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New AXOS completes tractor renewal line-up

Following the launch of the AXION and the new ARION range last year, CLAAS has now completed the line up with the addition of a new model, the AXOS to replace the Celtis.

The new AXOS range consists of four models - the AXOS 310, 320, 330 and 340 – which have power outputs of 75hp, 87hp, 92hp and 102hp respectively.

Tractors of this size are expected to handle a wide range of tasks, from field work such as fertiliser spreading or mowing, to trailer work or handling work with a front loader, and this is reflected in the design of the AXOS. In addition, markets such as local authorities and specialist vegetable growers also have specific requirements that have been taken into account.

In order to meet these varying market requirements, three differing specification levels are available - C, CL and CX – reflecting the differing transmission and cab options fitted to these models.

Whilst compact in design, the new AXOS range has a long wheelbase and even weight distribution to provide stability on the road and increased lift capacity. Maximum ground clearance is 490mm making it ideal for field work, but a tight turning circle ensures the AXOS is just at home working in buildings and tight spaces.



High performance engines

Because tractors of this size do not need the electronic sophistication and engine management systems found on higher horsepower models, CLAAS has opted to use Perkins 1104D-44TA engines for the new AXOS range.

These 4-cylinder engines have a cubic capacity of 4.4 litres and feature a mechanical injection system with a 2-valve cylinder head, a wastegate turbocharger, exhaust gas recirculation plus an intercooler on the two higher powered models, and fully meet Tier 3 criteria.

The high efficiency of these engines means they offer a wide constant power band of up to 300rpm and up to 45% of torque back-up. This ensures there is plenty of power available at all speeds, but the engines are also very fuel efficient and physical performance is comparable with Tier 2 DPS engines previously used, but with higher torque.

Transmission options

To meet the wide range of tasks that tractors of this size are used for, a total of three transmission options are available.

In its simplest form, AXOS C models come with a fully mechanical two-range, 10 forward, 10 reverse speed 40kph transmission, which for maximum flexibility has 6 speeds within the 6-15km/h speed range. In addition there is also the option of a mechanical splitter to double the number of gears available.

AXOS CL models are fitted with a new version of this base 10F/10R transmission, which uses the CLAAS REVERSHIFT electro-hydraulic clutchless reverser for direction changes. With the availability of three declutching options (dashboard, gearstick or pedal) and no need to declutch when changing direction, this makes this transmission ideal for use on tractors fitted with a front loader.

The highest specification AXOS CX models feature the well-proven TWINSHIFT 20 forward, 20 reverse transmission which incorporates an electro-hydraulic splitter operated using buttons on the side of the gear lever, plus the REVERSHIFT reverser.

As an option for specific operations such as vegetable work, a third creeper range of speeds can be specified giving a minimal speed of 400 metre/hour.

Cab options

As with all CLAAS machines, operator comfort is a priority and was a major consideration when designing the new cab for the AXOS range. Two levels of cab specification are available, again dependent on model and anticipated market requirement.

Manufactured in the new CLAAS cab manufacturing facility at Le Mans, the spacious cabs have sufficient room for a passenger seat and feature front opening doors that can be locked open. Depending on specification, the cabs are fitted with the new adjustable steering column with self-cancelling direction indicators as fitted to the ARION range, and also feature a new dashboard with digital displays, plus they both have a large glass panel in the roof, which is ideal when using a front loader.



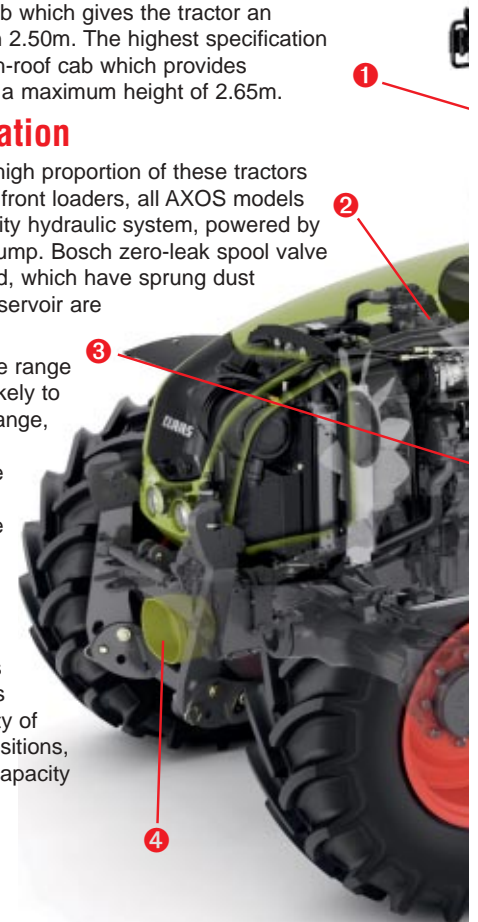
In standard specification, the AXOS C and CL are both fitted with a low-profile cab which gives the tractor an overall height of less than 2.50m. The highest specification AXOS CX has a new high-roof cab which provides increased headroom and a maximum height of 2.65m.

