

MT500D

150-255 hp

Challenger



Smart Machines. Serious Results.

YOUR VERSATILE SKILLED WORKHORSE

Five new models in the Challenger MT500D Series with power ranging from 150-255hp deliver users optimum performance and efficiency with straight-forward automation.

Combined with their light, but immensely strong design, the MT500D Series tractors are built to provide exceptional productivity and economy in a wide range of tasks from heavy draft applications through to delicate top work.

All are powered by the very latest, most advanced six cylinder AGCO POWER™ engines. Developed specifically for agriculture and to run on high sulphur diesel, they are proven to deliver outstanding power and torque at low engine speeds for industry-leading fuel efficiency. The engines also generate up to 25hp extra power with Engine Power Management (EPM).

The robust AutoPower VI™ transmission provides superior, clutch-free changing of 24 speeds in both directions. A wide range of automatic modes, with lever and pedal operation, enhance efficiency and the driving experience. For specialist work there are creep and super-creep options providing speeds down to 1km/hr.

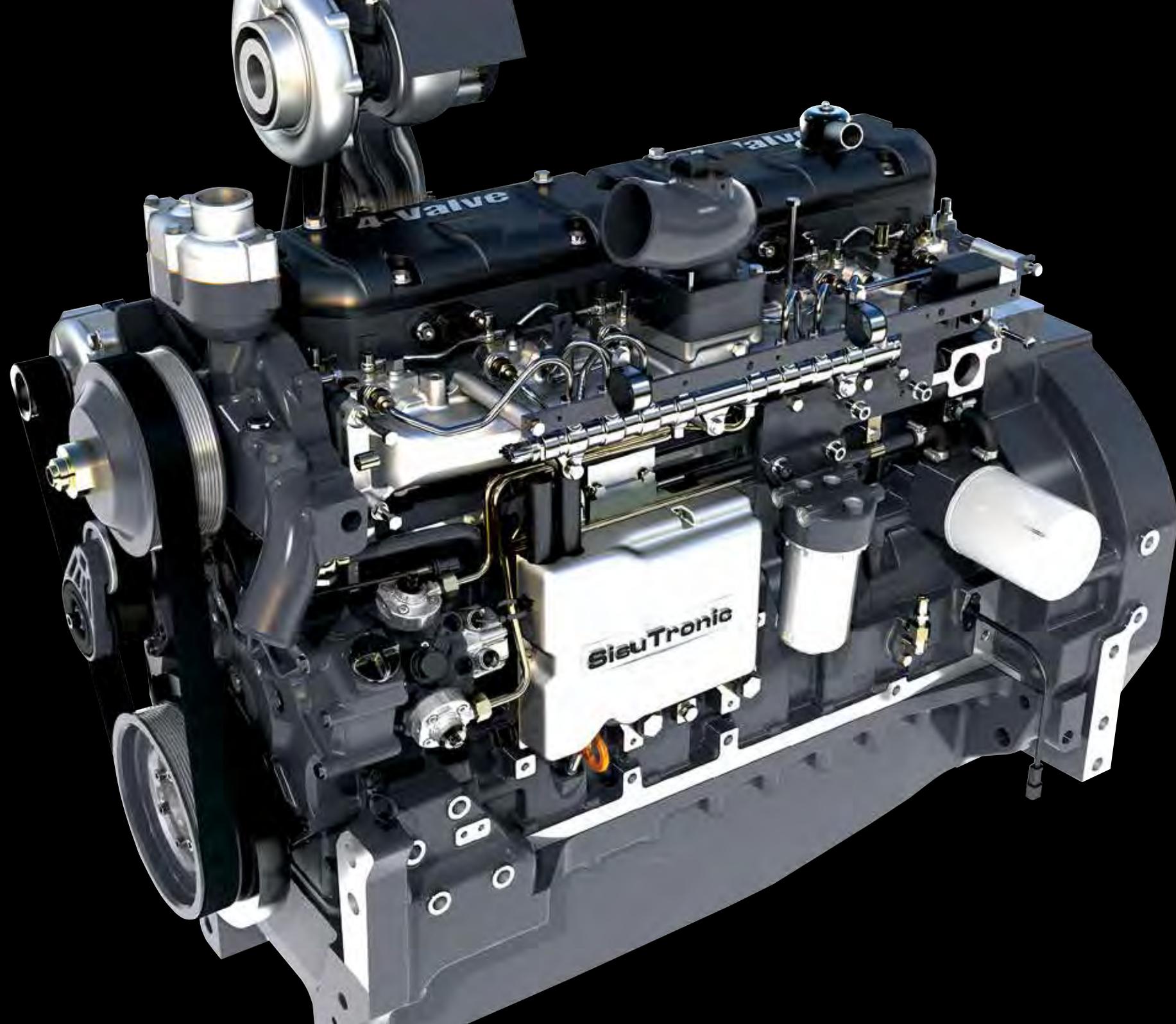
A completely new cab structure offers high levels of space, comfort and visibility. Inside operators will find the new Tractor Management Center™ offers superb, straight-forward and easy to use controls.

