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# The torque

MITO NEWS – ISSUE 1 | 2010

## StartUp® – a winner all round!

**A MITO training programme that targets secondary school students is proving a big hit with employers.**

StartUp® offers benefits all round – enabling interested students to experience and learn about the automotive industry first hand, and employers to meet and observe potential new employees.

### Delivering success

Nineteen year old Peta Sharpe says enrolling in the StartUp® programme when she was at school was “one of the best things I've ever done”.

“I heard about StartUp® and thought it was a great opportunity. It gave me the chance to learn more about the industry. It included theory-based study and work experience with a local employer every Friday, which soon showed me that being an automotive technician was the job for me.”

Peta now works at Junior's Kustom Rides and Classics Ltd, a business based in Lower Hutt that specialises in hot rods, custom cars and classics. It's her dream job, “I love it,” she says. “I wouldn't leave this job for anything!”

As for the employer's perspective, Grant Ryan of Lower Hutt's Contour Brakes thinks StartUp® is a great programme. “It gives young people the chance to experience

the discipline and demands of a business environment, which is so different from school,” he says. “It also helps us to find out whether we have a ‘fit’ with the young person, in terms of their abilities and their willingness to learn and contribute to the workplace.”

### Offering experience and qualifications

MITO works closely with secondary schools and employers to ensure StartUp®'s success.

For many employers, StartUp® is a great move towards securing the future of their business, while for others it's a personal contribution to the community and the future of the industry. Either way, the programme

is helping to improve overall industry standards while providing young people with challenging work opportunities – putting them on track to long and rewarding careers.

### Joining StartUp® is easy

If you're interested in signing a student into StartUp®, simply contact your local MITO Industry Training Advisor or call MITO on 0800 88 21 21.

StartUp® – it's the perfect way to match your business with the energy and talent you need for the future. 🚗

*Peta Sharpe from Junior's Kustom Rides  
and Classics Ltd in Lower Hutt*





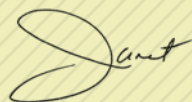
Welcome to the first issue of The Torque! In addition to a new name, MITO News has undergone quite a transformation – a new design and format to expand on the information

we provide. Our new features include “hot tips” and stories with an “international flavour”. The Torque will be published quarterly and distributed to over 6,000 readers.

Last year was certainly challenging for all of us. In the midst of an economic recession, we achieved some significant successes. A record number of learners completed their qualifications, we released some exciting new programmes in collision repair and refinishing, we strengthened our industry partnerships both nationally and internationally and we came up trumps with our annual customer satisfaction survey. More than 1,300 learners and employers were interviewed by phone at the end of the year, and 87% of learners and 82% of employers said they were satisfied or very satisfied with MITO.

We are very excited about our new initiatives for 2010, including the release of new programmes as well as the implementation of our literacy and numeracy strategy, dedicated to supporting our learners overcome barriers to their success.

Stay tuned – we will keep you updated throughout the year.



Janet Lane  
Chief Executive



## Automotive apprenticeships – your opportunity for adventure

**If you are thinking about a career in the automotive industry, and want to keep working in the great outdoors – take a leaf out of Justin Keen’s book, or should we say his travel diary!**

Before leaving on his OE, Justin already had an automotive engineering qualification – National Certificate in Automotive Engineering. He was able to apply this qualification and his work experience to get a job as a guide on African and South American overland adventure tours.

Justin says his most memorable trip was overland from London to Cape Town. The African section of the journey started in Morocco, tracked down the west coast of Africa through Chad and the Sudan to Ethiopia, then on towards southern Africa.

The toughest part was driving through war-torn Chad, Justin recalls, where there was nothing, not even roads.

As well as being a tour guide and driver, it was Justin’s responsibility to keep the travel vehicles (old Bedford and MAN ex-army trucks) on the road and moving. This task required all his Kiwi ingenuity and expertise, as he was constantly required to produce automotive parts and solutions literally in the middle of nowhere – fixing

broken springs from what you could find on the side of the road being just one example.