General specification

In view of the fact that a high proportion of these tractors are likely to be used with front loaders, all AXOS models feature a new high capacity hydraulic system, powered by a 60 litre/minute Bosch pump. Bosch zero-leak spool valve connections are also fitted, which have sprung dust covers and a waste oil reservoir are available.

To accommodate the wide range of powered implements likely to be used with the AXOS range, up to three PTO speeds (540, 540E and 1000) are available with a new design of interchangeable shaft, which are either mechanically or hydraulically engaged.

In addition a new telescopic pick-up hitch is fitted to AXOS CX models and there is the availability of three differing exhaust positions, plus the option of a 2.8t capacity front linkage and PTO.



Front loader options

It is anticipated that around 50% of AXOS models sold will be fitted with a front loader, and with this in mind new fitting brackets for the CLAAS FL loader range have been designed which have rear axle support in order to evenly spread the load.

The AXOS has been designed so that it can be fitted with both the PRO PILOT single lever mechanical control or FLEX PILOT hydraulic single lever control systems.

AXOS model overview



MODEL	SPECIFICATION
AXOS C	Anticipated market: small farms, vegetable growers, councils <ul style="list-style-type: none"> • Low profile cab • 10F/10R 40kph mechanical transmission + splitter option • 540/1000 rpm PTO with mechanical engagement • Mechanical linkage control • Fixed steering column • Through bonnet exhaust
AXOS CL	Anticipated market: small stock farmers, loader work Specification as above plus: <ul style="list-style-type: none"> • Low profile cab with glass panel • 10F/10R transmission with REVERSHIFT • 540/100 rpm PTO with hydraulic assist engagement • Adjustable steering column
AXOS CX	Anticipated market: larger livestock farms or mixed farms Specification as above plus: <ul style="list-style-type: none"> • High roof cab with glass roof • 20F/20R TWINSHIFT transmission with REVERSHIFT • Air conditioning • Air seat • Hydraulic push back hitch • Passenger seat

The full CLAAS tractor line-up

	Rated hp	Max hp	Max with CPM Boost
NECTIS			
227F	68		
247F	82		
257F	90		
267F	101		
AXOS			
310C/CL/CX	75		
320C/CL/CX	87		
330C/CL/CX	92		
340C/CL/CX	102		
ARES			
547	92	97	
557	102	105	
ARION 500 & 600			
510 CIS/CEBIS	110	117	
520 CIS/CEBIS	120	127	
530 CIS/CEBIS	130	133	
540 CIS/CEBIS	135	140	160
610 C/CIS/CEBIS	120	130	
620 C/CIS/CEBIS	135	140	
630 C/CIS/CEBIS	145	155	
640 CIS/CEBIS	155	160	180
AXION			
810 CIS/CEBIS/CMATIC	170	180	214
820 CIS/CEBIS/CMATIC	189	197	232
830 CIS/CEBIS	203	213	
840 CIS/CEBIS/CMATIC	212	213	246
850 CIS/CEBIS/CMATIC	233	238	268
XERION			
3300 Trac/Trac VC	312	340	
3800 S-Trac/Trac/Trac VC	355	388	

* ISO TR14396



For fast and easy access to the engine, all AXOS models feature a one-piece bonnet and an easy access cooling package layout. In addition all models also feature a moulded rear wing style for increased durability.

AXOS C, CL, CX

- Three variants:
 - AXOS C, the basic model with mechanical operation
 - AXOS CL, the front loader specialist with REVERSHIFT
 - AXOS CX, the premium model with a wide range of uses
- Four models from 75 to 102 hp: with mechanical injection pump and turbocharger
- High stability and loading capacity: Integrated CLAAS front loader
- Ideal for front attachment devices: Integrated front hydraulic system and front PTO shaft
- Five transmission variants from 10F/10R fully mechanical up to 30F/30R with REVERSHIFT, TWINSHIFT and creep gear
- Three cab variants, designed for minimum overall height:
 - Platform, minimal overall height of 1.92 m
 - Low-profile roof, minimal overall height of 2.43 m
 - High-profile roof, minimal overall height of 2.58 m
- Mechanical or electronic linkage operation
- Six different variants of control units
 - Operation either by single lever or 4-way control lever
 - Single or double-acting
 - Adjustable flow control
- Up to three PTO shaft speeds:
 - 540 rpm Standard
 - 540 rpm ECO
 - 1,000 rpm

AXION 850 sets new fuel efficiency benchmark

A recurring comment from users of CLAAS AXION tractors is how fuel efficient their tractors are compared to other makes they have run.

This has now been confirmed in the latest Powermix fuel consumption tests conducted by the DLG in Germany on behalf of Profi magazine for their test report on the 260hp AXION 850 published in October.

This showed the AXION 850 to have an average fuel consumption of just 282g/kWh, a saving of 7% compared to the average of 305g/kWh from the 21 other tractors tested to date.

