

Allied Concrete is ramping up the safety and image of its fleet as it strives to maintain a market leading position. The current crop of trucks entering the fleet represent some of the safest and most advanced vehicles it has ever procured. Simon Vincent spoke to Allied's General Manager, Grant Driver about what makes their new trucks so special.

Speaking to Grant Driver, General Manager, Allied Concrete recently it became obvious the lengths some companies have gone to, to embrace and implement new safe working practices to meet their obligation under the more stringent workplace health and safety regime as well as advancing mixer performance. At Allied, rather than just paying lip service to the new rules, the company is investing heavily in the safety of their staff and those they work around in a bid to lead the field when it comes to safe work practices.

Whilst Grant is particularly protective of new technologies which give the company its commercial advantage, he is most open and willing to share the company's knowledge when it comes to safety around their latest tranche of vehicles.

"We've invested a hell of a lot of time to make things safer for our staff and to reduce fatigue," Grant says of the time and money they have invested in their new plant. "It costs us more to build these mixers than an off the shelf unit, however, spending time and money investing in the right gear for our people is especially important to Allied," he affirms.

At the Hino Track day Grant was more than happy to share the changes to the latest Hino 500 Series concrete mixer on display.

Grant starts by pointing out the iBright telemetrics device which is driver specific due to each driver having their own individual tag. Performance of all the fleet's drivers' is monitored and recorded and, at the end of each week, a companywide scoreboard is made available for drivers to gauge their performance against the driver pool.

"It gets a bit of competition going," Grant says, adding, "We've seen a lot of driver behaviour improvement through that. It's certainly not a big stick, it's about us improving and displaying the professional standards that we've got for our drivers and improving how we perform. We're really happy with the results."

Even though Hino are fitting reversing cameras as standard to their trucks, Allied has implemented a multi camera arrangement, two cameras on the cab overs and three on the bonneted trucks. The camera display is mounted on the top of the dash where it falls within the driver's line of sight as they scan from one mirror to the other. Drivers are becoming really comfortable checking the three locations to ensure their intended pathway is clear he says.

The cameras combined with the mirrors give a clear 360 degree view around the truck via a dash display able to show up to four views at once. Grant feels they are essential due to enable drivers to observe those working in the region of the truck

## **GREAT MATES**"

**CONCRETE MOVES SAFETY UP A GEAR** 







or those who may, potentially, walk into its path. With 90% of the work around the truck occurring at the back, in the past that was the area we have had the worst visibility, Grant pointed out.

He mentioned that damaging letterboxes or fences is an ongoing risk due to them generally being below the driver's line of sight. With increasingly tight access points, Grant's concern is that one day it won't be a letterbox but a curious child, sneaking around a hedge or fence to see what's going on, that could be unintentionally injured.

The concrete mixer bowl controls have been made simpler for the driver in a bid to ease everyday use and reduce fatigue. By automating a large number of basic functions, the driver can concentrate on their driving and not have to worry about anything else until they get to the delivery point.

To stop unauthorised access of the bowl, Allied has removed all the external controls, leaving only an emergency stop button. Every other function is now controlled by the driver's hand held wireless remote control which can be clipped to their belt or worn around their neck (which also frees up their hands) as they move around the truck.

A cab mounted centre console controls all the functionality of the truck and mirrors many of the functions of the remote control. From lighting switches to bowl controls everything can be controlled from the driver's seat. The panel has been constructed with pictorial symbols in a bid to ease the burden on drivers who might have English as a second language.

To reduce the amount of water used in the bowl cleaning process, an automatic cleaning function has been included. With the bowl under computer control, the driver can be washing the truck, or undertaking other tasks. Once the cleaning cycle is complete, the bowl stops and the horn beeps to let the driver know it's finished.

Historically, Grant says trucks could be filled with up to 5000 litres of water for the wash by the driver. Grant is very proud of the fact that they are now using only a few hundred litres of water to achieve the same level of cleanliness, saying, "Reduction of waste is a big driver for our company."

The loading, mixing and transit process are also now under computer control. This sees the engine revs set where it offers maximum performance with the minimum number of revs required. Once the truck starts moving, the bowl is automatically set to transit mode with the correct bowl revolutions to ensure the concrete is maintained in optimum condition from plant to job site.

The slower rotational speed of the bowl improves vehicle stability too.

Accidental discharges are no longer possible due to the discharge function being blocked out whilst the truck is in travel

Adding computer control to many of the functions is expected to reduce the fuel burn, lower wear and tear on the plant and deliver maximum operating efficiency.

Grants says that the move to Allison automatic transmissions has been taken in a bid to reduce fatigue and improve drivability.

"Whilst the auto is not ideal for every situation, for 95 times out of 100 it is the right piece of equipment for this layout of truck and, for what we're doing, it's perfect," Grant said.



