

Challenger®

MT400B
SERIES

PRODUCT INFORMATION GUIDE

MT400B

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INTRODUCTION

CHALLENGER® MT400B SERIES

GENERAL

The new Challenger® MT400B tractors have been developed to meet the needs of today's progressive growers. Advanced styling combined with high performance features provide improved versatility and outstanding reliability.

While designing these new features, Challenger® engineers were dedicated to providing a tractor that has proven durability and exceptional operator comfort and convenience. Advanced engine and power train technology define the 60 to 225 horsepower Challenger® tractors. This allows better compatibility with a wide variety of equipment and will make owning an Challenger® tractor more appealing to owners and operators across a larger spectrum of needs and demands.



INTRODUCTION CHALLENGER® MT400B SERIES

DESCRIPTION OF PRODUCT

The CHALLENGER® Series tractor family is comprised of the following models:

The Challenger MT400 Series tractors feature amenities that the customers have asked for. Caterpillar engines provide durable and reliable power for tough jobs. More transmission options provide the customer with easier operation and lower maintenance costs. The cabs have been designed with efficient air conditioning operation and control. Easy to remove engine side panels still make tractor service convenient.



INTRODUCTION

CHALLENGER® MT400B SERIES

MARKET

The North American tractor market continues to expand and develop into many different areas. With a wide variety of different attachments, these machines are ideally suited for customers ranging from weekenders to municipalities and farmers.

Some potential customers include:

- **Corporate Farmers**
- **Specialty Farmers**
- **Traditional Farmers**
- **Hobby Farmers**
- **Government**
- **Municipalities**
- **Construction**

MARKET

The Challenger® MT400B Series tractors meet the competition head on.

The following is the match up of major competitive tractors with the Challenger® MT400B Series.

Challenger®	John Deere	Case IH	New Holland	Kubota
MT425B @ 60 hp	5320 @ 55 hp	JX75 @ 60 hp	TN70 @ 57 hp TL 70 @ 56 hp	M5700 @ 52 hp
MT445B @ 70 hp	5420 @ 65 hp 6120 @ 65 hp	JX85 @ 70 hp JX80U @ 66 hp	TN75 @ 62 hp TL 80 @ 70 hp	M6800 @ 62 hp
MT455B @ 80 hp	5520 @ 75 hp 6220 @ 72 hp	JX95 @ 80 hp JX90U @ 76 hp	TS 90 @ 70 hp TL 90 @ 80 hp	M8200 @ 73 hp
MT465B @ 90 hp	6320 @ 80 hp	JX100U @ 82 hp	TL 90 @ 80 hp TS 100 @ 80 hp	M9000 @ 80 hp

For more detailed information, refer to the Competitive Comparisons section of this manual



SPECIFICATIONS CHALLENGER® MT425B

GENERAL

Make Challenger™
Model MT425B
Class Small Row Crop/Utility
Chassis Type Isolation-Mounted Cab or Isolation-Mounted
Flat-Deck Platform, 2WD or 4WD

PTO AND DRAWBAR PERFORMANCE

PTO hp @ Rated Engine rpm hp (kW) 60 (44.7) @ 2,200

**INFORMATION
AVAILABLE
AFTER TESTING**

ENGINE GENERAL

Model Caterpillar 3054
Type In Line, 4 Cycle, Direct Injection, Diesel
Cylinder Head Design One, Cast Iron, Overhead Valve
Number of Cylinders 4
Bore in (mm) 4.13 (105)
Stroke in (mm) 5.0 (127)
Displacement CID (L) 269 (4.4)
Compression Ratio 19.3 : 1
Aspiration Natural
Starting Aid Glow Plug
Block Heater Field Installed Accessory



SPECIFICATIONS CHALLENGER® MT425B

ENGINE SYSTEMS

Cooling System

Type Pressurized Liquid, Forced Circulation
Temperature Control Thermostat
Fan
Number of Blades 7
Diameter in(mm) 19.8(502)
Drive Belt From Crankshaft with Viscous Clutch
Water Pump
Type Impeller
Drive Gear From Timing Gear

Air Intake System

Intake Location Under Hood
Air Cleaner
Type Dry, Centrifugal, Exhaust Dust Extraction
Number of Elements 1: Primary and 1 Secondary
Material Pleated Paper
Restriction Indicator Warning Light

Exhaust System

Type Integral with External Elbow and Vertical Stack
Muffler Location Vertical, at Right, Front Cab Post

Fuel Injection System

Type of Injection Direct
Injection Pump Bosch VE10
Type Rotary, Self-Venting
Drive Timing Gear
Injectors Multi-Hole
Governor
Type Mechanical
Governed Speed Range rpm 950 – 2354
Rated Engine rpm 2200

Lubrication System

Type Full Pressure, Full Flow w/Bypass & Cooler
Filter Spin on canister
Number of Filters 1
Pump Type Gear
Pump Drive Crankshaft



SPECIFICATIONS CHALLENGER® MT425B

ENGINE SYSTEMS (Cont.)

Crankcase, Cylinder Block, & Cylinder Head

Cylinder Block.....	Cast Iron, Four Cylinder In-Line w/Replaceable Dry Sleeves
Cylinder Head	One Piece, Cast, Overhead Valves
Pistons.....	Cast Aluminum Alloy, Controlled Expansion Top Ring Insert, Fastram Design
Crankshaft	Induction Hardened and Balanced
Number of Main Bearings	5

POWERTRAIN

Clutch

16F / 16R Transmission Tractors

Type (Mechanical shuttle).....	Dry, Multi-Disc
Number of Discs (Mechanical shuttle)	5
Main Disc Diameter in (mm) (Mechanical shuttle).....	9 (230)
Control (Mechanical shuttle)	Foot Pedal and Modulating Valve
Actuation (Mechanical shuttle).....	Hydraulic
Free-Play Adjustment (Mechanical shuttle)	Self-Adjusting
Type.....	Inching Pedal, Electronic Transmission Control

PowerShuttle Transmission Tractors

Dual, Wet Multi-Disc Clutch Pack

Transmission

16F / 16R

Type.....	Mechanical, Transmission w/2-Speed Powershift
Mechanical Shuttle (Optional).....	Left Side of Dash
Power Shuttle (Electronic Controlled Hydraulic Shuttle)	Left Side of Steering column
Speeds.....	16 Forward, 16 Reverse
Gears	4 Synchronized, 2 Powershift
Ranges	2 Synchromesh and Dual Wet Clutch,
Creeper.....	Optional, 4:1 Reduction Optional, 9:1 Reduction

Rear Final Drive and Brakes

Type	Primary Reduction - Spiral Hypoid Pinion and Ring Gear on Differential Secondary Reduction – Inboard Planetaries
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Differential Lock

Type.....	Sliding Collar, Engage On the Go
Engagement	Electro-Hydraulic



SPECIFICATIONS CHALLENGER® MT425B

POWER TRAIN (Cont.)

Rear Final Drive and Brakes(Cont.)

Brakes

Rear Inboard Wet Disc
Actuation Hydraulic
Parking Brake Hand Operated Lever, Multi-Disc, on Pinion

16F / 16R Transmission

TRAVEL SPEEDS @ RATED ENGINE rpm (18.4R38 REAR TIRES)

Trans. Speed		1 mph (kph)	2 mph (kph)	3 mph (kph)	4 mph (kph)
Forward Low	A	1.7 (2.7)	2.5 (4.0)	3.8 (6.0)	5.1 (8.1)
	B	2.1 (3.4)	3.2 (5.1)	4.7 (7.6)	6.4 (10.3)
Forward High	A	6.3 (10.1)	9.5 (15.2)	14.1 (22.6)	19.0 (30.6)
	B	7.9 (12.7)	12.0 (19.3)	17.7 (28.6)	24.0 (38.7)
Reverse Low	A	1.7 (2.7)	2.5 (4.0)	3.8 (6.0)	5.1 (8.1)
	B	2.1 (3.4)	3.2 (5.1)	4.7 (7.6)	6.4 (10.3)
Reverse High	A	6.3 (10.1)	9.5 (15.2)	14.1 (22.6)	19.0 (30.6)
	B	7.9 (12.7)	12.0 (19.3)	17.7 (28.6)	24.0 (38.7)

Standard Speed x .25 = 4:1 Creeper Speed

Standard Speed x .11 = 9:1 Super Creep Speed



SPECIFICATIONS CHALLENGER® MT425B

POWER TRAIN (Cont.)

Rear Axle

Type Flanged Axle
Tread Settings: Min - Max, in(mm) 60.2 (1530) – 84.4 (2144)
Maximum Permissible Axle Static Load Limit lb (kg) 13,977 (6340)

Adjustable Front Axle (2WD)

Type Telescopic, Box-In-Box Design
Steering Angle 57°
Tread Setting
Adjustment Increments in (mm) 4 (101.6)
Tread Adjustment Range (10:00 X 16 Tire)
Wheel Turned In in (mm) 60.7 (1543) – 88.7 (2254)
Wheel Turned Out in (mm) 63.8 (1622) – 91.8 (2333)

Maximum Permissible Axle Static Load Limit lb (kg) 9590 (4350)

4WD Front Axle

Type Center Pivot, Mechanical Drive, AG 85
Steering Angle 55°
Drive Centerline Splined Shaft
Drive Ratio 1.308
Method of Engagement Electro-Hydraulic, Wet, Multi-Disc Clutch
Differential Lock
Type Sliding Collar
Method of Engagement Electro-Hydraulic, Simultaneous with Rear Axle
Tread Settings in(mm) 61.7 (1568) – 80.7 (2051)
Maximum Permissible Axle Static Load Limit lb (kg) 11,023 (5000)



SPECIFICATIONS CHALLENGER® MT425B

POWER TRAIN (Cont.)

Power Take-Off

Type	Independent
Speeds (rpm)	540/1000
Optional Speed(s)	Economy
Control	Electro-Hydraulic
Clutch	Wet, Multi-Disc
Clutch Disc Diameter in (mm)	5.31 (135)
Shaft Configuration	
540 RPM	6 Spline, 1.375 in. (35)
1000 RPM	21 Spline, 1.375 in. (35)
Engine/PTO Speed Ratio	
540 RPM	540 @ 1990 Engine rpm
1000 RPM	1000 @ 2090 Engine rpm
Economy 540/1000 (Optional)	1550 Engine rpm

Front PTO (Optional)

Type	Independent
Speed rpm	1000
Shaft Configuration	21 Spline, 1.375 (35)

HYDRAULICS AND HITCH

OPEN CENTER SYSTEM

Pumps

Type	Dual pump and Single pump, Open Center
Total Flow gpm (Lpm)	34.9 (132)

Remote Valves and Three Point Pump

Type	Gear Pump, Fixed Displacement
Flow gpm (Lpm)	26.4 (100)
Relief Pressure psi (bar)	2900 (186)

Steering and Accessories Pump

Type	Gear Pump, Fixed Displacement
Flow gpm (Lpm)	8.5 (32.7)
Relief Pressure psi (bar)	250 (17)

Filters

Number	2
Type	External Suction Strainer and Canister Filter

Remote Auxiliary Hydraulic Valves

Number	2 Standard, 3 and 4 Optional
Type	1 ST 3 Position, W/Kickout, and Flow Control 2 ND 4 Position, W/Float, and Kickout



SPECIFICATIONS CHALLENGER® MT425B

HYDRAULICS AND HITCH (Cont.)

