

PRODUCT SPECIFICATIONS FOR 16

US Metric

Base Power (1st Gear) - Net	216 kW
Engine Model	Cat® C13
Bore	130 mm
Stroke	157 mm
Speed at Rated Power	2,000 rpm
Derating Altitude - Tier 2/Stage II/Japan 2001 (Tier 2) Equivalent	3954 m
Maximum Torque - ISO 9249 - Tier 3/Stage IIIA/Japan 2006 (Tier 3) Equivalent	1721 N·m
Maximum Torque - ISO 9249 - Tier 4/Stage IV/Japan 2014 (Tier 4)	1771 N·m
Maximum Torque - ISO 9249 - Tier 2/Stage II/Japan 2001 (Tier 2) Equivalent	1721 N·m
Emissions (2)	Tier 3/Stage IIIA/Japan 2006 (Tier 3) Equivalent Emission Standards – depending on emission standards of specific country
Torque Rise - Tier 4/Stage IV/Japan 2014 (Tier 4)	43%
Torque Rise - Tier 2/Stage II/Japan 2001 (Tier 2) Equivalent	39%
Standard - Ambient Capability	50 °C

Derating Altitude - Tier 3/Stage IIIA/Japan 2006 (Tier 3) Equivalent	3711 m
VHP Range - Net - Metric	216-259 kW (294-353 hp)
Base Power (1st Gear) - Net - Metric	216 kW
Standard - Fan Speed - Minimum	550 rpm
Standard - Fan Speed - Maximum	1,450 rpm
Emissions (3)	Tier 2/Stage II/Japan 2001 (Tier 2) Equivalent Emission Standards – depending on emission standards of specific country
Torque Rise - Tier 3/Stage IIIA/Japan 2006 (Tier 3) Equivalent	39%
Emissions (1)	U.S. EPA Tier 4 Final/EU Stage V/Japan 2014 (Tier 4 Final)
VHP Range - Net	216-259 kW (290-348 hp)
Derating Altitude - Tier 4/Stage IV/Japan 2014 (Tier 4)	3810 m
Optimized VHP Range - Net	216-259 kW (290-348 hp)
Displacement	12.5 l
Number of Cylinders	6
Forward/Reverse Gears	8 Forward/6 Reverse
Transmission	Direct drive, power shift, countershaft
Brakes - Dynamic Brake Torque per Wheel	36701 N·m

Brakes - Secondary	Oil-actuated, oil-disc
Brakes - Service	Oil-actuated, oil disc
Brakes - Parking	Spring applied, hydraulically released
Circuit Type	Electro-hydraulic load sensing, closed center
Pump Type	Variable piston
Maximum System Pressure	24750 kPa
Standby Pressure	5900 kPa
Pump Output*	280 l/min
Note	*Pump output measured at 2,150 rpm.
Steering Range - Left/Right	47.5°
Forward - 6th	25.8 km/h
Forward - 4th	12.3 km/h
Forward - 5th	19 km/h
Turning Radius - Outside Front Tires	9.3 m
Forward - 7th	35.5 km/h
Top Speed - Forward	51.7 km/h
Forward - 3rd	8.9 km/h
Reverse - 6th	40.8 km/h

Reverse - 5th	28 km/h
Reverse - 2nd	6.6 km/h
Reverse - 3rd	9.7 km/h
Forward - 8th	51.7 km/h
Reverse - 1st	3.6 km/h
Forward - 1st	4.5 km/h
Top Speed - Reverse	40.8 km/h
Forward - 2nd	6.1 km/h
Reverse - 4th	15 km/h
Articulation Angle - Left/Right	20°
Note	Calculated with no slip and 23.5 R25 L-3 tires.
Fuel Capacity	496 l
Cooling System	70 l
DEF Tank	16 l
Hydraulic System - Total	146 l
Hydraulic System - Tank	70 l
Engine Oil	36 l
Transmission - Differential - Final Drives	98.5 l

Tandem Housing - Each	129 l
Front Wheel Spindle Bearing Housing	0.9 l
Circle Drive Housing	10 l
Front Frame Structure - Height	460 mm
Front Frame Structure - Width	356 mm
Drawbar - Width	76 mm
Drawbar - Height	203 mm
Front Axle - Total Oscillation per Side	35°
Circle - Diameter	1822 mm
Circle - Blade Beam Thickness	50 mm
Front Frame Structure - Thickness	14 mm
Front Axle - Wheel Lean	18° Left/17° Right
Front Axle - Height to Center	670 mm
Tandem Oscillation - Front Up	15°
Sidewall Thickness - Outer	22 mm
Sidewall Thickness - Inner	22 mm
Tandem Oscillation - Front Down	25°

