

powernews

Agritechnica 2015 special edition

You can always
depend on
Perkins engines



 **Perkins®**

THE HEART OF EVERY GREAT MACHINE

Perkins – the driving force in agricultural machinery



With 80 years of agricultural heritage, Perkins understands agriculture and the needs of the sector,

explains Jaz Gill, sales director (pictured).

Whether it's powering applications on farms, in forestry work or lawn and garden care, Perkins has a complete range of reliable engines, which meet different emissions standards, and provide low cost of ownership. We tailor engines to meet the specific needs of your particular application, and provide global service support to keep the engine running.

Perkins strategy of offering a seamless engine range right up to 240 kW (320 hp) with overlaps at key power nodes has afforded OEMs greater flexibility to optimise their engine selection according to their specific criteria.

Among our customers are leading OEM brands including Massey Ferguson, CLAAS, Lindner, Landini, McCormick, Manitou, Hattat, Farmtrac, Iseki, Weidemann and Stara.

With more than 500,000 Perkins engines currently in service in agricultural machinery around the world, our products have proven performance in real-world applications.



Always get the latest news from Perkins

Have you visited Perkins new website which gives visitors quick and easy access to the latest engine, parts and service information?

For ease of navigation the new website at www.perkins.com has been streamlined into four sections – products, parts and service, our network and company.

With a fresh look and feel and more than 300 pages of new customer focused content, the website is designed to adapt to the user's screen size. To keep up to date with Perkins latest news, why not follow us on LinkedIn - <https://www.linkedin.com/company/perkins-engines-company-limited>

New Sales & Marketing VP appointed

Chris Snodgrass has been appointed Vice President of Global Sales, Marketing, Service and Aftermarket Parts at Perkins.

Responsible for global engine sales, parts and customer relationships, Chris (pictured) is the first VP to have offices in San Antonio, Texas, US, Peterborough, UK, and Shanghai, China.

"Our customers are our number one priority," said Perkins President Ramin Younessi. "We are a global business, serving a diverse customer base throughout the world. Having Chris and his customer facing teams located close to our OEMs enables us to effectively manage these customer relationships, share our expertise and support their business growth." Chris will lead all commercial activities



for Perkins engines, sold both directly to customers and through the global Perkins distribution network, and will own the service and parts group, where he will continue to ensure customers experience consistently exceptional levels of service and support. "This is a fantastic opportunity to lead a truly global customer focused team," said Chris. "Over the last few years the team has grown our engine and aftermarket parts sales, which has created a strong foundation for us to build on and secure new opportunities."

EU Stage V likely to drive wider use of particulate filtration aftertreatment



The introduction of Stage V in 2019, details of which are likely to be ratified in early 2016,

promises to pose

new challenges for Original Equipment Manufacturers (OEMs), particularly those who use engines in the 19 kW to 560 kW range, says Oliver Lythgoe, product concept manager (pictured). However, Perkins is well positioned to not only supply Stage V engines but to help OEMs manage the transition from Stage IV to Stage V.

Subject to ratification, the biggest impact of Stage V will be the introduction of a particle number (or PN) limit for all engines in the 19 kW to 560 KW power band. This is similar to that which already applies for equipment used on construction sites in Switzerland.

Whilst the proposed regulation does not mandate a specific technology to comply with the proposed PN limit, as with Euro VI on-road trucks, it is anticipated that this will result in the widespread application of diesel particulate filters (DPFs) on off-highway equipment across the power range to which the PN limit applies. This is a technology with which Perkins has considerable experience, having used it for many engine models from Stage IIIB onwards.

While common rail fuel systems and exhaust aftertreatment have already been incorporated on many large machines, the biggest challenge will come on some smaller machines between 19 and 37 kW, many of which will be requiring common rail fuel systems and exhaust aftertreatment for the first time.

Some of these machines are extremely compact so packaging could be a challenge. By working closely with

OEMs we have been successful in identifying solutions to aftertreatment packaging so, we are confident that we can help OEMs overcome these challenges.

Emissions, however, should not be the sole focus: our OEM customers must design and sell machines that are productive, reliable and good value, providing their end customers with the best total owning and operating costs. You can't do that by simply focusing on meeting emissions alone. By working together with OEMs, on machine and engine integration, Perkins can help manufacturers differentiate their products in the market while ensuring that equipment remains easy to operate.