After an adventurous few years travelling the world, Justin returned to New Zealand and his home base in Turangi. That’s when he decided to use his overseas experience with heavy vehicles and do some further study. He completed a second MITO automotive apprenticeship while working for Ruapehu Alpine Lifts Ltd on the Whakapapa ski field on Mount Ruapehu.

Justin qualified with a National Certificate in Automotive Heavy Engineering (Plant and Equipment).

Justin worked for Ruapehu Alpine Lifts Ltd in their mountain workshops for three years, at an altitude of 2,000 metres above sea level. His job was to service the snow groomers used to prepare the ski fields for the public.

Justin then moved off the mountain and worked in Taupo before going on his next adventure to Botswana in Africa. 🌍



## Climbing the ladder to success!

*Daniel Boyd from Andrew Purser  
Panelbeaters Ltd in Hawera*

**At just 26 years of age, Daniel Boyd already has a number of motor industry qualifications to his name – and now he's won a scholarship that will take his learning to a whole new level!**

Hawera-based Daniel has been part of the industry since he went looking for an after-school job when he was 13. He contacted Andrew Purser Panelbeaters Ltd, where his aptitude for collision repair eventually saw him employed full-time and enrolled in a MITO apprenticeship.

### **A passion for learning**

With support from MITO and employer Andrew Purser, Daniel's passion for learning has flourished ever since.

Having completed his National Certificate in Panelbeating, he gained the country's highest mark for his 2004 'A' Grade examination, then in 2005 won the MTA Tom Hodgson Memorial Apprenticeship of the Year Award.

**"I enjoy the mental stimulation of learning new skills and knowledge."**

**DANIEL BOYD**

The learning didn't stop there. Daniel later spent a year in Canada, where he acquired a lot of knowledge that he shared with Andrew Purser Panelbeaters Ltd on his return. He has now recently completed the motor industry's elite training programme, ATech®, and by May this year plans to complete his National Certificate in First Line Management – an important step in transforming his skills into credentials for a management position.

This new focus on management also inspired Daniel to apply recently for a scholarship offered by Massey University – the EXMSS (Massey Extramural Students' Society) 'Trade to Tertiary Scholarship'. He was awarded \$1,500 towards his tuition fees for extramural study towards a Bachelor of Business Studies.

Daniel says he just loves learning. "I enjoy the mental stimulation of learning new skills and knowledge as I am a highly motivated person," he says.

"I particularly enjoyed doing ATech® – I apply what I've learned in my everyday work, and some of the areas it covers, such as legal research, are proving really useful for my university study and other interests. The First Line Management and Massey

degree programmes will give me a new set of skills, which will be great for my long-term career."

While undertaking his study, Daniel has progressed to become Andrew's right-hand man, with increasing responsibilities in the workshop. His pay packet is looking healthier too, with recognition for the skills he's bringing to the business.

"We encourage all our apprentices to take their studies as far as they can," says Andrew. "They bring fresh skills and new approaches to the business, and in turn improve our productivity levels and the service we provide to our customers.

"Daniel has been amazing – he's suggested and implemented a number of improvements that have saved us time and therefore money, and he's always coming up with new ideas to make us more efficient or give us a competitive edge."

Andrew also believes that supporting people through apprenticeships helps with staff retention. "I'm lucky to have a loyal team – and it's good to see people who leave us, such as Daniel for his OE, coming back to our business when they get home." 🌟

## Customer satisfaction survey



**Customer satisfaction is a measure of how products and services supplied by a company meet or surpass customer expectations. It is a key performance indicator for businesses.**

MITO has conducted annual independent customer satisfaction surveys since 2001. In November and December 2009, we conducted our latest survey and have just received the results, which we are proud to share with you.

677 learners and 678 existing and past MITO employers were interviewed over a four-week period.

