

Challenger MT500B

Challenger MT500B



We're up to
The Challenge

MT500B
120 - 185 hp

MT500B - AutoPower VI

Whether you're working the farm, a construction job site or municipal grounds, today's fast-paced workload calls for a mid-sized tractor with the ability to handle a wide variety of jobs, the comfort to enhance operator productivity and the technology to improve efficiency. Throw in a longing for the best dealer support in the industry and there's only one choice... Challenger® equipment.

Whatever the task, the Challenger MT500B Series offers everything you demand and more. All MT500B models are supplied with a range of high specification features to cater for the needs of high output users:

- Six-cylinder, electronically fuel-injected Caterpillar® engines, recognised around the world for durability and reliability.
- AutoPower™ VI Transmission
- High lift capacities.
- Industry-leading Electronic Linkage Control (ELC).
- Largest cab available on a tractor under 130 horsepower.
- Lowest cab sound level in the industry at 70 dbA.
- Optional front axle suspension system.
- Optional Power Performance™ III display and control centre.
- Optional Dual Stage cab suspension system

Model	Rated Engine hp - ISO TR (14396)
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MT525B	120 hp
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MT535B	135 hp
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MT545B	145 hp
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MT555B	160 hp
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MT565B	170 hp
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MT575B	185 hp
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Challenger Merges The Best Of Both Worlds

Seldom does a farm equipment brand grow to prominence as quickly as the Challenger brand has. In just a few short years, it has become synonymous with quality and service, particularly among professional and commercial producers whose output represents 75 percent of the world's commodity production.



It all started in March 2002, when AGCO Corporation acquired the highly respected Challenger line of tracked tractors from Caterpillar and began expanding it into a full line of quality farm machinery. Today, the Challenger brand includes a rugged line of wheeled and tracked tractors from 67 to 570 engine horsepower; and some of the most productive and reliable harvesting and application equipment on the market.

Equally important, Challenger partners with only the finest dealers to ensure the highest level of customer satisfaction. Our network is built on integrity and is committed to delivering excellence in sales, in-field service and parts support.

Nobody is better prepared to keep your equipment running, no matter the hour, day or location of your parts and service needs.



We're up to
The Challenge 3



Proven Power a

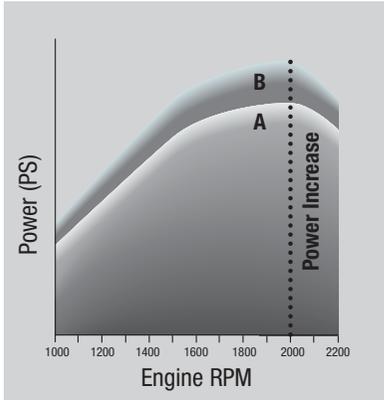
Tough, challenging conditions are no match for the Caterpillar 1106D Tier III engines used in all six MT500B models. This rugged 6-cylinder, turbocharged engine carries on the tradition of legendary Cat® strength and reliability with solid, cast-iron construction. A generous 6.6 litres of displacement ensures plenty of reserve for sudden draft loads and heavy torque demands, while meeting all current emission standards.

Usable Power

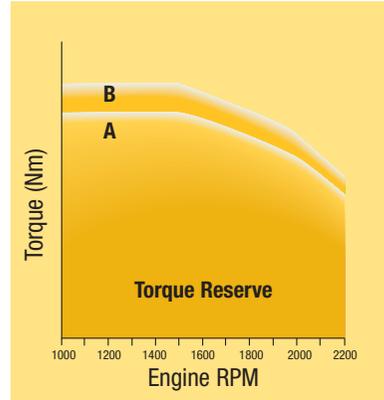
All MT500B models benefit from more power at 2,000 rpm than at 2,200 rpm (rated engine speed), to maximise PTO performance. They maintain high torque, even at 1,000 rpm, allowing them awesome power to pull the heaviest loads, or work through the toughest conditions.

With an increased constant power range of around 500 rpm these machines can also maintain work rates at lower engine speeds, with reduced noise and improved fuel consumption.