Three Point Hitch

ASAE Hitch Category	II
Hitch Lower Links	Extendable
Number of Lift Cylinders	2, External Controls
Armrest	Height/Depth, Raise/Lower, Transport Lock
Right Side Console	Position/Draft/Intermix, Maximum Height of Raise, Rate of Drop, Active Transport
External	Raise And Lower Buttons On Both Rear Fenders
Draft Sensing	Electronic Lower Link Pins
Lift Capacity @ 24 in lb (kg).....	6600 (2993)
Type of Stabilizers	Telescopic

Front Three-Point Hitch (Optional)

ASAE Hitch Category	II
Hitch Lower Links	Fixed
Number of Lift Cylinders	2, External Controls
Position	Position
Lift Capacity at Hitch lb (kg).....	5500 (2500)

Drawbar

Type	Narrow Swing w/Clevis
Maximum Vertical Static Load lbs (kg)	4420 (2000)



SPECIFICATIONS CHALLENGER® MT425B

OPERATOR AREA

Cab and Controls

Type	Isolation Mounted Cab With A/C and Heater
Glass Area Sq Ft	61
Sound Level in Cab dB (A)	72
	Manufacturers Estimate
Pedals.....	Suspended
Steering Wheel	Tilt/Telescope
Roll Over Protective Structure (ROPS).....	Integral w/Cab
Seat	Deluxe Pneumatic, Swivel, Seat Belt
Instructor's Seat.....	Optional, With Backrest and Seat Belt

Instrumentation

Gauges	Tachometer, Fuel, Temperature (Coolant), Hourmeter
Digital Readouts	PTO Speed, Ground Speed
Warning Lights.....	Alternator Charge, Engine Oil Pressure, Air Cleaner Restriction
	Differential Lock Engage, High Beam, Directional & Hazard Lights,
	Parking Brake, Transmission Oil Low Pressure, Hydraulic Filter,
	4WD Engage, Transmission High Range, Speedshift, C, D,
	PTO Engage 540, 1000, Economy

CAPACITIES

Engine

Crankcase w/Filter qt (L).....	8 (7.5)
Fuel Tank gal (L)	
Standard	40 (151)
Optional	13.2 (50)
Cooling System qt (L)	17.5 (66.2)

Power Train

Transmission and Final Drives	
Mechanical Shuttle Transmission (L)	16.4 (62)
Power Shuttle Transmission	19.5 (73.8)
Power Steering System	Common w/Transmission
Hydraulic System.....	Common w/Transmission
4WD Differential qt (L)	5.8 (5.4)
4WD Planetary Final Drives - Each qt (L)	1 (.94)



SPECIFICATIONS CHALLENGER® MT425B

ELECTRICAL SYSTEM

Starting and Charging

Type of System..... 12 Volt Negative Ground
Alternator Cab / Platform 80 Amp
..... 120 Amp available as factory option
..... 120 Amp required with optional handrail lights
Starter..... 2.7 kW
Battery One - 505 CCA

Lighting

Front..... 2 Front Grille Hi/Lo Beam Headlights,
2 Double Element Field Lights Above Windshield,
2 Field Lights On Hand Rail,
Rear..... 2 Double Element Field Lights Above Rear Window
Hazard Flashers Red Tail Lights, Flashing Safety/Turn Indicator Lights
Trailer Plug Standard, Rear Mounted 7 Terminal ASAE
Horn..... Standard



SPECIFICATIONS CHALLENGER® MT425B

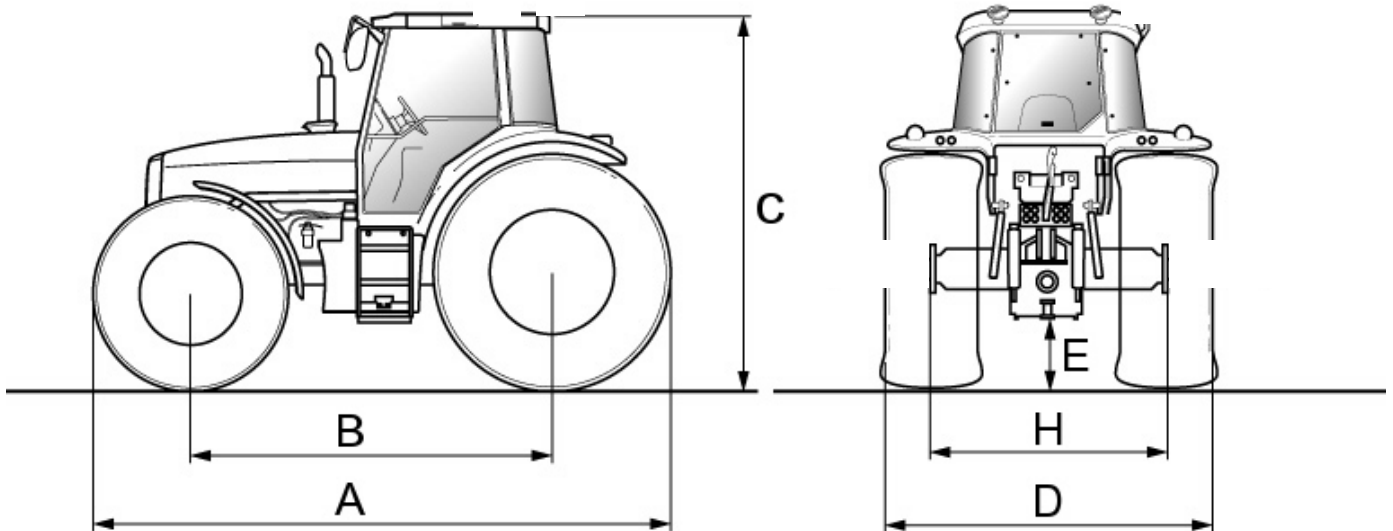
DIMENSIONS AND WEIGHTS - 2WD Cab With 16.9R34 Rear and 10.00 x 16 Front Tires

Dimensions

Wheel Base [A] in (mm)	97.0 (2463)
Overall Length [B] in (mm)	169.3 (4302)
Overall Height	
Top of Cab [C] in (mm)	106.5 (2706)
Overall Width [D]	
Minimum in (mm)	60.0 (1518)
Maximum in (mm)	100.4 (2550)
Ground Clearance	
Under Drawbar [E] in (mm)	13.6 (346)

Weights

Approximate Shipping Weight lb (kg)	7826 (3550)
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SPECIFICATIONS CHALLENGER® MT425B

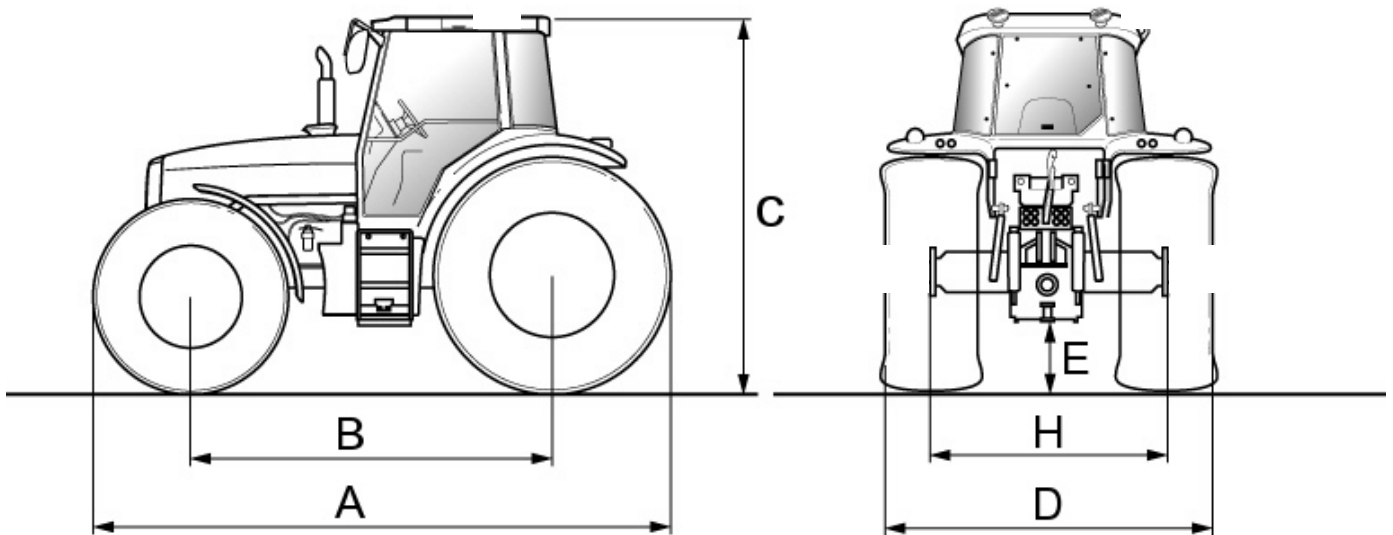
DIMENSIONS AND WEIGHTS – 4WD Cab With 16.9R34 Rear and 13.6R24 Front Tires

Dimensions

Wheel Base [A] in (mm)	97.0 (2463)
Overall Length [B] in (mm)	169.3 (4302)
Overall Height	
Top of Cab [C] in (mm)	106.5 (2706)
Overall Width [D]	
Minimum in (mm)	60.0 (1518)
Maximum in (mm)	100.4 (2550)
Ground Clearance	
Under Drawbar [E] in (mm)	13.6 (346)

Weights

Approximate Shipping Weight lb (kg)	8520 (3865)
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SPECIFICATIONS CHALLENGER® MT445B

GENERAL

Make Challenger™
Model MT445B
Class Small Row Crop/Utility
Chassis Type Isolation-Mounted Cab or Isolation-Mounted
Flat-Deck Platform, 2WD or 4WD

PTO AND DRAWBAR PERFORMANCE

PTO hp @ Rated Engine rpm hp (kW) 70 (52.2) @ 2,200

**INFORMATION
AVAILABLE
AFTER TESTING**

ENGINE GENERAL

Model Caterpillar 3054
Type In Line, 4 Cycle, Direct Injection, Diesel
Cylinder Head Design One, Cast Iron, Overhead Valve
Number of Cylinders 4
Bore in (mm) 4.13 (105)
Stroke in (mm) 5.0 (127)
Displacement CID (L) 269 (4.4)
Compression Ratio 19.3 : 1
Aspiration Wastegate Turbocharged
Starting Aid Glow Plug
Block Heater Field Installed Accessory



SPECIFICATIONS CHALLENGER® MT445B

ENGINE SYSTEMS

Cooling System

Type Pressurized Liquid, Forced Circulation
Temperature Control Thermostat
Fan
Number of Blades 7
Diameter in(mm) 19.8(502)
Drive Belt From Crankshaft with Viscous Clutch
Water Pump
Type Impeller
Drive Gear From Timing Gear

Air Intake System

Intake Location Under Hood
Air Cleaner
Type Dry, Centrifugal, Exhaust Dust Extraction
Number of Elements 1: Primary and 1 Secondary
Material Pleated Paper
Restriction Indicator Warning Light

Exhaust System

Type Integral with External Elbow and Vertical Stack
Muffler Location Vertical, at Right, Front Cab Post

Fuel Injection System

Type of Injection Direct
Injection Pump Delphi DB210
Type Rotary, Self-Venting
Drive Timing Gear
Injectors Multi-Hole
Governor
Type Mechanical
Governed Speed Range rpm 950 – 2354
Rated Engine rpm 2200

Lubrication System

Type Full Pressure, Full Flow w/Bypass & Cooler
Filter Spin on canister
Number of Filters 1
Pump Type Gear
Pump Drive Crankshaft



SPECIFICATIONS CHALLENGER® MT445B

ENGINE SYSTEMS (Cont.)