Height	648 mm
Width	236 mm
Drive Chain Pitch	63.5 mm
Wheel Axle Spacing	1841 mm
Blade Width	4.9 m
Arc Radius	413 mm
Throat Clearance	126 mm
Thickness	25 mm
End Bit - Width	152 mm
Blade Pull* - Base GVW	18615 kg
Cutting Edge Width	203 mm
Cutting Edge Thickness	25 mm
Down Force - Maximum GVW	19895 kg
Height	787 mm
Width	4.9 m
Down Force - Base GVW	13945 kg
Blade Pull* - Maximum GVW	23985 kg

End Bit - Thickness	19 mm
Note	*Blade pull calculated at 0.9 traction coefficient, which is equal to ideal no-slip conditions, and Gross Machine Weight.
Maximum Blade Position Angle	65°
Maximum Lift Above Ground	400 mm
Maximum Depth of Cut	470 mm
Maximum Shoulder Reach Outside of Tires - Right	2311 mm
Moldboard Sideshift - Left	740 mm
Circle Centershift - Right	560 mm
Circle Centershift - Left	690 mm
Moldboard Sideshift - Right	790 mm
Maximum Shoulder Reach Outside of Tires - Left	2311 mm
Blade Tip Range - Forward	40°
Blade Tip Range - Backward	5°
Ripping Depth - Maximum	452 mm
Shank Holder Spacing - Minimum	445 mm
Shank Holder Spacing - Maximum	500 mm
Ripper Shank Holders	7

Penetration Force	13749 kg
Pry-Out Force	19822 kg
Machine Length Increase, Beam Raised	1610 mm
Operating Weight - Typically Equipped	32411 kg
Gross Vehicle Weight - Maximum Tested - Total	38500 kg
Gross Vehicle Weight - Base** - Total	28816 kg
Gross Vehicle Weight - Typically Equipped - Rear Axle	23678 kg
Gross Vehicle Weight - Typically Equipped - Total	32411 kg
Gross Vehicle Weight - Maximum Tested - Front Axle	11850 kg
Gross Vehicle Weight - Typically Equipped - Front Axle	8733 kg
Gross Vehicle Weight - Maximum Tested - Rear Axle	26650 kg
Gross Vehicle Weight - Base** - Front Axle	8134 kg
Gross Vehicle Weight - Base** - Rear Axle	20682 kg

Note (1)

*For machines not equipped with Tier 4 Final emission engine, subtract 150 kg (331 lb) from rear axle weight and total weight

subtract 150 kg (331 lb) from rear axle weight and total weight.

Note (2)

**Base operating weight calculated on standard machine configuration with 23.5 R25 tires, full fuel tank operator and ROPS cab.

