Customer Magazine 2/2016

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Valtra and Kesla

IDEAL FORESTRY PARTNERS

## **VALTRA TEAM**

Customer Magazine 2/2016

#### **EDITORIAL**



In a falling tractor market, Valtra's share of that market is raising. This despite all the uncertainty about grain prices, Brexit, milk prices, herbicides and much more.

I believe the main reason for this increase in market share is an increase in activity by our dealers and the introduction of T4 and N4 tractors. Are the two directly related? To give an emphatic ,Yes' to that question would be very unfair to our loyal dealers who have been working hard over many years. However, there is no doubt that the impact made, first by T4 and more recently by N4 tractors has been considerable and it is noticeable that interest. particularly from non Valtra owners during summer shows, has been steadily translating into positive sales. That's good for both you, the farmer and us, the manufacturer.

If you're someone who is thinking now is the time to change a tractor, Valtra or another brand, this is a very good time to see what the fuss is about – you'll be pleasantly surprised!

Mark Broom
NATIONAL SALES MANAGER









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	durable AGCO Power engines

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### AGCO Power engines

### **Innovation**

**Electronic turbo** management ensures rapid reactions

Electronic inlet air management helps control emissions

AGCO Power's own engine management system offers optimal performance for tractors



**SCR** reduces emissions and fuel consumption without weakening performance

**High-pressure common** rail direct fuel injection reduces emissions and fuel consumption

## **POWERFUL, FUEL EFFICIENT AND DURABLE**

Valtra, like Valmet before it, has traditionally used its own engines to power its tractors, preferring to keep the development of its engines, transmissions and the entire tractor in its own hands.

AGCO Power engines have earned a reputation for power and durability. They have been designed from the start for off-road use, which can be seen in the heavy-duty components.

Today's modern AGCO Power engines are also fuel efficient and leading the way in terms of engine management systems, for example. AGCO Power and Valtra were the first in the tractor industry to introduce SCR technology, which has since been adopted by other manufacturers. •

www.valtra.co.uk



The Valtra Demo Tour will visit 14 European countries this year. The event has already attracted over 5000 visitors during the first six months.

he Valtra Demo Tour has already in the first half of this year. In addivisited 14 European countries this year. The stars of this year's Demo Tour are the fourth generation N, T and S Series models.

"The Demo Tour has been a real success. We have been on the road almost non-stop since January, with only a few small breaks in between. By mid-June over 5000 people had participated in the event," says Aapo Aijasaho, who is in charge of the tour.

The Demo Tour generally presents the entire model line up to customers and gives them the chance to test drive the tractors on fields. They can also visit the special Demo Tour truck, where they can see for example all of the different cab options, also in virtual reality.

"Thanks to the popularity of the tour and the quality of the overall presentation, already 27 new tractors have been ordered at the event tion, many more customers order their new Valtra tractors soon after visiting the tour," Aapo adds. •

### Valtra Demo Tour 2016:

Greece 27.1.-1.2.

Finland 25.2.-24.3.

Great Britain 1.4.-30.4.

Germany 4.4.-24.4.

Denmark 25.4.-1.5.

Norway 2.5.-13.5.

Sweden 15.5.-21.5.

Lithuania 25.5.-27.5.

Latvia and Estonia 27.5.-6.6.

Poland 8.6.-22.6.

Germany 26.6.-27.6.

Finland 6.7.–9.7.

Finland 28.7.-31.7.

Poland 17.8.-3.9.

France 6.9.-9.9.

Czech and Slovakia 18.9.-30.9.

France 4.10.-7.10.

Norway 2.11.-3.11.

### **VALTRA T4 WINS TOP** A' DESIGN AWARD 2016

This June the T4 Series won the highest Platinum A' Design Award in the Vehicle, Mobility and Transportation Design Category. The prestigious Platinum A' Design Award continues the impressive run of success enjoyed by Valtra's fourth generation of tractors. Valtra's N4 and T4 Series have already won the Red Dot Design Award, the Golden Tractor for the Design, Machine of the Year 2015 and 2016 awards.

Over 15,000 products from around the world were entered in the competition. The jury was composed of 83 design professionals, academics, journalists and entrepreneurs.





### **VALTRA TO OFFER POWER GENERATORS IN EUROPE AND AFRICA**

Valtra sales outlets in Europe and Africa will begin offering 60-250 kVA generators powered by AGCO Power engines. The AG Series generators have been designed specifically as backup power sources for farms. For example, in case of power cuts, the generators can power ventilation, milking, feeding and cooling systems. The generators are available with automatic start-up, sound insulation and preheating for cold conditions.

