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Wheeled Loaders, Hydraulic Attachments, Tyres & Traction Chains









Wheeled loaders have become a familiar sight in the UK waste and recycling industry. Yet waste operators have consistently struggled to maintain uptime due to dust clogging up their machinery. Until now that is. More and more customers are now turning to Bell Equipment, whose loaders are making heads turn.

The UK waste and recycling industry provides an invaluable service in keeping our nations clean and green.

Yet the end result belies the harsh and dusty working conditions experienced across the sector. This is particularly true of indoor recycling plants.

While the human operators protect themselves from dusty atmospheres with face masks and goggles, wheeled loader manufacturers have mostly failed to provide the perfect solution in preventing airborne debris from building up in engines and cooling systems.

The problem causes expensive downtime and excessive machine maintenance.

But, in 2009, Bell Equipment introduced its six-strong range of wheeled loaders to the UK, and customers have been increasingly impressed; not only by the higher-thanaverage standard specifications and power but by their ability to keep on working in the very harshest of waste handling environments.

The secret lies primarily in Bell's unique QuadCool cooling system, which keeps the internal mechanics clean and operational, whatever type of environment the loaders are operating in.

New West Gypsum Recycling, based in Avonmouth, Bristol, is a prime example of where Bell loaders have shone.

On Cloud Nine

The company, which operates from an industrial estate in St Andrews Road, provides the harshest test for any machinery. Its core task involves breaking up used or damaged plasterboard and urning it to calcium sulphate powder, which is then delivered to Lafarge to nake new plasterboard.

The operation, which processes between 500 and 1,000 tonnes of material per week, takes place inside a shed that is constantly shrouded in a cloud of white dust.

In 2010, New West Gypsum trialled a Bell loader when it was looking to replace an existing machine from another manufacturer. The trial went well and the plant now operates two Bell L1506E wheeled loaders.

Bob Curd, UK operations manager for New West Gypsum Recycling, said: "Our working environment would challenge any machine, but we've noticed a huge difference with the Bells due to the QuadCool system. We've certainly seen a reduction in downtime."

"Whereas we were continually having to blow out our previous loaders, we could now get away with doing it every other day if we had to. They're fantastic machines."

The story is similar at Premier Waste, in Perry Barr, Birmingham, which operates one of the largest indoor recycling facilities in the country. Premier Waste segregates virtually all types of construction, demolition and municipal waste, including plastics, wood, metals, soils and aggregates.

Mark Jones, of Premier Waste, said he was immediately interested in looking at a Bell loader when he first came across them at the 2010 Hillhead exhibition. He trialled a demo machine and purchased a new L1706E with high-tip bucket.

Mr Jones said: "It's got great build quality and many people commented on how robust it looked. It is all-singing-anddancing - the fact it came with all the added extras as standard was also very important.

After performing 6,000 hours of service in around 12 months, Premier Waste has now traded-in the original machine for a new L1706E plus a slightly smaller L1506E".

"Other loaders we've operated have had problems with fans clogging up due to the working environment," said Mr Jones.
"But as soon as I saw the QuadCool system on Bell's loaders I realised it was possible to overcome this problem".

"We would generally need to clean our other machines three or four times a day, but with the QuadCool we now do it once a day at the end of each shift. We probably don't even need to do it that often. We've definitely saved on downtime."

The QuadCool system was designed by John Deere, which manufactures Bell's loaders in the US to UK specifications. It was initially designed to counter the airborne debris common in the US agricultural market.

QuadCool places the wide-core radiator, transmission, axle, hydraulic and air-to-air coolers in a separate compartment to the engine. The individual mounting of wide-core radiators on Bell's loader range eliminates debris collection in between radiators, which is common in other manufacturers' machines.

With the E-Series loaders, steel access panels have fine mesh screens to filter cooling air as it enters the QuadCool system. The holes in the screen are substantially smaller than the wide-core radiators, so any debris drawn in passes straight through the system, thus extending intervals between cleaning - and increasing up-time.

Included "as standard" in the QuadCool system is the automatic reversing fan and a proportional fan speed, which operates independently to the engine. ▶

It is a system which has not failed to impress a growing number of Bell customers in the waste and recycling sector, many of whom were unfamiliar with the strong reputation Bell had already established with its articulated dump trucks.