“... what impressed us most about AXION was its performance in our Powermix test, where its average consumption figures work out at about 7% below the average of other tractors that have already been subjected to this DLG/profi test protocol. Theoretical perhaps, but if the tractor is saving 2.5 litres/hour on heavy work over, say, an annual 1,000 hours, that represents about a £1,700 cut in the tractor’s yearly diesel bill. And that’s clearly not a saving to be sniffed at.”

“Put bluntly, CLAAS’s AXION 850 consumed less fuel in our static test than any previously tested tractor in this power class.”

The article concludes:

“When it comes to picking the current AXION’s main

attraction, there’s not too much doubt. For those who have already forgotten, just take a look at all of those green bars on the Powermix chart.”

To come to this figure of 282g/kWh the DLG take the average fuel consumption achieved in seven individual tests and across 36 different test runs. The tests are designed to test draft work; pto work and mixed work across a range of working conditions and operations.

In all three of these working conditions, the AXION 850 recorded average fuel consumption that was well below the overall average.

- **Draft work** (ploughing and cultivating at 100% and 70% load): 277g/kWh or 10.35 l/ha
- **Pto work** (power harrow and mowing at 100%, 70% and 40% load): 286g/kWh or 3.83 l/ha
- **Mixed work** (manure spreading and baling): 282g/kWh or 3.89 l/ha

Just as importantly the fuel efficiency of the AXION range is also helping users in the field save fuel and so reduce their operating costs.

“Over the 600 hours the AXION 830 has done, it has used 2 litres/hour less fuel than the 185hp tractor it replaced, which so far is a saving of 1200 litres worth £600.” (Matthew Bowe, Sentry Farms, Suffolk)

“I have been extremely pleased with the fuel economy. Customers have also been surprised as their first impression is often that due to its size the AXION must use a lot of fuel. For silage work the customer supplies the fuel ... one customer has calculated that I will save him £3,000 in fuel a year.” (Raymond Copland, Dumfries)

“I have certainly noticed the difference in fuel consumption compared to the tractor that the AXION replaced.” (Andrew Hughes, Andover, Hampshire)



CMATIC flexibility

Amenity and agricultural contractor Max Pickerill has been extremely impressed with the variable transmission on his new AXION 820 CMATIC.

Bought this autumn, he says that the transmission is superb and the difference between this tractor and the AXION 830 it replaced is considerable.

“The CMATIC variable transmission makes the tractor very easy to drive. I tend to just leave the tractor in the automatic AUTOMOTIV mode all the time and just use either the foot throttle or the cruise control on the DRIVESTICK depending on what is easiest at the time,” explains Max. “I do a lot of baling for haylage and in thick crops you do have to be on the ball to avoid the baler blocking, so CMATIC will make it very easy to adjust the speed according to the conditions. Also I would now never

dream of hedgecutting using a geared tractor.”

Based at Bunny near Nottingham, Max started contracting 14 years ago. Aside from agricultural work, mainly gained through local contacts and the Lincolnshire machinery ring, nearly 75% of his work is specialist amenity and ground care contract work using niche equipment that most other contractors don’t have.

The AXION 820 CMATIC, which has a rated power output of 189hp with a boost from the CPM system up to 232hp, is Max’s third CLAAS tractor.

“When I bought my first tractor, an ARES 836, I looked at everything on the market and it represented extremely good value. Again when I replaced it with an AXION 830 I costed it like-for-like with another leading make and there was nothing in it, but the service and back-up from Marsh is fantastic, which is an important element. I had always wanted a variable transmission tractor so replaced that tractor after 1500 hours with the new AXION 820.”

Inch perfect drilling

A BASELINE HD automatic steering system forms an integral part of Andrew Hughes' unique oilseed rape drilling system.

Having used a lightbar steering guide for the past three years, Andrew Hughes upgraded to the BASELINE HD automatic steering system this spring, when he bought a new AXION 820.

"Having had the guidance system, it made sense to go to the next stage and invest in the BASELINE system for the greater accuracy," explains Andrew. "The investment in this system will help bring down my fixed costs through fuel and input savings and improve efficiency."

"The main saving will come from reduced overlap when cultivating and drilling. With field sizes mainly around 40ha (100 acres) and our largest field 100ha (250 acres), a 30cm overlap is a big area, and then because the tramlines do not accurately match, this causes spray and fertiliser overlap. Also with just two of us running 647ha (1600 acres) we do work long hours, so this will help reduce stress and allow us to concentrate on what we are doing."

One early application for the BASELINE system, which uses a tripod mounted receiver to transmit a correction signal for accuracy down to 5cm, was for drilling the 220ha (550 acres) of oilseed rape Andrew grows at Trinley Estate near Andover.

The crop is drilled using a homemade 4m wide one-pass drill combination. Tractor driver Shaun Burgess built the drill last year after Andrew attended a meeting held by Syngenta, which looked at the yield benefit gained with a German establishment system.

"The system revolved around cultivating at 23cm, sealing the gap and then placing the seed directly on top. Because oilseed rape is a lazy rooting plant, this means it will develop a better root structure and avoid horizontal rooting," explains Andrew.