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Valtra is a worldwide brand of AGCO



Made it to Land's End.

# TRACTORTHON IN AID **OF MENINGITIS RESEARCH**

In June 2016 three men and a lady took three days to drive a black Valtra T234 Versu all the way from John o' Groats on the northern tip of the British Isles down to Land's End on the southern tip to raise money for the Meningitis Research Foundation.

TEXT AND PHOTO ROGER THOMAS

ack in October 2014 Rebecca Marsden and Ryan Boisclair's little girl Darcy, then only two years of age, contracted meningitis. There was a rushed journey to the local hospital during which Darcy's condition visibly deteriorated, but thankfully they arrived just in time for Darcy's treatment to commence successfully. Many hours of worry and a

week later Darcy was almost back to her normal self, but that period of worry connected with many people, including friends of Ryan and Rebecca, and over the following months a plan was hatched.

Ryan Boisclair and James Bentley both work for Bereleigh Estate in East Meon, twelve miles to the east of Winchester in Hampshire, Continues on page 15... →

## Valtra and Kesla are a perfect combination for forestry work

# "WE'VE NEVER HAD TO LEAVE T

Valtra and Kesla are an ideal pairing for forest tasks. Customers have used Valtra-Kesla combinations for years, of course, but now the two companies are also teaming up in product development and the sales network. For example, in Finland and some other markets Valtra and Kesla products can be purchased from the same dealer. The Unlimited Studio at the Valtra factory in Suolahti has also specialised in fitting Kesla forest equipment.

TEXT TOMMI PITENIUS PHOTO VALTRA ARCHIV



The only real competitor would be a specialised forest machine, but tractors always come out on top in terms of purchase and operating costs, as well as versatility.

# **IMBER BEHIND IN THE FOREST'**





Heikki Pulkkinen has had his Valtra N123 for around three years and his Kesla 12T MDH trailer and 316T loader for around a year. In summertime Heikki transports wood for chipping to his own yard.

collect around 70 to 80 cubic metres of first cuttings, 100 cubic metres of second cuttings and 250 cubic metres of final cuttings. Of course, the amounts vary according to distances and terrain, but they are good averages. Even a big forest machine could not achieve much higher figures." Kvösti tells us.

Kyösti and Heikki transport everything from small pulp wood to heavy sawmill timber, short logs, long logs and base logs of varying diameters. They have even transported 20 metre long trunks, for which Kyösti has a special attachment for his trailer.

"Transporting tall trees can be a real challenge due to their size. But we've never had to leave timber behind in the forest because we couldn't handle it," Kyösti adds.

Both Valtra tractors are equipped with a reverse-drive system, forest mudguards and forest tyres. They usually also use tyre chains, except when conditions are easy in summertime. Kyösti's tractor pulls a loader with a JAKE mounting kit, while Heikki's loader is mounted on the trailer's frame. Kyösti uses a front pump for more hydraulic power, while Heikki has auxiliary hydraulics on the trailer.

"It's a case of preference, really.





If you have to transport soil or handle fodder once in a while, then it's good to have the loader attached to the tractor. All of the hydraulic movements can be preset using the IQAN electronic control system," says Heikki.

### From farming to forestry

Both Kvösti and Heikki were raised on farms and have been farming since they were young. Keeping

dairy cattle would have required major investments in the 1980s, so the men decided to switch to forestry.

"In 1988 we got rid of the cattle and began buying forests instead of fields. Initially I did a lot of forestry work by hand, but these days I mostly transport timber with my tractor. I work about half the year in my own forests and the other half as a contractor. In my own forests about half my work involves transporting wood





and the other half is manual labour, such as planting trees and pulling out shoots," Heikki explains.

Heikki's equipment now includes a Valtra N123 tractor, a 12-tonne Kesla MDH trailer and a 316T loader with a reach of 8.8 metres. This combination gets used around a thousand hours a year. Heikki also has experience with a Valtra 6850 tractor and many older Kesla models.



Since 2004 Kyösti Tiainen has driven his Valtra M120 tractor, Kesla MD 120 trailer and Foresteri 400 loader over 21,000 hours. Tiainen can transport around 70 cubic metres of first cuttings a day to the side of the road around half a kilometre away.

"My Valtra consumes just 4.5 litres of fuel an hour – half as much as a forest machine would. On the road the tractor would use more diesel, but for longer distances we usually use another contractor's truck. Our AdBlue consumption is very low when working in the forest – after 450 hours we still have 20 percent in the AdBlue tank," Heikki adds.