Power and Efficiency



- A. Normal power curve
- B. Extra power, available when PTO is engaged



- A. Normal torque curve
- B. Extra torque, available when PTO is engaged

Common Rail Fuel Injection

The common rail fuel injection system uses precise electronic control to continuously monitor operating conditions and engine load, and to regulate the high-pressure fuel injection accordingly.

The result is a faster response to changes in field conditions and engine load, more power and torque over a wider engine speed range, excellent fuel economy and lower noise and emissions.



Electronic Engine Management (EEM)

Full-authority electronic engine management is standard on all models, providing full machine integration, engine history and system protection. It also works in perfect unison with the electronic fuel injection system to provide quick and precise response to throttle movement. Finally, the EEM system is in constant communication with the transmission, no matter which model you select, providing the ability to maintain a consistent ground speed, regardless of engine speed or vice versa.

Standard Dual Speed Engine Control allows the operator to pre-set two engine speeds for instant recall. The +/- switch is used to pre-set the speeds in increments of 10 rpm, independent of hand throttle position, while the A/B switch is used to recall the settings.



Managing Your Every Need

AutoPower VI

Building on the success and reliability of the proven AutoPower legacy, the AutoPower VI offers six powershift ratios that can be shifted under full load within four mechanical robotised ranges for a total of 24 speeds in both forward and reverse.



Using a special T-handle control lever mounted on the armrest console, the operator can manually change both the AutoPower ratio and the gearbox range under load, without using the clutch. For AutoPower ratio changes, simply move the handle forward or back to make pulse or sequential shifts through six ranges marked "A" to "F" (AutoPower ratios can also be changed with the left-hand power control lever).



- N Neutral
- ▶ Lift to De-Clutch
- ▶ Forward Drive
- ▶ Reverse Drive
- ▶ Change up ratio
- ▶ Change down ratio

The Power Control Lever on the left of the steering wheel provides simple forward/reverse shuttle, powershift changes, range changes (in AutoDrive transport mode) and fingertip de-clutching. All of these functions from one, convenient lever mean that the right hand is free for other tasks, such as operating front and rear mounted implements.

Range changes under load are just as easy. Just depress the range button on the control handle while moving the lever forward or backward. That's all there is to it.

This simple, straightforward procedure allows easy progression from minimum to maximum speed, and lets you quickly find the perfect balance of engine speed and forward speed for any type of job.

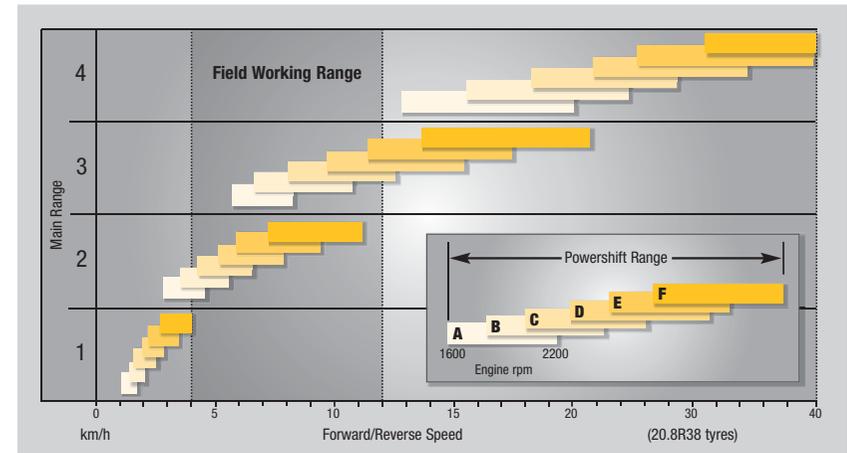
AutoPower VI also incorporates a rotary-dial AutoDrive controller that

provides automatic shifting in several different modes.

Manual - Allows manual shifting, yet provides the back-up of overspeed protection.

Speed Matching - Automatically selects the appropriate AutoPower ratio after a manual range change has been made.

