The introduction of the T series from Valtra in early 2003 put the company ahead in terms of styling and design. Valtra decided to follow up the ‘T’ tractors with their smaller sibling, the ‘M’ series. Ranging from 115 to 150hp, the M series used the latest in four-cylinder engine technology to obtain high power from a compact machine. Only a limited number were sold in the UK, but Howard Sherren shows us what to look for if you get the chance to buy one.
Claimed as ‘The world’s most powerful four-cylinder tractor’, the M series had high expectations to live up to. The M series was claimed to be the first line of tractors in the world offering 150hp from a four-cylinder turbocharged engine. Revealed at the beginning of July in 2003, the design of the M Series was determined by three main demands: versatility, efficiency and economy in their broadest senses and combined in one tractor. The modern design of the M Series continued the theme of the internationally recognised and awarded S and T Series machines launched prior to the release of the M.

Powered by a series of diesel engines designed and manufactured by SisuDiesel the Valtra units were known for reliability and excellent fuel efficiency and all M Series engines featured electronic management and air-to-air intercooling with viscous fans. A powerful battery and electronic preheating system guaranteed start-ups even in the coldest weather. Standard fuel capacity was 165 litres and this could be increased by specifying the optional 170-litre reserve fuel tank.

At 115hp the M120 was fitted with a low-speed engine that provided exceptional torque. Long service intervals and low fuel consumption made the M120 an economical and efficient machine. The mid-range 130hp M130 could be equipped with Valtra’s HiTrol turbine clutch. This service-free clutch was a popular option on many farms for front-loader work and other shuttle operations and in grass fields, particularly with heavy trailers, where a smooth start was essential to prevent damage to the sward by spinning wheels. The smooth starts possible with HiTrol have also proved its worth during forest operations. At 147hp the M150 was the flagship of the range offering unparalleled power reserves for use with large implements. The M150 was highly manoeuvrable and put quite simply, it was the world’s most powerful four-cylinder tractor.

The total lift capacity was a hefty 7.2 tonnes and with Valtra’s Autocontrol with Drive Balance Control, even the largest implements could be used easily and in safety. With the main hydraulic controls located in the seat arm rest, implement operation was simplified still further. Uniquely, Valtra allowed the customer to choose whether the control and armrest should be situated on the right or left-hand side.

September 2004 saw the option of cab suspension offered to the M and T series, though Valtra had offered cab suspension as standard equipment on S Series tractors since 2001. The suspended cab was attached to the frame at the front using vibration insulation, as before. At the rear, corners of the cab were attached to the frame via two shock absorbers and coils. A Panhard rod located on the right side of the cab limited lateral movements, and stoppers prevented excess movement of the cab in dangerous situations. In normal fieldwork, it was claimed that the suspension reduced vertical seat movements by around a third and in extreme situations, such as when harrowing ploughed fields, by up to 80 percent. On normal gravel tracks, the impact of small bumps was reduced by around 15 per cent.

One way to describe the ‘M’ was as a small...
The bonnet lifts high and side panels are removable to access the SisuDiesel 44EWA engine of a ‘T’, or a ‘T’ series with a four-cylinder engine. At 20cm less than its bigger brother, the M150 costs less for the same hp and is far more manoeuvrable and lighter. By using the same high-specification cab, on top of a heavy-duty back-end capable of lifting 7.2 tons, connected to a ‘pokely’ four-cylinder SISU engine and plenty of electronics, Valtra had designed an exciting tractor. Sadly at the time, Valtra continued its basic spec, ‘bullet-proof’ 6000 series and ‘C’ series which were considerably cheaper and very simple and suited many livestock and mixed farms. Buyers still thought they were paying a premium for the model and this meant that not as many of these models were sold in their three-year production. The replacement ‘N’ series which replaced both the C and M was launched in November 2005 in production and half-way through 2006. The new range consisted of six models ranging from 101hp up to 150hp with a 160hp transport boost, and reports so far have been excellent.