Punkaharju is in the heart of Lakeland Finland, where there is as much water as land for hundreds of square kilometres. Working on the islands is one of the unique things about working in this beautiful region.

"Some islands have bridges, while the bigger islands may even have a cable ferry service. If there is no other way of getting to them, then we simply drive across the ice in wintertime or use a ferry in summertime," Kyösti Tiainen says.

Both men consider the reversedrive system indispensable for forestry work. The loaders can be controlled using joysticks on the specially designed armrests.

"I don't think I even know how to drive my Valtra forwards! In the forest I always drive in reverse. The wheels on the trailer also steer, and it has hydraulic drive, so I can get everywhere I need to," says Heikki. •

### KESLA - MULTITA-LENTED SUPPLIER TO THE FOREST INDUSTRY

Valtra and Kesla entered into cooperation at the beginning of 2016. In practice this means that in Finland, for example, Valtra tractors and Kesla forest equipment can be purchased from the same dealer. Valtra and Kesla share the same importer or distributor also in many other markets. In addition, the companies are working together in product development, and Kesla forest equipment is fitted to Valtra tractors already at the Suolahti factory in the Unlimited Studio.

Kesla is an international leader in forest technology, and 70 percent of its production is exported from Finland. The company's products cover the entire range of forest equipment for tractors, including loaders, trailers, heads, grapples and chippers.

Kesla's roots go back to the late 1950s when **Antti Kärkkäinen**, a farmer from Rantasalmi in Finland, began developing his own equipment to clear rocks from his fields using his tractor. His neighbours were impressed by his innovative and durable equipment, so Antti decided to establish his own company on 19 August 1960.

Ownership in the company later transferred to Antti's son, and the product range was expanded. The company decided to focus on forest equipment in 1979. In the 2000s the respected brands Patu and Foresteri were combined under the Kesla brand.

### Kesla Oyj

Founded in 1960

Listed on the Helsinki Stock Exchange
Annual turnover approx. 40 million euros

275 employees

HQ located in Joensuu, Finland

70 percent of production is exported to 35 different markets

Manufactures forest loaders, trailers, chippers and other forest equipment



avid Pendray runs a small family farm not far from the South Cornwall coast in England. His father utilises some of the farm buildings and land as exercise paddocks for a very successful kennels and cattery business. David himself looks after 150 ewes and a small single suckler beef herd, plus 20 acres of silage maize for a neighbouring dairy farmer.

These days an enterprise of even this size is not enough to support David's family of four, so for some years he has been developing a contracting business working directly for a number of farmers or taking on several tasks for a neighbouring contractor. This work is sufficient to clock up over 1000 hours a year on his 215-horsepower Valtra T214.

"Initially I had another make, but it gave me problems," David recalls. "I let it be known that I wished to change, but because the existing machine was pretty much new, the sums did not add up. It would have cost me a lot of money to change – more than I could justify."

A year later David took another look at the figures offered by Valtra dealer **Alan Snow**. This time a change made sense, so David opted for a Valtra T214 Direct with Valtra's

own CVT transmission. The tractor was also fitted with front suspension and a front linkage, as well as Auto-Guide ready.

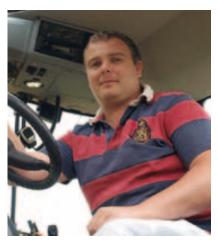
"I'm finding Auto-Guide automatic steering exceptionally useful for a number of operations – particularly maize drilling. It's much, much easier and quicker."

### **Efficient farming**

Rather than relying on being told the size of a field, sometimes inaccurately, David only has to drive once round the field and he knows exactly how big it is. As a result, he knows exactly how much seed and fertiliser he requires



The Auto-Guide controls are conveniently located and easily set. David has also installed a TV monitor that is used in conjunction with a remote camera at the rear of balers or planters to check operations. The cab is also fitted with a hands-free mobile phone and a CB radio to keep him in contact with home and colleagues.



The cab of the T4 is comfortable for the long days David has to put in.

and can request more if necessary or set the drill to ensure he does not run out – or have any left over.

"I bought a tractor of this size mainly for maize planting, and the PTO speeds offered by Valtra proved to be very beneficial," David tells us.

His tractor came with 540 Eco, 1000 Standard Speed and 1000 Eco Speed.

"The 1000 Eco is ideal for maize drilling. I can operate at 1050 rpm rather than 1500 rpm, which results in a significant fuel saving."