AutoDrive - The operator selects the desired engine speed between 1,600 and 2,200 rpm, which, in turn, controls



Challenger MT500B

the upshift and downshift points at which the transmission automatically selects the next AutoPower ratio. Shifts are electronically actuated in response to both engine speed and load, providing full power and torque control, as well as engine braking.

The AutoDrive controller allows you to select between Manual, Speed Matching and Full AutoDrive in road or field mode.

In the "Road" mode, the transmission changes both the AutoPower ratio and the gear range automatically. In the "Field" mode, only the AutoPower ratio is changed.



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THE SEAT BELT
The good practice of
Seatbelt Use.

Your office in the field

When you spend 12 to 14 hours a day in a tractor cab, you need an office environment that's designed for the purpose. One that's going to keep you comfortable and alert, so you can be as productive at 8:00 p.m. as you are at 8:00 a.m. That's exactly what the MT500B Series provides. Designed by ergonomic specialists, with the help of farmers like you, the new MT500B cab offers superior comfort, control and ease of use.

Two Levels Of Cab Suspension

Comfort in the MT500B cab actually starts under the cab, where special bushes isolate the front of the cab from the frame to reduce the amount of vibration felt by the operator.

For an even softer ride, Dual Stage Pneumatic Cab Suspension is an option. Similar to the systems used on highway trucks, it adds two electronically controlled air baffles at the rear of the cab to further control oscillation and reduce noise. You can even adjust the ride firmness on the go to one of two comfort settings.

Exceptionally Quiet And Comfortable

At a maximum sound level of 70 db(A), the MT500B Series cab offers a level of solace that is unparalleled in the industry. And with its fully adjustable, air-ride swivel seat, it's as comfortable as it is quiet. For those extra touches, substitute the optional super deluxe seat, with its extra width, added cushioning, double pneumatic lumbar support and cold-weather heating.

You'll never be too hot or too cold in any weather thanks to the responsive air conditioning system that features easy-to-access controls for temperature and fan speed.

Or choose the Automatic Climate Control system, which automatically adjusts the fan and temperature controls to maintain a specified temperature.

Office Amenities Throughout

An amazing ride is just the beginning of the comfort features you'll find in the MT500B Series' spacious cab. Take a seat and look around at some of the other amenities:

- Ergonomically designed right-hand control console with controls organised by function.
- 5.6 m² of glass for excellent visibility.
- Slim profile dash for improved forward ground visibility, and both analogue and LCD displays.
- Indicator lights strategically placed across the top of the instrument panel.



- Tilt and telescopic steering column.
- Digital clock and outside temperature display.
- Large cool box along with mobile phone holder.
- Cab roof designed for more headroom and better forward

visibility, while putting radio access and climate control within easy reach.



Take performance and control to new levels

Efficiency is always close at hand on the MT500B Series, whether you reach for the hand throttle, the hydraulic controls, the rear linkage depth control or the engagement switch for the 4wd. In addition to being clearly marked, all switches and levers are ergonomically arranged by function, so you never take your eyes off the field for longer than necessary.

In fact, the most frequently used controls, including the hydraulic spool valves, rear linkage rocker switch and AutoPower VI speed control are incorporated into the armrest, so they move with the seat and remain at your fingertips whether you're travelling over rough terrain or swivelling the seat for a better view of a towed implement.

Step Up To Power Performance™ III

Harness the latest that technology has to offer with the optional new-generation Power Performance III system run through the GTA console I. Working in conjunction with a ground radar, it offers more than 20 valuable monitoring and control functions, including wheel slip, fuel/hour, distance, area worked and many more.



In addition, Power Performance III includes an innovative array of management features and memory functions that deliver improved productivity and efficiency.

GTA Console I - The GTA console lets you store up to 36 tractor and implement actions for activation at the simple push of a button. Programme hydraulic remotes to extend or retract; raise or lower the rear linkage; downshift and/or throttle back; disengage or re-engage the PTO; disengage or re-engage the 4wd and differential lock... or any combination of the above.

Trailed Implement Control -

Working in conjunction with TouchMaster (Electronic spool valve management), this unique feature automatically adjusts the working depth of sensor-equipped trailed implements to control wheel slippage. As a result, field travel speed and engine performance always remain at peak levels.