Learners expressed a high level of satisfaction with MITO's service. 87 percent are satisfied or very satisfied. In particular, they are really pleased with how the goal sheets work, the courses run by industry specialists and the MITO training folders.

Most also reported receiving good support from their employers, especially

relating to employers being open to questions and providing them with opportunities to attend off-job training. In addition, they are very positive about their future career prospects, acknowledging that the automotive industry is a good industry to be in with good career opportunities. Almost half of the learners also indicated that they are considering further training once they complete their current MITO programme, which is great news for the industry in general.

The employers expressed a similar level of satisfaction. 82 percent of current employers are satisfied or very satisfied with MITO's service. They mention the high quality of the MITO programmes and the business benefits they get from having qualified employees as the main reasons for enrolling employees in MITO programmes. Employers said that MITO training improves their employees' skills, their self-confidence and professionalism. 59 percent of the employers reported that they intend to continue to provide the same level of training to their employees and 21 percent are planning to increase the number of employees enrolled in training. 🌀

## Officials' day in industry

**How much do apprenticeships benefit the businesses that offer them – and the industry as a whole?**

It's a question that was asked by a group of government officials who recently visited Wellington Star Mercedes Benz.

Hosted by MITO Board Chairman Peter Hancock, the group was made up of senior policy staff and managers from the Department of Prime Minister and Cabinet, Te Puni Kōkiri, the Department of Labour, the Tertiary Education Commission and the Ministry of Social Development.

The guests spent an hour learning about the increasingly sophisticated vehicles serviced by the Wellington Star Mercedes Benz team – and the highly technical skills required to do the work.

"The visit was part of a larger initiative where the group were taken to a number of workplaces representing different industries in New Zealand," says James Hill, MITO's Industry Training Advisor for the Wellington region. "They were fascinated by the technological wizardry in today's cars, and interested in hearing all about apprenticeships – from both the employer's and the learner's perspectives."

*Government officials at Wellington  
Star Mercedes Benz*

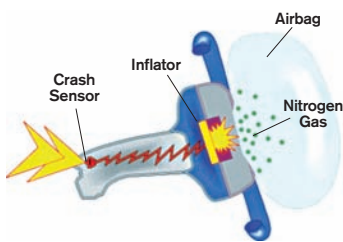


All in all, the visit was an excellent opportunity – to profile a local employer, and to demonstrate the value of apprenticeships to New Zealand's motor industry! 🌀

# Airbags

**Airbags can help save your life. But how do they work?**

Since the early days of auto airbags, experts have cautioned that airbags are to be used in tandem with seat belts. Airbags supplement the safety belt by reducing the chance that the occupant's head and upper body will strike some part of the vehicle's interior. Only seat belts can help in side swipes (although side-mounted airbags are becoming more common now), rear-end collisions and secondary impacts.




When a crash occurs, the vehicle rapidly decelerates while its structure absorbs the majority of the crash forces. Unbelted occupants continue to move forward at the vehicle's original speed until the vehicle's interior (the steering wheel, instrument panel, windshield, etc.) stops their movement. Belted occupants come to a more gradual stop by being secured to the vehicle's structure. In severe crashes, even properly belted occupants may come into contact with the vehicle's interior.

From the onset of the crash, the entire deployment and inflation process takes only

about 1/20 of a second, faster than the blink of an eye.

The goal of an airbag is to slow the passenger's forward motion as evenly as possible in a fraction of a second. There are three parts to an airbag that help to accomplish this feat:

- The **bag** itself is made of a thin, nylon fabric, which is folded into the steering wheel or dashboard or, more recently, the seat or door.
- The **sensor** is the device that tells the bag to inflate. Inflation happens when there is a collision force equal to running into a brick wall at approximately 20 km per hour. A mechanical switch is flipped when there is a mass shift, that closes an electrical contact, telling the sensors that a crash has occurred.
- The airbag's **inflation system** reacts to produce nitrogen gas. Hot blasts of the nitrogen inflate the airbag. 