Industry leader Görrel purchased 12 Bell loaders in 2011 following a successful demo at a wood recycling plant in Manchester.

Mike Haskell, general manager of Görrel, said: "The extremely dusty environment was intentionally chosen to really put the Bell machines through their paces.

Other loaders operating on that particular site have experienced severe overheating problems due to the airborne debris clogging up the system, leading to a lot of downtime for cleaning and maintenance.

The Bell L1706E loader that was trialled performed impressively and was still spotlessly clean after the end of the demo."

Other Bell loaders have been purchased by the likes of Tom Waste Solutions in Scotland, Slough Heat & Power (Scottish & Southern Energy), Earthline and Brewsters Waste Management in East London.

Without exception, every one of them has been impressed with the Bells and, particularly, with the way the QuadCool system overcomes the problems of debris

Brewsters Waste Management bought its L1806E loader from Bell after having a larger L2106E machine on hire from Görrel.

Part-owner Steven Brewster said: "It's a beautiful machine - and for the price and the extras you'd have to be silly not to look at it. The reversing fan works perfectly. With the machines we've had before we would need to blow them out every other day; but even after having the Bell machine for three weeks, it still didn't need it. That's pretty impressive when, apart from a coal mine, I don't think you can get a harsher, dustier environment than this."

Slough Heat & Power, a subsidiary of Scottish & Southern Energy, purchased three new Bell L1806E loaders to work in its woodchip and waste-derived fuel processing sites, once again after trialling a machine on site.

John Watson, national fuel manager (waste and biomass) for SSE, said: "The Bell machines have proved to be much better at working in our environment than any other machine on the market. There are few harsher conditions that a wheeled loader can operate in."

He added: "If you look at what is available in the market place at the moment, and if I had to replace the machines today, I would more than likely replace them with Bells.'

As Bell ventures deeper into the waste and recycling market, it is finding that its loaders, which range from the L1204E up to the L2606E, are having an even more positive effect on customer operations and efficiencies than it ever imagined when it launched the new loaders.

Neville Paynter, managing director of Bell Equipment UK, said: "The machines are genuinely well-designed, robust and reliable, and from the outset we decided to offer the highest standard spec on the market. Yet it is the QuadCool system which has made the really big difference in the waste and recycling industry. It's fantastic to receive such positive endorsements from some of the biggest players in the sector."



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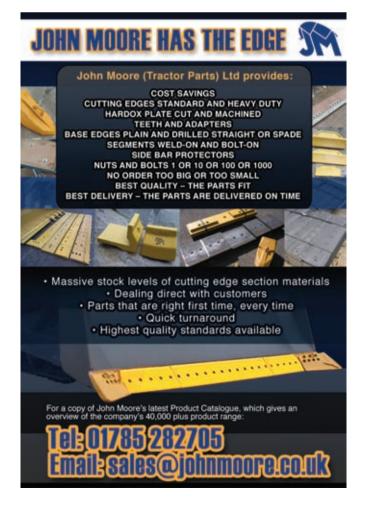


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Kal Tire UK prove it takes more than just rubber to produce quality retread earthmover tyres

Retread manufacturing at Kal Tire Mining Tire Group's UK plant has shown that despite global raw material costs increasing and a major shortage of good casings to retread, a quality product will always be in demand, with more than 1.3 million pounds of rubber compound used and in excess of 3,000 tyres produced over the past 12 months.

Whilst the actual manufacturing output has shown the results for the year, it is the infrastructure that has been put in place over the past three years, the initiatives introduced and adhered to and the performance of the manufacturing team, that have all contributed to the outstanding results.

Factory

The manufacturing facility, located at Kal Tire's UK head office, near Alfreton, Derbyshire, houses state of the art retreading machinery. New mould matrixs, satisfy customer demand for different tyre size tread patterns plus a refurbished semi automatic tyre builder to work alongside the recently purchased fully automated builder, take the value of the equipment to in excess of £4million.

"We have a continual improvement programme in the factories" said UK and Ghana Manufacturing Manager Wayne Cornell "and we will continue to look and find ways to improve the efficiency and effectiveness of the whole process".