Many Perkins products are ready for Stage V as proposed, and eight different models have already been introduced into series production meeting the proposed level of particle number. These are powering some of the latest equipment to be launched by OEMs including excavators, wheeled loaders, telehandlers and forklifts. While some manufacturers are relatively new in their experience with particulate filters, we are familiar with all the required technologies having successfully used them in production engines running in harsh field conditions. Not only are we ready today, but we plan to introduce other non-emissions improvements, for example improved power density, that will positively impact the customer's owning and operating costs – both before EU Stage V in 2019 and beyond.

Furthermore there is a bigger picture with which to contend. While Stage V is just about Europe, there is growing global complexity with multiple emissions standards around the world. For example, there are highly regulated



regions such as Europe, US/Canada, and Japan that are subject to Stage IV/ U.S. EPA Tier 4 Final, and other regions such as China and India to name a few which are currently working to Stage IIIA/Tier 3 equivalents. Starting in 2022, it is likely that there will be at least five different, distinct levels of emissions standards in the world.

For OEMs to exploit these markets without excessive machine variety, they must look at 'tierable' solutions for their machines. An area in which Perkins has considerable experience with its 'world' engine concept, namely a common core with the appropriate aftertreatment technology applied.

The proposed introduction of Stage V emissions standards in 2019 might seem a long way off but Perkins is urging machine OEMs to start their journey now. There are many issues to consider and a timely consideration of those issues will result in the best possible outcome. 2015 and to some extent 2016 should be a time of strategic planning for OEMs. They need to consider their future range additions and rationalisations, which territories they wish to serve, sources of differentiation, and the resources they will need to implement a variety of solutions. Perkins, as a global full range engine supplier, is ready to provide OEMs with the inputs they need.



Over 50 years of peak performance

Long-lasting relationships and a collaborative way of working are at the heart of the Perkins approach.

Its 52 year relationship with Lindner, the Austrian manufacturer of specialist tractors, demonstrates this ethos in every respect. Producing what UK publication Farmers' Weekly has called 'the Rolls-Royce of the small tractor world', Lindner made its name as specialists in all-wheel-drive through the production of the first four-wheel-drive tractors in Austria.

Then, just as today, Lindner manufactured special vehicles are renowned thanks to their cross-country mobility, compact and sturdy construction and their high-quality components. The sturdy construction that is required to operate reliably in an Alpine landscape has proved advantageous in numerous other applications. Based in Kundl in the Tyrolean region, Lindner is a family-owned business that has seen four successive generations steer the company to its present prosperity where 50 percent of its production is exported and it enjoys a 14.1 percent share of its home market. And Perkins has contributed to that

achievement, as marketing and export director David Lindner generously points out: "The outstanding performance and reliability of Perkins engines are definitely responsible for a great share in Lindner's success as a European tractor manufacturer." Lindner began life in 1946, when Hermann Lindner started

manufacturing transportable highland gang saws and woodworking machines he designed himself on an old workbench. Two years later, his company produced its first tractor, a hand-built model that was launched at the Vienna autumn fair of the same year. The 10 kW (14 hp) model proved popular, even though many other



"The outstanding performance and reliability of Perkins engines are definitely responsible for a great share in Lindner's success as a European tractor manufacturer."

David Lindner, marketing and export director at Lindner

tractor manufacturers believed that it was "nonsensical to want to produce tractors in Tyrol".

These first tractors were powered by Warchalowski engines and then Jenbacher-motors in the "JW15" model but Lindner developed its own engines to overcome issues of delivery reliability. These then powered the "BF"-models, which stands for "BauernFreund", or "Farmers' Friend". Lindner made its great innovation in 1953, when it developed the first ever four-wheel drive tractor in Austria. This innovation was, in many ways, the springboard for the success of the modern business. Certainly the features that made the original tractor such a step forward in agricultural engineering are still appreciated today. Four-wheel drive is far gentler on the land, applying far less pressure per inch than its two-wheel drive equivalent, and far safer because each wheel has independent braking. It is also far more effective in front loader work, an advantage that is still valued by farmers.

The new model's success led in part to the company expanding and moving into new premises in 1956, producing around 70 tractors a month, mainly for domestic customers, but also for export to Spain, France and Italy. Just two years later this figure had more than doubled to 200. But Lindner could not boost the power output of its own-brand motors above the 30 kW (40 hp) - at a point when the market was demanding more powerful engines. Lindner's own dealership network encouraged the company to

consider Perkins as its engine supplier, as the Perkins brand had earned a strong reputation throughout Europe as a competent and reliable partner. Initially, Lindner worked with the Austrian Perkins-Importer ÖFAG in Salzburg, under the personal stewardship of the owner, a Mr Pölz. The first fruit of this collaboration was a new 33.5 kW (45 hp) tractor, the BF45, which was launched in 1963 and, thanks in part to the good performance and innovative cooling system of its Perkins engine, became very popular. But Lindner continued making its own engines for the smaller models until 1972, when it started dealing with Perkins in the UK rather than through the Austrian dealership and used Perkins engines exclusively. Since then Perkins and Lindner have built a relationship that has overseen the development of the popular Geotrac and Lintrac models, powered variously by Perkins® 400, 1100, 850 and 1200 Series engines. One of the major ingredients behind the success has been Perkins ability to meet Lindner's key criteria of good fuel consumption, high productivity and the ability to work in the demanding alpine environment.