The automatics work well where there is a lot of curbing work or in areas with high traffic volumes.

He credits the change to automatic transmissions with an "immense reduction" in driver fatigue pointing to the extremely positive feedback they are receiving from their drivers.

Usability is praised and "clutch leg" is no longer mentioned as

There has also been a noticeable reduction in repairs and maintenance he pointed out. "A lot of trucks just aren't designed to do that edging work, even an AMT's not. We find the Allision fully automatic transmission works really well."

Outside the vehicle there has been a host of improvements.

The chute is now locked in place for travel and can't be moved without the driver's remote control input. The chute lock, which holds the chute at the correct angle, has been lowered to make it easier to access.

The hose and the water meter have been removed from view and are located in a separate compartment between the chassis rails behind a fold down panel. The water system cannot be activated without the driver's remote. This also clears the rear of the truck of clutter and makes the cleaning process much easier.

Fold down steps allow the driver better visibility and access when discharging into concrete pumps or over obstacles.

The side ladder features grip tape on the back faces of the hand rails and a new design aimed at ensuring three points of contact at all times. There is a push open, self closing gate for the top basket/platform which has been designed to have the driver either in or out with no in-between.

A second hose with a kink in the end is mounted by the mouth of the bowl. This allows drivers to wash behind the second fin with ease and has removed the need for drivers to climb with a hose.

A guard has been fitted to prevent hands getting near the mouth of the bowl.

High intensity LED lighting, the fish eye camera (160 degree view) and hand holds have all been added to improve the working environment at the back of the unit.

High mounted stop/tail lights enhance safety for other road users.

The trucks are fitted with high specification pumps and drive motors which deliver improved performance through greater torque and improved swash blade angle at lower engine revs as they try to minimise fuel consumption during the long periods spent unloading.

To enhance the reliability of the hydraulic system, cooling units have been added.

The design improvements are a testament to the close working relationship between Gough Industrial Solutions and Allied Concrete. Grant says working closely with Neil Seals and his team has made these improvements possible in a very short period of time, while maintaining high quality advanced products.

The truck chassis is now longer due to changes in the VDAM rules. This change means the trucks are able to operate in two different delivery configurations. As a standard 6x4 mixer, with super single front tyres they run under the standard road weights. Under permit they can carry more than an extra cubic metre of concrete.

The differing wheelbase has added some overhang at the rear of the unit which makes accessing concrete pumps easier too.

Great gear, great people, great mates is one of our company values," Grant emphasises. Our customers and suppliers are our great mates, he says, but it's our great people who really matter, which is why we are investing in great gear. Spending more on building the best trucks delivers better value and more efficiency over the life of that gear Grant believes.

After that it's up to the great people of Allied to deliver the best service to the customers, because they are being given the best

## **GOUGH INDUSTRIAL SOLUTIONS**

Gough Industrial Solutions is constructing high quality concrete bowls from local and imported componentry. The company chose to cease full local manufacture around three years ago and have since partnered with a company in China to produce the high tensile steel bowls we see today.

The change was necessary to meet the increasing competition from imported product says Neil Seales, Gough Industrial Solutions, Product Manager. This drive to reduce cost and improve quality was brought about by many businesses viewing a concrete bowl as a commodity, which then makes them very price sensitive.





















The bowl remains a Gough designed product, however these days it is manufactured to Goughs demanding quality assurance systems by overseas suppliers.

Maintaining the New Zealand specification is important as most overseas concrete is wet batched whereas locally we use a dry batch method where the dry ingredients are placed in the truck's mixing bowl with the water added afterwards. The concrete is agitated in the truck's bowl and "slumped" afterwards.

By choosing to manufacture overseas, Goughs have been able to optimise the bowl design to handle the challenging conditions which are part and parcel of our unique local

Neil pointed out that, "We get our product built cheaper with better quality steel, it is better than what could be produced locally."

Neil has had a longstanding relationship with Allied Concrete which spans over 30 years. In the early days he was dealing with Farrier Waimak after the company became part of the Richardson Group.

What distinguishes an Allied truck are all the bespoke additions which make Allied trucks special, the safety features, lighting, cameras, etc Neil says.

He says Allied are quite unique with their development, Grant wants to keep pushing that further forward to introduce safer and more efficient machines.

## **ALLIED CONCRETE**

Allied Concrete, part of the HW Richardson Group, employs over 550 staff and operates around 400 concrete mixer trucks. Founder, Bill Richardson began the firm's involvement with the ready mix concrete industry in 1976 with the acquisition of Allied Concrete plants in Invercargill and Gore. In 1984 the company expanded into Christchurch and this was followed by Wellington in 1987 and Auckland during 1994. Along the way a joint venture was formed with Holcim New Zealand Ltd (1989) which facilitated further expansion across the North Island.

From these small beginnings the company has grown to become a market leader in concrete nationwide.

