

Product Specifications For 16



Engine

Base Power (1st Gear) - Net	290 hp
Engine Model	Cat® C13
Bore	5.1 in
Stroke	6.2 in
Speed at Rated Power	2,000 rpm
Derating Altitude - Tier 2/Stage II/Japan 2001 (Tier 2) Equivalent	12176 ft
Maximum Torque - ISO 9249 - Tier 3/ Stage IIIA/Japan 2006 (Tier 3) Equivalent	1270 lb/ft
Maximum Torque - ISO 9249 - Tier 4/ Stage IV/Japan 2014 (Tier 4)	1306 lb/ft
Maximum Torque - ISO 9249 - Tier 2/ Stage II/Japan 2001 (Tier 2) Equivalent	1270 lb/ft
Emissions (2)	Tier 3/Stage IIIA/Japan 2006 (Tier 3) Equivalent Emission Standards â€” 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	122 °F
Derating Altitude - Tier 3/Stage IIIA/ Japan 2006 (Tier 3) Equivalent	12973 ft

VHP Range - Net - Metric	216-259 kW (294-353 hp)
Base Power (1st Gear) - Net - Metric	294 hp
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)	12500 ft
Optimized VHP Range - Net	216-259 kW (290-348 hp)
Displacement	763 in ³
Number of Cylinders	6

Weights

Operating Weight - Typically Equipped	71454 lb
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Moldboard

Blade Width	16 ft
Arc Radius	16.3 in
Throat Clearance	5 in

Thickness	1 in
End Bit - Width	6 in
Blade Pull* - Base GVW	41039 lb
Cutting Edge Width	8 in
Cutting Edge Thickness	1 in
Down Force - Maximum GVW	43861 lb
Height	31 in
Width	16 ft
Down Force - Base GVW	30743 lb
Blade Pull* - Maximum GVW	52878 lb
End Bit - Thickness	0.75 in

Note

*Blade pull calculated at 0.9 traction coefficient, which is equal to ideal no-slip conditions, and Gross Machine Weight.

Service Refill

Fuel Capacity	131 gal (US)
Cooling System	18.5 gal (US)
DEF Tank	4.2 gal (US)
Hydraulic System - Total	38.6 gal (US)
Hydraulic System - Tank	18.5 gal (US)

Engine Oil	9.5 gal (US)
Transmission - Differential - Final Drives	34 gal (US)
Tandem Housing - Each	34 gal (US)
Front Wheel Spindle Bearing Housing	0.24 gal (US)
Circle Drive Housing	2.6 gal (US)

Power Train

Forward/Reverse Gears	8 Forward/6 Reverse
Transmission	Direct drive, power shift, countershaft
Brakes - Dynamic Brake Torque per Wheel	27069.27 lb/ft
Brakes - Secondary	Oil-actuated, oil-disc
Brakes - Service	Oil-actuated, oil disc
Brakes - Parking	Spring applied, hydraulically released

Hydraulic System

Circuit Type	Electro-hydraulic load sensing, closed center
Pump Type	Variable piston
Maximum System Pressure	3590 psi
Standby Pressure	856 psi
Pump Output*	74 gpm

Note	*Pump output measured at 2,150 rpm.
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Blade Range

Maximum Blade Position Angle	65°
Maximum Lift Above Ground	15.7 in
Maximum Depth of Cut	18.5 in
Maximum Shoulder Reach Outside of Tires - Right	91 in
Moldboard Sideshift - Left	29.1 in
Circle Centershift - Right	22 in
Circle Centershift - Left	27.2 in
Moldboard Sideshift - Right	31.1 in
Maximum Shoulder Reach Outside of Tires - Left	91 in
Blade Tip Range - Forward	40°
Blade Tip Range - Backward	5°

Operating Specifications

Steering Range - Left/Right	47.5°
Forward - 6th	16 mile/h
Forward - 4th	7.6 mile/h
Forward - 5th	11.8 mile/h
Turning Radius - Outside Front Tires	30.5 ft
Forward - 7th	22 mile/h
Top Speed - Forward	32.1 mile/h

Forward - 3rd	5.5 mile/h
Reverse - 6th	25.3 mile/h
Reverse - 5th	17.4 mile/h
Reverse - 2nd	4.1 mile/h
Reverse - 3rd	6 mile/h
Forward - 8th	32.1 mile/h
Reverse - 1st	2.2 mile/h
Forward - 1st	2.8 mile/h
Top Speed - Reverse	25.4 mile/h
Forward - 2nd	3.8 mile/h
Reverse - 4th	9.3 mile/h
Articulation Angle - Left/Right	20°
Note	Calculated with no slip and 23.5 R25 L-3 tires.