Another operation in which the automatic steering system is useful is silage making. David often finds

that he has to spread, turn or row up grass ready for the forager or a baler.

"I know PTO shafts and their universal joints are designed to take the turns, but with the Auto-Guide system on the tractor I can miss alternate bouts, which is easier on me and the machine. When I get across the field I can come back turning or rowing up the alternate bouts. The system is so accurate that the machine will fit exactly down the rows. It really is so easy. The self-steer system also ensures there is no unplanned short work, so following operations are also more efficient."

With maize planting complete, David also undertakes a lot of clamp work with a 2.8-metre buckrake on the front and a similar width Silo Press on the rear.

"With other tractors I've had to protect the underside of the tractor and stop grass getting caught up here, there and everywhere. With the Valtra I've no such worries, as it's made with a clean underside. It may have been designed for forestry operations originally, but the clean underside is also ideal for silage work."

#### Additional benefits of the T4

"When hauling heavy trailers I used to have to use the brakes on most of the hills around here, but with the Valtra, as long as I select the correct brake option, the tractor will automatically hold the trailer at a steady speed. This creates much less wear on the brakes and is much safer. The T214 is also on larger diameter tyres and sits higher off the ground than the previous machine, but on hillsides it still feels safer, more stable." David describes.

Since having the tractor delivered David has had loader brackets fitted.

"I kept my existing loader. This is perhaps a big tractor for the size of loader, a bit over powered, but the loader is more than adequate for the type of work it gets – mostly loading silage bales onto a trailer or into the barn. There's also a bit of muck now and again. The roof window is ideal – I can see exactly what I'm doing without having to strain my neck peering under the top of the windscreen."

During the winter off-season, David trims hedges on his own farm and for neighbours, and of course there's a flock of sheep to lamb.

All in all David is very happy that he made a change to Valtra.

"I believe I've more than made up any loss made during the change. I bought it mostly for the maize planting, but I've since found that it fits well into all my operations and offers many advantages for other operations." •



# **SOFTWARE IS** THE SOUL OF A TRACTOR

Each year software is playing an increasingly important role, also when it comes to tractors. It is no longer possible to count the number of lines of code, as a single hydraulic valve from an outside supplier can contain as much code as an early HiTech tractor. Advanced software also allows a tractor's functions to be altered after production.

TEXT TOMMI PITENIUS PHOTO VALTRA ARCHIVE

oftware development, like all other tractor engineering, starts with the customer. "There is an infinite number of needs, so it is the job of product management to prioritise them. These priorities are then used to create projects for our software development system, in which demands are split into small technical parts so the work can be divided. The development phase is two times three weeks, with functional testing after three weeks and validation after : six weeks. The validation team tests whether the new software meets customer demands. The project list shortens, but new projects are constantly being added to the list," says Pekka Huuskonen, head of software development.

The new software is delivered to the factory and service teams, which can distribute it to all tractors using the Electronic Diagnostic Tool (EDT). Valtra service technicians around the world use EDT to download the latest software to tractors during servicing. This is one of the many advantages of having tractors serviced

by an authorised Valtra dealer.

### C code, QT code or UML

Traditionally software developers have programmed directly in C code. QT code is then written for user interfaces. User Experience (UX) and Graphic User Interface (GUI) work is also involved. These days a lot of code is made by modelling, which involves Unified Modelling Language (UML) or Simulink code.

"The control of a multidisc clutch or engine fan, for example, is hard to describe mathematically, let alone with code. It is easier to demonstrate by simulating how you want it to function and having the modelling software create code for this. The final software is usually a combination of handwritten and modelling code," Pekka explains.