**Engine**

The M150s belonged to a range of four-cylinder engine models, powered by SisuDiesel unit capable of achieving up to 150hp when fitted to the top of the range M150 model. All models used the 44EWA 4.4 litre engine, which had a 108mm bore and long 120mm stroke. The M120 and M120E were classed around or just under 108mm bore and long 120mm stroke. The M120 used the 44EWA 4.4 litre engine, which had a maximum of 580Nm on the M120E and M150, an excellent little performer.

Look out for the 170 litre auxiliary fuel tank, the maximum fuel capacity was a handy 335 litres with it fitted – the standard 165 litre tank was considered to be too small. SisuDiesel engines are known for their excellent reliability as many machines on the market are now fitted with this unit. Electronic hand throttle was standard and all M Series models were available with Cruise Control as an option, which allowed the driver to choose either a set driving speed or set engine speed. Service intervals on the engines were at 500 hours, similar to most modern tractors currently available. The reliability and cold starting of the SisuDiesel engines is excellent and hardly any issues have arisen with them to date, with some of the M series tractors reaching 5,000 hours without any glitches. Check for a service history, as keeping the engines maintained is very important due to their high specification.

**Gearbox**

When it comes to the transmission it is identical to that seen in the larger T series. This was a 36F x 36R Powershift transmission equipped with a programmable forward-reverse shuttle, including an electronic parking brake, electronic hydraulic control, load sensing, armrest control and a hydraulic output of 91 litres per minute. The Powershift was changed via buttons on the gear lever and they can set automatically to shift to a higher or lower gear as necessary. You could let the system shift according to the pre-programmed factory settings, or you could easily programme your own settings according to your experience and needs, based on the RPM.

Options included a 50kph top speed, and it is worth noting that the first gear of the top range could be a bit too high and the medium range may be needed to pull away on the road. An additional useful transmission feature was that the four-wheel drive engaged when the tractor started off moving or changed the driving direction. This eliminated the wheel slippage that can break the field’s surface. The shuttle lever located on the left of the steering column operates the parking brake and the unique traction release system. This allowed you to stop the tractor by pressing the brake pedal or by letting the revs drop below 1,000 RPM, and then start off again by pressing the accelerator or removing your foot from the brake pedal.

Many drivers appreciated the straightforward mechanical gear levers, but the range lever was a bit of the stretch and the three powershift speeds would have been more effective with four. No major problems have been reported with the transmission so far; just check each gear engages and drives.

**Rear linkage and PTO**

The Category II linkage was capable of lifting 7200kg on all models, which meant the smallest M120 could lift the same as the range-topping M150. This put the smaller Valtra M series ahead of most of the competition. A 3.5 tonne front linkage at £2,420 and a PTO was offered as factory-installed option and is now a useful extra.

Dromone hydraulic hitches are worth finding – check for the usual linkage abuse and loose or broken pick-up hitch bolts.

Check over the standard axle for plenty of greasing, and it is certainly worth seeking out models fitted with the Aires suspension.

The 'M' series was available in up to ten different colours. Metallic paint schemes such as gold or silver are worth finding as it can make your tractor stand out from the crowd. This particular model is in Claas colours, when Valtra was sold by Claas dealers.

"Tractor & farm Trader"
to be found fitted. The linkage was controlled by the electronic ‘Auto Control’ fitted to the armrest and ‘Drive Balance Control’ was a standard feature that provided linkage damping when an implement was in the raised position. The linkage was a robust design and the stabiliser bars were simple and strong. The pick-up hitch was regarded as a weak point by a few users who bought the tractor for transport work.

The standard hitch was Valtra’s own simple drop-down affair which worked extremely well and was one of the best available in terms of strength and reliability. It was perfect when the tractor was used predominantly on trailer work as it was an integral part of the tractor and around 75 per cent of tractors in Britain had them fitted. Unfortunately it lacked a push-out feature which many other manufacturers had available. The answer was to fit a Dromone hydraulic hitch as an optional extra which was considerably easier to use. It was found that extra lugs were required to strengthen it after problems occurred with bolts coming loose.

