, Geoff Kelsey & Keith Angus gained their experience in the fuel injection field.

Gordon went to work for Repco designing and manufacturing diesel test benches, nozzle grinders, lapping machines, cam shaft grinders and the famous Repco electronic wheel balancer, still in use today.

Also, during his time at Repco, he was responsible for the setting up of at least twelve fuel injection shops in Victoria and New South Wales. Gordon died on Thursday, 25 November 1999 at 87 years of age. He will be remembered as one of the fathers of diesel fuel injection in Australia.



*Gordon Dangerfield on a 348 OHC Chater Lea - Bakers Beach 1934-35*

# DENSO Product Introduction

The final issue of *Diesel Torque* for this year signals the end of a millennium. In this final issue we include the 4th and final section of the introduction of ECD-V4 fuel injection system.

Your current mindset and expectation of the way in which current fuel injection systems operate must be completely re-evaluated and you must be open to new technology and concepts.

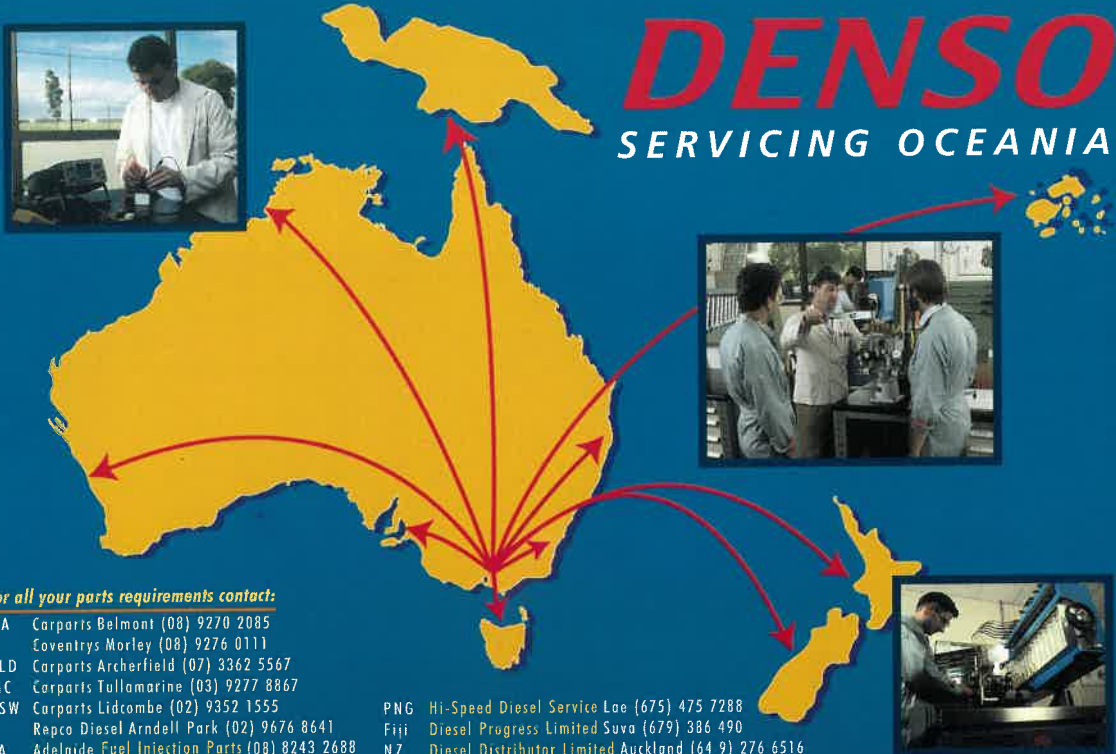
An example of this change in perception that must occur is the testing of VCO nozzles in nozzle holders associated with the ECD-V4 fuel system. Your past experience in observing the operation of a nozzle must be accepted as previous technology and a new standard of

observation has to be accepted and embraced. The way in which VCO nozzle spray patterns are observed during testing is completely different to current pintle and long-stem nozzles.

Also the hydraulic circuit of the inner cam mechanism pump operates completely different to conventional rotary injection pumps. The process of operation of the hydraulic circuit is explained on the following page.

We hope you have enjoyed our 4 part issue on new product introduction of the ECD-V4 fuel injection system.

From all of us at Denso International Australia we wish all members a Merry Christmas and a prosperous New Year.