Two levels of specifications allow customers to tailor their MT500D tractor to match their budget and requirements. For those looking for cost effective power and performance there are the Essential models, while Efficient versions provide higher levels of comfort, control and extra features.





Models	MT525D	MT545D	MT565D	MT585D	MT595D
Engine Performance					
Rated ISO engine Hp @ 2 100rpm (kW)	140 (103)	165 (121)	185 (136)	220 (162)	240 (177)
Maximum ISO engine Hp @ 1 950rpm (kW)	150 (110)	175 (129)	200 (147)	235 (173)	255 (187)
Maximum engine Hp with EPM Boost (kW)	175 (129)	200 (147)	220 (162)	260 (191)	280 (206)
Maximum ISO engine torque (Nm) @1 500 engine rpm	660	740	880	1,030	1,049
Maximum engine torque with EPM Boost (Nm)	745	840	980	1,120	1,145



THE POWER TO PERFORM

The MT500D Series are equipped with high displacement, 6.6 litre and 7.4 litre capacity engines that develop exceptional levels of power and torque across a wide speed range for optimum economy.

AGCO POWER™ is one of Europe's leading manufacturers that is respected throughout the world, building an enviable reputation for its robust construction, durable, reliable engines.

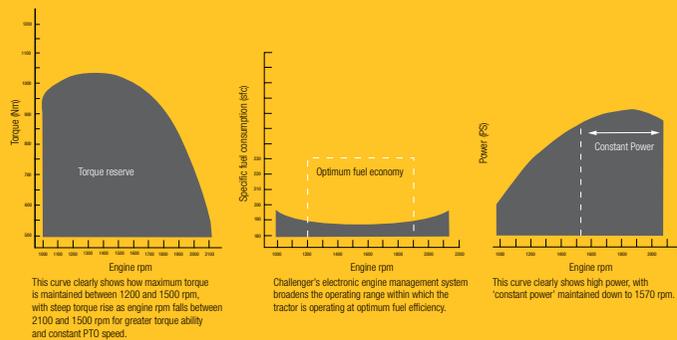
The engines are designed and built exclusively to provide the uncompromising performance that precisely matches the fluctuating loads and exacting demands in agricultural work. They deliver superb power, strong torque and exceptional economy – in tests producing a specific fuel consumption figure as low as 192g/kWh.

Maximum power (ISO) is delivered at a low 1,950rpm, while the maximum torque is generated at an economical 1,500rpm. Low operating speeds reduce fuel consumption, cut wear levels, reduce noise and extend working time between services.

Durability is built in. Thick engine block side walls along with cylinder mid-supports significantly reduce vibration, wear and noise. Wet cylinder liners improve cooling and extend engine service life.

Superb access for maintenance is provided by the one-piece lifting bonnet. The air filter is easily reached from the ground, with auto air cleaning provided by a vortex system, with a wide 150mm gap between radiators for great access for cleaning.

Outstanding fuel economy, torque and power



Models	MT525D	MT545D	MT565D	MT585D	MT595D
Max HP	150	175	200	235	255
Max HP with EPM	175	200	220	260	280



ECONOMY AND CONTROL

Developed specially for operation with high sulphur diesel, the AGCO POWER™ engine's superior design makes the best use of every drop of fuel.

Ultimate efficiency starts with Challenger's Electronic Engine Management (EEM) system, which controls the high pressure, common rail fuel injection system and delivers a precise and immediate response to match varying load demands.

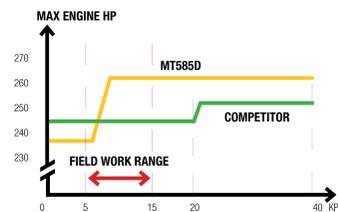
Four valves/cylinder improve gas exchange with the crossflow cylinder head ensuring optimum combustion. A viscous fan drive responds quickly to changing engine temperatures, providing effective cooling with minimum power loss.

As well as outstanding control and economy, the Engine Power Management (EPM) provides an automatic power boost of up to 25hp (depending on model). Available at working speeds above 6km/hr this delivers the extra power and torque you need to keep going in the field and on the road.