LEAN Initiative

Introduced 3 years ago into the Alfreton factory following research and development by UK Managing Director Darren Flint, the LÉAN initiative has made a significant contribution to performance since then.

The core components of the initiative centre around the '5'S's philosophy' - sort, set in order, shine, standardise and sustain. Darren Flint added "We are delighted with the way the manufacturing team have taken the initiative on to improve many aspects of the factory. The bottom line is simple - reduce all forms of 'waste' be that material waste, effort, energy, time etc. - it is a case of recognising where there is waste, and doing something about it".

Whilst accepting that the manufacturing



process of retreading earthmover and mining tyres will always generate waste', what Kal Tire have indentified and reacted upon is that this discarded material (primarily rubber compound 'crumb' buffed from the tyres prior to retreading or repair) may have a secondary use.

Hysteresis testing has been introduced for a trial period to determine if the reclaimed materials can be reused, together with other raw materials and compounds, in the manufacturing process.

As Wayne Cornell said "This initiative again highlights Kal Tire's continual commitment towards recycling and environmental efficiency - after all, 'retreading is recycling'."

Tyre Repairs

The global nature of the Kal Tire Mining Tire Group is such that the transfer of manufacturing or service principles, together with products and supplies, has opened many new avenues for process improvements.

Large tyre injuries have always been a concern - the side wall or tread damage that exposes or breaks large areas of the tyres infrastructure has always been a major health and safety issue.



Perhaps more prevalent in the North American mining environment, Canadian tyre repair component specialists have started a 'major injuries' training programme for Kal Tire's UK repair technicians and a number of tyres will be out on trial shortly. "If these larger repairs prove successful then again, we will be giving our customer the chance to extend their tyre life, at a fraction of the replacement cost" said Wayne Cornell.



A drive towards competitive advantage

The modern production environment demands reliability and flexibility from plant equipment, allowing it to cope with the wide range of variables which may occur. This is essential if high productivity is to be sustained and profit levels to be maximised.

Rexroth puts you in touch with leading engineers in heavy systems engineering incorporating hydraulic drive systems and controls, servo drives and controls, pneumatics, linear and factory automation. The scope of Rexroth products for heavy engineering projects is unrivalled and thanks to its expertise in applications, provides a comprehensive service and unique solutions to all heavy industries.

Bosch Rexroth is renowned in heavy industries with its hydraulic systems technology and other products, enhanced now with unique Hägglunds direct hydraulic drives. This brings significant benefits such as starting with full load, low inertia fast response and accurately controlling torque to prevent overloads. This wide range of products and its formidable engineering knowledge, ensures the best drive and control solution for your plant.



▲ A typical drive consists of a Hägglunds motor which will provide the torque required. A power unit with a variable displacement pump/motor set and necessary tank, filters and instrumentation is also included in addition to a control and monitoring unit and the inter-piping. The arrangement is versatile and flexible which enables customisation to suit the exact requirements of the application and environment.



Belt conveyor for coal at power station

This Amco Birtley belt conveyor at Tilbury Power Station in the UK is 200m long with speed range up to 2.5m/sec and capacity of 3000 tonne/hr of coal from the ship unloaders. Smooth dynamic acceleration and braking enables the loaded conveyor to stop quickly and prevent flooding the downstream conveyors.



Autoclave processing household waste

This Joseph Rhodes autoclave is a large rotating drum with doors each end processing household waste under pressure with steam. A Hägglunds motor drives a single pinion against a girth gear in both directions and the drum has to be stopped accurately to engage a shot bolt before the auxiliary hydraulics opens the doors for loading and unloading.



Agitators or mixers in process industries

Direct hydraulic drives are very suitable for agitators either top or bottom entry.

They give excellent overload protection to the impeller arrangement with a wide speed range. They are far more compact and weight saving than the traditional gearbox which makes attending to the agitator shaft sealings much quicker and easier to maintain.



Doosan New Generation Large Wheel Loaders

At Intermat, Doosan Infracore
Construction Equipment is launching the
new generation DL300-3, DL350-3,
DL420-3, DL450-3 and DL550-3 large
wheel loaders. Powered by Scania SCR
diesel engines meeting the Stage IIIB EU
emissions regulations, the new large
wheel loaders combine high engine
power output with new ZF transmissions
and several other features to minimise fuel
consumption and provide exceptional
performance, ease of handling,
serviceability, durability and significantly
enhanced operator comfort.