Ground Clearance - Rear Axle 396 mm

Length - Counterweight to Ripper 12051 mm

Length - Front Axle to Moldboard 3066 mm

Length - Front Axle to Mid Tandem 7365 mm

Height - Top of Cylinders 3088 mm

Width - Tire Center Lines 2703 mm

Width - Outside Rear Tires 3411 mm

Length - Between Tandem Axles 1841 mm

Height - Top of Cab 3719 mm

Width - Outside Front Tires 3411 mm

Height - Front Axle Center 733 mm

Length - Front Tire to Rear of Machine - Including Tow Hitch 10593 mm

Height - Exhaust Stack 3557 mm

Steering ISO 5010:2007

Brakes ISO 3450:2011

Sound	ISO 6394:2008/ISO 6395:2008/ISO 6396:2008
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ROPS/FOPS	ISO 3471:2008/ISO 3449:2005
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Note (1)	The dynamic spectator sound power level is 109 dB(A) for Stage IV certified configurations and 109 dB(A) for Tier 2/Stage II/Japan 2001 (Tier 2) and Tier 3/Stage IIIA/Japan 2006 (Tier 3) equivalent emission standard machines when measured according to the dynamic test procedures that are specified in ISO 6395:2008. The measurement was conducted at 70% of the maximum engine cooling fan speed. The machine was equipped with a sound suppression system.
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Note (2)	The dynamic operator sound pressure level is 71 dB(A) for Stage IV certified configurations and 72 dB(A) for Tier 2/Stage II/Japan 2001 (Tier 2) and Tier 3/Stage IIIA/Japan 2006 (Tier 3) equivalent emission standard machines when measured according to the dynamic test procedures that are specified in ISO 6396:2008. The measurement was conducted at 70% of the maximum engine cooling fan speed, with the cab doors and the cab windows closed. The cab was properly installed and maintained. The machine was equipped with a sound suppression system.
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Gear - Reverse 3rd-6th	222 kW
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Gear - Forward 8th	259 kW
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Gear - Forward 3rd	222 kW
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Gear - Forward 6th	239 kW
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Gear - Forward 5th	232 kW
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Gear - Reverse 1st	216 kW
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Gear - Reverse 2nd	216 kW
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Gear - Forward 4th	227 kW
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Gear - Forward 7th	244 kW
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Gear - Forward 1st	216 kW
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Gear - Forward 1st	216 kW
Gear - Forward 2nd	216 kW
Gear - Forward 4th	227 kW
Gear - Reverse 1st	216 kW
Gear - Forward 3rd	222 kW
Gear - Reverse 3rd-6th	222 kW
Gear - Reverse 2nd	216 kW
Gear - Forward 7th	244 kW
Gear - Forward 6th	239 kW
Gear - Forward 8th	259 kW
Gear - Forward 1st	216 kW
Gear - Forward 5th	232 kW
Gear - Forward 2nd	216 kW
Wheel Group - 19.5×25 MP (1)	Tires: 23.5R25 Bridgestone VKT 2 Star
Wheel Group - 19.5×25 MP (2)	Tires: 23.5R25 Bridgestone VKT 1 Star
Wheel Group - 19.5×25 MP (3)	Tires: 23.5R25 Bridgestone VJT 1 Star
Wheel Group - 19.5×25 MP (4)	Tires: 23.5R25 Michelin XHA 2 Star
Wheel Group - 19.5×25 MP (5)	Tires: 23.5R25 Michelin XLDD 2 Star L5

16 STANDARD EQUIPMENT

NOTE

Standard and optional equipment may vary. Consult your Cat dealer for details.

OPERATOR ENVIRONMENT

- Adjustable Electric Arm rest
- Adjustable wrist rest
- Air conditioner with heater
- Articulation, automatic Return-to-Center
- Centershift pin indicator
- Coat hook
- Cup holder
- Display, digital speed and gear
- Doors, left and right side with wiper
- Gauges (analog) inside the cab (includes fuel, articulation, engine coolant temp, engine rpm, and hydraulic oil temp)
- Gauges, machine level
- Information display touch screen
- Joystick gear selection
- Joystick hydraulic controls for implements, steering, transmission
- Ladders, cab, left and right side
- Lights, left and right side lights
- Lights, night time cab
- Meter, hour, digital
- Mirror, inside rearview, wide angle
- Power port, 12V
- Radio ready, entertainment
- ROPS cab, sound suppressed, less than 73 dB(A) ISO 6394 (70% fan speed)
- Seat, cloth-covered, comfort air suspension
- Storage compartments
- Throttle control, electronic

POWER TRAIN

- Air cleaner, dual stage dry type radial seal with service indicator through messenger and automatic dust ejector
- Air-to-air after cooler (ATAAC)
- Auto Diff Lock
- Belt, serpentine, automatic tensioner
- Brake wear indication
- Brakes, oil disc, four-wheel, hydraulic
- Consistent Power to ground
- Critically Low Fluid Level Monitoring System

Differential, lock/unlock
Drain, engine oil, high speed
Electronic over speed protection
Engine ECO Mode: Tier 4 Final/Stage IV/Japan 2014 (Tier 4 Final) and Tier 2/Stage II/Japan 2001 (Tier 2) equivalent emission standards
Engine, compression brake
Ether starting aid
Fuel tank, fast fill, ground level
Fuel-water separator
Hydraulic Demand Fan
Muffler, under hood (Tier 2/Stage II/Japan 2001 (Tier 2) and Tier 3/Stage IIIA/Japan 2006 (Tier 3)
OK-to-Start
Optimized VHP
Parking brake – multi disc, sealed, oil-cooled
Priming pump, fuel
Rear axle, modular
Sediment drain, fuel tank
Three variations of the C13 engine. One meets U.S. EPA Tier 4 Final/EU Stage V/Japan 2014 (Tier 4 Final) emission standards and is required for sale in higher regulated countries. The other options are capable of meeting Tier 2/Stage II/Japan 2001 (Tier 2) or Tier 3/Stage IIIA/Japan 2006 (Tier 3) equivalent emission standards and are available for lesser or non-regulated countries, depending on the emission standards of the specific country.
Transmission, 8F/6R, power shift