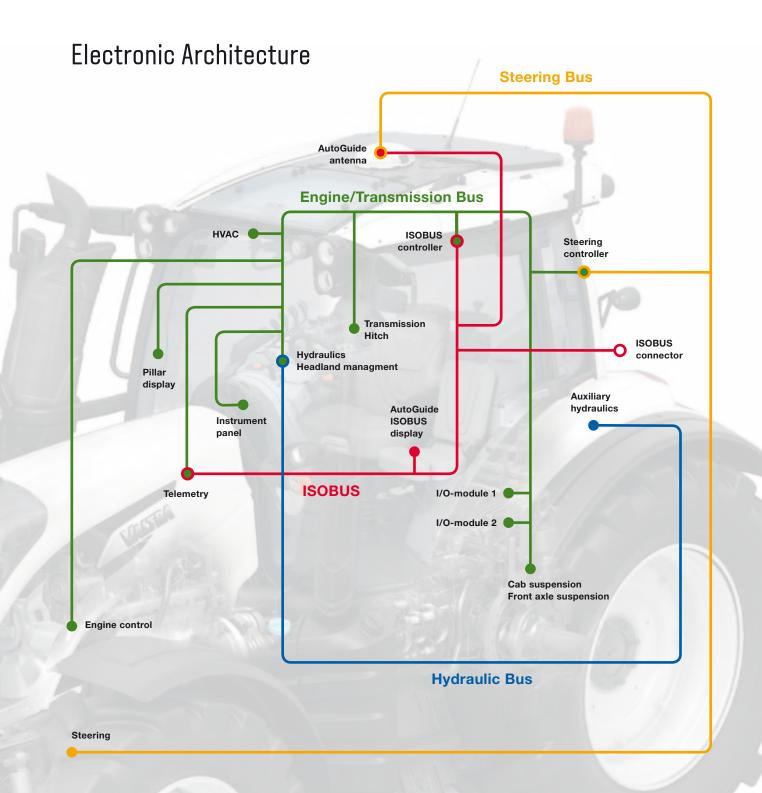
The challenge with tractors compared to computers or cars, for example, is that the conditions and ways in which they are used vary enormously.

"Anti-slip regulation, or ASR, is relatively simple in terms of code: if a tyre slips too much, then ASR limits engine output. But inventing this function, finding the limits and other background work required research on the level of a doctoral thesis," says Aleksi Vesala, a specialist in the algorithms of automated transmissions.

ASR is also a good example of how software can be used to add new capabilities to existing tractors. ASR can be added with a simple software update providing that the T4 Series tractor already has the required sensor. In the future, the number of new functions that can be added in this way will no doubt increase.

Safety considerations create their own set of challenges for software developers. If the software in a television or mobile phone crashes once in a while, or stops to think for a few seconds, there is no great danger. Tractors, on the other hand, have to react to all control systems and commands instantly, regardless of the implement being used, the conditions in which it is being driven or how the operator is driving the tractor. The reliability of a tractor's critical software really is on a completely different level than that of consumer electronics. •

### Safety considerations create their own set of challenges for software developers.





The Parts Books to Go app makes it easy to access Valtra's spare parts books on your mobile device. You can find spare parts numbers easily using the search engine, browsing lists or viewing photos.

## Parts Books to Go app for your phone

# **GET PARTS NUMBERS ON** YOUR MOBILE DEVICE!

TEXT TOMMI PITENIUS PHOTO VALTRA ARCHIV

"I have an 8450 from the '90s and something square-shaped has broken on the left side of the engine. It's attached by four bolts, maybe 14 mm bolts. Do you have that kind of part?"

Every parts salesperson and many customers too are familiar with the situation in which a part is needed for a tractor but the number for that part is missing. It's hard to describe parts over the phone or standing at the counter. Even if our

parts salespersons are whizzes at finding the right components, it is always much simpler if you know the part number.

"Parts Books to Go is an app for Apple and Android devices that makes it easy to browse parts books. By zooming in on the drawings it's easy to find parts and their numbers," explains Jari Luoma-aho, Marketing Manager for Spare Parts at Valtra.

The Parts Books to Go app can

be downloaded free of charge from the Apple and Android app stores. The app has 14 language options, and it also works offline if you download the parts book to your phone or tablet and are signed on to the app. The app covers almost all Valtra tractor models.

"You can find parts by using the search engine, browsing lists or viewing pics. You can also zoom into the pics and click on them to get the parts number. You can them add the parts you need to your shopping basket, which you can then send to the e-mail address of your choice - for example to your local parts dealer. You cannot, however, order parts or pay for them using the app itself," Jari adds. •

### The Parts Books to Go app can be downloaded free of charge from the App Store and Google Play.

... continues from page 5.









where Valtra tractors are used to manage the 2,500 acre grounds. After discussing their idea of a "tractorthon", the estate offered the use of a new T234 Versu. A friend of Ryan and James, **Simon Sinclair**, also happened to work for local Valtra dealer A J Seal Ltd, and a support car was organised from a Farnham BMW dealer. The plan started to come together.

### 1000 miles without motorways

The Valtra tractor was transported to John o' Groats, and on Sunday 12 June the run began early on a wet, windy day. On the way south the group called in at TRP Scotland Ltd, where **Billy Beatson** had helped raise

sponsors. After a brief stop the group headed for their overnight hotel in Edinburgh.