With bucket capacities ranging from 3.0 to 5.5 m³, the new Doosan large wheel loaders are intended to meet a wide range of material-handling needs from loading and transporting granular material (such as sand and gravel) to industrial, mining and quarrying applications.

The DL300-3 and DL350-3 wheel loaders are driven by the 9-litre Scania DC09 SCR 5-cylinder diesel engine delivering a maximum power output of 202 kW at 1800 rpm, whilst the DL420-3, DL450-3 and DL550-3 models are powered by the larger 13-litre Scania DC13 SCR 6-cylinder diesel engine delivering 'best in class' power and engine torque, with maximum power outputs of 264, 264 and 283 kW at 1800 rpm, respectively.

The new large wheel loaders have three engine working modes: ECO, NORMAL and POWER, to adapt the machine to different applications, with different engine speeds and gear steps according to the working mode engaged. With the 'Power-Up' function, the operator can manually adjust to the next highest working mode by applying a full stroke of the accelerator pedal. With this function, the operator can travel in moderate NORMAL mode and switch to POWER mode when it is really needed, such as when taking material from a pile. This capability helps to reduce fuel consumption. The ECO Bar provides information about fuel consumption in relation to machine performance in real-time, allowing the operator to select the driving profile for the best fuel efficiency.

The operator can set a password for machine start. If Auto Idle is activated, engine speed goes down about 200 rpm after 10 seconds if there is no machine movement. Auto Idle is ideal for applications with long waiting times, such as truck loading. Thanks to Auto Idle, tuel consumption is reduced by up to 8%.

All new generation Doosan large wheel loaders are equipped with load-sensing controlled, variable hydraulic piston pumps, improving performance and reducing fuel consumption. With load sensing, the hydraulic pumps receive a signal from the MCV informing how much oil is needed. This helps to save on engine performance.

With the clutch cut-off system engaged, the driver is able to disconnect the transmission from the engine by operating the brake pedal, to have 100% engine performance for the hydraulic system. As a result, movements are faster, breakout force is maximized and fuel consumption is reduced.

All new generation Doosan large wheel loaders are equipped with a torque-converter-cut-off (TCCO) system which, when activated, is switched on automatically. This provides a direct mechanical connection between the engine and transmission without loss of power and torque by the torque converter. Tests show that fuel consumption is up to 10% lower with increased traction compared with conventional systems. In contrast to the drive systems on other machines, the TCCO can be engaged



even in 2nd to 5th gear, not just in the highest gear. This makes the TCCO more efficient.

New ZF 5-gear transmission

The new ZF 5-gear transmission improves the transfer of power from the engine to the wheels and contributes significantly to the overall reduction in fuel consumption. The change from four to five gears provides better response and acceleration, especially on slopes. Engine speed variation is less thanks to smaller gear steps, and lower engine speed throughout the whole drive range reduces fuel consumption. Thanks to higher shift quality, noise levels are lower while driving performance and productivity have been increased. A lock-up-clutch also helps to reduce fuel consumption.

New ZF limited slip Type II differential axles provide more durability and a longer lifetime. Rolling resistance for the axles is also reduced, improving traction and decreasing fuel consumption. As an option, customers can choose ZF axles with a hydraulic differential lock. This function is engaged via the operator pedal or in automatic mode, depending on

the torque resistance in 1st and 2nd gear. The advantage of the hydraulic lock system is that it has less rolling resistance compared to the limited slip system.

The radiator fan is hydraulically driven and controlled by an ECU. Changing the fan direction for cleaning the radiator can be done manually from the cab, without having to switch off the engine. Fan reverse intervals (30 minutes to 2 hours) can be set via the menu.

High Operator Comfort

A new cab design features improvements both outside - such as better visibility due to a wider front glass section and an extended wiper blade area, better protection thanks to larger mud guards, improved hand rail and step designs and a new roof cover - as well as inside - such as the new instrument panel with integrated vehicle control unit (VCU).

The control panel has been redesigned to allow the operator to choose the information they want on the display. Using the Main Menu, the operator has access to several functions and machine information. Pressure, temperature and engine speed can be monitored in real time. Detailed operating information is available via the Special Menu.