Crankcase, Cylinder Block, & Cylinder Head

Cylinder Block.....	Cast Iron, Four Cylinder In-Line w/Replaceable Dry Sleeves
Cylinder Head	One Piece, Cast, Overhead Valves
Pistons.....	Cast Aluminum Alloy, Controlled Expansion Top Ring Insert, Fastram Design
Crankshaft	Induction Hardened and Balanced
Number of Main Bearings	5

POWERTRAIN

Clutch

16F / 16R Transmission Tractors

Type (Mechanical shuttle).....	Dry, Multi-Disc
Number of Discs (Mechanical shuttle)	5
Main Disc Diameter in (mm) (Mechanical shuttle).....	9 (230)
Control (Mechanical shuttle)	Foot Pedal and Modulating Valve
Actuation (Mechanical shuttle).....	Hydraulic
Free-Play Adjustment (Mechanical shuttle)	Self-Adjusting
Type.....	Inching Pedal, Electronic Transmission Control

PowerShuttle Transmission Tractors..... Dual, Wet Multi-Disc Clutch Pack

Transmission

16F / 16R

Type.....	Mechanical, Transmission w/2-Speed Powershift
Mechanical Shuttle (Optional).....	Left Side of Dash
Power Shuttle (Electronic Controlled Hydraulic Shuttle).....	Left Side of Steering column
Speeds.....	16 Forward, 16 Reverse
Gears	4 Synchronized, 2 Powershift
Ranges	2 Synchromesh and Dual Wet Clutch,
Creeper.....	Optional, 4:1 Reduction Optional, 9:1 Reduction

Rear Final Drive and Brakes

Type	Primary Reduction - Spiral Hypoid Pinion and Ring Gear on Differential Secondary Reduction – Inboard Planetaries
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Differential Lock

Type.....	Sliding Collar, Engage On the Go
Engagement	Electro-Hydraulic



SPECIFICATIONS CHALLENGER® MT445B

POWER TRAIN (Cont.)

Rear Final Drive and Brakes(Cont.)

Brakes

Rear Inboard Wet Disc
 Actuation Hydraulic
 Parking Brake Hand Operated Lever, Multi-Disc, on Pinion

16F / 16R Transmission

TRAVEL SPEEDS @ RATED ENGINE rpm (18.4R38 REAR TIRES)

Trans. Speed		1 mph (kph)	2 mph (kph)	3 mph (kph)	4 mph (kph)
Forward Low	A	1.7 (2.7)	2.5 (4.0)	3.8 (6.0)	5.1 (8.1)
	B	2.1 (3.4)	3.2 (5.1)	4.7 (7.6)	6.4 (10.3)
Forward High	A	6.3 (10.1)	9.5 (15.2)	14.1 (22.6)	19.0 (30.6)
	B	7.9 (12.7)	12.0 (19.3)	17.7 (28.6)	24.0 (38.7)
Reverse Low	A	1.7 (2.7)	2.5 (4.0)	3.8 (6.0)	5.1 (8.1)
	B	2.1 (3.4)	3.2 (5.1)	4.7 (7.6)	6.4 (10.3)
Reverse High	A	6.3 (10.1)	9.5 (15.2)	14.1 (22.6)	19.0 (30.6)
	B	7.9 (12.7)	12.0 (19.3)	17.7 (28.6)	24.0 (38.7)

Standard Speed x .25 = 4:1 Creeper Speed

Standard Speed x .11 = 9:1 Super Creep Speed



SPECIFICATIONS CHALLENGER® MT445B

POWER TRAIN (Cont.)

Rear Axle

Type Flanged Axle
Tread Settings: Min - Max, in(mm) 60.2 (1530) – 84.4 (2144)
Maximum Permissible Axle Static Load Limit lb (kg) 13,977 (6340)

Adjustable Front Axle (2WD)

Type Telescopic, Box-In-Box Design
Steering Angle 57°
Tread Setting
Adjustment Increments in (mm) 4 (101.6)
Tread Adjustment Range (10:00 X 16 Tire)
Wheel Turned In in (mm) 60.7 (1543) – 88.7 (2254)
Wheel Turned Out in (mm) 63.8 (1622) – 91.8 (2333)

Maximum Permissible Axle Static Load Limit lb (kg) 9590 (4350)

4WD Front Axle

Type Center Pivot, Mechanical Drive, AG 85
Steering Angle 55°
Drive Centerline Splined Shaft
Drive Ratio 1.308
Method of Engagement Electro-Hydraulic, Wet, Multi-Disc Clutch
Differential Lock
Type Sliding Collar
Method of Engagement Electro-Hydraulic, Simultaneous with Rear Axle
Tread Settings in(mm) 61.7 (1568) – 80.7 (2051)
Maximum Permissible Axle Static Load Limit lb (kg) 11,023 (5000)



SPECIFICATIONS CHALLENGER® MT445B

POWER TRAIN (Cont.)

Power Take-Off

Type	Independent
Speeds (rpm)	540/1000
Optional Speed(s)	Economy
Control	Electro-Hydraulic
Clutch	Wet, Multi-Disc
Clutch Disc Diameter in (mm)	5.31 (135)
Shaft Configuration	
540 RPM	6 Spline, 1.375 in. (35)
1000 RPM	21 Spline, 1.375 in. (35)
Engine/PTO Speed Ratio	
540 RPM	540 @ 1990 Engine rpm
1000 RPM	1000 @ 2090 Engine rpm
Economy 540/1000 (Optional)	1550 Engine rpm

Front PTO (Optional)

Type	Independent
Speed rpm	1000
Shaft Configuration	21 Spline, 1.375 (35)

HYDRAULICS AND HITCH

OPEN CENTER SYSTEM

Pumps

Type	Dual Element and Single element, Open Center
Total Flow gpm (Lpm)	34.9 (132)

Remote Valves and Three Point Pump

Type	Gear Pump, Fixed Displacement
Flow gpm (Lpm)	26.4 (100)
Relief Pressure psi (bar)	2900 (186)

Steering and Accessories Pump

Type	Gear Pump, Fixed Displacement
Flow gpm (Lpm)	8.5 (32.7)
Relief Pressure psi (bar)	250 (17)

Filters

Number	2
Type	External Suction Strainer and Canister Filter

Remote Auxiliary Hydraulic Valves

Number	2 Standard, 3 and 4 Optional
Type	1 ST 3 Position, W/Kickout, and Flow Control 2 ND 4 Position, W/Float, and Kickout



SPECIFICATIONS CHALLENGER® MT445B

HYDRAULICS AND HITCH (Cont.)

Three Point Hitch

ASAE Hitch Category	II
Hitch Lower Links	Extendable
Number of Lift Cylinders	2, External Controls
Armrest	Height/Depth, Raise/Lower, Transport Lock
Right Side Console	Position/Draft/Intermix, Maximum Height of Raise, Rate of Drop, Active Transport
External	Raise And Lower Buttons On Both Rear Fenders
Draft Sensing	Electronic Lower Link Pins
Lift Capacity @ 24 in lb (kg).....	6600 (2993)
Type of Stabilizers	Telescopic

Front Three-Point Hitch (Optional)

ASAE Hitch Category	II
Hitch Lower Links	Fixed
Number of Lift Cylinders	2, External Controls
Lift Capacity at Hitch lb (kg).....	5500 (2500)

Drawbar

Type	Narrow Swing w/Clevis
Maximum Vertical Static Load lbs (kg)	4420 (2000)



SPECIFICATIONS CHALLENGER® MT445B

OPERATOR AREA

Cab and Controls

Type	Isolation Mounted Cab With A/C and Heater
Glass Area Sq Ft	61
Sound Level in Cab dB (A)	72
	Manufacturers Estimate
Pedals.....	Suspended
Steering Wheel	Tilt/Telescope
Roll Over Protective Structure (ROPS).....	Integral w/Cab
Seat	Deluxe Pneumatic, Swivel, Seat Belt
Instructor's Seat.....	Optional, With Backrest and Seat Belt

Instrumentation

Gauges	Tachometer, Fuel, Temperature (Coolant), Hourmeter
Digital Readouts	PTO Speed, Ground Speed
Warning Lights.....	Alternator Charge, Engine Oil Pressure, Air Cleaner Restriction
	Differential Lock Engage, High Beam, Directional & Hazard Lights,
	Parking Brake, Transmission Oil Low Pressure, Hydraulic Filter,
	4WD Engage, Transmission High Range, Speedshift, C, D,
	PTO Engage 540, 1000, Economy

CAPACITIES

Engine

Crankcase w/Filter qt (L).....	8 (7.5)
Fuel Tank gal (L)	
Standard	40 (151)
Optional	13.2 (50)
Cooling System qt (L)	17.5 (66.2)

Power Train

Transmission and Final Drives	
Mechanical Shuttle Transmission (L)	16.4 (62)
Power Shuttle Transmission	19.5 (73.8)
Power Steering System	Common w/Transmission
Hydraulic System.....	Common w/Transmission
4WD Differential qt (L)	5.8 (5.4)
4WD Planetary Final Drives - Each qt (L)	1 (.94)



SPECIFICATIONS CHALLENGER® MT445B

ELECTRICAL SYSTEM

Starting and Charging

Type of System.....	12 Volt Negative Ground
Alternator Cab / Platform	80 Amp
.....	120 Amp available as factory option
.....	120 Amp required with optional handrail lights
Starter.....	2.7 kW
Battery	One - 505 CCA

Lighting

Front	2 Front Grille Hi/Lo Beam Headlights, 2 Double Element Field Lights Above Windshield, 2 Field Lights On Hand Rail,
Rear.....	2 Double Element Field Lights Above Rear Window
Hazard Flashers	Red Tail Lights, Flashing Safety/Turn Indicator Lights
Trailer Plug	Standard, Rear Mounted 7 Terminal ASAE
Horn.....	Standard



SPECIFICATIONS CHALLENGER® MT445B

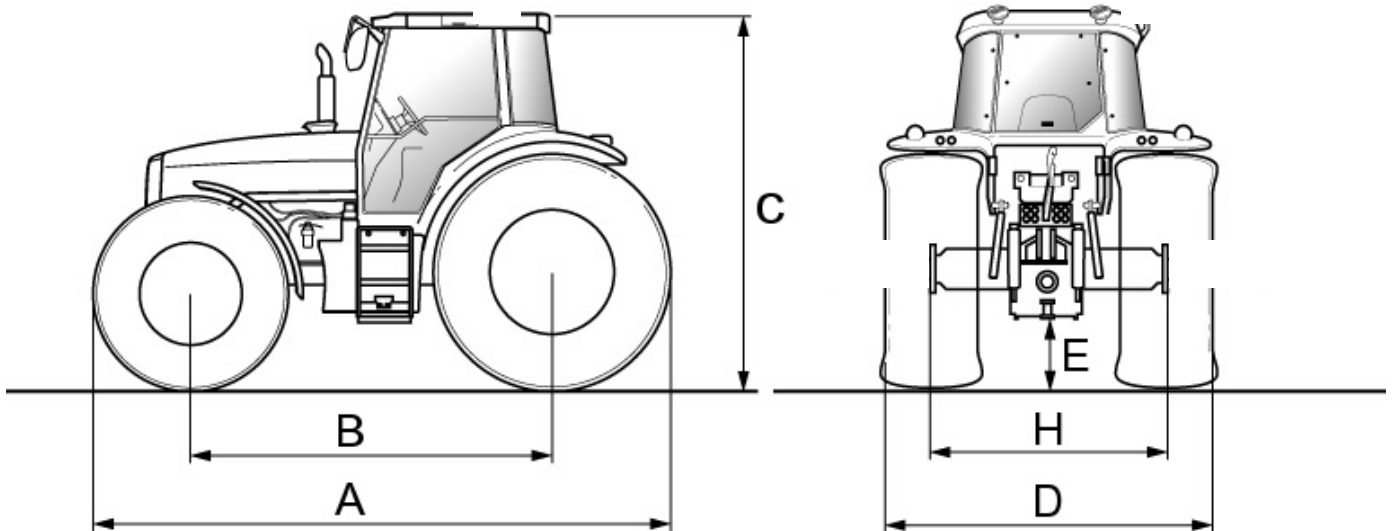
DIMENSIONS AND WEIGHTS - 2WD Cab With 16.9R34 Rear and 10.00 x 16 Front Tires