The drill consists initially of a Brocks Superflow frame, onto which are mounted eight Shakerator tines at 48cm spacing. Behind these are following tines designed to close the slot and break any lumps. This in turn is followed by a ring roller, on which is mounted a KRM seed drill with the



outlets positioned in-line with the legs, that drop the seed directly over the top of the slot.

"We built it as a 6.0m unit, but reduced it down to 4.0m as that meant we could go faster, so got better clod shatter and more consistent depth. We also tried 43cm spacing, but the advantage of the wider spacing is that you get a shorter, wider plant and better light penetration. This in turn means the crop is easier to manage and quicker to harvest, and even though we only trialled it last year, at 4.2t/ha this year's yield was superb. Timeliness is also important. The aim is to start drilling on the 'Glorious 12th' and we have been able to halve the seed rate to just 4kg/ha, which alone has covered the cost of the drill."

"In order to create the tramline, you need to block off two of the outlets, so to save time Shaun initially uses BASELINE to drill the five passes between the tramline pass, and then when he has done all the full width passes, he then uses BASELINE to go back and accurately do all the tramline passes."

Andrew adds that at such low seed rates, it also important to look after the crop right from the start, so having drilled and finally rolled the crop, he routinely applies slug pellets, using a fertiliser spreader guided by BASELINE, followed by 86kg/ha of ammonium nitrate to boost early growth, so that the rows quickly join to discourage pigeons.

"Having invested in the BASELINE unit, I have just bought a new AXION 850 that has a steering system on it, and as I replace tractors and the combine, these will also have systems fitted so as to make maximum use of the system."

BASELINE HD makes it easy to go back and drill the tramlines after the rest of the field has been drilled



"For the size of tractor the AXION 820 is extremely manoeuvrable and I have got 710 Michelin Xeobib tyres that I run at 14psi for roadwork and about 8psi in the field. Being my only large tractor, for me 200hp is about the right size as it makes the tractor very flexible. It is also very well balanced, you can put a five furrow plough on the back and not excessive front weights. The cab is also very comfortable and user friendly."

"The other big noticeable feature of the tractor is its fuel economy. By using CEBIS to just try different engine droop settings it amazing what a difference you can make. When hauling maize I found that I could reduce consumption by about 8 litres/hour, which was a saving of about 20%, whilst for big baling I was using about 12.8 litres/hour."

For amenity work the AXION is mainly used to haul a Stronga 16 tonne, 50kph fully sprung and air-braked hook-lift trailer that is used for a wide range of on-site haulage and transport work.



Profile on XERION

With its superb driving position and perfect balance that ensures maximum power can be transferred through its equal sized wheels, the CLAAS XERION never fails to impress.



24 hour spreading

Since buying it in February, Neil Buckton's XERION 3300 and 24m dribble bar umbilical spreading combination has spread a massive 250,000m³ of pig and cow slurry, and worked over 2,500 hours.

Based near Beverley in the pig farming and breeding heartland of East Yorkshire, Neil invested in the XERION based dribble bar system last spring to replace a home built, tractor mounted splash plate unit.

"With tightening regulations it made sense to change to a dribble bar system," says Neil. "As we are mainly spreading into growing cereal crops, firstly a dribble bar means that we can more accurately place the slurry at the base of the plant, and also avoid slurry being washed down tramlines, but also as most of the farms are using 24m tramlines, obviously they wanted us to follow those."

Having bought the 24m Vogelsang dribble bar unit, after looking at various dribble bar and power units to mount it on, Neil thought that the XERION offered him the most flexibility, as during quiet periods it could be used for other agricultural work. In addition, by using the front linkage the XERION, which has a front positioned cab, could also carry a 1200m pipe reel between sites.



Supporting the XERION 3300 is a second tractor, which carries and tows a further three reels of pipe totalling 2000m, which works ahead of the XERION to set up supply pipes from the 150hp slurry pump, so as to keep field turnaround time to a minimum.

"Our season starts in February when we are spreading on to oilseed rape, after which we then spread into cereals through to late May, often running 20 hours a day," explains Neil. "During the summer we then change to a 6m injector unit for stubbles and grasses before finishing in late September."

"Typically we work at 0.5kph covering 2ha/hour at a rate of 50m³/ha and during the spring when in standing crops, those who used to use two splits of fertiliser will now often use us for at least one of those splits. I have at least ten 3,000 pig units which we will visit twice a year, taking three days to pump over 5,000m³ and we have the capacity to pump up to three kilometers because these often don't have much land, so neighbouring farmers are buying the slurry in place of fertiliser."

"The XERION 3300 is fantastic and even when pulling 300m of 10cm diameter pipe, because it is so well balanced it makes far less mess than a normal tractor. CEBIS makes it very easy to operate and change the macerators hydraulic flow speed depending on whether we are applying watery pig slurry or thicker cow slurry."

"The drivers love the XERION, the cab is very comfortable and we have even fitted it with a small TV and a 12 volt Freeview box as when working at night at such a slow speed, a good three hour film soon helps the time go by!"