On day two the four set off again south, stopping briefly at the Angle of the North before continuing to their second night stop. The journey south continued down the A34 to Winchester before turning west and the run to Land's End. The journey was not as simple as one may think, as tractors are not allowed on motorways!

At the end of the third day the group arrived at Land's End having used 580 litres of fuel, averaging 14.4 litres per hour for the approximately 330 miles each day. By the time of publication the group had raised several thousands of pounds for the charity of their choice. •



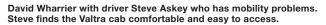
Like most British cities and towns, Derby includes a lot of open spaces - everything from acres of parkland, playing fields and golf courses to grass verges and central reservations. All of this land requires maintenance, such as grass cutting and replanting, tree cutting and the removal of cut timber, and repairs to the infrastructure, including roadways, walls and ornamental bridges. To handle this workload the Street Pride Department of Derby City Council relies on four Valtra N113 tractors.

TEXT AND PHOTO ROGER THOMAS

erby City's N Series tractors are equipped with HiTech 5 40kph transmissions, cab suspension and front axle suspension, and loaders.

"We ordered the tractors at the beginning of this year, and they arrived in the spring. The likelihood that we will need to use four loaders at one time is remote, so while each tractor is fitted with loader brackets, our organisation has only three loaders and a selection of 4-in-1 buckets, pallet forks and a







Steve Coats is very happy with his new Valtra tractor. Steve has experienced many hours in different machines – large and small and this is the best yet.

log grab," explains **David Wharrier**, one of council's four grounds maintenance officers.

David and his team paid close attention to the brand, model and specifications when selecting the new equipment, as it is expected to perform for the next ten years.

"Trying to choose the specification for a machine that will be used in ten years' time is a bit like crystal ball gazing!" David admits.

### Focus on fuel economy and comfort

Like the majority of British councils, Derby operates under an O licence, which means the tractors come under the eagle eye of inspectors. Carrying capacity, axle weights, tyre capacities and more all come under close scrutiny. In addition, the large area of operation, with significant distances travelled on the road, requires that the tractors run on white un-rebated diesel. As a result, fuel costs per hour of operation are high compared to purely agricultural machines.

"Small differences in fuel consumption between makes and models will add up to quite a bit, so fuel use was looked at very carefully," David says.

Close behind the tractors' specifications in terms of priorities came operator acceptance and training.

"These guys are sat in their machines for long periods, particularly in the summer. They can start work at 4 or 5am so they can finish before the sportsmen and women arrive. Air conditioning is imperative, but it's just as important for the driver to feel comfortable and for them to like the machine. After all, they're going to be driving it for the next ten years!"

### A carefully considered choice

The drivers were given plenty of time to test drive all the competitive tractors before the final decision was taken.

"Our guys tested the various makes for a week, and any questions were referred back to the dealer; in Valtra's case this was David Eaton Tractors Ltd. The staff at David Eaton Tractors were most helpful. No question went unanswered, and that impressed us all," David Wharrier admits.

"The tractors may seem a little oversized and overpowered for some jobs, considering they have up to 130 horsepower with boost, but it's better to have power in hand than to struggle through some of the winter maintenance jobs," David explains.

Tyres also came in for careful scrutiny. Derby measures seven miles across, so travelling between jobs is mostly along busy highways that require hard-wearing tyres. On the other hand, playing fields and golf courses can be damaged by industrial tyres. As a result, three of the Valtra tractors are fitted with Nokian 440/80R28 tyres on the front with 540/80R38 on the rear. The fourth tractor, which is used mainly on a golf course, is fitted with 560/60R22.5 and 650/65R30.5 Michelin CargoXBib tyres. These offer greater flotation while causing minimal damage on fairways, even during the most inclement weather.

Alongside the 17-foot cylinder mowers used on golf fairways and sports fields, the team also operate a couple of 16-foot rotary mowers for rougher grass, as well as power harrows and seeders. They also use their trailers a lot, and one machine can spend a lot of time supporting the tree section.

"We've even developed a loader attachment for handling goal posts!" David adds. •

# FREE UP YOUR TIME FOR **WORK THAT PAYS**

### Single-line lubrication now available as a Valtra Unlimited option

The SKF MonoFlex single-line lubrication system has been developed for agricultural and contracting machinery. The system can be controlled and monitored directly from the cab. The compact electric pump can be filled by hand through the quick coupling and filter. The tank volume is two kilos.

The SKF MonoFlex solution also enables implements to be connected to the same single-line lubrication system.