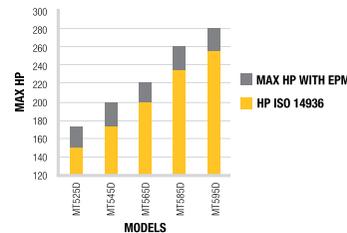
Power boost is also available automatically whenever the PTO is engaged, providing the power when it's needed most to further boost efficiency.

Operators can pre-set, store and activate two different engine speeds at the touch of a button. These can also be set and operated manually or stored and replayed automatically by the One-Touch™ headland management system.

Engine power boost comparison



MT500D engine power



EFFORTLESS TRANSMISSION CONTROL

The Challenger AutoPower VI™ robotised, semi-powershift transmission provides industry-leading, clutchless operation and control for all MT500D Series tractors.

With AutoPower VI™ there's no need to use the clutch to change speeds or direction. Six speeds in four gears can be changed, under load, at the flick of a lever.

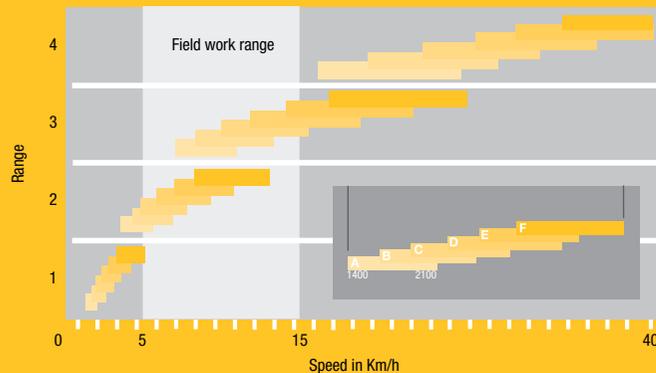
There are ten speeds in the main working range, and top speeds* of 40km/hr and 40km/hr ECO and 50km/hr (option) are achieved at low engine speeds (1,600rpm), for optimum economy for haulage duties and transport. (*Top speed depends on markets and legislation).

Renowned for its superb reliability, the AGCO-built transmission employs a straight-forward design for ease of operation with top economy. It uses just three clutch packs to change all the speeds and ranges, which significantly reduces power losses compared with other, more complex, transmissions.

AutoPower VI™ blends sophisticated features with simple and straight-forward control. The power direction lever, mounted conveniently to the left of the steering wheel, combines three functions allowing operators to use it to declutch, switch direction and change speeds.

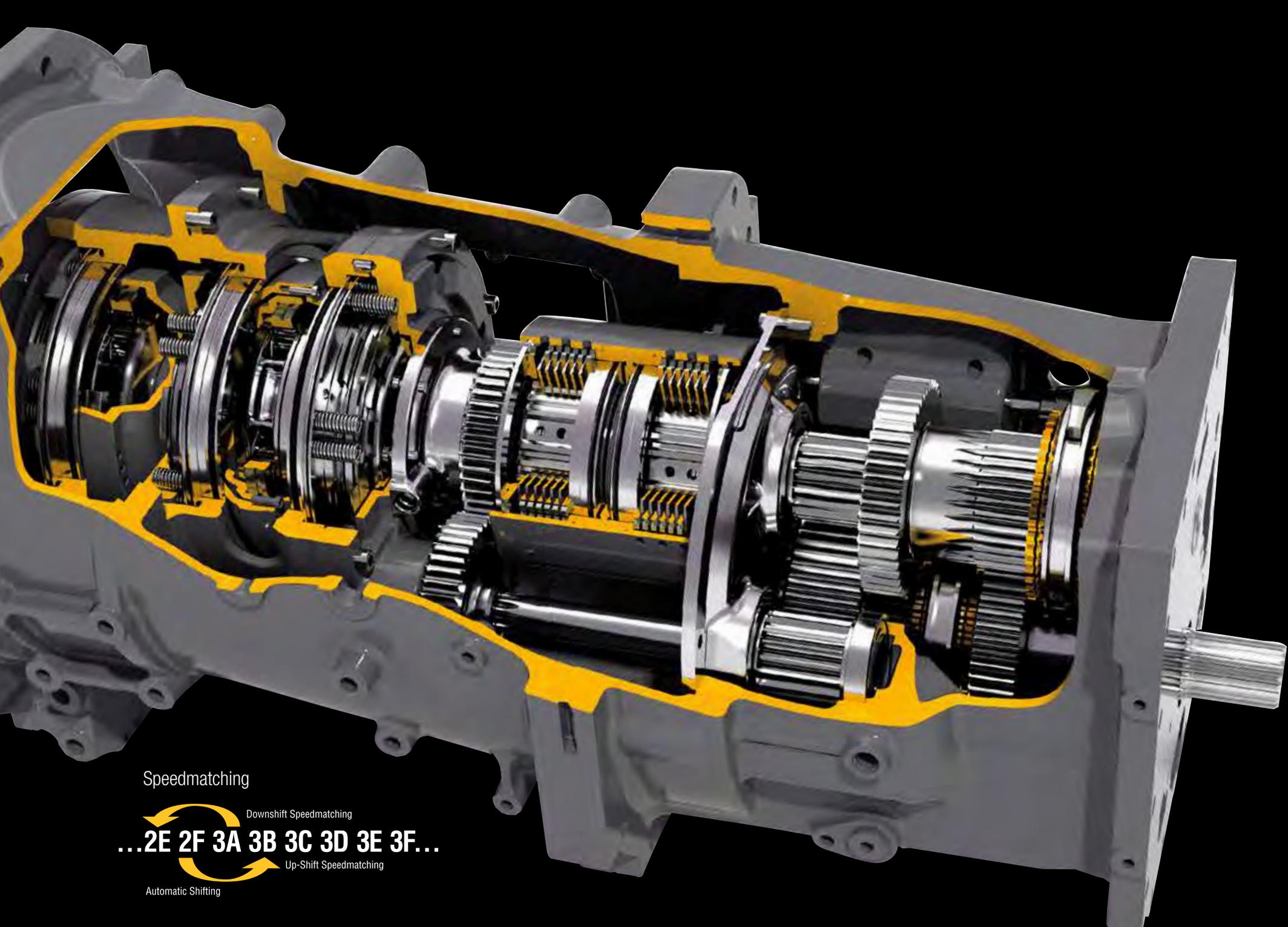
It's even possible to set how the shuttle responds via the TMC dash display, with separate settings for how smoothly the tractor pulls away in both forwards and reverse.