Today Lindner is firmly positioned as the premier Alpine tractor brand and Perkins supplies the very latest emissions compliant engines, with engine powers right up to 99 kW (133 hp), massively more powerful than the 33.5 kW (45 hp) of that first model. Now the company's expertly trained staff produce around 1,500 vehicles per year. Since first manufacturing the BF45 way back in 1963 Lindner has built more than 55,000 tractors and transporters with Perkins engines - and confidently expects to manufacture yet more, as David predicts. "The company and family Lindner is looking forward to the next 50 years of successful partnership with Perkins," he says.

● See Lindner at Agritechnica: Hall 5, Stand C04



Recognising a 10 year partnership

Perkins and Erkunt Traktör recently celebrated a partnership which has thrived for more than 10 years. One of the largest tractor manufacturers in Turkey, the company sells its tractors under the Erkunt brand in Turkey and as ArmaTrac in international markets. Based out of Ankara, Erkunt has rapidly grown the tractor side of its business over the years and now offers its global customer base around 40 different models, majority of which are powered by Perkins 1103, 1104 and 850 Series engines. Visiting the Perkins facility in Peterborough, UK, Erkunt general manager, Zeynap Erkunt Armağan toured the manufacturing plant before meeting with Mark Stratton, Vice President Medium Engines, who presented a plaque in recognition of the collaboration between the two companies (pictured). Accepting the plaque, Zeynap said Erkunt was proud to partner with Perkins.

● See Erkunt Traktör at Agritechnica: Hall 7, Stand B04



New-look Landini Rex tractor

A new-look version of the Landini Rex purpose-designed fruit tractor recently made its debut, with styling that matches the rest of a tractor range that has been modernised and improved.

It continues to be offered in narrow orchard, low orchard and large orchard, open field versions.

All are powered by fuel-efficient Perkins 1103D and 1104D, 3 and 4 cylinder engines with outputs from 50-82 kW (68-110 hp). A choice of 12x12, 15x15 and 30x30 speed transmissions with mechanical or power shuttle makes the most of the power available for different applications.

● See Landini at Agritechnica: Hall 7, Stand C35

McCormick X5 Series tractors unveiled

A new cab design giving improved all-round visibility, greater interior room, more convenient controls and space for a 'training' seat is the major feature of an upgrade package for 63-84 kW (85-113 hp) tractors in the McCormick range.

The four-model X5 Series has taken over from the X50 line-up introduced in 2013; but the X50M with the original cab has been added to the range in Britain for operators who want a simpler tractor.

X5 Series

"Power outputs with the synchro shuttle transmissions – 24x12 or 32x12 with creep – are 63 kW (85 hp), 71 kW (95 hp), 76 kW (102 hp) and 84 kW (113 hp) from the economical Perkins 3.4 litre engine," said product specialist Paul Wade.



X50M Series

The McCormick X50M Series is a capable but more basic tractor that retains the previous cab design. It comes with a choice of 63 kW (85 hp), 71 kW (95 hp) and 76 kW (102 hp) outputs from the same Perkins 854E-E34TA engine and features the synchro shuttle transmission, but without the three-speed pto option of the X5.

● See McCormick at Agritechnica: Hall 7, Stand C35

Growers get a lift from a high-clearance tractor

A high-clearance tractor has been reintroduced to the Landini range to meet the needs of strawberry growers and producers of salad, vegetable and other delicate crops wanting to minimise the potential for contact damage.

The 'Hi Clear' version of the new Landini 5-D tractor has an axle arrangement that permits the use of tall row crop wheels all round, resulting in a significant increase in underbelly clearance.

Among those new options for the Landini 5-D HC is a two-wheel drive version for growers who do not need the extra traction of a driven front axle. The pay-off is the ultimate in ground clearance, which at 700mm is even

more than the 684mm provided by the four-wheel drive version.

"During the final phase of Powerfarm HC production, power output was limited to just 68 kW (92 hp)," says Paul Wade, Landini product specialist. "But the new 5-D HC is available with three outputs to suit different requirements."