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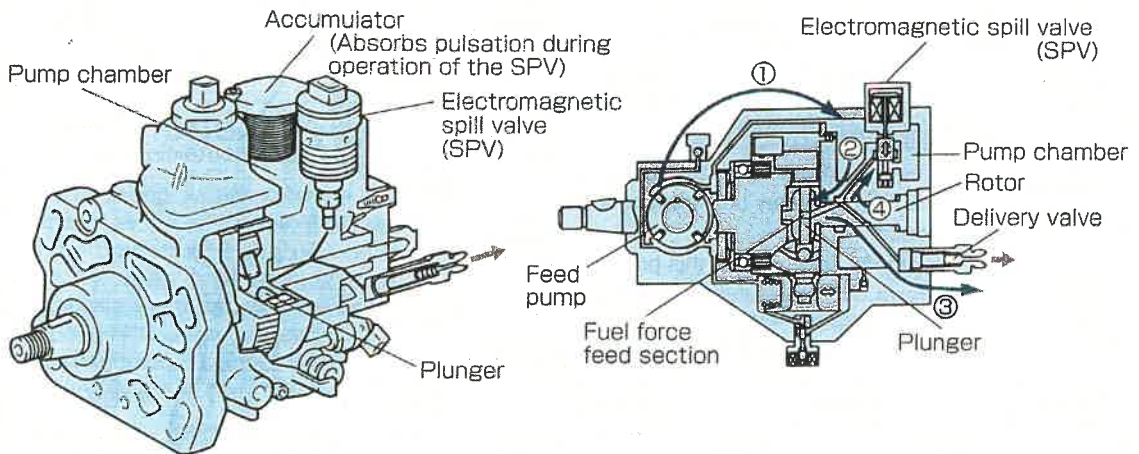
## JUST A THOUGHT ...

This Christmas, consider getting a new car for your partner. It could be a great swap!

## 2-3 Hydraulic circuit

- ① Simultaneous with driving of the pump drive shaft by the engine, there is rotation of the internal feed pump to suck fuel up from the fuel tank and send it to the pump chamber inside the pump. (Pump chamber pressure: 1.5-2.0 MPa).
- ② The electromagnetic spill valve opens (SPV: OFF) and the fuel force-feed section (rotor section) is filled with fuel.
- ③ The electromagnetic spill valve closes (SPV: ON) and the fuel shut inside the rotor section is pressurized with the inner cam and plunger due to rotation of the drive shaft. At the instant that this pressure becomes greater than the valve-open pressure of the delivery valve, the fuel is force fed in the order of delivery valve, high pressure tube and nozzle so that injection begins.
- ④ When the electromagnetic spill valve opens (SPV: OFF) and the pressure of the rotor section decreases, the delivery valve closes and injection ends.

Steps ① to ④ are repeated for each cylinder in accordance with the injection order.

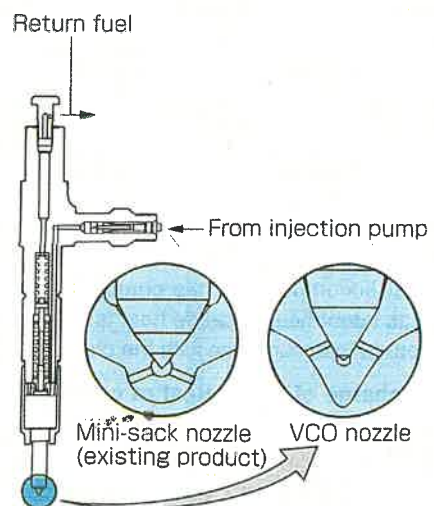


## 3 Nozzle and nozzle holder

- ① There was adoption of the VCO (valve covered orifice) which is effective in reducing white smoke and exhaust odors, as well as a nozzle (high flow nozzle) which considerably improves flow circuit resistance.
- ② A double-spring nozzle with a narrow diameter was adopted for high pressure injection. To improve fuel combustion, the injection holes were made smaller so that, along with a higher pressure for the injection pump, it was possible to achieve fine fuel vapor particles.