Speed matching automatically selects the best powershift speed when changing ranges to suit the actual speed and load.



AutoPower VI speed chart.





Speedmatching

Downshift Speedmatching

...2E 2F 3A 3B 3C 3D 3E 3F...

Up-Shift Speedmatching

Automatic Shifting



EASY AND EFFECTIVE AUTOMATION

With AutoPower VI™ operators can choose to control the transmission using the best method to suit their needs or the operation. Completely clutchless changes are made under load resulting in smooth, effortless operation and high efficiency.

In road mode all the ranges and powershift speeds are changed seamlessly. This ensures the tractors always operate at optimum efficiency in the maximum torque band and is perfect high efficiency transport operations.

FIELD MODE

The six powershift speeds change seamlessly, while ranges can be changed, under load and without the clutch, by simply pressing a button on the T-handle or multi-function joystick levers to maintain high performance in heavy draft work.

CRUISE CONTROL

Two pre-set gears – SV1 and SV2 – can be saved and automatically selected at the touch of a button. Powershift steps are changed in field mode, while range changes are also made automatically in road mode.

DRIVING MODES FURTHER ENHANCE CONTROL

With AutoPower VI™ operators can also choose to use either hand levers or the foot pedal to control the transmission.

In lever mode moving the power direction lever, T-handle or multi function joystick forwards or back will increase or decrease the speed, also changing the powershift speeds and ranges, depending on whether it is in field or road mode.

In pedal mode all the operator needs to do is simply adjust the foot or hand throttle and the system responds accordingly. It increases or decreases the speed, while also changing the powershift speeds and, in road mode, also the ranges.

SIMPLE, MULTI FUNCTION, LEFT-HAND POWER DIRECTION LEVER

1. NEUTRAL
2. DE-CLUTCH
3. FORWARD DRIVE
4. REVERSE DRIVE
5. CHANGE UP RATIO
6. CHANGE DOWN RATIO





BUILT ON STRONG FOUNDATIONS

An exceptionally strong, but lightweight, chassis plays a key role in creating the Challenger MT500D Series' exceptional power to weight ratio, which increases output while saving fuel.