Frame

Front Frame Structure - Height	18.1 in
Front Frame Structure - Width	14 in
Drawbar - Width	3 in
Drawbar - Height	8 in
Front Axle - Total Oscillation per Side	35°

Circle - Diameter	71.7 in
Circle - Blade Beam Thickness	2 in
Front Frame Structure - Thickness	0.6 in
Front Axle - Wheel Lean	18° Left/17° Right
Front Axle - Height to Center	26.4 in

Tandems

Tandem Oscillation - Front Up	15°
Sidewall Thickness - Outer	0.9 in
Sidewall Thickness - Inner	0.9 in
Tandem Oscillation - Front Down	25°
Height	25.5 in
Width	9.3 in
Drive Chain Pitch	2.5 in
Wheel Axle Spacing	72.5 in

Ripper

Ripping Depth - Maximum	17.8 in
Shank Holder Spacing - Minimum	17.5 in
Shank Holder Spacing - Maximum	20 in
Ripper Shank Holders	7
Penetration Force	30311 lb

Pry-Out Force

43700 lb

Machine Length Increase, Beam Raised

63.4 in

Weights Tier 4/Stage IV/Japan 2014 (Tier 4 Final)*

**Gross Vehicle Weight - Maximum
Tested - Total**

84877 lb

Gross Vehicle Weight - Base -
Total**

63528 lb

**Gross Vehicle Weight - Typically
Equipped - Rear Axle**

52201 lb

**Gross Vehicle Weight - Typically
Equipped - Total**

71454 lb

**Gross Vehicle Weight - Maximum
Tested - Front Axle**

26125 lb

**Gross Vehicle Weight - Typically
Equipped - Front Axle**

19253 lb

**Gross Vehicle Weight - Maximum
Tested - Rear Axle**

58753 lb

Gross Vehicle Weight - Base -
Front Axle**

17932 lb

Gross Vehicle Weight - Base -
Rear Axle**

45596 lb

Note (1)

*For machines not equipped with Tier 4 Final emission engine, 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.

Dimensions (Approximate)

Ground Clearance - Rear Axle	15.6 in
Length - Counterweight to Ripper	474.4 in
Length - Front Axle to Moldboard	120.7 in
Length - Front Axle to Mid Tandem	290 in
Height - Top of Cylinders	121.6 in
Width - Tire Center Lines	106.4 in
Width - Outside Rear Tires	134.3 in
Length - Between Tandem Axles	72.5 in
Height - Top of Cab	146.4 in
Width - Outside Front Tires	134.3 in
Height - Front Axle Center	28.9 in
Length - Front Tire to Rear of Machine - Including Tow Hitch	417 in
Height - Exhaust Stack	140 in

Standards

Steering	ISO 5010:2007
Brakes	ISO 3450:2011
Sound	ISO 6394:2008/ISO 6395:2008/ISO 6396:2008
ROPS/FOPS	ISO 3471:2008/ISO 3449:2005

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.

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.

Variable Power Tier 4 Final/Stage IV/Japan 2014 (Tier 4 Final), Tier 3/Stage IIIA/Japan 2006 (Tier 3) Or Tier 2/Stage II/Japan 2001 (Tier 2) - Net

Gear - Reverse 3rd-6th

298 hp

Gear - Forward 8th

348 hp

Gear - Forward 3rd

298 hp

Gear - Forward 6th

320 hp

Gear - Forward 5th

311 hp

Gear - Reverse 1st

290 hp

Gear - Reverse 2nd

290 hp

Gear - Forward 4th

304 hp

Gear - Forward 7th

328 hp

Gear - Forward 1st

290 hp

Gear - Forward 2nd

290 hp

Variable Power Tier 4 Final/Stage IV/Japan 2014 (Tier 4 Final), Tier 3/Stage IIIA/Japan 2006 (Tier 3) Or Tier 2/Stage II/Japan 2001 (Tier 2) - Metric

Gear - Forward 4th	309 hp
Gear - Reverse 1st	294 hp
Gear - Forward 3rd	302 hp
Gear - Reverse 3rd-6th	302 hp
Gear - Reverse 2nd	294 hp
Gear - Forward 7th	332 hp
Gear - Forward 6th	325 hp
Gear - Forward 8th	353 hp
Gear - Forward 1st	294 hp
Gear - Forward 5th	315 hp
Gear - Forward 2nd	294 hp

Optional Tire Arrangements

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

Air Conditioning System

Air Conditioning

The air conditioning system on this machine contains the fluorinated greenhouse gas refrigerant R134a or R1234yf. See the label or instruction manual for identification of the gas. - If equipped with R134a (Global Warming Potential = 1430), the system contains 2 kg (4.4 lb) of refrigerant which has a CO2 equivalent of 2.860 metric tonnes (3.152 tons).

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 and 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

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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)