### Caution:

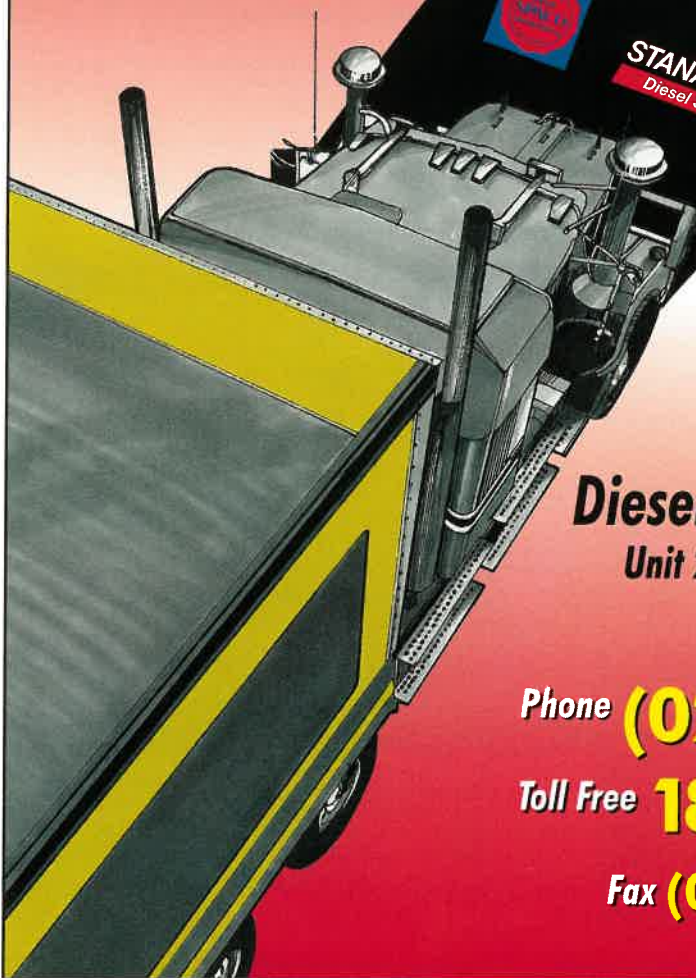
The VCO nozzle features an altered configuration, starting with the sack section on the end. As a result, during the spray mist test with the nozzle tester there is an abnormal spread-type spray with clogging of the injection hole, though the nozzle is not defective. It is thus important to pay attention to these matters when judging the acceptability of the equipment.



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## From the Desk of Jack Holstein ...

**L**OOKING back on 1999, I see an eventful year that was also full of optimism.

The Australian economy remained strong and grew by 4% with business investments steady.

Whilst there was a slight decline in the total vehicle registration due mainly to the forthcoming introduction of the GST in July 2000, the total commercial vehicle registrations were up by 6.2% with Heavy Commercial Vehicles up by 2.8. The share of diesel vehicles in Light Commercial remains at approximately 30% with Heavy Commercials at approximately 99%.

For Bosch this was also a successful year, which saw a number of 'millionaire' products being produced. These included 100 million Blaupunkt car radios since 1932, 50 million ABS anti-lock braking systems, 1 million plus ESP electronic stability program and 25 million alternators from the assembly plant in Cardiff, England.

Another millionaire milestone was achieved with the VP44 diesel radial piston pump, with 1 million already been manufactured in only three years. The demand for this product is so huge, that employees have been working shifts around the clock seven days a week for more than a year.

Bosch increased its share in ZEXEL Corp. Japan to 51%, making it the major shareholder. This cements Bosch's position as the largest

manufacturer of diesel products in the world.

Robert Bosch Australia dominated the 1999 Governor of Victoria Export Awards winning the Exporter of the Year and Large Advanced Manufacturer Awards. This is the first time Bosch Australia has submitted an entry in its 45-year history in Victoria.

The Bosch Service Dealer network is flourishing, with many businesses having embraced the diversification strategy, which is part of the Bosch 'Quantum Leap' program. This will ensure Bosch Service Dealers have the skills to improve their business and technology base, thus remaining competitive in the auto repair market.

As we enter the new millennium, I am looking forward to the future, which I believe will be an exciting one. We need to remember however, anything good cannot be established overnight. It requires dedication, hard work and especially confidence at all levels of business.

From all of us in the Bosch Australia Automotive Division, we thank you for your support and extend to you, your family and your staff, Seasons Greetings and hope for a prosperous New Year.

### **JACK HOLSTEIN**

Manager, National Sales and Service Training  
Robert Bosch (Australia) Pty. Ltd.