Material for this article was sourced from [www.auto.howstuffworks.com](http://www.auto.howstuffworks.com) and [www.nhtsa.dot.gov](http://www.nhtsa.dot.gov)



*Deployed driver and passenger airbags.*

## HERE ARE A FEW TIPS TO ENSURE THAT YOUR AIRBAG CAN WORK AS EFFICIENTLY AS IT SHOULD:

- Ensure that you are not holding anything on your lap that may hurt you in case of an accident.
- Sitting 25cm from your driver airbag gives you a clear margin of safety.
- When an airbag is deployed, seatbelts are the key to ensuring your best chance of survival. They work together with the airbag by holding you away from the deployment area so by the time you hit the airbag, your head and upper body are cushioned correctly, preventing injury.

The rules are different for **children**. An airbag can seriously injure or even kill a child. Experts recommend that children 12 and under should always ride in **the rear seat**.

Only one percent of cars which have their airbags deployed are still road worthy. Once deployed, the airbag cannot be reused as the residue can be harmful to the skin.

The airbag should only be replaced by an authorised service department.

**Airbags are an amazing piece of life saving technology, but keep in mind, they don't work alone!**

**The goal of an airbag is to slow the passenger's forward motion as evenly as possible in a fraction of a second.**



Approximately 1/20th second

Less than 1 second

## APRIL, MAY AND JUNE EXPOS AND EVENTS

<b>April 15-16</b>	2010 Automotive Educators Conference, Christchurch
<b>April 16-18</b>	Hamilton V8 Supercars
<b>May</b>	Manawatu Careers Insight Month, Palmerston North
<b>May 9-11</b>	Coca Cola Careers Expo Christchurch
<b>May 11-14</b>	East Coast and Gisborne Careers Week
<b>May 21-22</b>	Rotorua Careers Expo
<b>May 26-29</b>	CRA Annual Conference, Christchurch
<b>June 13-14</b>	Career Paths Waikato Expo, Hamilton
<b>June 16-19</b>	NZ National Agricultural Fieldays, Hamilton
<b>June 24-26</b>	OFPANZ Conference and Trade Expo, Takapuna, Auckland
<b>June 28-July 1</b>	NZ Careers Road Show, Northland



Hamilton V8 Supercars

## APRIL, MAY AND JUNE GRADUATIONS

<b>April 21</b>	New Plymouth
<b>April 30</b>	Manawatu
<b>May 4</b>	Otorohanga
<b>May 12</b>	Waitomo
<b>May 19</b>	Matamata – Piako
<b>May 21</b>	South Canterbury
<b>May 25</b>	Canterbury
<b>May 26</b>	Waipa District
<b>June 6</b>	Hauraki/Thames-Coromandel

## Driving a 4x4?

**If you service, own or drive a 4x4, here's some overseas news that might interest you – a recent international study that reveals the most reliable 4x4s.**

The study was done by Warranty Direct, a British company that specialises in providing vehicle warranties. Using data gathered from millions of pounds worth of claims, they developed an independent 'Reliability Index', which assesses a vehicle's reliability based on things like air conditioning, axle and suspension, braking system, cooling and heating, electrical, engine, fuel system and transmission. It takes into account how often vehicles break down, average costs of repairs to individual models and how long each car typically spends off the road.

So which 4x4 is the most reliable? If you guessed a Honda CR-V, congratulations! It won the title as the 4x4 least likely to let its owner down.