The new wheel loaders will have Grammer seats, which are vertically as well as horizontally air suspended. This design, which cushions movements to the front and the rear, is recommended by orthopedic consultants and is well accepted by operators.

By relocating the reservoir for the wiper water to the outside of the cab, space inside has been increased, providing more foot room. The air conditioning system is regulated automatically by a temperature sensor.

To keep cans and food fresh, a new cooling compartment is standard. There is also more storage room behind the seat.

Durability and Serviceability

All Doosan new generation large wheel loaders have as standard the SKF Vogel Auto Lubrication system. This system increases operational hours and extends the lifetime of the machine.

The lift arm has been strengthened with 10% thicker metal in the arm and the tilt lever.

An automatic front control system allows the operator to save one low and one high position. The boom raise 'kick out' function reduces cycle times and increases operator comfort. 'Return to dig' positions can also be saved.

New kinematics and a larger cylinder on the lift arm have allowed the main pressure in the front hydraulic system to be increased by up to 40 - 70 bar, depending on the machine size, with a corresponding increase in breakout and lifting forces of up to 5%.

A larger opening angle for the side door improves serviceability. A 90° swing-out fan with swing-out side doors provides easy access to the rear for cleaning the new one block radiator. The operator can set and monitor the time remaining to the next service. If the maintenance period is exceeded, a pop-up warning will appear. Increased space in the engine compartment ensures that components such as filters, valves and batteries are within easy reach for service work.

For more information about Doosan construction equipment, visit the website: www.doosanequipment.eu





Geith Launches New Automatic Couplers at Intermat

Geith, a world leader in the design and manufacture of couplers and attachment products for excavators, is launching new safety-focused, automatic quick couplers for a range of excavator sizes. Thanks to their quality, reliability, durability and low maintenance, Geith couplers are among the very best in the industry.

The new QC35/40 hydraulic coupler is designed for use on mini-excavators from 2 to 4 tonne in weight and expands the range of Geith couplers to cover excavators from 2 to 90 tonne

These fully automatic couplers ensure a safe changeover of attachments without the need for the operator to leave the excavator cab. A patented double pin locking system ensures that the coupler retains the attachment in a safe position even if there is a loss of power.

Clearly visible from the cab, the front safety lock is activated by a powerful spring and hydraulic cylinder. This design offers a clear advantage over gravity systems, which is especially important when working in very difficult and dirty environments.

As safety is a core value at Geith, the company is participating in the ISO Working Group aiming to create a new International Quick Coupler Standard, which is scheduled for publication in 2013. Since the new Standard is still under development, no company can claim to be compliant. However, Geith has ensured that all its couplers comply fully with all current national standards and safety regulations, and will continue to do so in the future.

The focus on safety has led to increased complexity in some coupler systems, compromising on reliability and performance. By contrast, Geith has continued to focus on developing the simplest, most reliable and safest couplers with few moving parts and no grease points so there is a limited need for maintenance.



Viby preparing for **UK** growth

Viby Attachment is using Hillhead as a further boost for a record increase in UK market activity this year.

The Danish attachment manufacturer has already seen UK sales increase by more than thirty per cent in the first quarter of 2012 compared with the same time last year, and it believes Hillhead will help to reinforce this growth trend.

Andrew Little, UK sales manager for Viby, said: "During the recession many customers have understandably tightened their purse strings, and either delayed buying new equipment or bought

"The cheaper options, however, typically mean a compromise in quality. We've always had a reputation for high quality and, as a result, we are now seeing a significant uplift in sales of our products.

"Viby attachments are, unashamedly, built to last, so in the medium-to-long-term, will provide unrivalled value for money. I think our customers recognise this.

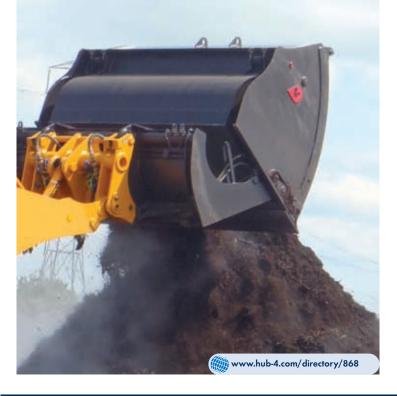
Viby will be showcasing a range of its attachments at Hillhead, both on its stand (B28) and in the quarry demo area.