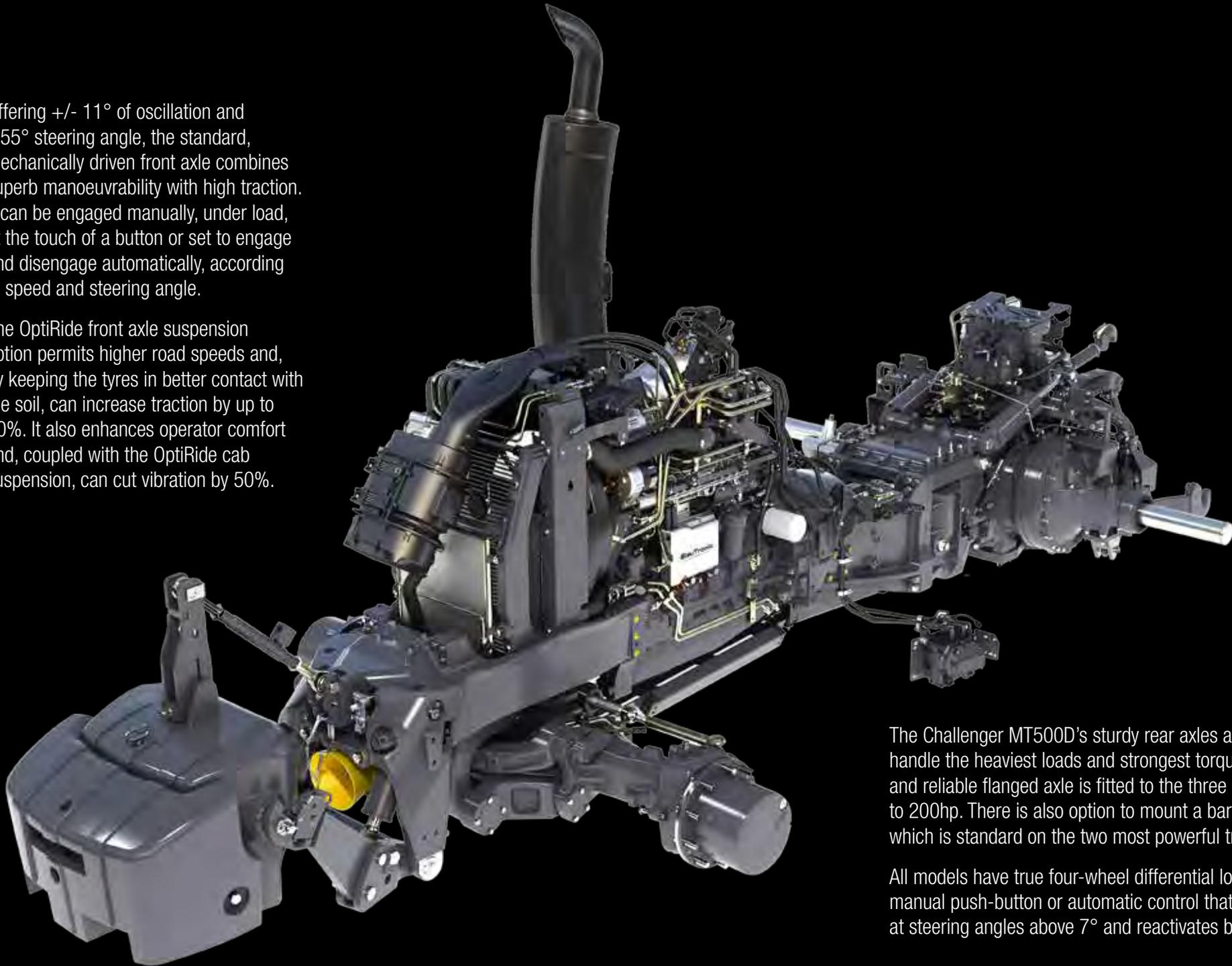
A pair of robust chassis rails, specially contoured for tight turning, extend from the front axle mount right back to the mounting plate behind the engine, with a long wheelbase that increases traction and further improves efficiency.

The rails provide a strong and rigid support for mounting a front-end loader, front linkage and other attachments.

The clever front linkage design allows equipment to be closely coupled to the tractor and offers lift capacities up to 4t. As well as increasing stability it also permits both a front linkage and loader to be fitted at the same time.

Offering +/- 11° of oscillation and a 55° steering angle, the standard, mechanically driven front axle combines superb manoeuvrability with high traction. It can be engaged manually, under load, at the touch of a button or set to engage and disengage automatically, according to speed and steering angle.

The OptiRide front axle suspension option permits higher road speeds and, by keeping the tyres in better contact with the soil, can increase traction by up to 20%. It also enhances operator comfort and, coupled with the OptiRide cab suspension, can cut vibration by 50%.



The Challenger MT500D's sturdy rear axles are built to handle the heaviest loads and strongest torque. A robust and reliable flanged axle is fitted to the three models up to 200hp. There is also option to mount a bar axle, which is standard on the two most powerful tractors.

All models have true four-wheel differential locking with manual push-button or automatic control that disengages at steering angles above 7° and reactivates below 5°.

SUPERB CONTROL AND STRENGTH

An exceptionally strong three-point linkage coupled with a powerful hydraulic system and versatile PTO make the most of the MT500D Series tractors' pulling power.

An advanced closed-centre load sensing (CCLS) system delivers 110 litres/min (150 litres/min option) at 200 bar for an almost instant response to handle the demands of the most sophisticated implements. Providing flow on demand saves fuel and power.