Single-line lubrication offers many benefits compared to traditional manual lubrication:

- 1. Increased productivity as lubrication takes place while the machinery is being used
- 2. Longer lifespan for bearings, as the system ensures optimal lubrication at all times
- 3. Enhanced safety, as hard-to-reach lubrication points are taken care of automatically
- 4. Environmentally friendly, as the system optimises the use of lubricants



Implements can be attached to the system by a simple quick coupling.



Hard-to-reach lubrication points are taken care of automatically.



Each lubrication point has its own dispenser.



Dispensers are grouped The lubrication lines close to the lubrication can be protected. points.



lacktriangle unlimited

Find out more from your local Valtra dealer.



The more weight there is over the driven wheels, the better the traction.

The Finnish Defence Forces made a prototype of a 4WD tractor in the early 1970s by connecting two Valmet 500 tractors to each other.

## **PULLING OR PUSHING POWER?**

our-wheel-drive tractors are more effective than rearwheel-drive tractors, especially on unlevel terrain where the weight on each wheel can vary. These kinds of conditions are typical in forests and in military applications, where tractors are often driven across unfamiliar terrain to get to their destination. Fourwheel-drive is a much better solution to this problem than stiff and noisy tracks.

Due to the lack of small fourwheel-drive tractors in the early 1970s, many workshops began converting tractors to 4WD. The most famous of these were County and Doe tractors from the UK. The manufacturers of County and Doe tractors purchased tractors new from the factory and converted them to 4WD. In Doe's solution, two tractors were connected to each other by a central joint and the front axles were removed.

The Finnish Defence Forces tried the same solution in the early 1970s by connecting two Valmet 500 tractors to each other. The idea was to improve their all-terrain capabilities with 4WD and to achieve a higher output by combining two three-cylinder engines. Altogether three of these tractors were assembled. The front tractor was kept standard with both axles in place, while the rear tractor was connected to the front tractor by a central joint and its front axle was removed. The rear tractor pushed the front tractor or provided braking force, depending on the ability of both operators to work together. The rear tractor was steered using the articulated joint, while the front tractor steered using its front tyres. Each operator controlled the gears and engine speed of his own tractor

One can imagine what it was like to drive a "double tractor" and how the two operators communicated with each other. A small mistake in a tight place could easily result in the tractors driving into a ditch or spinning on the road. In principle the combination worked like a tractor towing another tractor. If tractor manufacturers had not begun introducing four-wheel-drive models, it is likely that the development of these double tractors would have continued. Fortunately, Valmet did introduce a credible four-wheeldrive tractor by the late 1970s. •



eorge Ellis has a proud boast: "I've cut verges or trimmed the hedges of just about every road in Yorkshire, from the North Sea to Lancashire." These days George limits his regular operations, trimming hedges and field margins within a 25-mile radius of his home near Stamford Bridge.

"I became a fan of Valmet and then Valtra many years ago. They're ideal for this job, as they have a clean underside and a good range of creep gears. Valtras don't use much diesel either and, very importantly, they're reliable," George says.

George's first Valtra was purchased in 2005, a 133-horsepower T121 HiTech that was an ex-demonstration model. By late 2007 the tractor already had 7500 hours on the clock from working with a Bomford Buzzard hedge cutter.

"I'd not put a spanner on it either, apart from the regular servicing, filter and oil changes, that type of thing," George admits.

In 2007 George traded in his T121 for a second ex-demonstration machine, a 148-horsepower Valtra T131 HiTech. He kept the Bomford Buzzard, however, swapping it over to this new machine.

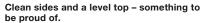
"The hedge trimmer was serving me well and there was nothing wrong with it, so I kept it."

George also purchased a 2-metre flail topper for the front linkage.

"Hedge cutting is limited to 6 months with a few exceptions to protect nesting birds. By adding a topper I can extend my working period doing pasture maintenance. North Yorkshire has quite a few horses of one sort or another," George explains









A Valtra T131 HiTech with 18,500 thousand hours on the clock, a venerable hedge trimmer and a job well done.

George finds long days in the Valtra cab comfortable – and he's experienced many other tractors to make the comparison.



#### Reconditioned box

"When I purchased the T131 it had clocked up just a few demonstration hours," he continues. A quick glance today shows an amazing 18,500 hours. George also keeps a note of the amount of diesel used, and today his records show an average of 9 litres per hour.

"Fuel, oil and filters for regular servicing, most of which I do myself, are my main costs after depreciation."