With 63 kW (85 hp) from the 5-090D, 70 kW (95 hp) from the 5-100D and 76 kW (102 hp) from the 5-110D, the new range offers greater choice – and higher power outputs. Added to which the new 3.4 litre Perkins 854E-E34TA compact 4 cylinder engine beneath the new-style hood can

deliver up to 8 percent better fuel economy.

Emissions control requirements are met using a catalytic converter and self-cleaning particulates filter.

● See Landini at Agritechnica: Hall 7, Stand C35



Emissions technologies get thumbs up from UK farmer

When Devon beef and sheep farmer Andrew Kneebone (pictured) replaced his previous Landini tractors with two new models, he was understandably concerned about saying goodbye to his faithful workhorses.

The two new tractors, the latest spec Landini 5-110H units, incorporated the very latest in engine emissions technology under the bonnet and Andrew was wary of any potential pitfalls that this new technology might expose him to.

"But my concerns were unfounded; the emissions system doesn't impact on performance or anything else," he says. "It's unobtrusive and the new engine pulls really well; I was a bit dubious but I'm more than pleased with the new tractors."

Powered by Perkins 4 cylinder 854E-E34TA engines, Andrew's new Landinis are helping him farm his 200-acre all grass property in Devon, where his family run 500 Suffolk and Texel ewes and a newly established herd of 25 Hereford cross suckler cows. Any misgivings he might have had were

quickly dispelled when he got behind the wheel. "I was very encouraged when the first of these tractors pulled the horse box up our lane over the brow of the hill in top gear," he recounts. "That seems a silly thing but it's the first tractor I've had that could do it, which shows how much more power and torque there is."

Despite the 5-110H model being powered by a smaller Perkins engine, 3.4 litres as opposed to the 4.4 litres in its predecessor, power and torque are improved. What's more a 'power boost' feature allows the electronically-managed fuel injection system to extract extra performance when the tractor is engaged with a pto-driven implement or is operating in its higher gears on the road. In those situations, the standard 78 kW (105 hp) output increases by 8 percent to 84 kW (113 hp) and the torque goes up by 9 percent. Yet the new engine has demonstrated up to 8 percent fuel savings over its predecessor. "The extra power means you don't have to change down too much to

keep the engine revs up," Andrew points out. "And if the engine doesn't have to run so fast it's not using as much diesel."

Even the nagging doubts about having exhaust aftertreatment on his tractors were allayed. "A light comes on to show that the regeneration process has started. You can carry on working but I tend to go and do something else while the tractor stands idling for a few minutes so the process can finish quickly; it's really not intrusive into the daily routine."

While the farm's 5-110H equipped with a Landini MClassic 80 loader undertakes bale wrapping and stacking, hay turning and all handling duties, the second tractor powers a mower and round baler for silage, a plough and harrow for grass reseeds, and a trailer, muck spreader and other equipment used through the year. "We really need something small and nimble enough for the buildings but big enough to handle the field work," concludes Andrew. "These Landini tractors fit the bill perfectly."

Perkins helps drive Hattat tractor sales

Turkey's agricultural market has for many years been home to the familiar red and white livery of old model Massey Ferguson tractors, which were largely manufactured under licence. However, in recent years a number of domestic manufacturers have started to gain prominence, and chief among these is Hattat Traktor.

Having previously worked under licence agreements itself the company decided in 2006 to create its own model line up, having recognised that Turkish farmers needed and wanted tractors that delivered good performance and trouble-free running. Its first tractor, the A series, was well received and subsequently it launched the H series, a lower horsepower range that quickly started to populate the countryside. In contrast to many European markets where high horsepower tractors have become all the rage, Turkey's popular choice remains in the lower power bands. The average horsepower in the country is 50 kW (68 hp) and



some 60 percent of tractors sold are below 52 kW (70 hp). It's no surprise that Turkish farmers, for many years, have been wedded to 3 cylinder engines but the times are changing as manufacturers, like Hattat, begin to introduce newer, more powerful models. Now the farmers are thinking that 4 cylinders is the must-have configuration for tractors over 56 kW (75 hp).

To accommodate both the old and the new Hattat sources its entire engine requirement from Perkins, fitting variants of the 3 cylinder 1103D model to its compact, orchard tractors and entry level A series tractors while employing turbo-charged versions of the 1104D engine for its larger A series models. The choice of Perkins as preferred engine supplier was due in part to the brand's strength in Turkey; it has long been recognised as an engine that offers high performance, life-time reliability and has excellent availability of parts, and as such, conferred on the Hattat marque an immediate feeling of quality and confidence. The company firmly believes that this legacy and reputation has helped grow volumes of its tractors in recent years.