Check the hitch bolts regularly and look for cracks and wear while checking it over. There was a choice of two PTO speeds, the combinations were 540/1000, 540/540E and 540E/1000. These were engaged by a rocker switch and selected by a large protruding lever on the side console. The usual Grammar seat welcomes the driver into the bright and spacious cab; very few issues to worry about here.

The dashboard uses both dials and an LCD display to show the vital information – a very clear design and extremely easy to read.

The side console can be quite confusing at first glance, but the array of rocker switches and dials is straightforward once you have found your way around it.

The steps are very well positioned and strong, but aren’t particularly good at self-cleaning.

Air-conditioning and heater controls are basic – check that it cools effectively.

Axles and brakes
The front axle could be fitted with Aires air front suspension if required or when the 50kph transmission was specified. This improved the ride quality drastically, while adding cab suspension improved it further. The £2,200 option of suspension is definitely an added extra worth tracking down, even if it has a top speed of 40kph. A 4.7m turning radius was the same for all models when fitted in combination with the front suspension. The rear axle brakes were multi-disc wet brakes, which weren’t power-assisted so required that little extra effort to apply than those power brakes of the close competition. No big problems found here if the tractor’s trailer brakes have been effective when on road work duties. The brakes are fairly easy to replace and they only warp in extreme conditions, unlike some of the competition which break up and contaminate the whole system. When testing the tractor be prepared for a little braking effort due to the lack of power brakes. But the system will be a little more effective than the ‘T’ series thanks to the ‘M’ weighing less at five tonnes. Check for signs of grease around the front axle.

Cab
The ‘T’ series cab fitted to the ‘M’ was an improvement over the last models and the C or 6000 series which was sold alongside. The side pillar exhaust and the backwards-narrowing bonnet helped forward visibility, although the crossbar in the middle of the front screen and wide ‘C’ pillars hindered it slightly. Wide and deep steps provided excellent access to the flat deck floor. A well-known Grammar air seat was standard equipment and the new armrest mounted controls on the electronic models provided a comfortable working environment. The dashboard consisted of three simple analogue dials, engine rpm, fuel level and temperature, with a series of warning lights located underneath. The M Series instrument panel was connected to the transmission and engine electronic management systems.

This allowed the panel to display information about all vital functions of the tractor and it could also show the area covered and distance travelled, and the size of display graphics was adjustable to meet individual requirements. The small trademark Valtra steering wheel improved visibility of the dash and made steering from lock to lock faster. The air-conditioning and heater controls were mounted in the roof next to the right-hand side along with the all-important radio. The passenger seat located in the rear behind the driver was rather small and uncomfortable. Valtra offered the TwinTrack two-way driving system on the range allowing reverse drive to be achieved. There are a handful of machines with this fitted, so keep an eye out for them as it can be a very useful option. Look out for rusting wheel rims and some of the metallic paintwork occasionally starts to lose its lacquer.
Verdict
The M Series is a very misunderstood tractor thanks to the short production run and the C, T, XM and 6000 series all covering the same power bracket. Too many models meant it was confusing to decide which tractor would be best suited, but the N series launched later solved this. The M150 was the first, 150hp four-cylinder tractor with a huge specification. The machines are well-equipped and excellent for most operations, but less weight, shorter wheel base and less grunt may persuade buyers to opt for the larger “Ts. There should be quite a few M series being chopped in for the latest examples, with anything from 1,000 hours up to 6 or 7,000 on the clock. Pricing these models can be quite difficult, but low-houred models should fetch in the region of £30 to £35,000, with the majority of average-houred models around £27,000 and the earliest, high-houred tractor will be priced at the late teens or early twenties.

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