Visitors will be able to see a selection of Viby's unique High-Tip and GP buckets for wheeled loaders, which have each experienced a major growth in interest from the UK waste & recycling markets as well as the traditional construction and earthmoving sectors.

Viby will also display a heavy duty rock bucket, one of which is also likely to be working in the quarry demo area on one of its customers' excavators.

Volvo has also confirmed that it will be using a 3m3 Viby High-Tip bucket with Top Grab on a new L60G wheeled loader in the demo area, and Bell' will also be giving a Viby bucket a run-out on one of its demo loaders.

Little said: "Hillhead is always an excellent exhibition, and it has fallen at just the right time for us - when interest from UK customers who recognise the value of durability is at an all-time high.





Recycling **Specialist Goes For Case**

A trio of machines from Case Construction Equipment is helping to increase productivity and reduce fuel costs for one of the UK's leading wood processing and recycling specialists. Barnsley-based Case dealer Warwick Ward has supplied two new Case 821 F XR Waste Spec Wheel Loaders and a TX130-45 Waste Spec Telehandler to R Plevin & Sons for use in their Elkesley processing plant in Nottinghamshire.

Elkesley is one of three sites that in total collect, process and distribute in excess of 600,000 tonnes of wood a year, which is then used to make biomass fuel, composite wood products and animal bedding.

The three machines are used to handle wood waste coming into the plant as well as processed fibre stockpiled at the site. Working 2 shifts per day up to 6 days per week in dry, dusty environments, the machines were chosen primarily for their durability, productivity and fuel efficiency.

The Case 821 FXR wheel loader is one of three F-Series loaders introduced last year. Equipped with a 6.7 litre Tier 4 interim certified diesel engine, the F Series loaders offer increased horsepower and torque output while selective catalytic reduction (SCR) technology ensures they meet the latest emissions regulations.. The high lift arm machines are fitted with 8m³ High Tip buckets.

Designed with the operators in mind the 821F range is equipped with a spacious operator's cab, ensuring unobstructed views to both edges of the bucket while a wide window and sloping engine cover

ensure excellent visibility to the rear.

Ergonomically placed controls and a fully adjustable seat guarantees a comfortable, stress-free environment for the operator

The award-winning Case Joystick Steering system lets operators move seamlessly between the joystick and the steering wheel for high production operations, while the Case Powerlnch feature assists the operator in tight loading areas, regardless of engine speed, providing full power to the loader arms and bucket cylinders.

"The two 821F XR loading shovels are working two shifts from 6 o'clock in the morning to 10 o'clock at night over five days and sometimes six" says Dean Ashton, Group Engineering Director with Plevins.

"I look at having the least machines as possible and having them work as long as they can" he adds.

To find the right machines, Plevins undertook an exhaustive selection process which eventually led to the company abandoning its previous policy of running a Volvo-only fleet. "We looked at every factor and came to the conclusion that Case was our best option for fuel returns, loading capability, manoeuvrability and durability" says Mr Ashton.

Plevins quickly formed a close working relationship with local Case dealer Warwick Ward. "Wood recycling business is highly specialised", explains Mr Ashton. "We went through the spec in detail with Warwick Ward and they met that spec, met delivery times and have been extremely supportive at all stages".

"We expected the operators to be a bit of a stumbling block, having used the same machines for past 20 years, but they were very quickly on board" he adds. "They were impressed with the better visibility and overall performance, especially when pushing the stockpiles and loading high sided vehicles".

Another deciding factor for Plevins was the rear-mounted engine on the Case machines. "This meant the weight distribution was better and they don't have to carry a big counterbalance weight" explains Mr Ashton.

Furthermore, with the cooling system positioned behind the cab, there is also less risk of the engines overheating in the very dusty environment in which the machines work. "The cooling elements remain clear and the operators don't have to keep stopping work to clean the radiators as they did with the traditional machines" explains Mr Ashton.