VIMS no telematics

ELECTRICAL

Alternator, 150 ampere, sealed
Batteries, maintenance free, heavy duty, 1,400 CCA
Breaker panel
Electrical system, 24V
Lights: brake, reversing, roof-mounted roading, stop and tail (LED), work front
Product Link
Starter, electric, heavy duty

SAFETY

Alarm, back up
Ground level engine shutdown
Hammer (emergency exit)
Horn, electric
Lockout, hydraulic implement for roading
Operator not present monitoring System
Paint, glare reducing – top of front frame, rear enclosure an ripper cylinders
Rearview camera
Seat belt indicator
Seat belt, retractable 76 mm (3 in)
Secondary steering
Windows, laminated glass: – Fixed front with intermittent wiper – Door with intermittent wipers (2)

Windows, tempered: – Left and right side wipers – Rear with intermittent wiper

OTHER STANDARD EQUIPMENT

3-Bolt blade Bracket

AccuGrade ARO

Accumulators, blade lift

Brake accumulators, dual certified

Cat Grade Control Cross Slope

CD ROM Parts Book

Clutch, circle drive slip

Cutting edges, curved DH-2 steel: – 203 mm × 25 mm (8 in × 1 in) – 19 mm (3/4 in) mounting bolts

Doors (four), engine compartment, (two left, two right hand) locking

Doors, two service, left and right side

Drawbar – six shoe with replaceable wear strips

End bits, 16 mm (5/8 in) DH-2 steel, 19 mm (3/4 in) mounting bolts

Fast fill fuel, 567.8 L/min (150 gpm)

Fluid check

Frame, articulated, with safety lock

Hydraulics, load-sensing

Metallic Fuel tank, 496 L (131 gal)

Metallic DCM wear strips

Modular cooling package

Moldboard: – 4880 mm × 787 mm × 25 mm (16 ft × 31 in × 1 in) – Hydraulic side shift and tip

Radiator, two cleanout access doors

Rear bumper

Rear tandem access steps and hand bars

S-O-S ports: engine, hydraulic, transmission, coolant

Tandem walkway

Top adjust circle wear strips

Tow hitch (not available with ripper)

TIRES, RIMS, AND WHEELS

A partial allowance for tires on 597 mm × 609.6 mm (23.5 in × 24 in) multi-piece rims is included in the base machine price and weight

FLUIDS

Extended Life Coolant to –35° C (–31° F)

WORK TOOLS/G.E.T.

4.9 m (16 ft) blade with curved cutting edge 203 mm × 25 mm (8 in × 1 in)

16 OPTIONAL EQUIPMENT

NOTE

Standard and optional equipment may vary. Consult your Cat dealer for details.

OPERATOR ENVIRONMENT

Air horn

Comfort package

Heated door

Mirrors high visibility

Mirrors, outside heated 24V

Mirrors, outside mounted

Seat heated

Seat heated/ventilated

Windows cleaning platform and ladders left-right hand side

POWER TRAIN

Transmission, autoshift

GUARDS

Debris guard

Front axle cylinder guard
Rear fenders
Sound suppression, engine enclosure and transmission
Transmission guard

ELECTRICAL

Light, LED, warning strobe
Lights front LED
Lights, front headlights high
Lights, front headlights low
Mounting, for warning light
Service lights
Working lights halogen
Working lights LED

SAFETY

Additional monitor for rearview camera
Enhanced access platform
Fire suppression ready
Machine Security System Key
Service access platform

OTHER ATTACHMENTS

Auto-lube, Centro-matic
Auto-lube, ripper enhancement
Control, blade, variable float
Heater, engine coolant, 120V
Heater, engine coolant, 240V
Hydraulic arrangements with additional hydraulic valves Base+1
Hydraulic arrangements with additional hydraulic valves Base+5
Product Link Elite dual
Rim, 495.3 mm × 635 mm (19.5 in × 25 in) MP (spare)
Weather, Cold Plus package

WORK TOOLS/G.E.T.

4.9 m (16 ft) blade with flat cutting edge 254 mm × 35 mm (10 in × 1 3/8 in)
Push block, counterweight
Ripper, rear
Tooth, ripper

FLUIDS

Coolant, -51° C (-60° F)