Standard on the three tractors above 200hp, CCLS can also be specified for the MT525D and MT545D models. For these tractors, less than 200hp, there is also an Open Centre system providing a choice of 100 litres/min or 57 litres/min option, both generating a pressure of 200 bar.

With up to four rear spool valves and two on the front, the MT500D Series is equipped to easily operate the widest range of implements with high hydraulic demands.

Front- and rear-mounted combinations are handled simply and easily by AGCO's exclusive Dual Control system - an option on the Efficient models. This automatically raises and lowers the implements at pre-set distances. This eases the load on the operator and increases output.

Another unique feature, Trailed Implement Control (TIC), monitors wheelslip to provide draft control for trailed and semi-mounted machines. Both systems can be incorporated into the One-Touch™ sequence for completely automated operation.

Heavy loads are handled with ease by the robust linkage, providing lift capacities up to 8,100kg on the MT525D and MT545D models and 9,300kg on the tractors above 200hp.

The TMC terminal, which is an option on Efficient models, offers simple finger-tip operation and control for the Electronic Linkage Control (ELC). This provides a comprehensive range of settings, which can all be included into the One-Touch™ headland management system, which relieves the operator of many repetitive tasks on the turn.

A wide range of PTO speeds are available to suit all machines and applications with an Economy option allowing engine speeds to be cut by 18%. The optional front PTO further increases versatility.





HIGHEST QUALITY COMFORTABLE WORKPLACE

The quiet, cool and comfortable MT500D panoramic cab is equipped to the highest specification with easy to use controls allowing operators to make the most of the tractors' performance potential.

A new cab structure, with optional OptiRide mechanical suspension, offers great visibility through its curved front windscreen and is equipped with a new slim, Instrument Panel and adjustable steering column.

The standard Air-Ride, suspended seat swivels 10° to the left and 20° to the right, while the optional Semi-Active seat offers even greater comfort. Air conditioning is standard.

The new Tractor Management Center™ (TMC) and Right Hand Pillar give operators complete control with all levers and switches falling to hand easily.

Efficient specification tractors come equipped with the TMC Armrest, which includes a T handle transmission control lever at the front, fingertip spool valve buttons to the side along with the linkage controls. Further buttons operate the transmission, engine and One-Touch™ headland management system.

A new Multi Function Lever option sits next to the transmission lever on the TMC Armrest. The obvious choice for loader work, it not only operates the spool valves or the loader, but also has buttons to change direction and gears.

The colour touch-screen TMC display option for Efficient models, allows operators to monitor and control a vast range of functions. These include engine performance, hydraulics, transmission settings, linkage controls, efficiency and cost monitoring as well operating the One-Touch™ system and Dual Control and TIC options.

On Essential specification tractors the transmission's T-handle is mounted to the side console, along with the spool valve levers and other controls.







AUTOGUIDE™ BOOSTS EFFICIENCY

Challenger's AutoGuide™ automatic steering is a genuine output enhancing option that increases productivity while saving fuel, labour and machine wear.

Efficient specification MT500D tractors can, as an option, be supplied ready for AutoGuide™ installation or equipped with the system as a factory-fit option.

AutoGuide™ employs the unique and most advanced Topcon Paradigm, G3 multiple-constellation receiver chip, which allows the AGI-3 receiver to track and pick-up signals from all visible satellites – GPS, GLONASS and Galileo.

The ability to employ multiple satellite constellations improves signal stability and increases positioning reliability and accuracy. State of the art inertia sensors further improve precision and fine-tune the steering by detecting the tractor's working angle and direction of travel.

The advanced Topcon AGI-3 antenna comes with sub-metre and decimetre accuracy as standard and is suitable for use with a wide range of differential signals (DGPS), from the cost-effective OmniStar VBS to the accurate OmniStar HP.

For ultimate precision, to within 2cm, is the optional RTK radio module, which is a simple 'snap-in' fit into the AGI-3 antenna. This module is able to receive correction signals from a mobile or fixed base station, as well as from a GSM correction signal, also offering 2cm accuracy wherever GSM coverage is available

AUTOGUIDE™ ADVANTAGES

The Operator

- Relieves boredom, stress and fatigue through what can often be long working days and nights
- Provides operators with time to optimise the performance of machine and implement, and to monitor screen settings and gauges
- Enables less experienced operators to achieve higher workrates and greater productivity
- Allows the operator to work efficiently in poor visibility

The machine

- Cuts overlaps and misses
- Saves fuel, labour and wear
- Increased application accuracy saves seed, fertiliser and pesticides
- Boosts output by ensuring full working width is employed
- Faster headland turns from automatic navigation
- Higher work quality from ability to closely monitor implement

AGCOMMAND™ MANAGES OPERATIONS

All MT500D tractors come ready for fitting the AGCOMMAND™ telemetry option that provides customers with a cost-effective, easy to use data recording and fleet management system.