Another facet of the supply deal was the facility with which the company's own transmissions could be integrated with the Perkins engine models, so reducing engineering costs and improving assembly line efficiency. With ambitious targets up to 2020 Hattat wants to increase volumes of its tractors rolling off the production line and sees this engine/transmission synergy as an important factor going forward.

Growth in the domestic market is also being accompanied by an increasing demand from abroad with the company currently exporting models to 65 countries through 20 distributors. Sales to the African continent continue to climb with Hattat using Stage 0 versions of the Perkins 1104 Series given the unregulated nature of many of the countries to which it sells. Once again the company attributes a great deal of its export success to the fact that it powers its tractors with Perkins, a name that farmers associate with reliability and dependability.

Fuel efficient Farmtrac tractors

Farmtrac is one of the leading tractor manufacturers in Poland, with its 675 DTN model, leading the way in the below 60 kW (80 hp) segment. Since 2004 Farmtrac has worked with Perkins, taking its 1104, 1204 and 850 Series engines.

"We and our customers value the performance and reliability of Perkins engines as well as the fuel efficiency," said Tomasz Nieborek, marketing manager at Farmtrac. "Perkins has a strong brand and can help us win customer trust in our product."

Polish customer Mr Franciszek who owns a Farmtrac 685DT said: "My Farmtrac has a Perkins engine, and thus has relatively low fuel consumption. You can tell that the engine is flexible. In light work burns very little and this is his great advantage."



BU Power Systems – engine and service expertise

For the many owners and operators of Perkins powered agricultural machinery in Germany, Italy, Poland and Southern Europe, there's one name that they rely on to keep them farming – BU Power Systems.

Since becoming the appointed Perkins distributor for the German market, the company has grown, taking on the responsibility for additional territories throughout Europe.

Headquartered in Ibbenbüren, North Rhine-Westphalia, where it has a 7,700m sq facility of which 5,500m sq is given over to engines and original parts, the company has become the leading supplier of Perkins engines in Germany. It supports its customers in the field through five service centres across the country and employs over 100 people to ensure BU Power Systems' unique standard of quality and service is delivered and maintained.

The company sets great store in its

service provision with a team of trained technicians and field engineers on hand to satisfy customer's requirements both in and out of the workshop. State of the art facilities, complete with the latest testing equipment, mean that overhaul, repair and maintenance work is finished to the highest standard. These are supported by a first class after-sales and parts service – over 12,000 original parts held in stock - minimising machine downtime and increasing customer productivity. BU Power Systems adopts the same high quality approach in the other European countries it operates in. With three sites in Italy, a facility in Warsaw, Poland and centres in both Croatia and Slovenia, the company can offer the service and expertise that it has developed in Germany across a wider marketplace. At the heart of this expertise is the company's belief in training and education.

URSUS C comes back

Polish tractor and agricultural machinery manufacturer URSUS is returning to its roots, offering a new generation of machines which refer to its iconic past.

In early 2015 URSUS presented the new C series tractors, a range of universal vehicles which, thanks to their broad range and options, can be used as agricultural, transportation and communal machines.

With powers from 37-76 kW (50-102 hp), URSUS launched seven models in the series: C-350, C-360, C-380, C-380M, C-382, C-392 and C-3102. They are equipped with economical and durable Perkins engines and 12x12 gearboxes with mechanical reverse.

The heart of all C series tractors over the years has been the Perkins engine. Its effectiveness and reliability was used before in the C-360 model.

Perkins engines are installed in all three C series models: the 1103-33, 3 cylinder engine, the 1104-44T, a turbocharged 4 cylinder and the 1104-44TA, a 4 cylinder with turbocharger and intercooler. URSUS tractors with these engines are considered to be economical and dependable.

● See URSUS at Agritechnica: Hall 5, Stand D22 and Hall 17, Stand A08

The combination of qualified employees and technically sophisticated products are the route to satisfied customers and BU Power Systems' success. This means that all its team members are constantly learning and developing their individual skills. The company even has its own international training centre to meet this need.

Perkins powers the GRIP 4 slope tractor

Sauerburger's GRIP 4 tractor offers customers a safe and secure way of working across a variety of terrains, including slopes.