Headland Management - Unlike other systems, the Power Performance III system allows you to pre-program a sequence before going to the field for use by the operator. Plus, the sequence is

retained in the memory, even when you shut off the engine.

Data Recall - Using the keys and rotary dial on the GTA console, the operator can input memory functions for up to six complete sets of data. Settings can then be given a name for various fields, operators or implements, making them easy to recall when changing drivers or equipment.

Information Downloads - Power Performance III even allows you to download information to a small memory card so it can be stored or input into your office computer to create and manipulate field, implement and work-rate records.



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Power to move the load - power with control

No matter the job or how you move the load, Challenger MT500B Series tractors are built for the task. Standard equipment on all models includes an electronic 3-point hitch with 3 remote hydraulic outlets and 540/1,000 power take-off (PTO) system to match your operation. Expand the capabilities even further with an optional front 3-point hitch and hydraulic outlets; up to four hydraulic remotes, and a choice of hydraulic control systems.



High-Performance Hydraulics
MT500B Series tractors feature a closed-centre, load sensed hydraulic system that provides flow to multiple functions at up to 110 l/min and 200 bar.

Challenger MT500B Series tractors offer more than just industry-leading hydraulic capacity, though. They're also available with a choice of control systems.

TouchMaster™ Controls
As optional equipment on the MT500B Series, the TouchMaster hydraulic control system features a



programmable electro-hydraulic valve arrangement that is controlled by a unique multi-directional joystick. Perfect for loader work, the TouchMaster system allows the operator to program the flow and speed of all functions and then repeat them by simply moving the joystick, shortening cycle times and reducing operator fatigue. Lever control of up to two additional remotes can be added to the console if multiple outlets are needed.

Fingertip Controls (MT555B – MT575B)

For those who prefer fingertip control of the hydraulic system, Challenger offers the option of four in-line electronic remote hydraulic levers. Sized and



positioned for intuitive fingertip operation, the levers allow you to control multiple functions without removing your hand from the armrest.

Suspended Front Axle

To deliver even greater comfort and control, an optional front axle suspension can be added to the MT500B. The high-pivot design ensures excellent clearance without compromising the turning circle, and can be engaged/disengaged from the cab as required.

The ability to handle any implement

Customised Hydraulic Settings

Customise hydraulic settings to suit specific requirements with the optional GTA console. Using the touch keys and rotary dial, the operator can regulate the flow rate for lifting and lowering, as well as adjust the actuation time of each remote.

Serious Rear Linkage Performance

Thanks to their rugged rear axles and large hydraulic capacity, MT500B Series tractors boast some of the highest lift capacities in their class - up to 7100 kg on the MT525B – MT545B and 9100 kgs on the MT555B – MT575B.

Meanwhile, electronic linkage control gives you a choice of draft sensing mode for quick response to changing field contours, or position control mode for maintaining a preset height or depth. When it's time to hit the road, simply use the transport lock to secure the implement in the raised position and let the hydraulic rams absorb the shocks that can otherwise affect both the ride and control.



Adaptable Power Take-Off (PTO)

Take your choice of PTO settings, depending upon the way you farm and your cropping program. Standard on all models is a 540/540E/1,000 drive that is electronically controlled through a wet multi-disc clutch. The economy PTO setting, designed for lighter load situations, allows the engine speed to be reduced by 23 percent from 2,000 to 1,550 rpm, yet maintain full 540 or 1,000 rpm PTO shaft speed. The benefits include

reduced fuel usage, less noise and vibration and less engine wear.

PTO speed with any setting is digitally displayed on the dash panel for precise control of PTO driven implements.

Optional Front Linkage And Hydraulics

Put additional equipment up front with an optional front linkage and hydraulic remotes. When equipped with a 3-point linkage to handle cultivators, ploughs, fertiliser tanks, etc., the front linkage offers a lift capacity of up to 4000 kg.



Hydraulic accumulators are also available to absorb shock during the transport of mounted equipment.