So pleased has Neil been with the XERION 3300, that he has just invested in a second spreading system, based around a XERION 3800 and a 24,000 litre Agrimac tanker with a 24m dribble bar boom.

One-pass saving

By changing to a cultivation system based around a XERION 3800 and a 5.0m wide one-pass cultivator, Jackson Brothers have been able to reduce their establishment and fuel costs.

Until this year, Jackson Brothers used a three pass cultivation system to work down their heavy coal measure soils ready for drilling on the 340ha (850 acres) of winter wheat and 320ha (800 acres) of winter oilseed rape they grow at Nether Handley near Sheffield.

However, in order to reduce cultivation costs this system has been replaced by just a single pass using a new 5.0m wide Watkins Tri-Till Extra cultivator pulled by the 388hp XERION 3800.

The Tri-Till cultivator consists of four elements; a row of seven hydraulic auto-reset subsoiling legs set to work at 24cm, followed by two rows of 510mm cutaway discs, then a levelling board and finally two rows of 600mm DD press rings. The cultivator is hitched using a 80mm ball connector to avoid pin wear and jolting.

"Our land is all undulating with some steep banks and the Tri-Till takes a lot of pulling, so we need plenty of power as

it is important to maintain a high forward speed for best results," explains Alan Jackson who drives the XERION. "One pass with this is just right, any more than that and it is too fine for the Vaderstad drill."

"We did consider a big tracked tractor, but I liked the concept of the four equal wheels on the XERION, which is fitted with 710 Michelin Xeobib tyres to give good traction and low ground pressure, but not be too wide on the road. The engine and the CVT transmission are fantastic and driving it is far easier than I thought it would be."

"I tend to just drive it using cruise control to maintain forward speed, and the engine really is fantastic. Using CEBIS I have altered the engine droop setting to about 30% so that it has plenty of torque and really puts the power down on the ground. I am surprised how well it climbs the hills as they are a long, straight drag, but it hardly leaves a mark. But it is important to ballast the XERION correctly and it has two tonnes on the front to evenly spread the load."

"In addition, I have also been very impressed by how little fuel it uses. Working at a forward speed of 9kph at about 1500 to 1700rpm, the XERION is only using 12.5 litres/hectare."



Designed as a versatile, powerful and practical power unit suitable for a wide range of tasks across a whole range of operating environments, XERION has more than met this role as these users confirm.

Spreading in the big league

Such is the versatility of the XERION, Oxfordshire contractor Charlie Baker now runs a fleet of three 388hp XERION 3800s, the most recent of which has been bought specifically for use with the first 24,000 litre (24m³) capacity Kaweco slurry tanker to be sold in the UK.

In all respects the XERION and Kaweco tanker combination is impressive, and Charlie comments that without fail customers have been staggered not only by its output and how lightly the combination treads, but also by how quick the grass response is to treatment.

Equipped with a 7m wide disc injector unit, the whole combination is 16 metres long. The tanker is fitted with a 150 litre/second pump and can be filled using either a pipe or a turbo arm controlled from the cab. In addition it has cameras on the arm and at the back, plus it has a steering rear-axle, which in combination with the all-wheel steering on the XERION makes the combination extremely manoeuvrable.

“The main reason for buying the KAWECO combination was its output and quality of build. Using the turbo arm, the tanker can be filled in about 2 minutes and in the field is emptied in about 8 minutes. Using CEBIS and the tanker’s own control unit we have total control over application rate, etc, and can then provide all the paperwork showing what has been applied. In addition it has superb brakes and you can feel them stopping the tractor.”

“Unlike a large trailed tanker which is just a dead-weight behind the tractor, the Kaweco is purpose built for the



XERION and connected using a 110mm ball head swanneck coupling. This effectively transfers a third of the tanker’s weight onto the middle of the XERION, so it is evenly spread over the tanker’s twin axles and the four even sized 710 tyres on the XERION. The tanker is also split into three compartments, with the front tank emptied last so weight is kept on the XERION. Even when fully loaded the combination hardly leaves a mark. Obviously fully loaded it is too heavy to go on the road, so we use nurse-tanks to keep it supplied, aside from the fact that its job is to inject slurry and it is far too expensive to waste time on roadwork.”

“By injecting the slurry rather than using a splash plate, you are placing the slurry exactly where it is needed and the response is far quicker. With surface dressing you lose about 35% of the nutritional benefit, plus smell can also be a problem. The other great benefit for dairy farmers is that having injected the slurry it disappears in about an hour, so if necessary cattle can be turned straight back out onto the grass when we have finished.”

“A lorry load of Nitram costs a lot of money, but depending on dilution, cattle slurry has a value of about £7/m³ so it is a valuable product and I now have a number of dairy farmers who are using no bought-in fertiliser at all.”

At peak periods, such as after first cut silage, in order to keep pace with demand it is probable that the combination will be worked 24 hours a day, so has been equipped with the tripod mounted BASELINE HD system so that it can be accurately steered after dark.

“The XERION is an unbelievable tractor. I would be lost without it and the engine management system means that it is extremely fuel efficient.”