The German manufacturer designs its machines to meet its customers' needs for comfort, use across a variety of terrains and reliable power. Powered by an EU Stage IIIB/ U.S. EPA Tier 4 Interim Perkins 854E-E34TA delivering 70-83 kW (94-111 hp) and outstanding torque of 395- 450 Nm, the GRIP 4 benefits from the engine's compact design and low fuel consumption.

Economical driving with ultra-modern motor management

Sauerburger's GRIP 4 has four different driving and steering modes



ensuring the user has the optimum mode for any application, while the tractor's electronics control the engine speed.

From the comfortable cab, which is protected by a safety frame, the driver has a clear view of what's happening

outside and can conveniently fix a range of attachments to both the front and rear hydraulics. This is supported by the GRIP 4's high lifting capacity of up to 2000daN.

● See Sauerburger at Agritechnica: Hall 26, Stand F14

J. Willibald GmbH trusts in technology from Perkins

The new Star Screen Flex-Star 3000 from Willibald delivers 75 kW (100 hp) thanks to a high torque Perkins 4 cylinder EU Stage IIIB/U.S. EPA Tier 4 Interim 854E-E34TA engine, running at 1600 rpm. Designed to strain biomass, compost, broken wood waste, bark mulch and wood chips, the Flex-Star 3000 precisely segregates the materials into two or three fractions, depending on user requirements.

For this reason J. Willibald GmbH looked for a powerful, reliable and efficient powertrain, selecting Perkins to meet its and the machine's specific needs.

The Perkins engine, combined with

a big 200 litre capacity diesel tank, ensures low fuel consumption and a long, continuous amount of work for the user.

At the heart of the sifting plant are the screen decks with flexshaft-fingerledge – developed by J. Willibald GmbH. A modular construction, the sifter can be used as a two or three fraction screen.

The machine's compact dimensions of only 9.20 m provides ease of mobility and can be used in a small space while the big dimensions of the material bunker guarantees a steady loading and therefore a high output up to 160 cbm per hour of precise material separation.



The Flex-Star 3000 is built on an 80 km/h-chassis with a serial compressed air system and ABS, so it's quick to transport to where it's needed.

● See Willibald at Agritechnica: Hall 18, Stand A10

New self-propelled fodder mixing wagon for first-time users

With the self-propelled 'Sherpa' fodder mixing wagon, Strautmann is expanding its existing product portfolio with two models for modern dairy and fattening farms planning to take the step into self-propelled fodder mixing technology.

The new Sherpa series has been completely redesigned to meet the requirements of modern dairy farms, enabling farmers to take a step towards using the self-propelled machine in mechanised dairy cattle feeding.

The self-propelled Sherpa fodder mixing wagon is available in two different sizes with one vertically arranged mixing auger, each with a mixing capacity of 12 m3 or 14 m3. A distinctive feature is the patented fast-cut pick-up system with cutting unit, ensuring an optimum combination of powerful pick-up and maximum structure maintenance of the fodder components. Pick-up heights of up to 4m are practicable with the self-propelled fodder mixing wagons in the Sherpa series.

The self-propelled Sherpa model is



equipped with a standard rigid front axle with front-wheel drive and a controlled swing axle at the rear. It is

driven by a 4 cylinder 1104D-44TA Perkins engine, delivering 106 kW (144 hp) at 2200 rpm, and the standard maximum speed is 15 km/h. A 25 km/h registration tin combination with a hydraulic chassis suspension is available as an optional extra. The self-propelled Sherpa model discharges the mixed fodder via side doors with adjustable discharge chutes or optional PVC discharge conveyors.

Due to its compact design, clear structure and intuitive operation, the fodder mixing wagon adapts to almost any specific operating requirements, says Strautmann.

● See Strautmann at Agritechnica: Hall 27, Stand G30



ISEKI supports Japanese farmers

Since its foundation in 1926, ISEKI has contributed to the modernisation of Japan's agricultural industry as a full-line manufacturer specialising in farming machinery.

During this time, ISEKI says it has consistently pursued efficient and labour-saving advances in agriculture, and has served the market by developing a range of agricultural machinery.

In 2007 ISEKI started to supply TJW series tractors to the Japanese domestic market, to meet the increasing demand for large-sized tractors due to the increased size and scale of each farm.

The new TJW tractors offered great support to the larger-sized domestic farms. ISEKI said these tractors feature impressive characteristics including:

1 Suitable machine weight for operating in a paddy field. The tractor's weight balance makes it possible to obtain the best manoeuvrability in a wet paddy field.

2 Tread adjustment allows flexible ridging work depending on the farm products.

3 Higher torque backup enables consistently controlled engine performance with better fuel consumption.

The TJW series tractor has since been used for various types of work on site, so users also demand a high quality performance from the engine.