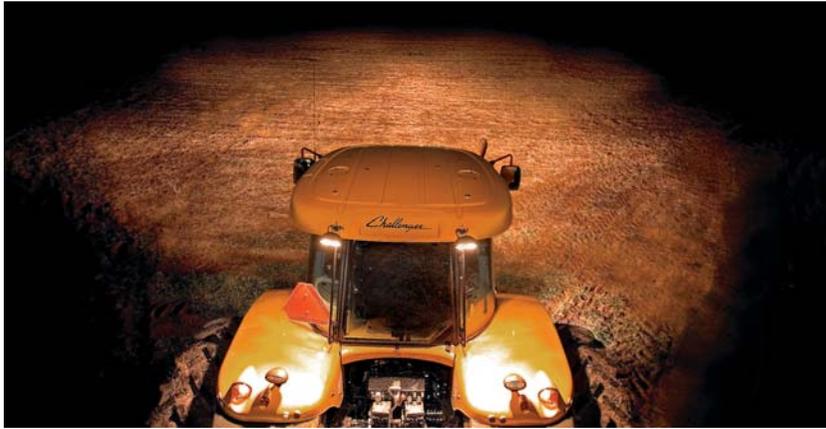
Meanwhile, the front hydraulic remotes feature the same pressure and flow as the rear remotes - 200 bar and 110 l/min.



We're up to
The Challenge 15



Designed to keep you going around the clock



The days can get pretty long come planting time or harvest. Fortunately, Challenger MT500B Series tractors are built to maintain your productivity, regardless of the time of day or the temperature outdoors.

Making Daylight

Don't worry about working late to beat the weather, or starting before daylight. The MT500B Series helps you make the most of long days with a full bank of hi/lo halogen work lights. Standard equipment includes two headlamps, two front and two rear double element work lights. Two field lights each side on the hand-

rails and fenders can also be added. For road travel there are also tail lights, flashing warning lights and indicators. One rotating beacon is fitted as standard, with a second available as an option.

Take Lighting to the Next Level

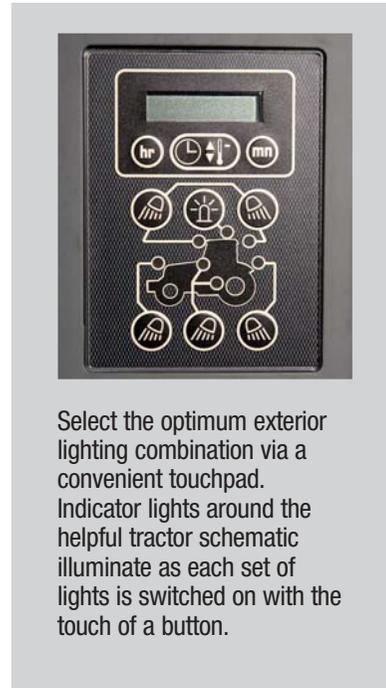
Burn an even bigger hole in the night with a Xenon lighting package. This valuable option replaces the halogen roof lights with HID Xenon lights that provide up to 30% greater night time visibility. The increase in the amount of pure white light is also easier on the eyes.

A Panoramic Vista

In addition to offering 5.6 m² of usable glass area, the Challenger MT500B Series tractors feature a contoured, sloping bonnet with a centre sight marker to provide an unobstructed, panoramic view of the field.

A Clear View Of Wide Implements

The view behind is clear in any weather with optional side mirrors that include electrical in-cab adjustment and electric de-icing. Even without this option, you'll appreciate two large, telescoping side mirrors and an inside mirror, in addition to the unobstructed view through the rear window.



Select the optimum exterior lighting combination via a convenient touchpad. Indicator lights around the helpful tractor schematic illuminate as each set of lights is switched on with the touch of a button.

Easy access means maintenance is no longer a chore

The narrow, sloping bonnet on the MT500B Series is more than simply stylish and unobtrusive; it's also service-friendly and functional. All engine service points are easily accessed behind the new lift-up, one-piece bonnet, putting every service check at your fingertips. The hydraulic oil cooler and engine air filter are hinged so they can be easily moved away from the engine radiator allowing excellent access for cleaning.