“The XERION is fantastic and done everything we expected of it, and by being able to work wider and quicker, this has resulted in a considerable saving in time, labour and cost.”



Charlie Baker with sons Christopher (left) and Stephen

Creating a firm footing

Faced with the rising cost of landfill and aggregate, in order to make the most of the hardcore and soil they find on-site, Dave Collins and Pat Gaffney have invested in their own soil stabilisation equipment.

Their new company, Envirotrac, was been established to mainly work alongside Dave's plant and earthworks company, Collins Earthworks, which is based in Kirkby in Ashfield, Nottinghamshire.

"Up until now we have used outside soil stabilisation contractors, but it was not ideal. By doing it ourselves we can take control of the operation and achieve the high quality of job and service that we aim to provide, plus it is a natural extension to our other operations," states Dave.

Soil stabilisation is increasingly being used by construction and civil engineering companies as an alternative to imported hardcore in order to create a suitable base for construction work. The process involves initially excavating out the area to be stabilised and then back-filling again in thin layers. As each layer is returned, using the stabilisation unit it is mixed with either cement or quick lime, after which it is compacted to leave a rock-solid base before the next layer is added.

"With landfill and aggregate taxes, to haul soil and rubble off-site and then make up levels with imported aggregate is just not an option," explains Dave, "so we need to be able to treat and make best use of what's on site."

Central to their new soil stabilisation system is a 388hp CLAAS XERION 3800 with a forward mounted cab, which Dave and Pat chose having looked at various options. Mounted behind this is a Stehr stabilisation unit consisting of an integrated 6 tonne capacity hopper feeding into a 2.5m wide mixing drum, in which there is a counter-rotating 600mm diameter rotor fitted with 100 hard-faced teeth.

"On paper the XERION looked ideal for the operation, and we bought it without looking at it, but we have been very, very impressed with it, to the extent that we have just bought a second 335hp XERION."

"The two most important aspects are the CVT transmission as we need to work at only 0.5 to 0.6 kph in order to get

the right mixing action, and the hydraulics as these are used to meter the flow of lime or cement into the mixing drum. On the XERION, using its CEBIS control unit we can accurately alter the flow rate, which is then displayed on the screen. It gives the operator fingertip control and he can easily increase the application rate if he hits a wet-spot."

"Another important feature is the Cruise Pilot function which we use all the time as it means that having set the forward speed, the XERION will then look after itself, leaving the operator free to concentrate on other things."

"CEBIS also gives us a wide range of information and allows the operator to set-up the engine and hydraulics specific to the operation. Also by displaying that the engine is running at 90-95% load most of the time, it does show how much power you do need for this operation."

Having now bought a second XERION, Pat and Dave intend that the two machines will work alongside each other to provide a complete service. In addition to a second soil stabilisation unit, the two XERIONs will be used for subsoiling or hauling dump trailers and bowsers, so making them completely flexible.

"Richard Sharman at Marsh, who is the local CLAAS dealer, could not have been more helpful and found a lot of information we needed, plus the back-up has been excellent."

"The XERION is a sophisticated tractor, but it is ideally suited to this operation and used to its full capacity, means that we are able to provide the high level of service we aim to provide our customers."



Dave Collins (left) and Pat Gaffney





An ideal all-rounder

Having had the use of a pre-production version of the ARION during autumn 2007, David Laird has subsequently bought five ARION tractors, including his old pre-production model.

The three 180hp ARION 640 CEBIS and two 155hp 630 CIS models are used for a wide variety of operations and it was their size and power that particularly appealed to David, who runs a total of 15 tractors.

"I like a tractor that's light and lively," he says. "Their performance is brilliant and they are great to operate. The drivers love them because they are comfortable and everything is at their fingertips. I still run four other makes, but the CLAAS is streets ahead in my opinion. I can foresee that CLAAS could well lead the market in the next few years the way they are going."

"For a tractor up to 180hp, the ARION is small and manoeuvrable, and can be easily weighted up if needed. Also the HEXASHIFT transmission is superb. It's so easy to operate and has the flexibility that it can be used in automatic or manual, depending on the operation; you get the benefit of a CVT without being tied to it."

With David expecting each of his tractors to do up to 6000 hours in two years, reliability and the service from his dealer Gordons is an important issue, and here again he has been very impressed with the tractors.

"Having CEBIS on the main tractors is a big bonus. It's

easy to use and set-up and having information on everything the tractor does is ideal for billing."

"The other important aspect of CEBIS is the ability to see exactly how much fuel the tractor is using to get to a farm, do the job and get back again. I never realised before how much my tractors did use, and with fuel at up to 70 pence it's important to know this so as to get the charging correct. Also the difference in consumption between the different makes is noticeable, and I was shocked to see that one make was using a third more fuel than the ARION."

Having had the use of a pre-production model, David Laird now runs five CLAAS ARION tractors.



ARION fuel saver



Martin and David Adamson

It was only when he was lent an ARION 640 that contractor David Adamson realised quite how thirsty his other makes of tractor were.