- Engine toughness with higher torque backup is essential for paddy field cultivation work using rotary tiller.

- On the other hand, torque stability is necessary no matter how the engine speed varies from low to high. Such farm work includes pest control with a boom sprayer or harvesting work.

Iseki selected the Perkins 1100 Series engine to satisfy all these requirements. The 1100 Series was considered to be the best match for the Iseki TJW series due to the compactness of the 4 cylinder engine layout, low fuel consumption and its high quality engine performance.

Perkins and Iseki have been working together for more than 20 years, after Perkins offered technical support to Iseki for engines loaded on large-sized tractors from its OEM supplier.

This long lasting partnership has continued to grow, with higher levels of emission standards coming into force for industrial vehicles including agricultural tractors. Iseki TJW tractors are currently powered by Perkins 1104D engines to meet Japan 2 MLIT Nonroad Regulations, but will use Perkins 1204E engines to meet Japan 3 emissions standards, equivalent to Tier 4 Interim. Over the years the combination of the TJW series and the Perkins engines have gained a positive reputation among farmers in Japan, and the machines continue to perform a pivotal role in large-scale farming across Japan.

With Japan 3 MLIT Nonroad Regulations emissions standards, the company is also using Perkins engines to power its Iseki TJV series tractors, a lower classified series than the TJW. Perkins 850 Series will power all models in the TJV range of tractors from 50-75 kW (67-100 hp) to meet the new standards which require an exhaust gas aftertreatment system.

The 3.4 litre 850 Series engine is compact, yet offers high torque and has an excellent power output. The new engine will support the performance of the tractors, continuing to serve the agricultural sector in Japan.

"When we consider the problems of an increasing world population and food supply, food self-sufficiency and land preservation, our duty to society as a manufacturer of agricultural machinery becomes even more significant," stated ISEKI.

"ISEKI will continue to operate under our basic business philosophy to deliver products that satisfy consumer demand so that we can contribute to agriculture both in Japan and throughout the world," it added.



CLAAS launches the powerful LEXION 760

Agricultural machinery manufacturer CLAAS first launched a combine harvester suitable for European harvesting conditions to the market back in 1936.

Since then CLAAS has developed three models of which the LEXION is its most powerful combine harvester.

Throughout this time CLAAS has continued to develop the machine to provide better performance, operational reliability, efficiency and

driver comfort. These factors, it says, were key when creating the new LEXION 700 model series. The LEXION 700 has also moved to the next level in terms of emission control. Now meeting EU Stage IV/U.S. EPA Tier 4 Final emission standards, the LEXION 760 is powered by a 12.5 litre Perkins 2206F-E13TA engine delivering up to 370 kW (503 hp).

● See CLAAS at Agritechnica: Hall 13, Stand C05

Tailored solutions to meet the customers' needs

UK based manufacturer Knight Farm Machinery is a leader in crop sprayers and has been using Perkins engines since 2002 on its 1835 and 2050



Vista self-propelled models.

"What we liked about the 1206F engine was that it came as a complete package, with the aftertreatment neatly integrated on top of the unit. For us, that meant a pretty seamless transition from one engine type to the next with little additional engineering being required," explains David Main, sales manager at Knight.

"For us, being able to move our machines onto the next emissions standards in a straightforward fashion has been great."



The right engine for the job

Maviproduct, part of the Mavi group, has over the years worked with IRUM SA on successful developments including tractors and machines for agricultural and forestry industries.

Their most recent project is the TAG 95.1 agricultural tractor. A successful independent business, IRUM selects engines and suppliers depending on the specific requirements of the project. "Perkins as a brand is recognised in Romania," said PhD eng Andrei Ioan Oltean, business development manager of Maviproduct, "but of utmost importance to IRUM was Perkins latest emissions technology and capability to move from EU Stage IIIB to Stage IV." For the first prototype of IRUM's proposed tractor, the Maviproduct team suggested a Perkins 854 or 1204 engine.

IRUM specified a Perkins 1204E-E44TA for this particular opportunity, choosing the 1200 Series for its power range and the excellent combination with the transmission proposed by the engineering design team. The design was completed in six months. Physical development was carried out by the two companies from February 2014 to March 2015, followed by testing of the prototype TAG 95.1 at a farm in real working conditions.

Power TK – growing distributor with big plans

Now in its third year as the Perkins distributor in Turkey, Power TK is a company that is putting the needs of the agricultural market very much at the heart of its business strategy.