- Batteries are easy to reach for inspection and service, yet protected from mud and debris.
- The dual-element air cleaner is positioned directly above the engine for easy inspection and replacement.

- The fuel fill for the MT525B - MT545B (at 270 litres) and the MT555B - MT575B (at 380 litres) fuel tanks can be accessed from ground level.
- A convenient outside access hatch lets you remove the cab air filter while standing on the cab steps keeping dust out of your workspace.

World-Renowned Dealers, World-Class Service

Downtime is rarely scheduled and never convenient. Fortunately, when you buy a Challenger MT500B Series tractor, you get the backing and support of committed Challenger dealers... who take downtime very seriously.

Challenger dealers are second to none in on-location service. Plus, our factory-trained technicians work as hard at preventing problems as they do at repairing them. With mobile service trucks loaded with more diagnostic equipment than most repair shops, it's little wonder that a new wave of Challenger

loyalists is a growing part of the farming community.

With quality Challenger service and 24-hour-a-day parts back-up, you can be assured of the absolute gold standard in dealer support.





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From strength to strength

Every Challenger Purchase Comes With World-Class Commitment

When you purchase a Challenger MT500B series tractor, or any other Challenger model, you're buying a lot more than a piece of farm machinery. You're purchasing the Challenger commitment to quality and service.

If you haven't already done so, take a close look at the MT500B Series at your local Challenger dealership. You'll realise quickly that it's built to the highest standards of quality in terms of components and construction as well as fit and finish. But the Challenger commitment extends well beyond steel and rubber. Consider just some of the benefits of being a Challenger customer.

Maximum Warranty Coverage

As a Challenger tractor owner, you are assured of full warranty protection for one year or 1500 hours, whichever comes first. An Extended Service Plan is also available, assuring you continued support from your Challenger dealer.

Higher Resale Value

Quality equipment demands a premium price, particularly when there's no competition. Fortunately, a new MT500B is extremely cost competitive, considering its advanced innovation. However, you can bet the technology built into the MT500B Series, along with its long-term Challenger dealer support, will ensure it retains its value.

When you combine Serious Machinery with the Serious Dealers of the Challenger network, you're looking at value that lasts well into the future.



Equipment

Standard Equipment:

- Closed Centre Load-Sensing Hydraulics
- Flow Control on all valves
- Total Flow of 110 L/min
- Power Beyond and Load-Sensing Port
- Lower Link Pin Sensing with Electronic Lift Control
- Active Transport Control (ATC)
- Left and Right Side External Lift Controls
- 3-Point Linkage: Category II/III Linkage with Mechanical Levelling
- External Hydraulic Lift Cylinders
- Standard-Duty Drawbar with Clevis
- Power Assist Brakes
- PTO & Transport Boost
- AutoPower VI Transmission
- Power Control Shuttle
- Shielded Centre Line Drive with Electro-Hydraulic Control of Front Wheel Drive and Front Differential Lock
- Toolbox
- Front Weight Frame
- Moulded Rear Fenders
- Caterpillar® 1106D Tier III Engine
- Economy PTO
- Front belly weight (MT555B-MT575B)

- Front Fenders
- Double Element Halogen Work Lights
- Deluxe Cab with Heater and Air Conditioning
- Rear View Mirror and Two Exterior Telescopic Side View Mirrors
- Tilt and Telescopic Steering Column
- In-Cab Electrical Socket
- Air Suspended Swivel Seat with Vertical Height and Backrest Angle Adjustment, Fore/Aft and Side/Side Isolators, Lumbar Support, Seat Belt and Adjustable Left Armrest
- Instructor / Passenger Seat
- Rotating Beacon
- Rear Window Washer/Wiper
- Additional Electrical Socket in Cab

Optional Equipment:

- Hydraulic Trailer Brakes
- Front Linkage 2,800 or 4,000 kg Lift Capacity at Hitch
- Front Suitcase and Wheel Weights
- Suspended Front Axle
- Pivoting Front Fenders
- Large Telescopic Side Mirrors with Electrical Adjustment and Electric De-Icing
- Xenon Work Lights
- Integrated Tractor Control System with Radar and Wheelslip Control
- Power Performance Display™ III with Colour Screen and Data Logging
- Dual Stage Cab Suspension
- Super Deluxe Air Suspended Grammer Seat
- Automatic Air Conditioning/Climate Control
- Additional Worklights
- Video System
- Auto-Guide™





Specifications

	MT525B	MT535B	MT545B	MT555B	MT565B	MT575B
Engine	Caterpillar® 1106D	Caterpillar® 1106D	Caterpillar® 1106D	Caterpillar® 1106D	Caterpillar® 1106D	Caterpillar® 1106D
Rated Power* @ 2200 rpm	120 hp	135 hp	145 hp	160 hp	170 hp	185 hp
Max Power @ 2000 rpm	130 hp	145 hp	157 hp	175 hp	185 hp	198 hp
PTO	115 hp	130 hp	140 hp	160 hp	170 hp	180 hp
Max Torque	543 Nm	607 Nm	649 Nm	750 Nm	796 Nm	841 Nm
Max Power (Transport) @ 2000rpm	140 hp	160 hp	170 hp	190 hp	200 hp	210 hp
Max Torque (Transport)	585 Nm	681 Nm	711 Nm	836 Nm	880 Nm	904 Nm
Type	----- In-line, liquid-cooled -----					
No. of Cylinders	6	6	6	6	6	6
Displacement	6.6 litres	6.6 litres	6.6 litres	6.6 litres	6.6 litres	6.6 litres
Rated Speed	2,200 rpm	2,200 rpm	2,200 rpm	2,200 rpm	2,200 rpm	2,200 rpm
Aspiration	----- Turbocharged and aftercooled -----					
Bore	100 mm	100 mm	100 mm	100 mm	100 mm	100 mm
Stroke	127 mm	127 mm	127 mm	127 mm	127 mm	127 mm
Fuel System	----- Bosch radial-piston pump, Electronically controlled -----					
Fuel Tank Capacity						
Fuel Tank	270 litres	270 litres	270 litres	380 litres	380 litres	380 litres
Lift Capacity						
at links ends	7100 kg	7100 kg	7100 kg	9100 kg	9100 kg	9100 kg
Dimensions						
Wheelbase	2820 mm	2820 mm	2820 mm	3000 mm	3000 mm	3000 mm
Minimum Width	2550 mm	2550 mm	2550 mm	2550 mm	2550 mm	2550 mm
Height to Top of Cab	2900 mm	2900 mm	2940 mm	3000 mm	3000 mm	3000 mm
Overall Length	4790 mm	4790 mm	4790 mm	5230 mm	5230 mm	5230 mm
Tyres						
Front	14.9R28	14.9R28	14.9R28	16.9R28	16.9R28	16.9R28
Rear	18.4R38	18.4R38	18.4R38	20.8R38	20.8R38	20.8R38

Specifications common to all models

Capacities						
Cooling System	25.5 litres					
Hydraulic System	70 litres					
Techstar CVT	58 litres					
Hydraulic System CVT	100 litres					
Transmission						
Type	AutoPower VI					
Max Speed	40/50 kph**					
Axles						
Front Axle Suspension	Standard					
Flange	Standard					
Bar Axle	Optional					
Track with 18.4 tyres	1,524 to 2,235 mm					
Brakes						
Type	Hydraulic wet multi-disc					
Independent PTO						
Type	Electronically controlled					
540/540E/1000	Standard					
Electrical System						
Alternator	120 amp					
Batteries	(2) 420 cca 12-V					
Hydraulic System						
Type	CCLS					
No. of Remotes	4					
Max. Pressure	200 bar					
Max. Flow	110 litres/min					
Rear Linkage						
Control	Electronic					
Front Hitch (optional)						
Lift Capacity	2,800 kg / 4,000 kg					
Steering						
Type	Full power hydrostatic					

* ISO TR 14396

** According to market legislation

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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