Dimensions

Wheel Base [A] in (mm)	97.0 (2463)
Overall Length [B] in (mm)	169.3 (4302)
Overall Height	
Top of Cab [C] in (mm)	106.5 (2706)
Overall Width [D]	
Minimum in (mm)	60.0 (1518)
Maximum in (mm)	100.4 (2550)
Ground Clearance	
Under Drawbar [E] in (mm)	13.6 (346)

Weights

Approximate Shipping Weight lb (kg)	7826 (3550)
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SPECIFICATIONS CHALLENGER® MT445B

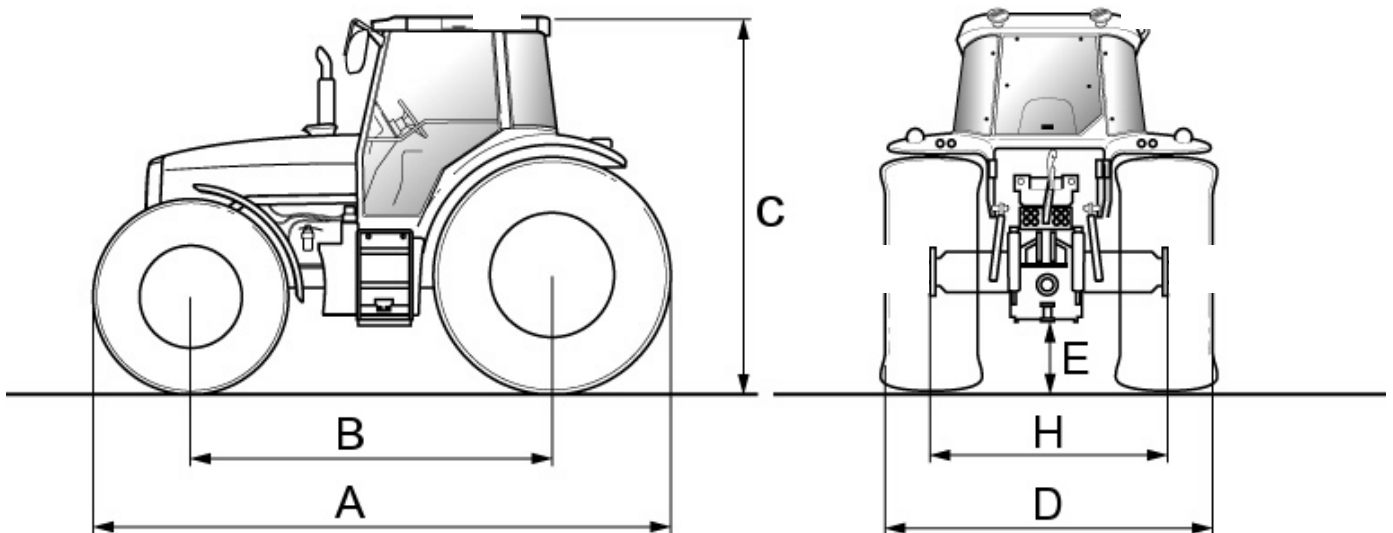
DIMENSIONS AND WEIGHTS – 4WD Cab With 16.9R34 Rear and 13.6R24 Front Tires

Dimensions

Wheel Base [A] in (mm)	97.0 (2463)
Overall Length [B] in (mm)	169.3 (4302)
Overall Height	
Top of Cab [C] in (mm)	106.5 (2706)
Overall Width [D]	
Minimum in (mm)	60.0 (1518)
Maximum in (mm)	100.4 (2550)
Ground Clearance	
Under Drawbar [E] in (mm)	13.6 (346)

Weights

Approximate Shipping Weight lb (kg)	8520 (3865)
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SPECIFICATIONS CHALLENGER® MT455B

GENERAL

Make Challenger™
Model MT455B
Class Small Row Crop/Utility
Chassis Type Isolation-Mounted Cab or Isolation-Mounted
Flat-Deck Platform, 2WD or 4WD

PTO AND DRAWBAR PERFORMANCE

PTO hp @ Rated Engine rpm hp (kW) 80 (59.7) @ 2,200

**INFORMATION
AVAILABLE
AFTER TESTING**

ENGINE GENERAL

Model Caterpillar 3054
Type In Line, 4 Cycle, Direct Injection, Diesel
Cylinder Head Design One, Cast Iron, Overhead Valve
Number of Cylinders 4
Bore in (mm) 4.13 (105)
Stroke in (mm) 5.0 (127)
Displacement CID (L) 269 (4.4)
Compression Ratio 19.3 : 1
Aspiration Wastegate Turbocharged
Starting Aid Glow Plug
Block Heater Field Installed Accessory



SPECIFICATIONS CHALLENGER® MT455B

ENGINE SYSTEMS

Cooling System

Type Pressurized Liquid, Forced Circulation
Temperature Control Thermostat
Fan
Number of Blades 7
Diameter in(mm) 19.8(502)
Drive Belt From Crankshaft with Viscous Clutch
Water Pump
Type Impeller
Drive Gear From Timing Gear

Air Intake System

Intake Location Under Hood
Air Cleaner
Type Dry, Centrifugal, Exhaust Dust Extraction
Number of Elements 1: Primary and 1 Secondary
Material Pleated Paper
Restriction Indicator Warning Light

Exhaust System

Type Integral with External Elbow and Vertical Stack
Muffler Location Vertical, at Right, Front Cab Post

Fuel Injection System

Type of Injection Direct
Injection Pump Delphi DB210
Type Rotary, Self-Venting
Drive Timing Gear
Injectors Multi-Hole
Governor
Type Mechanical
Governed Speed Range rpm 950 – 2354
Rated Engine rpm 2200

Lubrication System

Type Full Pressure, Full Flow w/Bypass & Cooler
Filter Spin on canister
Number of Filters 1
Pump Type Gear
Pump Drive Crankshaft



SPECIFICATIONS CHALLENGER® MT455B

ENGINE SYSTEMS (Cont.)

Crankcase, Cylinder Block, & Cylinder Head

Cylinder Block.....	Cast Iron, Four Cylinder In-Line w/Replaceable Dry Sleeves
Cylinder Head	One Piece, Cast, Overhead Valves
Pistons.....	Cast Aluminum Alloy, Controlled Expansion Top Ring Insert, Fastram Design
Crankshaft	Induction Hardened and Balanced
Number of Main Bearings	5

POWERTRAIN

Clutch

16F / 16R Transmission Tractors

Type (Mechanical shuttle).....	Dry, Multi-Disc
Number of Discs (Mechanical shuttle)	5
Main Disc Diameter in (mm) (Mechanical shuttle).....	9 (230)
Control (Mechanical shuttle)	Foot Pedal and Modulating Valve
Actuation (Mechanical shuttle).....	Hydraulic
Free-Play Adjustment (Mechanical shuttle)	Self-Adjusting
Type.....	Inching Pedal, Electronic Transmission Control

PowerShuttle Transmission Tractors

Dual, Wet Multi-Disc Clutch Pack

Transmission

16F / 16R

Type.....	Mechanical, Transmission w/2-Speed Powershift
Mechanical Shuttle (Optional).....	Left Side of Dash
Power Shuttle (Electronic Controlled Hydraulic Shuttle)	Left Side of Steering column
Speeds.....	16 Forward, 16 Reverse
Gears	4 Synchronized, 2 Powershift
Ranges	2 Synchromesh and Dual Wet Clutch,
Creeper.....	Optional, 4:1 Reduction Optional, 9:1 Reduction

Rear Final Drive and Brakes

Type	Primary Reduction - Spiral Hypoid Pinion and Ring Gear on Differential Secondary Reduction – Inboard Planetaries
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Differential Lock

Type.....	Sliding Collar, Engage On the Go
Engagement	Electro-Hydraulic



SPECIFICATIONS CHALLENGER® MT455B

POWER TRAIN (Cont.)

Rear Final Drive and Brakes(Cont.)

Brakes

Rear Inboard Wet Disc
Actuation Hydraulic
Parking Brake Hand Operated Lever, Multi-Disc, on Pinion

16F / 16R Transmission

TRAVEL SPEEDS @ RATED ENGINE rpm (18.4R38 REAR TIRES)

Trans. Speed		1 mph (kph)	2 mph (kph)	3 mph (kph)	4 mph (kph)
Forward Low	A	1.7 (2.7)	2.5 (4.0)	3.8 (6.0)	5.1 (8.1)
	B	2.1 (3.4)	3.2 (5.1)	4.7 (7.6)	6.4 (10.3)
Forward High	A	6.3 (10.1)	9.5 (15.2)	14.1 (22.6)	19.0 (30.6)
	B	7.9 (12.7)	12.0 (19.3)	17.7 (28.6)	24.0 (38.7)
Reverse Low	A	1.7 (2.7)	2.5 (4.0)	3.8 (6.0)	5.1 (8.1)
	B	2.1 (3.4)	3.2 (5.1)	4.7 (7.6)	6.4 (10.3)
Reverse High	A	6.3 (10.1)	9.5 (15.2)	14.1 (22.6)	19.0 (30.6)
	B	7.9 (12.7)	12.0 (19.3)	17.7 (28.6)	24.0 (38.7)

Standard Speed x .25 = 4:1 Creeper Speed

Standard Speed x .11 = 9:1 Super Creep Speed



SPECIFICATIONS CHALLENGER[®] MT455B

POWER TRAIN (Cont.)

Rear Axle

Type Flanged Axle
Tread Settings: Min - Max, in(mm) 60.2 (1530) – 84.4 (2144)
Maximum Permissible Axle Static Load Limit lb (kg) 13,977 (6340)

Adjustable Front Axle (2WD)

Type Telescopic, Box-In-Box Design
Steering Angle 57°
Tread Setting
Adjustment Increments in (mm) 4 (101.6)
Tread Adjustment Range (10:00 X 16 Tire)
Wheel Turned In in (mm) 60.7 (1543) – 88.7 (2254)
Wheel Turned Out in (mm) 63.8 (1622) – 91.8 (2333)

Maximum Permissible Axle Static Load Limit lb (kg) 9590 (4350)

4WD Front Axle

Type Center Pivot, Mechanical Drive, AG 85
Steering Angle 55°
Drive Centerline Splined Shaft
Drive Ratio 1.308
Method of Engagement Electro-Hydraulic, Wet, Multi-Disc Clutch
Differential Lock
Type Sliding Collar
Method of Engagement Electro-Hydraulic, Simultaneous with Rear Axle
Tread Settings in(mm) 61.7 (1568) – 80.7 (2051)
Maximum Permissible Axle Static Load Limit lb (kg) 11,023 (5000)



SPECIFICATIONS CHALLENGER® MT455B

POWER TRAIN (Cont.)