In addition to the two 821 FXR shovels, Plevins has also taken delivery of a new TX130-45 telescopic handler which will undertake general duties about the site. Like the F-Series loaders, the TX range telehandlers are suitable for heavy duty applications, highly manoeuvrable and productive. Its 13 m telescopic boom gives unrivalled lift height and, when equipped with a high tipping bucket, the TX130-45 is an ideal general materials handling machine.

"The telehandler is ideal for our bulk low-density material. We put a large 4m3 bucket on it to deal with chipping operations and we can use it for loading high-sided vehicles if ever one of the loading shovels were unavailable" says Mr Ashton.

"On top of that we can use it for general use around the facility, either for lifting with the forks or, with the rear hitch, pulling the fuel bowsers around.

Since taking delivery of the three vehicles late last year, Plevins has noticed a dramatic drop in fuel consumption at the site, says Mr Ashton: "We're using far less fuel with the new Case products than we traditionally have."

Lower fuel consumption not only saves money but also saves time. Capable of working longer on a single tankful, the Case machines need fewer interruptions for refuelling on a daily basis.



Tyre Protection Chains -Providing the Ultimate Advantages to your **Operating Process**

Do you want to reduce operating costs, decrease downtime and increase prodictivity? If yes no need to look any further. RUD Chains can help make this a reality with their innovative tyre protection chains and latest technological advances.

Profitable productivity is vital for companies in all sectors operating in such turbulent economic climates, ensuring a high level of competitive advantage is achieved through the quality and price of products. This concept most certainly applies to heavy industries such as quarrying, materials handling and recycling to name a few.

many more. They retain a dedicated approach to providing a complete solution to the companies they work with. Their main objectives are to firstly reduce operating costs, decrease downtime and most importantly increase overall productivity.

A comprehensive installation and maintenance programme is an essential factor in delivering long term benefits from a tyre protection investment. RUD offer a high level of technical advice, support and service for tyre protection projects from start to finish and throughout.

Predominantly RUD provide a product specialist to determine a chain design that meets your



Where loading and hauling is a central component of an operation, optimizing plant availability is the key to success, and this success depends on skilled staff and a rigorous maintenance schedule with particular attention being paid to the tyres. A good plant manager will make certain that both staff and machines are well protected, for without a full set of sound tyres, just as without a skilled operator, a loader or truck is simply an expensive, idle lump of metal.

RUD a leading manufacturer of tyre protection chains have worked alongside many heavy operators across numerous industries such as quarrying, mining, recycling and

specific needs and requirements of your working environment. The correct selection of tyre protection chains is determined by many parameters which are mostly site and application specific. These factors would include issues like machine travel speeds, distances, and abrasiveness of the surfaces.

RUD's tyre protection chains use case hardened alloy chains linked in patented designs to provide a high level of tyre protection and traction qualities. As a market leader in tyre protection chains RUD have a high level of technical know - how and a comprehensive product range.



There are numerous benefits to using RUD's top quality tyre protection chains such as three wear levels to provide a greater wear resistance, sharp edges on the outer surface to increase traction and multiple link designs to suit a wide range of aggressive and low traction surfaces. The designs and benefits vary to each project and specific requirements.



RUD's innovative tyre protection chains ensure that customers in demanding working environments can operate effectively and safely. Working machines in areas with fire and hot slag conditions can be very dangerous and lead to loss of equipment through burnt tyres. With RUD's tyre protection chains they offer specially developed hardened forged wear links which guarantee optimal tyre protection in the use on hot and burning surfaces.

RUD pride themselves in being a market leader in the tyre protection chains market and also being at the forefront of the latest revolutionary technological innovations. RUD's latest advanced innovation is The Chain Monitoring System (CMS). CMS is the first system of its kind to utilise the proven Radio Frequency Identification (RFID) technology in tyre protection chain applications. The CMS enables technicians to electronically capture live service and performance data on site. This then allows the technicians to provide valuable tailored reporting resulting in efficient and quick decisions on optimising machines.

Primarily the CMS provides technicians and operators with a high level of reporting data helping them maximise their tyre protection chains through: increased safety and traction from less tyre change outs, increased machine availability due to reduced downtime, tyre damage and repair. The benefits are countless, one of the most important factors being the reduced operating expenses from lower fuel burn and less tyre replacements.