Having ordered an AXION CEBIS 850 and 810 early in 2008, when one of them was delayed due to tyres, Swards lent David the ARION 640 to tide him over.

"I had never really thought as to how thirsty my previous tractors were until the CLAAS arrived," he says. "The difference was noticeable, so to compare them I loaded two trailers with the same weight, and sent the tractors off on a road test. At the end when we compared the two, the ARION 640 had used only 18 litres whilst the other make used 27 litres. Over 1500 hours a year that's a considerable saving. Also all the drivers liked the tractor so much they asked for it not to go back."

As a result, in addition to the initial two AXIONS, David has now bought two ARION CIS 640s, and a third AXION 850 to replace a different make of tractor that he had ordered, but was seriously delayed.

Based at South Cowton near Northallerton in North Yorkshire, Adamson Contractors offer a wide range of mainly grassland based services, including harvesting 2,500 ha (6,500 acres) of grass, whole crop and maize, and umbilical slurry spreading pumping 77,000m³ a year.

Having run the same make of tractor for many years, needing more power David initially changed to another leading make two years ago. However problems with those tractors prompted him to look at the AXION, having seen them at World CLAAS.

"I thought they looked good and liked the GIMA transmission, as this had been in our previous tractors, plus the DPS engine is well proven. However, it is very noticeable how much better the CLAAS transmission software is; it's easier to use and far smoother. The DRIVESTICK is very simple and all the drivers like it. Also the cab suspension is extremely good and essential if drivers are working up to 100 hours a week at peak periods."

Both the AXION 850s are fitted with CEBIS and David finds the area meter facility extremely useful, especially for umbilical work to ensure that the correct amount is applied.

"I would aim each tractor to work 1500 hours a year, so the fuel savings from all five CLAAS tractors is considerable. The AXION is a big tractor, but it's very manoeuvrable and for triple mowing we are getting up to 35% more output from the AXION 850."

"Also the service from Swards has been brilliant – I cannot fault them, which is essential as you only need one tractor to be out of action for a day or so for the whole system to fall apart."



A tractor driver with a difference

With her children having ‘flown the nest’, Alex Collins reckoned that this was the time to put into action a plan she had long thought about – to buy her own tractor and offer her services to local contractors as a self-employed owner driver.

Last summer saw Alex take delivery of a new 135hp CLAAS ARION 620 C from Hamblys and since then she has been kept busy working for local contractors, averaging about 75 hours a month.

Alex, who also provides a book-keeping service for local farmers and businesses, in addition to owning 44ha (110 acres) at Lewdown in Devon, is the first to admit that owning and driving a tractor would not be top of every woman’s list when considering a career change, but as she explains it is something that she has wanted to do for a long time.

“I love farming and have long had an interest in farm machinery. Tractors have always been a passion and I am quite at home talking about engines and quizzing the service technicians about the tractor. I used to drive a tractor about 10 years ago and have really missed the work, so whilst I have been planning this for a while, I decided that this was the ideal opportunity to put my plan into action, as I could see that with the shortage of drivers contractors do have a need for extra tractors with drivers at peak times.”

“By having my own tractor it saves them having to make that investment, plus I can be flexible and still work it around my book-keeping work.”

“Traditionally, contracting and tractor driving has been a male occupation, and at first it did raise a few questions and eyebrows, but I can honestly say I’ve been welcomed and supported wherever I’ve been. By just spreading the word about, and proving my ability, I have worked for four local contractors, but particularly hauling trailers for a local foraging contractor who has a CLAAS JAGUAR 890. ”

When it came to looking for a tractor, through a local plant hire book-keeping client Alex approached three local machinery dealers.

“Eventually, I discussed my new venture with Martyn Conway at Hamblys explaining I just wanted a tractor that was simple and straightforward that would have the power to cope with the jobs I had in mind. Martyn arranged a demonstration of the new ARION, and I was impressed not only by the feel and design of the tractor, but also that Martyn had listened and really understood what I was looking for. I liked the whole CLAAS support structure, and the fact that CLAAS is still a family company.”

“The combination of the air seat and sprung cab makes it very comfortable, but in hindsight perhaps I should also have opted for the sprung front axle. My tractor was delayed by the shortage of tyres, so Hamblys loaned me a tractor with a sprung front axle. This made a noticeable difference when returning across the fields with an empty silage trailer.”

“Owning and using one of the growing number of CLAAS tractors in the area does get me noticed, but I’m getting used to it!! ”

CLAAS GPS Pilot steering solutions

From January 2009, all CLAAS GPS PILOT guidance systems will come as standard with the new Outback S3 terminal, which provides a far greater functionality and information than previous terminals.

The new Outback S3 terminal has a 1GB internal memory and incorporates an 8.4 inch colour touchscreen through which the user can access menus and information. A touchscreen QWERTY and numerical keyboard is accessible so that data and field information can be easily inputted. The terminal also incorporates a USB connection so that data can be quickly and easily exchanged, or the software updated.