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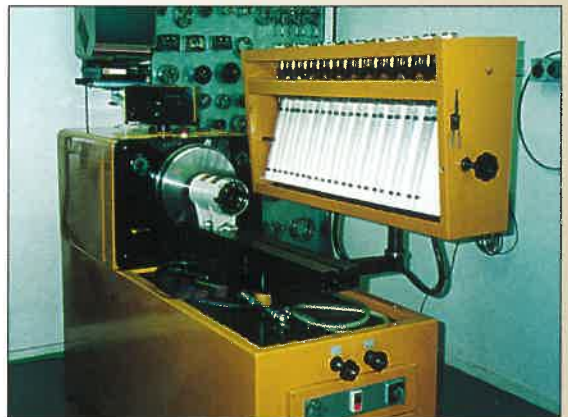
Contact Don Holgate

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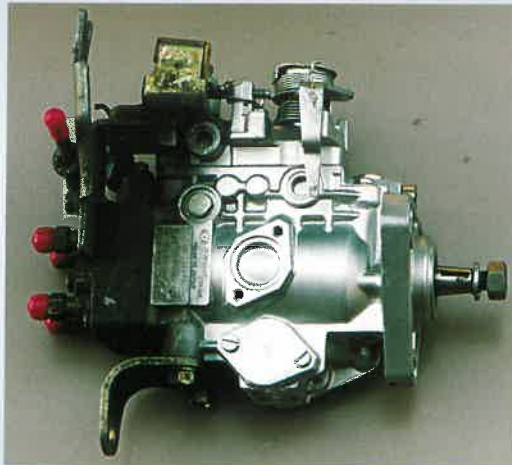
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# Media Release

## Honda's Insight Achieves World's Best Fuel Economy

DETROIT - The Honda Insight hybrid car has confirmed its status as the world's most efficient vehicle, achieving best-ever fuel economy figures in independent tests by the United States Environmental Protection Agency.

Powered by a petrol/electric engine, the Insight earned an EPA city rating of 3.85 litres per 100 km (61 miles per gallon) and a highway rating of 3.36 litres per 100 km (70 miles per gallon).

These figures were more than 11.8 litres per 100 km (20 miles per gallon) better than the most efficient competing diesel-powered models.

The Insight has already been heralded for its Low Emission Vehicle (LEV) engine, and the EPA's fuel economy figures confirm it as the world's best.

The Insight goes on sale in Japan in November and the United States in December.

Honda has combined a wide variety of

innovative technologies to produce the Insight. Its aluminium body is about 40 per cent lighter than a comparable steel body, while its drag coefficient of 0.25 makes it one of the most aerodynamic vehicles.



The Insight is powered by the world's lightest 1.0-litre lean-burn VTEC engine, working in tandem with Honda's Integrated Motor Assist (IMA), which boosts acceleration by using an ultra-thin brushless DC

electric motor. This reduces demand on the petrol engine, saving fuel and improving performance.

The electric motor becomes a generator during deceleration, turning kinetic energy into electricity that is stored in a nickel hydride battery. In conventional cars, braking energy is wasted in the form of heat.

Insight is equipped with a choice of lightweight five-speed manual transmission or Honda's Multimatic CVT transmission.

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The **Gloves in a bottle** lotion has no greasy residue when rubbed on the hands and acts like a second skin, giving the protection of rubber gloves without any loss of sensitivity or dexterity. This means that you can use your hands freely on the most complicated Jobs. As an added bonus, oil and grime also wash off much more easily. Your skin will not be stained and your hands won't dry or crack. **Gloves in a bottle** does not wash off, but wears off gradually as part of the natural exfoliation process of the skin, over about four hours. Most people apply the lotion before they start work in the morning and again after lunch.

**Gloves in a bottle** was originally

developed in the United States in conjunction with General Motors Corporation to assist staff who suffered from

dermatitis. After three years of exhaustive trials it was released for public use and is now used in engineering, construction, manufacturing and chemical industries world wide.

Independent laboratory tests have been carried out on the product in the United States using a wide variety of strong skin irritants including hydrochloric acid, ammonia and isocyanates as found in paints and solvents.

Despite dosages of chemical irritant in excess of that normally encountered in the workplace, **Gloves in a bottle** has been found to effectively protect the skin from local or systemic reactions in all cases. It's not recommended, but you could actually pour battery acid over your hands wearing **Gloves in a bottle** and they would not be harmed.

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