It has to be said that putting this number of hours on the clock, George has also had to purchase tyres and in 2015 also a new head for the Bomford Buzzard.

"Unfortunately I've also required a new gearbox. The old box had only a minor problem and the tractor did not actually require a new gearbox, but I talked the problem over with Valtra-trained technicians and we decided that it was quicker, easier and probably cheaper in the long run to get a remanufactured box from the factory, fit it and return my old one. This avoided stripping the box, seeing what was required obtaining the components and then re-

building the box – one out, one in, fill with oil and away. Simple!"

While his Valtra may be parked up having a well deserved rest during the off-season, for George the second half of February, March and April is spent working for another contractor spreading liquid fertiliser. He also performs a range of tasks for a local potato grower and processor. During this time George gets to drive a wide range of tractors, which convinces him that he made the correct choice when buying his own – a Valtra. •

# FORMER VALTRA EMPLOYEE TAKES 11TH IN TRAP SHOOTING AT THE RIO OLYMPICS



Olympian Vesa Törnroos previously worked at Valtra but now shoots professionally and works on his farm.

esa Törnroos is a former parts salesperson and product manager at Valtra who now practices trap shooting as a profession. He also works on his family farm in Finland.

"I didn't shoot well at the Olympics, but neither did the others. I would have needed two more hits to make it into the finals," Vesa reports.

Vesa hit 116 clay targets out of 125. Although he was not satisfied with his performance, 11th position is still impressive considering it was his Olympic debut.

"I plan to continue competing professionally until the Tokyo Olympics, after which I can focus again on farming, machinery and business. Professional shooters are usually at their best between the ages of 30 and 40," says Vesa, who is now 33. •

# NESTE RALLY ATTRACTS VISITORS TO THE VALTRA FACTORY

altra had its own special stage at this year's Neste Rally Finland. The fast 7.4-kilometre stage took part in the vicinity of the Suolahti factory, and visitors could test drive new Valtra tractors alongside the special stage.

The day before the start of the rally, a family event was organised at the Suolahti factory in which WRC drivers competed against each other in tractors and greeted their fans. The event attracted around 3500 visitors.

Valtra also enjoyed a lot of other visibility, including the opening tractor at the Harju special stage and at the service park. •

Valtra enjoyed a lot of visibility at this year's Neste Rally Finland. Many world rally champions, including Marcus Grönholm, Tommi Mäkinen, Juha Kankkunen, Ari Vatanen and Carlos Sainz, drive Valtra tractors on their farms.



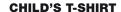


#### CHILD'S BACKPACK

Spacious backpack with padded shoulder straps and reflective details. Polyester 600D/PVC. Transfer print on front pocket. Backpack dimensions: width 27 cm, height 31 cm, depth 11 cm. (V42701950)



1963£



Sublimation-printed children's' T-shirt, 65% polyester and 35 % cotton. Light grey marl. Sizes: 116 (V42702605)

128 (V42702605)

140 (V42702607) 152 (V42702608)

151£

#### **UMBRELLA**

Colourful umbrella with tractor and logo prints. Umbrella equipped with automatic opening mechanism. 126 cm diameter. Polyester. (V42702150)



1817 €



### **PUZZLE**

Puzzle of an image of an N4 series tractor. 500 pieces. Finished puzzle size: 493x362 mm. Age 9+. (V42702100)

945£



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N103 HiTech	111/465
N104 HiTech	105/470
N114 HiTech Eco	115/500
N124 HiTech	125/550
N134 HiTech	135/570
N154 HiTech Eco	155/610
N174 HiTech	165/680
N134 Active	145/600
N154 Active Eco	165/720
N174 Active	185/730
N134 Versu	145/600
N154 Versu Eco	165/720
N174 Versu	185/730
N134 Direct	145/600
N154 Direct Eco	165/720
N174 Direct	185/730



MODEL	MAX. HP/NM
T144 HiTech	170/680
T154 HiTech	180/740
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T214 HiTech	230/910
T234 HiTech	250/1000
T144 Active	170/680
T154 Active	180/740
T174 Active Eco	190/900
T194 Active	210/870
T214 Active	230/910
T234 Active	250/1000
T144 Versu	170/680
T154 Versu	180/740
T174 Versu Eco	190/900
T194 Versu	210/870
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A73	78/310
A83 HiTech	88/325
A93 HiTech	101/370



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•	MODEL	MAX. HP/NM
	S274	300/1300
	S294	325/1390
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	S354	380/1590
	S374	400/1600