Second on the list was the Suzuki Grand Vitara, while the Toyota RAV4 placed third. With Mitsubishi and Kia just behind them, it was an outright clean win for Eastern manufacturers. 🌀

Sourced from: [www.warrantydirect.co.uk](http://www.warrantydirect.co.uk)



*The winner! Congratulations Honda for having the most reliable 4x4 on the road, as measured by Warranty Direct.*

## The car of the future?

### What kind of car will you be working on in 20 years' time?

The following article was featured in the *Gizmag Emerging Technology Magazine*, November 2009 at [www.gizmag.com](http://www.gizmag.com)  
– By Noel McKeegan

Each year as part of the Design Los Angeles Conference held at the LA Auto Show, creative types from major car companies get to stare into their crystal balls and let their imaginations run wild in designing the car of the future. In 2007 the theme was the car 50 years from today, last year the challenge was to envision how motor-racing will look in 2025 and this time around, the brief is to look at what young people will be driving in the year 2030.

Labeled “youthmobile 2030”, the ‘09 Design Challenge asks how the automobile fits in with the growing interaction and self-expression offered by communication technology, and just what will 16-23 year old drivers raised on mobile phones and instant gratification want from their cars 20 years from now?

Here's the summary of the 2009 entries:

#### Audi

Audi is presenting two design concepts based on the premise that the fully autonomous vehicles of the future, while providing safety and convenience, will also be a tad boring for the “driver”. To combat this coming motoring malaise, designers have produced a pair of radical, hubless designs aimed at bringing back the excitement of your first time behind the wheel. Both designs aspire to an intuitive control interface that “takes even the smallest body movements and gestures of the driver into consideration to provide an unsurpassed command of the drive”. While both use the same open-wheel platform, the Audi eSpira does more to retain familiar Audi lines with its low-slung design, while the Audi eOra – billed as the sportier of the two – has a smaller footprint and more upright cabin configuration where the driver sits in a position more akin to riding a bicycle.

#### Honda Helix

Honda's offering is perhaps both the most thought provoking (and hardest to get your head around) of the designs. It's another morphing concept based on the notion that “genetic integration and advanced adaptive polymers will shatter the current paradigm of what is now considered ‘personally’ unique.” This results in a concept that, through bio-receptors inside the vehicle, links the shape, colour and even materials used to the user's DNA. This makes the vehicle an extension of the user that grows with them and reflects their personality and traits as well as the environment.

The Helix has three basic configurations – “A” for tighter urban roads, “B” for areas where high speed travel is required, and the skinny, split level “Z” shape is for highly congested cities where a tiny footprint is essential. Thought provoking? Yes. Achievable by 2030? We'll just have to wait and see.

#### Mazda Souga

Also focusing on responding to individual desires, the Mazda concept revolves around the creation of a “virtual reality website that acts as a design playground for young people, allowing them to experiment, build, and share their automotive dreams in a virtual world at no cost”.

The system would use 3D design and manufacturing software to allow buyers to create the car of their choice and then purchase it at a low cost with an ongoing

monthly contract (like mobile phone deals) covering electricity usage costs.


The Mazda vision also sees communication and info systems being integrated into the driver's clothing by 2030, meaning that there's no need to bother with these systems as part of the vehicle itself. This one gets the vote for the slickest sketches.

#### Nissan V2G

Reminding us a little of a Star Wars Pod-racer for the road, Nissan's V2G design would take advantage of an electrified highway system to deliver a low-cost transport solution – again based on the mobile phone plan model. The V2G could also be taken “off-grid” and customised with plug-and-play upgrade kits.

#### Toyota LINK

The Toyota LINK is designed as a low-cost, social networking transport solution for the students of tomorrow. Customisable LINK vehicles would be picked up at central hubs and when occupied, tie the driver into a central information system that could be used by drivers to “share the commute, trade music, or compare class schedules”.

Designwise the LINK looks like a large, road-going rollerblade which could be customised using “LINK SKINZ” – personalised designs that can be downloaded and implemented immediately. The designers also foresee technology that replaces conventional wheels with electro conductive “SPHERES” that can convert friction into energy to recharge the batteries. 



**What will 16-23 year old drivers raised on mobile phones and instant gratification want from their cars 20 years from now?**



*Nissan V2G takes out the 2009 LA Auto Show Design Award.*



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