Users are able to employ the system to boost machine and operator efficiency, locate, track, as well as plan maintenance and create comprehensive records. Users can cut the risk of equipment theft by setting alarms to alert managers if machines enter or leave pre-defined boundaries.

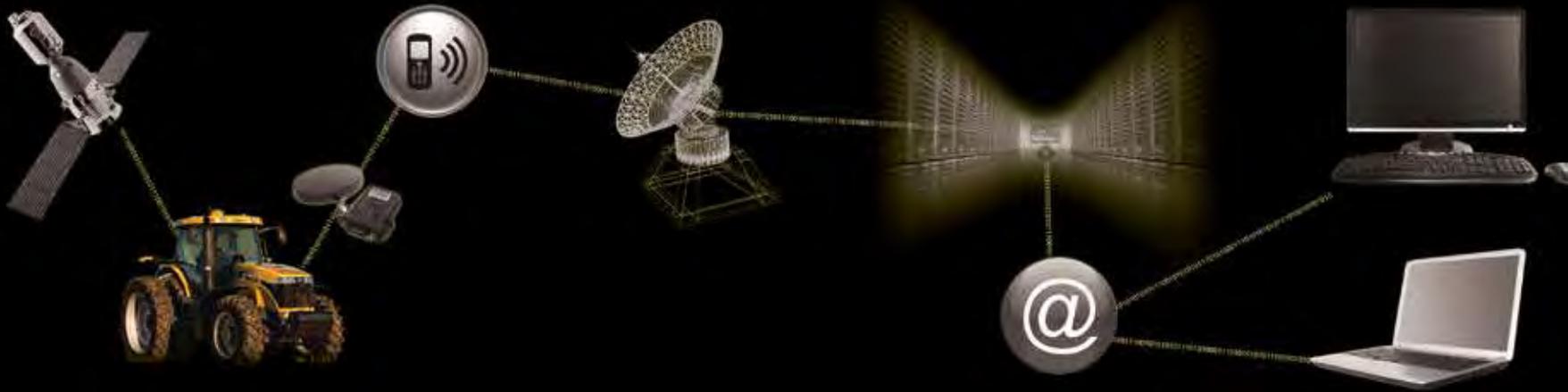
AGCOMMAND™ offers enormous management benefits by constantly monitoring machine operations and transmitting data back to a secure website via the mobile phone network. There is no need to install any additional software, with users able view their records from any computer connected to the internet. With the owner's permission, dealers are also able to monitor service needs.

Data from AGCOMMAND™ is easy to view and manage on a special, secure webpage that shows the location on Google Maps™. Users can choose to see the whole fleet or locate individual machines, current working status as well as check staff.

The system organises the information and can show an Instant Report Card, which indicates the machine's actual position, engine hours, current speed, direction and whether it is working.

A range of ready-prepared reports help users to quickly create records to analyse, manage and control costs. Users can also create their own reports. If provided with the machine's working width, AGCOMMAND™ will also deliver information on the area worked by the field, day or in any given period.





FEATURES AND BENEFITS

NEAR REAL TIME ACCESS

AGCOMMAND Standard Plus collects and transmits data providing accurate and precise information regarding machine performance and location optimising machine utilisation and efficiency

FULLY AUTOMATIC DATA COLLECTING AND TRANSFER

AGCOMMAND Standard Plus requires no operator input, the operator can concentrate on the task in hand maximising in field performance whilst the data is continuously transferred

UNIVERSAL INSTALLATION

AGCOMMAND Standard Plus is not limited to AGCO branded machines and vehicles

ALARMS

AGCOMMAND GEO-fences allow the customer to monitor machine position and check that the machine is working in the correct location. Service alarms allow routine maintenance to be planned and actioned with a minimum impact to machine productivity

MAINTENANCE

AGCOMMAND allows the requirements for machine maintenance to be directly monitored and managed by the customer or passed over to the dealer

MAPS

AGCOMMAND provides maps showing a machines working history - historic locations, area worked, travel patterns, etc., allowing productivity to be measured in specific fields or over a specific length of time