Power Take-Off

Type	Independent
Speeds (rpm)	540/1000
Optional Speed(s)	Economy
Control	Electro-Hydraulic
Clutch	Wet, Multi-Disc
Clutch Disc Diameter in (mm)	5.31 (135)
Shaft Configuration	
540 RPM	6 Spline, 1.375 in. (35)
1000 RPM	21 Spline, 1.375 in. (35)
Engine/PTO Speed Ratio	
540 RPM	540 @ 1990 Engine rpm
1000 RPM	1000 @ 2090 Engine rpm
Economy 540/1000 (Optional)	1550 Engine rpm

Front PTO (Optional)

Type	Independent
Speed rpm	1000
Shaft Configuration	21 Spline, 1.375 (35)

HYDRAULICS AND HITCH

OPEN CENTER SYSTEM

Pumps

Type	Dual pump and Single pump, Open Center
Total Flow gpm (Lpm)	34.9 (132)

Remote Valves and Three Point Pump

Type	Gear Pump, Fixed Displacement
Flow gpm (Lpm)	26.4 (100)
Relief Pressure psi (bar)	2900 (186)

Steering and Accessories Pump

Type	Gear Pump, Fixed Displacement
Flow gpm (Lpm)	8.5 (32.7)
Relief Pressure psi (bar)	250 (17)

Filters

Number	2
Type	External Suction Strainer and Canister Filter

Remote Auxiliary Hydraulic Valves

Number	2 Standard, 3 and 4 Optional
Type	1 ST 3 Position, W/Kickout, and Flow Control 2 ND 4 Position, W/Float, and Kickout



SPECIFICATIONS CHALLENGER® MT455B

HYDRAULICS AND HITCH (Cont.)

Three Point Hitch

ASAE Hitch Category	II
Hitch Lower Links	Extendable
Number of Lift Cylinders	2, External Controls
Armrest	Height/Depth, Raise/Lower, Transport Lock
Right Side Console	Position/Draft/Intermix, Maximum Height of Raise, Rate of Drop, Active Transport
External	Raise And Lower Buttons On Both Rear Fenders
Draft Sensing	Electronic Lower Link Pins
Lift Capacity @ 24 in lb (kg).....	6600 (2993)
Type of Stabilizers	Telescopic

Front Three-Point Hitch (Optional)

ASAE Hitch Category	II
Hitch Lower Links	Fixed
Number of Lift Cylinders	2, External Controls
Lift Capacity at Hitch lb (kg).....	5500 (2500)

Drawbar

Type	Narrow Swing w/Clevis
Maximum Vertical Static Load lbs (kg)	4420 (2000)



SPECIFICATIONS CHALLENGER® MT455B

OPERATOR AREA

Cab and Controls

Type	Isolation Mounted Cab With A/C and Heater
Glass Area Sq Ft	61
Sound Level in Cab dB (A)	72
	Manufacturers Estimate
Pedals.....	Suspended
Steering Wheel	Tilt/Telescope
Roll Over Protective Structure (ROPS).....	Integral w/Cab
Seat	Deluxe Pneumatic, Swivel, Seat Belt
Instructor's Seat.....	Optional, With Backrest and Seat Belt

Instrumentation

Gauges	Tachometer, Fuel, Temperature (Coolant), Hourmeter
Digital Readouts	PTO Speed, Ground Speed
Warning Lights.....	Alternator Charge, Engine Oil Pressure, Air Cleaner Restriction
	Differential Lock Engage, High Beam, Directional & Hazard Lights,
	Parking Brake, Transmission Oil Low Pressure, Hydraulic Filter,
	4WD Engage, Transmission High Range, Speedshift, C, D,
	PTO Engage 540, 1000, Economy

CAPACITIES

Engine

Crankcase w/Filter qt (L).....	8 (7.5)
Fuel Tank gal (L)	
Standard	40 (151)
Optional	13.2 (50)
Cooling System qt (L)	17.5 (25)

Power Train

Transmission and Final Drives	
Mechanical Shuttle Transmission (L).....	16.4 (66.2)
Power Shuttle Transmission	19.5 (73.8)
Power Steering System	Common w/Transmission
Hydraulic System.....	Common w/Transmission
4WD Differential qt (L)	5.8 (5.4)
4WD Planetary Final Drives - Each qt (L)	.1 (.94)



SPECIFICATIONS CHALLENGER® MT455B

ELECTRICAL SYSTEM

Starting and Charging

Type of System..... 12 Volt Negative Ground
Alternator Cab / Platform 80 Amp
..... 120 Amp available as factory option
..... 120 Amp required with optional handrail lights
Starter..... 2.7 kW
Battery One - 505 CCA

Lighting

Front..... 2 Front Grille Hi/Lo Beam Headlights,
2 Double Element Field Lights Above Windshield,
2 Field Lights On Hand Rail,
Rear..... 2 Double Element Field Lights Above Rear Window
Hazard Flashers Red Tail Lights, Flashing Safety/Turn Indicator Lights
Trailer Plug Standard, Rear Mounted 7 Terminal ASAE
Horn..... Standard



SPECIFICATIONS CHALLENGER® MT455B

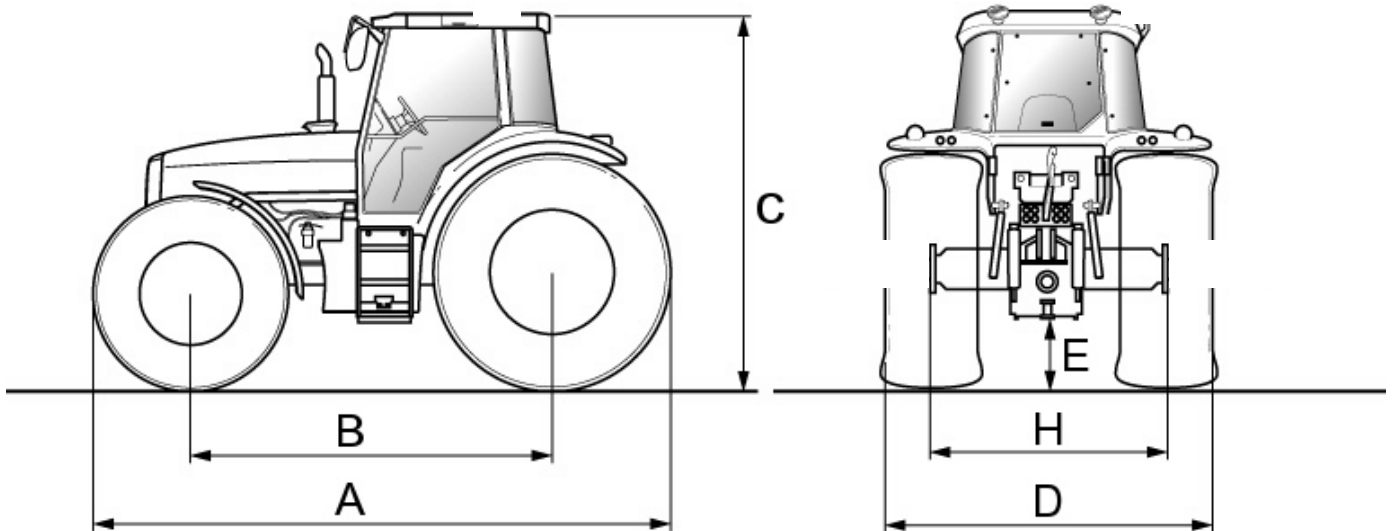
DIMENSIONS AND WEIGHTS - 2WD Cab With 16.9R34 Rear and 10.00 x 16 Front Tires

Dimensions

Wheel Base [A] in (mm)	97.0 (2463)
Overall Length [B] in (mm)	169.3 (4302)
Overall Height	
Top of Cab [C] in (mm)	106.5 (2706)
Overall Width [D]	
Minimum in (mm)	60.0 (1518)
Maximum in (mm)	100.4 (2550)
Ground Clearance	
Under Drawbar [E] in (mm)	13.6 (346)

Weights

Approximate Shipping Weight lb (kg)	7826 (3550)
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SPECIFICATIONS CHALLENGER® MT455B

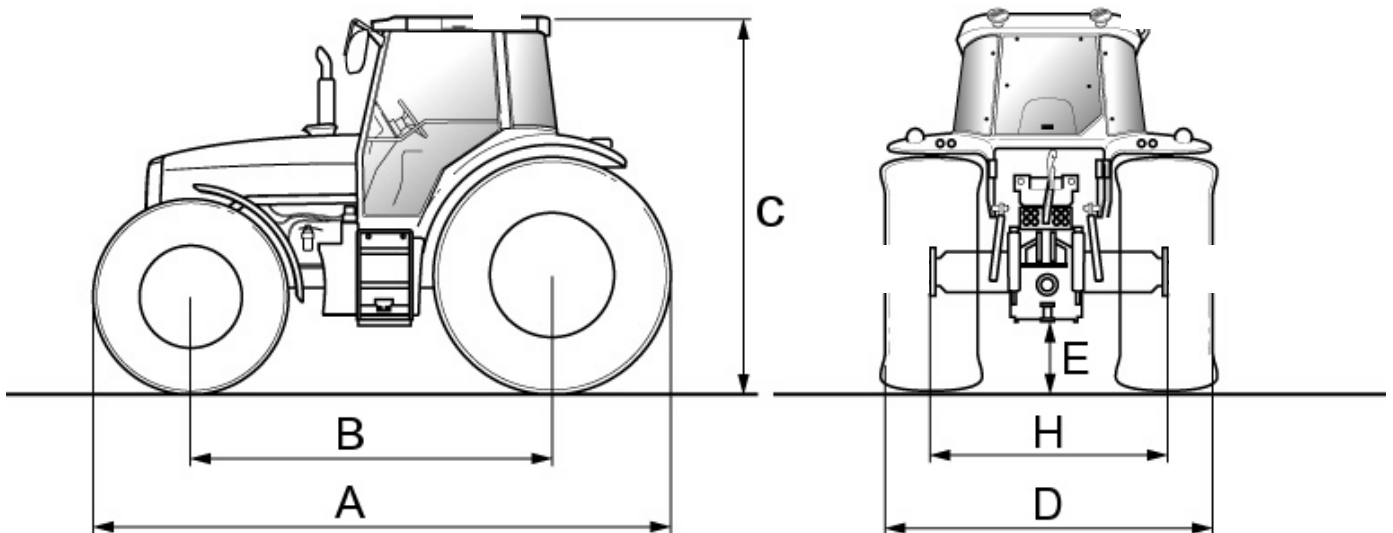
DIMENSIONS AND WEIGHTS – 4WD Cab With 16.9R34 Rear and 13.6R24 Front Tires

Dimensions

Wheel Base [A] in (mm)	97.0 (2463)
Overall Length [B] in (mm)	169.3 (4302)
Overall Height	
Top of Cab [C] in (mm)	106.5 (2706)
Overall Width [D]	
Minimum in (mm)	60.0 (1518)
Maximum in (mm)	100.4 (2550)
Ground Clearance	
Under Drawbar [E] in (mm)	13.6 (346)

Weights

Approximate Shipping Weight lb (kg)	8520 (3865)
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SPECIFICATIONS CHALLENGER® MT465B

GENERAL

Make Challenger™
Model MT465B
Class Small Row Crop/Utility
Chassis Type Isolation-Mounted Cab or Isolation-Mounted
Flat-Deck Platform, 2WD or 4WD

PTO AND DRAWBAR PERFORMANCE

PTO hp @ Rated Engine rpm hp (kW) 90 (44.7) @ 2,200

**INFORMATION
AVAILABLE
AFTER TESTING**

ENGINE GENERAL

Model Caterpillar 3054
Type In Line, 4 Cycle, Direct Injection, Diesel
Cylinder Head Design One, Cast Iron, Overhead Valve
Number of Cylinders 4
Bore in (mm) 4.13 (105)
Stroke in (mm) 5.0 (127)
Displacement CID (L) 269 (4.4)
Compression Ratio 19.3 : 1
Aspiration Wastegate Turbocharged
Starting Aid Glow Plug
Block Heater Field Installed Accessory



SPECIFICATIONS CHALLENGER® MT465B

ENGINE SYSTEMS

Cooling System

Type Pressurized Liquid, Forced Circulation
Temperature Control Thermostat
Fan
Number of Blades 7
Diameter in(mm) 19.8(502)
Drive Belt From Crankshaft with Viscous Clutch
Water Pump
Type Impeller
Drive Gear From Timing Gear

Air Intake System

Intake Location Under Hood
Air Cleaner
Type Dry, Centrifugal, Exhaust Dust Extraction
Number of Elements 1: Primary and 1 Secondary
Material Pleated Paper
Restriction Indicator Warning Light

Exhaust System

Type Integral with External Elbow and Vertical Stack
Muffler Location Vertical, at Right, Front Cab Post

Fuel Injection System

Type of Injection Direct
Injection Pump Delphi DB210
Type Rotary, Self-Venting
Drive Timing Gear
Injectors Multi-Hole
Governor
Type Mechanical
Governed Speed Range rpm 950 – 2354
Rated Engine rpm 2200

Lubrication System

Type Full Pressure, Full Flow w/Bypass & Cooler
Filter Spin on canister
Number of Filters 1
Pump Type Gear
Pump Drive Crankshaft



SPECIFICATIONS CHALLENGER® MT465B

ENGINE SYSTEMS (Cont.)