Among the many new features and functions there is the ability to:

- Store multiple A-B tracks for different fields
- Enter and store different A-B tracks for individual fields (e.g. one for cultivating and one for spraying)

- Choose from four different views depending on user preference
- Zoom in and out for a better overview
- Create and display border lines that allow field areas to be calculated
- Display the area traversed and the corresponding size of the area
- Point mark
- Drop and name ‘flags’ to identify specific problems
- Sort and store previous tracks and add information such as field size, operation, name and date

The new Outback S3 terminal is suitable for use with all CLAAS guidance systems, which have been grouped together under the CLAAS GPS PILOT banner.

Four systems are available, depending on the level of accuracy the user requires.



Reliable, multi-purpose tractor

When you rely on just one tractor for all the main jobs on the farm and expect it to do over 1600 hours a year, reliability is essential.

Running 240 beef cattle and 600 sheep on his 180ha (440 acres) upland farm near Aberfeldy in Perthshire, Drew Kennedy has been extremely pleased with the performance and reliability of his ARION 510 CIS, which was one of the first to be sold by Sellars last April.

“When you have only one tractor it’s got to be reliable, which unfortunately my last tractor wasn’t. In nine months it had 42 things go wrong and it was replaced by another, slightly more reliable model after 14 months,” says Drew.

“Before buying the ARION I priced it against two other tractors to a similar specification and even though the Arion was the most expensive, there was only £691 between them all. However the reason for buying it was purely because of the service I have had from Sellars. I have dealt with them for a long time and even when I had problems with the other make, their support was exceptional.”

The ARION 510 CIS, which has a rated power output of 110hp and a peak of 117hp, is equipped with both a 3.5 tonne capacity front linkage and a 2.5 tonne capacity front loader.

About the only job the Arion does not do on the farm is round baling the 1250 bales of silage, 350 bales of hay and 1000 bales of straw made each year.

Ahead of silaging, the tractor is used to mow and ted the crop using a DISCO 2650 mower and VOLTO 52 tedder. Due to the steep ground and awkward gates, instead of using a trailer, Drew uses bale spikes on the front and back of the ARION to transport four bales at a time back to the yard for wrapping. One of the other main jobs in the summer is to haul back the 1000 bales of straw Drew buys in the field near Crieff.

“It’s a 50 mile round trip through the mountains, so there is a lot of hills, but the HEXASHIFT transmission is wonderful,” he says. “Once you get used to it the DRIVESTICK control is fantastic and effortless. The speed matching is particularly good, especially on hills and really makes the tractor exceptional on the road. The 40kph road speed means I can get three loads done a day and the Eco speed and cut in engine speed definitely helps save fuel. I reckon I get one more load per tank a day. Generally I have also found that even with the higher cost of fuel, it is still cheaper to run than my old tractor.”

“The tractor is very well balanced and even when moving heavy silage bales I have never had the back end off the ground, and the sprung cab makes it very comfortable over a long day, plus access to the cab is excellent which is important when you are constantly getting in and out. Also the 110 litre/minute load sensing hydraulic system makes a great difference when using the loader and bale shredder in the winter.”



GPS PILOT – Egnos

With a pass-to-pass accuracy of between 15-30cm, the Egnos based system is ideal for those who do not need a high level of accuracy, or for those looking for an entry into steering guidance with the possibility to upgrade to more accurate systems later.

GPS PILOT – Omnistar HP

To achieve a higher degree of accuracy, in addition to the three satellite signals used by Egnos, Omnistar HP uses a fourth differential signal from a stationary satellite over the Equator, for which a licence fee has to be paid. This gives a pass-to-pass accuracy of 5-10cm so is suitable for auto-steering but does require a clear line-of-sight to the south.

GPS PILOT – Baseline HD

Baseline HD is unique to CLAAS and uses a tripod-mounted base station to provide an accuracy of 4-8cm, the same as similar RTK systems but far less expensive. Unlike other tripod systems, the Baseline HD unit also incorporates an in-built 36-hour battery, making it very compact. The system uses an FM signal, with a range of about 5Km, and does not rely on line-of-sight, so is more robust and does not get ‘lost’ as easily.

GPS PILOT – RTK

With an accuracy of 2-3cm, RTK provides the highest level of accuracy. The RTK system uses a fixed base station, normally fitted to a tall building, that issues a dual frequency FM signal with a range of up to 20km. Unlike other RTK systems on the market, the CLAAS RTK system also incorporates a security feature so that only authorised units can connect into it.



AXION – Counting the Costs.

We don't need to tell you the importance of fuel efficiency, suffice to say that the design and technical innovation of the AXION tractor range officially achieves top marks when it comes to fuel savings.

When compared to 21 other tractors tested, the CLAAS AXION used on average 7% less fuel in the DLG Powermix fuel consumption test.

“Put bluntly, CLAAS’s AXION 850 consumed less fuel in our static test than any previously tested tractor in this power class.” *PROFI October 2008*

Both ARION and AXION combine the very latest technology Tier III engines and HEXASHIFT transmissions, guaranteeing you Fuel Efficient Farming.

Contact your CLAAS dealer today.

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