COMPARISONS

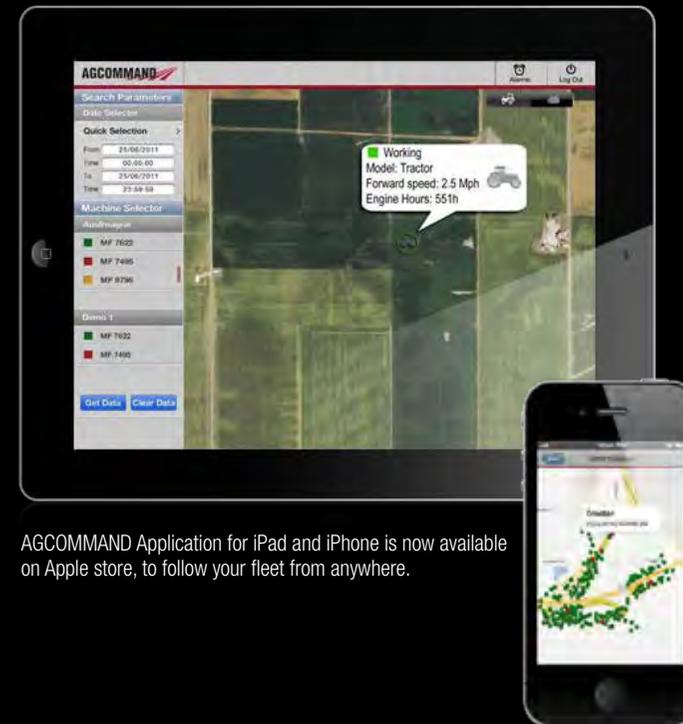
AGCOMMAND allows the direct comparison of the performance and efficiency of up to five machines in the same fleet working in any location or application

REPORTS

AGCOMMAND allows a number of reports to be generated, ranging from individual field reports up to a full season efficiency report allowing productivity to be studied and maximised

AGCOMMAND ADVANCED

For those customers wishing to receive minute-by-minute updates plus an abundance of extra information to assist their business with data capture



AGCOMMAND Application for iPad and iPhone is now available on Apple store, to follow your fleet from anywhere.



HANDLES LOADS WITH EASE

Quick to fit and easy to operate, the rugged and versatile Challenger ML Series front-end loaders are the perfect partner for the MT500D Series tractors.

A wide range of high lift capacities and heights allows customers to choose exactly the right ML Series loader to handle every task. All come with a third hydraulic service and are equipped with parallel linkages to keep the load level to further ease operation.

The loader's robust subframe is designed specifically for Challenger tractors, combining superb balance, visibility and manoeuvrability with easy fitting. A unique mounting system locks the loader frame securely to the tractor, creating a solid, integrated combination, while the standard Soft Drive system reduces shock loads on the tractor, operator and loader.

Loader operation has never been easier thanks to the range of novel and useful features on the MT500D Series that make materials handling tasks simple, easy and comfortable for operators.

The standard left-hand power direction lever and the AutoPower VI™ transmission's fully clutchless shifting make for effortless manoeuvring. The new MultiFunction joystick option on Efficient models, not only operates all the loader functions, but also includes push-button control of the reverse shuttle well as gear changing.

The ML Series Lock & Go system makes it quick and simple to mount the ML Series loader to Challenger tractors, using integral parking stands and a locking wheel on each side. For fast, clean hydraulic hook-ups is the MC4 Multi-Coupler option, which connects all the hoses, under pressure as well as the electrics in one simple movement. The SelectoFix option works in the same way for connecting the hoses to the implement tool carrier.

MODEL LINES

	MT525D	MT545D	MT565D	MT585D	MT595D
ML66	✓	✓	-	-	-
ML68	✓	✓	-	-	-
ML76	✓	✓	✓	✓	✓
ML78	-	-	✓	✓	✓
ML88	-	-	-	✓	✓

MODEL SPECIFICATIONS

	ML66	ML68	ML76	ML78	ML88
Max lift height*	4,25 m	4,25 m	4,50 m	4,50 m	4,95 m
Max lift capacity**	2120 kg	2450 kg	2120 kg	2430 kg	2770 kg

* to pivot pin, may vary depending on tractor configuration

** at max lift height, 800 mm from pivot pin



ML SERIES LOADER IMPLEMENTS

The right tools for the job. Purpose-designed to suit Challenger ML Series Loaders, this complete range of implements provides the widest choice available. Developed through a rigorous R&D programme, those versatile and high quality implements will suit the widest range of tasks like bale handling, grain loading, cattle feeding, etc...



Please contact your dealer for a complete list of implements.







THE POWER
BEHIND YOUR BUSINESS



Challenger[®]

MT500D



Smart Machines. Serious Results.

Every effort has been made to ensure that the information contained in this publication is as accurate and current as possible. However, inaccuracies, errors or omissions may occur and details of the specifications may be changed at any time without notice. Therefore, all specifications should be confirmed with your Challenger Dealer or Distributor prior to any purchase.

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