Crankcase, Cylinder Block, & Cylinder Head

Cylinder Block.....	Cast Iron, Four Cylinder In-Line w/Replaceable Dry Sleeves
Cylinder Head	One Piece, Cast, Overhead Valves
Pistons.....	Cast Aluminum Alloy, Controlled Expansion Top Ring Insert, Fastram Design
Crankshaft	Induction Hardened and Balanced
Number of Main Bearings	5

POWERTRAIN

Clutch

16F / 16R Transmission Tractors

Type (Mechanical shuttle).....	Dry, Multi-Disc
Number of Discs (Mechanical shuttle)	5
Main Disc Diameter in (mm) (Mechanical shuttle).....	9 (230)
Control (Mechanical shuttle)	Foot Pedal and Modulating Valve
Actuation (Mechanical shuttle).....	Hydraulic
Free-Play Adjustment (Mechanical shuttle)	Self-Adjusting
Type.....	Inching Pedal, Electronic Transmission Control

PowerShuttle Transmission Tractors

Dual, Wet Multi-Disc Clutch Pack

Transmission

16F / 16R

Type.....	Mechanical, Transmission w/2-Speed Powershift
Mechanical Shuttle (Optional).....	Left Side of Dash
Power Shuttle (Electronic Controlled Hydraulic Shuttle)	Left Side of Steering column
Speeds.....	16 Forward, 16 Reverse
Gears	4 Synchronized, 2 Powershift
Ranges	2 Synchromesh and Dual Wet Clutch,
Creeper.....	Optional, 4:1 Reduction Optional, 9:1 Reduction

Rear Final Drive and Brakes

Type	Primary Reduction - Spiral Hypoid Pinion and Ring Gear on Differential Secondary Reduction – Inboard Planetaries
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Differential Lock

Type.....	Sliding Collar, Engage On the Go
Engagement	Electro-Hydraulic



SPECIFICATIONS CHALLENGER® MT465B

POWER TRAIN (Cont.)

Rear Final Drive and Brakes(Cont.)

Brakes

Rear Inboard Wet Disc
 Actuation Hydraulic
 Parking Brake Hand Operated Lever, Multi-Disc, on Pinion

16F / 16R Transmission

TRAVEL SPEEDS @ RATED ENGINE rpm (18.4R38 REAR TIRES)

Trans. Speed		1 mph (kph)	2 mph (kph)	3 mph (kph)	4 mph (kph)
Forward Low	A	1.7 (2.7)	2.5 (4.0)	3.8 (6.0)	5.1 (8.1)
	B	2.1 (3.4)	3.2 (5.1)	4.7 (7.6)	6.4 (10.3)
Forward High	A	6.3 (10.1)	9.5 (15.2)	14.1 (22.6)	19.0 (30.6)
	B	7.9 (12.7)	12.0 (19.3)	17.7 (28.6)	24.0 (38.7)
Reverse Low	A	1.7 (2.7)	2.5 (4.0)	3.8 (6.0)	5.1 (8.1)
	B	2.1 (3.4)	3.2 (5.1)	4.7 (7.6)	6.4 (10.3)
Reverse High	A	6.3 (10.1)	9.5 (15.2)	14.1 (22.6)	19.0 (30.6)
	B	7.9 (12.7)	12.0 (19.3)	17.7 (28.6)	24.0 (38.7)

Standard Speed x .25 = 4:1 Creeper Speed

Standard Speed x .11 = 9:1 Super Creep Speed



SPECIFICATIONS CHALLENGER® MT465B

POWER TRAIN (Cont.)

Rear Axle

Type Flanged Axle
Tread Settings: Min - Max, in(mm) 60.2 (1530) – 84.4 (2144)
Maximum Permissible Axle Static Load Limit lb (kg) 13,977 (6340)

Adjustable Front Axle (2WD)

Type Telescopic, Box-In-Box Design
Steering Angle 57°
Tread Setting
Adjustment Increments in (mm) 4 (101.6)
Tread Adjustment Range (10:00 X 16 Tire)
Wheel Turned In in (mm) 60.7 (1543) – 88.7 (2254)
Wheel Turned Out in (mm) 63.8 (1622) – 91.8 (2333)

Maximum Permissible Axle Static Load Limit lb (kg) 9590 (4350)

4WD Front Axle

Type Center Pivot, Mechanical Drive, AG 85
Steering Angle 55°
Drive Centerline Splined Shaft
Drive Ratio 1.308
Method of Engagement Electro-Hydraulic, Wet, Multi-Disc Clutch
Differential Lock
Type Sliding Collar
Method of Engagement Electro-Hydraulic, Simultaneous with Rear Axle
Tread Settings in(mm) 61.7 (1568) – 80.7 (2051)
Maximum Permissible Axle Static Load Limit lb (kg) 11,023 (5000)



SPECIFICATIONS CHALLENGER® MT465B

POWER TRAIN (Cont.)

Power Take-Off

Type	Independent
Speeds (rpm)	540/1000
Optional Speed(s)	Economy
Control	Electro-Hydraulic
Clutch	Wet, Multi-Disc
Clutch Disc Diameter in (mm)	5.31 (135)
Shaft Configuration	
540 RPM	6 Spline, 1.375 in. (35)
1000 RPM	21 Spline, 1.375 in. (35)
Engine/PTO Speed Ratio	
540 RPM	540 @ 1990 Engine rpm
1000 RPM	1000 @ 2090 Engine rpm
Economy 540/1000 (Optional)	1550 Engine rpm

Front PTO (Optional)

Type	Independent
Speed rpm	1000
Shaft Configuration	21 Spline, 1.375 (35)

HYDRAULICS AND HITCH

OPEN CENTER SYSTEM

Pumps

Type	Dual pump and Single pump, Open Center
Total Flow gpm (Lpm)	34.9 (132)

Remote Valves and Three Point Pump

Type	Gear Pump, Fixed Displacement
Flow gpm (Lpm)	26.4 (100)
Relief Pressure psi (bar)	2900 (186)

Steering and Accessories Pump

Type	Gear Pump, Fixed Displacement
Flow gpm (Lpm)	8.5 (32.7)
Relief Pressure psi (bar)	250 (17)

Filters

Number	2
Type	External Suction Strainer and Canister Filter

Remote Auxiliary Hydraulic Valves

Number	2 Standard, 3 and 4 Optional
Type	1 ST 3 Position, W/Kickout, and Flow Control 2 ND 4 Position, W/Float, and Kickout



SPECIFICATIONS CHALLENGER® MT465B

HYDRAULICS AND HITCH (Cont.)

Three Point Hitch

ASAE Hitch Category	II
Hitch Lower Links	Extendable
Number of Lift Cylinders	2, External Controls
Armrest	Height/Depth, Raise/Lower, Transport Lock
Right Side Console	Position/Draft/Intermix, Maximum Height of Raise, Rate of Drop, Active Transport
External	Raise And Lower Buttons On Both Rear Fenders
Draft Sensing	Electronic Lower Link Pins
Lift Capacity @ 24 in lb (kg).....	6600 (2993)
Type of Stabilizers	Telescopic

Front Three-Point Hitch (Optional)

ASAE Hitch Category	II
Hitch Lower Links	Fixed
Number of Lift Cylinders	2, External Controls
Lift Capacity at Hitch lb (kg).....	5500 (2500)

Drawbar

Type	Narrow Swing w/Clevis
Maximum Vertical Static Load lbs (kg)	4420 (2000)



SPECIFICATIONS CHALLENGER® MT465B

OPERATOR AREA

Cab and Controls

Type	Isolation Mounted Cab With A/C and Heater
Glass Area Sq Ft	61
Sound Level in Cab dB (A)	72
	Manufacturers Estimate
Pedals.....	Suspended
Steering Wheel	Tilt/Telescope
Roll Over Protective Structure (ROPS).....	Integral w/Cab
Seat	Deluxe Pneumatic, Swivel, Seat Belt
Instructor's Seat.....	Optional, With Backrest and Seat Belt

Instrumentation

Gauges	Tachometer, Fuel, Temperature (Coolant), Hourmeter
Digital Readouts	PTO Speed, Ground Speed
Warning Lights.....	Alternator Charge, Engine Oil Pressure, Air Cleaner Restriction
	Differential Lock Engage, High Beam, Directional & Hazard Lights,
	Parking Brake, Transmission Oil Low Pressure, Hydraulic Filter,
	4WD Engage, Transmission High Range, Speedshift, C, D,
	PTO Engage 540, 1000, Economy

CAPACITIES

Engine

Crankcase w/Filter qt (L).....	8 (7.5)
Fuel Tank gal (L)	
Standard	40 (151)
Optional	13.2 (50)
Cooling System qt (L)	26.4 (25)

Power Train

Transmission and Final Drives	
Mechanical Shuttle Transmission (L)	16.4 (62)
Power Shuttle Transmission	19.5 (73.8)
Power Steering System	Common w/Transmission
Hydraulic System.....	Common w/Transmission
4WD Differential qt (L)	5.8 (5.4)
4WD Planetary Final Drives - Each qt (L)	1 (.94)



SPECIFICATIONS CHALLENGER® MT465B

ELECTRICAL SYSTEM

Starting and Charging

Type of System..... 12 Volt Negative Ground
Alternator Cab / Platform 80 Amp
..... 120 Amp available as factory option
..... 120 Amp required with optional handrail lights
Starter..... 2.7 kW
Battery One - 505 CCA

Lighting

Front..... 2 Front Grille Hi/Lo Beam Headlights,
2 Double Element Field Lights Above Windshield,
2 Field Lights On Hand Rail,
Rear..... 2 Double Element Field Lights Above Rear Window
Hazard Flashers Red Tail Lights, Flashing Safety/Turn Indicator Lights
Trailer Plug Standard, Rear Mounted 7 Terminal ASAE
Horn..... Standard