Based in Istanbul, and with a major service centre in Ankara, Power TK has ambitious plans to not only grow its engine sales, parts and service operations but also to provide its Original Equipment Manufacturer (OEM) customers with specialist application solutions.

Despite a subdued economy tractor sales in Turkey are running at about 55,000 units per annum, a figure that includes a growing number of domestic brands. These include the likes of Hars (pictured), Aslanlar, Yagmur and Bozok, all of whom source their engines from Power TK, taking a combination of the 1103D, 1104D and smaller 404D units.

While new engine sales are obviously desirable Power TK has also had the opportunity afforded by the historical legacy of thousands of existing Perkins engines in the field, many of which powered the battalions of old MF models made under licence in the country. Parts and service are therefore a backbone of the

operation, served by a network of 10 parts dealers and 25 service dealers, spread throughout the country to maximise coverage.

In a bid to further expand its service availability Power TK's service dealers have trained a number of OEM dealers with the result that end users have in the region of 300 service points at their disposal. With access to over 13,000 parts, and an array of engine repair options such as new for old, reconditioned engines and overhaul kits, the service network is well placed to keep owners of Perkins-powered equipment on the road.

There is no doubt that farming machinery will become more complex as the agricultural industry seeks to improve productivity and Turkey looks forward to EU Stage IV equivalent emissions standards being introduced in 2019. Perkins is proactively leading Stage IV application preparations by holding product awareness programs for its



customers. Many OEMs are looking at higher horsepower vehicles, reaching beyond the current average threshold of 52 kW (70 hp), up to 74.5 kW (100 hp) and beyond. And this is where Power TK sees a big growth opportunity, catering for the additional requirements of engine integration and machine systems. General manager Levent Uz explains: "As the Perkins distributor we are able to give project based solutions support to many Perkins OEMs. From the industrial to the agricultural markets, we are in close cooperation with the research and development teams of our customers. With direct access to best-in-class

technological suppliers, we add value via a turnkey solution that can include electronic, hydraulic and mechanical products. As the market demands, our engineers can design, develop and commission solutions such as hydrostatic IVT drive, 4-wheel steering, touchscreen displays and also Stage IV management systems as well as custom made software developments. We can support the new technology the customer needs for his engine application and installation to become a state-of-the-art product."

Similarly Power TK sees opportunity in working with OEMs to provide dedicated parts, service and warranty programs through the OEM's dealer network and is currently working with the likes of Erkunt, Basak and Hidromek along these lines.

Power TK is working hard to ensure that both customers and end users continue to get the full benefit of the renowned Perkins brand – engine, parts, service and applications expertise.

Global service and support from Perkins

Users of our engines who need to buy genuine Perkins parts can take advantage of a truly global reach. The locations of our main warehouses mean that you're able to obtain the parts you need often within just 24 hours.

Both our main warehouse site locations, in Irlam, UK, and in Singapore, were deliberately chosen to give as wide a reach across the world as possible. This means that you're frequently able to obtain new genuine Perkins parts within just 24 hours from the time we receive your order to delivery at your door or site address. Using genuine parts for your engine is the optimum way of keeping it running long into the future. These



parts have been precision engineered to fit your engine, are rigorously tested for quality and by using only our parts, you have the reassurance of the comprehensive 12 month warranty from Perkins.

Contact your local Perkins distributor at www.perkins.com/distributor

Secodi – supporting your engine needs

In its 25 years as a Perkins distributor Secodi has grown from a four-person outfit to a business employing over 250 personnel, located in eight centres spread throughout France. In that time it has developed its range of services to meet the growing needs of its customers and to cater for the increasing complexity of machinery.

Today it is a 7 day a week operation, specialising in servicing and maintenance, engine/machine integration and ancillary systems. These activities are dealt with by highly trained teams of experts, experienced in specific applications and encompass a range of engines. With its widespread national coverage of eight service locations, Secodi is able to meet customer requirements for maintenance, on-site assistance, on-site repairs, break-downs and other services quickly and efficiently. It is a business that prides itself on speed of delivery.

With over 200 engines always in stock and with access to over 13,000 parts, and an array of engine repair options such as new for old, reconditioned and reman engines and overhaul kits, the service network is well placed to keep owners of Perkins powered equipment on the road.

Secodi also works with customers to develop new equipment, modify or improve existing applications and on machine validation. Its engineering team advises on engine choice, configuration and machine integration, while working with leading component specialists to provide the best overall solution for items such as radiators, couplers, wiring and control panels and hydraulic requirements. Secodi has Authorised Training Centre status and opened its own specialist training facility. In 2012 it was also appointed as the distributor for Finland and Estonia.

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