SPECIFICATIONS CHALLENGER® MT465B

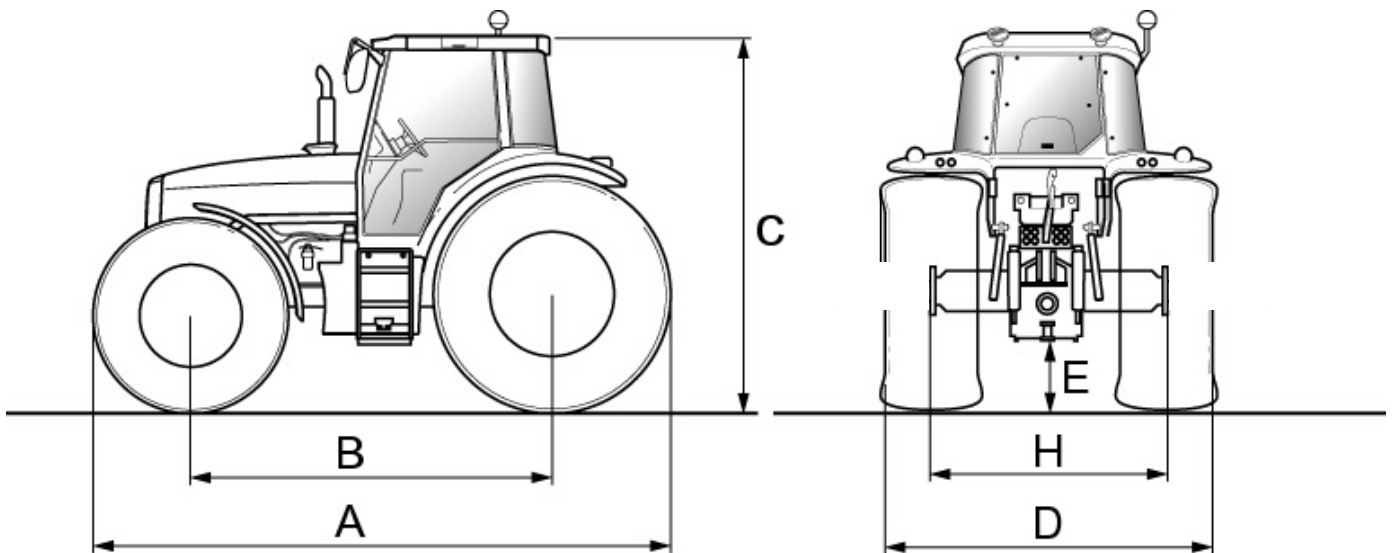
DIMENSIONS AND WEIGHTS - 2WD Cab With 16.9R34 Rear and 10.00 x 16 Front Tires

Dimensions

Wheel Base [A] in (mm)	97.0 (2463)
Overall Length [B] in (mm)	169.3 (4302)
Overall Height	
Top of Cab [C] in (mm)	106.5 (2706)
Overall Width [D]	
Minimum in (mm)	60.0 (1518)
Maximum in (mm)	100.4 (2550)
Ground Clearance	
Under Drawbar [E] in (mm)	13.6 (346)

Weights

Approximate Shipping Weight lb (kg)	7826 (3550)
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SPECIFICATIONS CHALLENGER® MT465B

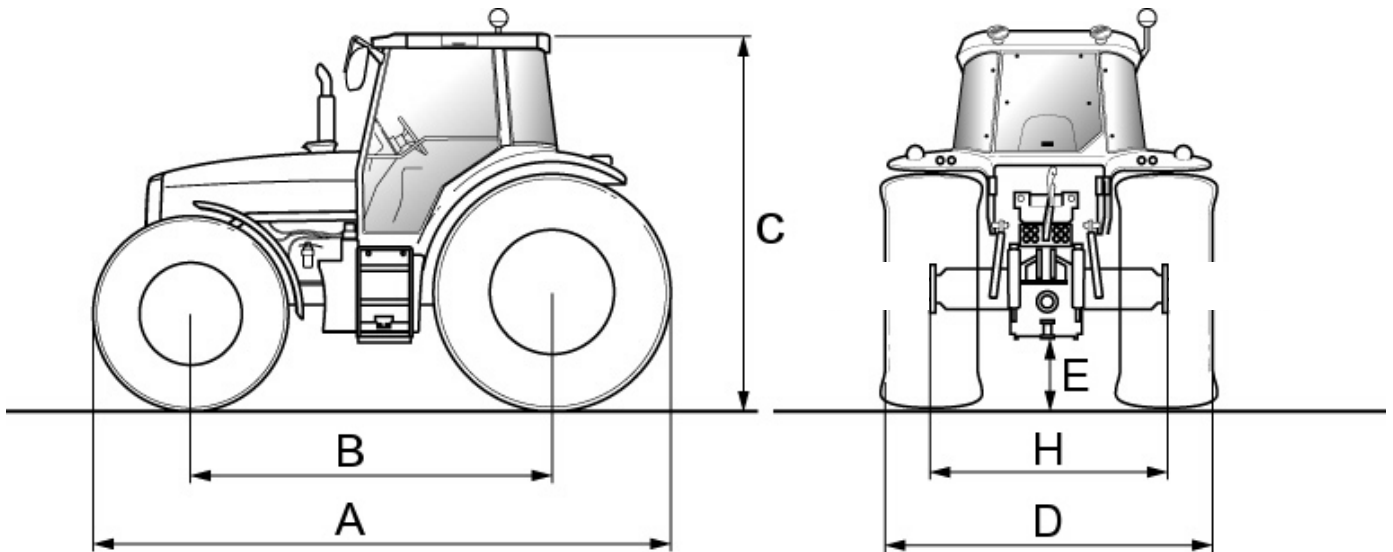
DIMENSIONS AND WEIGHTS – 4WD Cab With 16.9R34 Rear and 13.6R24 Front Tires

Dimensions

Wheel Base [A] in (mm)	100.5 (2463)
Overall Length [B] in (mm)	169.3 (4302)
Overall Height	
Top of Cab [C] in (mm)	106.5 (2706)
Overall Width [D]	
Minimum in (mm)	60.0 (1518)
Maximum in (mm)	100.4 (2550)
Ground Clearance	
Under Drawbar [E] in (mm)	13.6 (346)

Weights

Approximate Shipping Weight lb (kg)	8520 (3865)
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FEATURES AND BENEFITS CHALLENGER® MT400B SERIES

OVERALL

The new Challenger MT400B series tractors were designed with versatility in mind. The MT400B series allows the producer the ability to tailor the tractor to meet their needs while remaining within their budget.

The MT400B series tractors provide increased performance whether operating in the yard or in the field. The MT400B series tractors range from 60 to 90 PTO horsepower. Tractors are available in either a cab or platform version, and can be equipped with either a 2WD front axle or a Powered Front Axle (PFA).

New Tier II emission compliant 3054 Caterpillar engines provide the power for the MT400B series. The reliability of the Caterpillar engine makes the MT400B series suitable to numerous applications in any climate.

The MT400B series tractors also feature a simplified 16F x 16R transmission. This transmission is available in either a mechanical or powershift configuration. Two range selections and two powershifts provide both numerous working speeds and high transport speeds.

The MT400B series provides operators with concise, versatile power in a small package. With a wide range of adaptability, greater reliability, and reduced maintenance time, the MT400B series is sure to be a value in any operation.



FEATURES AND BENEFITS CHALLENGER® MT400B SERIES

Model	PTO Horsepower	Engine	16F X 16R	Aspiration	Injection
MT425B	60	3054 Caterpillar 268 CI(4.4 L)	Standard	Natural	Mechanical
MT445B	70	3054 Caterpillar 268 CI(4.4 L)	Standard	Turbocharged	Mechanical
MT455B	80	3054 Caterpillar 268 CI(4.4 L)	Standard	Turbocharged	Mechanical
MT465B	90	3054 Caterpillar 268 CI(4.4 L)	Standard	Turbocharged and Inter-cooled	Mechanical

MT400B Series Challenger tractors are available in a wide range of configurations to suit almost any application. Powerful Caterpillar engines, coupled with the 16F /16R transmission, will provide increased performance to your operation. The proven performance of Challenger tractors and the reliability of proven parts, ensure that the Challenger tractor will provide reliability in extreme conditions.



FEATURES AND BENEFITS CHALLENGER[®] MT400B SERIES

ENGINE

Challenger MT400B series tractors are proud to feature the 3054 series Caterpillar engine. Caterpillar is the world's largest manufacturer of medium speed engines, as well as one of the world's largest manufacturers of high speed diesel engines, with ratings available from 54 to 13,600 hp (40 to 10,000 kW).

The Caterpillar 3054 series mechanical engines feature numerous improvements. For example, the 3054 has a 30% increase in low speed torque compared to its 3054 predecessor. Also, research in emissions control has produced an engine that not only meets Tier II emissions standards, but produces almost no visible smoke.

Further research in engine design has produced a Caterpillar engine that is quieter, up to 3 decibels in raw engine noise. This noise reduction was accomplished with numerous innovations. A high contact ratio gear train, a pre-stressed engine block, and an open top deck block design have all helped to reduce raw engine noise.

All MT400B series tractors offer mechanically fuel injected Caterpillar engines equipped with either the Bosch VE10 or the Delphi BD210 fuel injection system. Regardless of the injection system, operators will see an increase in fuel efficiency over previous 3054 series engines.

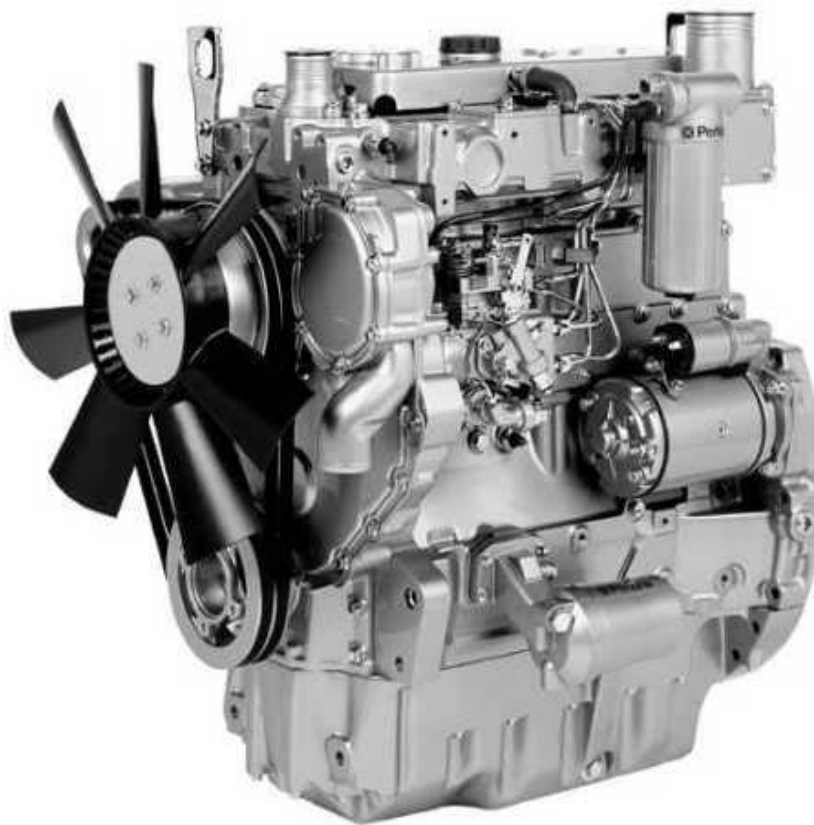
Finally, Caterpillar trusts the reliability of their engine enough to further increase the service interval to 500 hours. The additional hours of operation will not only save the operators time, but will also reduce maintenance cost on the engines.



FEATURES AND BENEFITS CHALLENGER® MT400B SERIES

New Perkins Engines

The new 4.4L (269 C.I.) Caterpillar engine features mechanical fuel injection, wastegate turbocharged or natural aspiration, and reduced emissions. Additional changes include an improved ground timing gear set for reduced noise pollution and a new rear oil seal for improved reliability. Finally, redesigned pistons and cylinder heads provide increased combustion, power, and fuel efficiency.



Model	PTO Horsepower	Engine	SAE Engine Horsepower	Aspiration	Injection
MT425B	60	3054 Caterpillar 268 C.I. (4.4L)	75	Natural	Mechanical Bosch VE10
MT445B	70	3054 Caterpillar 268 C.I. (4.4L)	85	Turbocharged	Mechanical Delphi BD210
MT455B	80	3054 Caterpillar 268 C.I. (4.4L)	95	Turbocharged	Mechanical Delphi BD210
MT465B	90	3054 Caterpillar 268 C.I. (4.4L)	105	Turbocharged and Intercooled	Mechanical Delphi BD210

FEATURES AND BENEFITS CHALLENGER[®] MT400B SERIES

Air Intake System

The profile of the air intake system has been redesigned to increase forward visibility. In addition, placing the air intake in a forward location helps to decrease dust contamination from material kicked up by the front tires or stirred up by the engine fan.

Another benefit of the forward location includes the system's access to cooler air. Cooler intake air is one factor that aids in reaching Tier II emission standards. Finally, access to the engine air filter is easier due to its location directly under the hood.



FEATURES AND BENEFITS CHALLENGER® MT400B SERIES

TRANSMISSION

The Challenger MT400B series tractors feature the 16F /16R transmission. The 16F /16R is a semi-powershift transmission. The components of the 16F /16R consists of; a four-speed gearbox selector, two ranges with gear lever mounted control button, and a two-speed gear lever mounted powershift button.

All ground speed changes with the 16F /16R transmission are accomplished on the righthand gear selector. All directional changes, on the MT400B series, are accomplished with the left hand. Customers have the choice of either the synchronized mechanical shuttle, or the single function powershuttle.

The standard 16F /16R transmission allows operators speed ranges from 1.7 to 25 mph, depending upon the selection. If slower, or more speed selections are needed, the MT400B series can be equipped with either a creeper or super-creeper option. The standard creeper will allow the tractor to reach a minimum 0.4 mph at rated engine rpm. The additional super-creeper will allow the tractor to reach a minimum 0.12 mph at rated engine rpm. Please check the specifications section of the product information guide for a speed chart on your MT400B model of choice.

All these features provide the operator with a versatile, reliable transmission for today's demanding applications.

Four Speed Gear Selection

Two-Speed Powershift

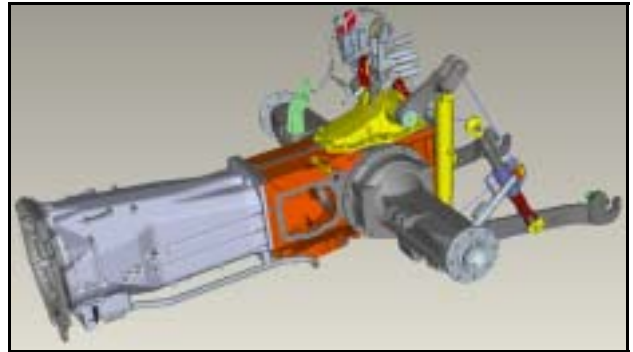
High/Low Range Selection



FEATURES AND BENEFITS CHALLENGER® MT400B SERIES

16F /16R Transm ission

This transm ission is a simple and easy to operate. The 16 x 16 speed selections allows the tractor the adaptability for a wide range of applications. The addition of either the creeper or super-creeper further expands the capabilities and operations to which the MT400B series can adapt.



Right Hand Shift Lever

The righthand shift lever incorporates all the speed changing functions of the tractor into a naturally positioned, easy to reach location. The simple H pattern and push button control allows for smooth gear transitions when moving up or down in the gear range. In addition, the ability to easily reach the gear selector increases operator comfort during long hours in the field.



Gears 1,2,3, and 4 are arranged in an H-type pattern and are selected by using the foot clutch. High/Low range selections are made by depressing button marked with a rabbit. In order to make range changes, the shift lever must be in neutral. Finally, powershift gear changes may be made on the go without using the foot clutch.

Power Shuttle Lever

The 16F /16R transm ission comes standard with the hydraulic shuttle lever. The single function shuttle lever allows the tractor to be shifted from forward to reverse without depressing the clutch pedal. Regardless of gear selection, the power shuttle will properly modulate the directional change of the transm ission giving the operator a smooth transition. As with the mechanical shuttle lever, all directional changes are controlled with the left hand. Thus, the operators righthand is free to operate other functions such as a loader joystick or hydraulic remotes.



FEATURES AND BENEFITS CHALLENGER[®] MT400B SERIES

Mechanical Shuttle Lever

The 16F /16R transmission has an optional mechanical shuttle lever. The convenient location of the lever allows operators to use their left hand to change directions and keep their right hand free for loader and hydraulic functions. Use of the foot clutch is required when making directional changes with the mechanical shuttle lever.



FEATURES AND BENEFITS CHALLENGER® MT400B SERIES

DIFFERENTIAL, BRAKES, AND FINAL DRIVES

The MT400B series tractors feature a tested, proven design on their rear differential, brakes, and final drives. The rear differential lock can easily be engaged with the use of a rocker switch located on the right console. The differential lock is electro-hydraulically engaged to ensure proper, smooth engagement.

Coupled with the rear differential system is the inboard rear planetary final drives. The final drives on the MT400B series tractors operate in an oil bath to ensure proper lubrication, reduced heat, and long wear life.

The MT400B series tractors have smooth progressive braking supplied by a rear wet, disc braking system. This system consists of ring pistons, brake disks, and steel backing plates. In addition, the brake discs are immersed in hydraulic oil to keep the discs lubricated and cool.

The rear brakes are hydraulically actuated using a master cylinder at the brake pedals and a slave cylinder or ring piston within the rear axle housings. Independent, suspended pedals operate the individual turning brakes. For transport, the pedals can be latched together to provide equal braking effort to each wheel. Tractors with PowerFrontAxle feature four-wheel braking during transport with latched brake pedals. Brake actuation will electro-hydraulically engage the PFA (PowerFrontAxle) clutch, which activates the front wheel braking effect. Challenger tractors also feature a lever-operated park brake that is independent of the pedal operated brakes.



FEATURES AND BENEFITS CHALLENGER® MT400B SERIES

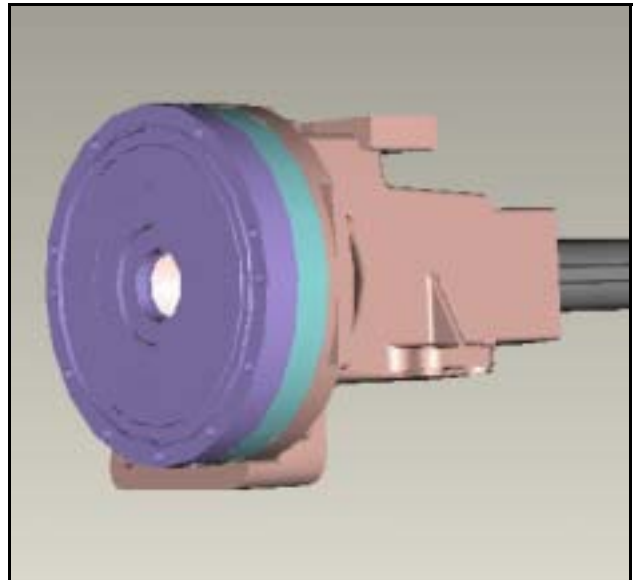
Differential Lock Controls

The differential lock on the MT400B series tractors is controlled by convenient rocker switch located on the right console. This switch provides quick, convenient access for the operator to engage the differential lock when needed.



Rear Wet Disk Brakes

Wet rear disk brakes provide smooth, progressive, fade free braking. The wet system also keeps the disks cool during operation which maintains constant braking power and reduces fade. Wet disks also reduce wear to provide for a long service life and reduced maintenance.



Automatic Four Wheel Braking

When both brake pedals are latched together in transport mode or depressed at the same time, the PFA is automatically engaged and braking power is supplied to all four wheels. This feature increases operator safety when towing heavy loads.



FEATURES AND BENEFITS CHALLENGER[®] MT400B SERIES

Independent Parking Brake

MT400B series tractors are equipped with an independent parking brake. Operated by a hand lever, this brake is independent from the transmission parking brake and the hydraulic braking system. This feature increases operator safety and reduces potential transmission damage.

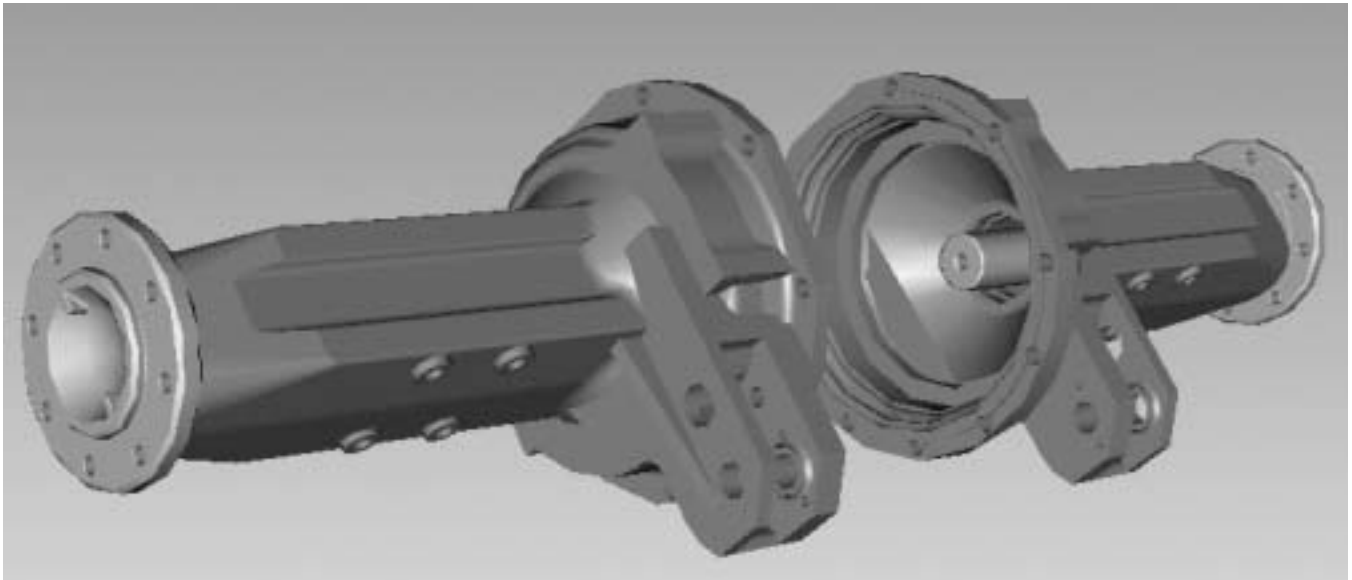


FEATURES AND BENEFITS CHALLENGER® MT400B SERIES

AXLES AND WHEELS

Flanged Rear Axles

The MT400B series is equipped with a flanged rear axle. The flange axle allows the MT400B series to maintain extreme maneuverability in tight clearances. The MT400B still maintains the adaptability to numerous row crops by changing the orientation of the pressed steel wheels.



Pressed Steel Manual Adjust Rear Wheels

All MT400B series tractors are equipped with manual adjust pressed steel wheels on the flanged rear axle. These wheels can be adjusted to eight different positions in order to vary the tire tread width and adapt to various row crop spacing.



FEATURES AND BENEFITS CHALLENGER® MT400B SERIES

Pressed Steel Manual Adjust Front Wheels

MT400B series tractors equipped with the powered front axle are fitted with pressed steel manual adjust front wheels. These wheels, like the rear wheels, are also adjustable to eight different positions by changing their orientation on both the axle and the outer rim. The varia-



Heavy Duty Pressed Steel Front Rims

MT400B series tractors equipped with the two wheel drive front axle are fitted with heavy duty pressed steel front wheels. The added strength of the heavy duty front rims matches their strength with the standard heavy duty front axle. The rims are also well suited for the entire load capacity of the front axle. The heavy duty rims will also provide reliable service in heavy load application.

