PRODUCT SPECIFICATIONS FOR 815

Engine Model	Cat® C7.1: configured for two emissions options
Net Power (SAE J1349:2011)	249 HP
Net Power (ISO 9249:2007)	249 HP
Emissions	Meets U.S. EPA Tier 4 Final/EU Stage V emission standards
Rated Speed	2200 r/min
Gross Power (SAE J1995:2014)	284 HP
Engine Power (ISO 14396:2002)	275 HP
Peak Torque - 1,400 rpm	902 lb-ft @ 1400 rpm
Torque Rise	52%
Bore	4.1 in
Stroke	5.3 in
Displacement	427.8 in^3
High Idle Speed	2270 r/min
Low Idle Speed	800 r/min
Maximum Altitude without Derating	9842.5 ft

Note	Net power advertised is the power available at the engine flywheel when the engine is equipped with a fan, air cleaner, clean emissions module and alternator.
Engine Model	Cat® C7.1: configured for two emissions options
Net Power (SAE J1349:2011)	249 HP
Emissions	Brazil MAR-1 and China Nonroad Stage III, equivalent to U.S. EPA Tier 3/EU Stage IIIA
Rated Speed	2200 r/min
Gross Power (SAE J1995:2014)	286 HP
Engine Power (ISO 14396:2002)	275 HP
Peak Torque - 1,400 rpm	749 lb-ft @ 1400 rpm
Torque Rise	26%
Bore	4.1 in^3
Stroke	5.3 in
Displacement	5.3 in
High Idle Speed	2270 r/min
Low Idle Speed	800 r/min
Maximum Altitude without Derating	9842.5 ft

Note	Net power advertised is the power available at the engine flywheel when the engine is equipped with a fan, air cleaner, clean emissions module and alternator.

Operating Weight	49652 lb

Transmission Type	Cat Planetary Power Shift
Travel Speeds - Forward - First	3.9 mile/h
Travel Speeds - Forward - Second	7.7 mile/h
Travel Speeds - Forward - Third	11.3 mile/h
Travel Speeds - Reverse - First	4.5 mile/h
Travel Speeds - Reverse - Second	8.5 mile/h
Travel Speeds - Reverse - Third	11.4 mile/h

Lift/Tilt System - Circuit	Pilot operated LS valve with EH
Lift/Tilt System	Variable displacement piston
Maximum Flow at 2,200 rpm	23.5 gal/min
Relief Valve Setting - Lift/Tilt	3190 psi
Pilot System	Open center, fixed displacement gear
Pilot Relief Valve Setting	3046 psi

Steering System - Circuit	Pilot, Load Sensing
Steering System - Pump	Piston – Variable Displacement
Maximum Flow at 2,200 rpm	38.8 gal/min
Relief Valve Setting - Steering	4003 psi
Total Steering Angle	84
Steering Cycle Times - High Idle	3 s
Steering Cycle Times - Low Idle	8.2 s

Fuel Tank	132.1 gal (US)
Diesel Exhaust Fluid Tank*	4.2 gal (US)
Cooling Systems - Tier 4 Final/EU Stage V	21.4 gal (US)
Cooling System - Tier 3/Stage IIIA Equivalent	19.3 gal (US)
Engine Crankcase	5.3 gal (US)
Transmission	14.8 gal (US)
Differential - Final Drives - Front	17.2 gal (US)
Differential - Final Drives - Rear	17.2 gal (US)
Hydraulic Tank	19.8 gal (US)

Hydraulic Tank Only	19.8 gal (US)
Note	All non-road Tier 4 Final and Stage V diesel engines are required to use: – Ultra Low Sulfur Diesel (ULSD) fuels containing 15 ppm for EPA and 10 ppm for EU (mg/kg) sulfur or less. Biodiesel blends up to B20 are acceptable when blended with 15 ppm for EPA and 10 ppm for EU (mg/kg) sulfur or less ULSD and when the biodiesel feedstock meets ASTM D7467 specifications. – Cat DEO-ULS™ or oils that meet the Cat ECF-3, API CJ-4, and ACEA E9 specifications are required. – Diesel Exhaust Fluid (DEF) that meets all requirements defined in ISO 22241-1.

Height - Top of Beacon	12.9 ft
Height - Top of Cab Roof	12 ft
Height - Top of Exhaust Pipe	11.1 ft
Height - Top of Hood	8.6 ft
Height to Top of Radiator Guard	7.9 ft
Ground Clearance to Hitch	1.2 ft
Ground Clearance to Transmission Guard	1.2 ft
Ground Clearance to Bottom of Bumper	2.2 ft
Centerline of Rear Axle to Bumper	6.5 ft
Hitch to Centerline of Front Axle	5.5 ft
Wheel Base	11 ft
Width over Platform	10.3 ft
Height to Top of GPS Antenna	12.1 ft

Overall Machine Length with Straight Blade	23.5 ft
Overall Machine Length with EU Suppression	24.9 ft

Front	Planetary – Fixed
Rear	Planetary – Oscillating
Oscillation Angle	±10

Service Brakes	Single Disc Wet (Enclosed) 2 WHL
Parking Brake	Drum and Shoe, Spring Applied, Hydraulic Released

Operator Sound Level (ISO 6396)	70 dB(A)
Machine Sound Level (ISO 6395)	111 dB(A)
Note (1)	The operator sound pressure level was measured according to the test procedures and conditions specified in ISO 6396:2008. The measurement was conducted at the maximum engine cooling fan speed.
Note (2)	The operator sound pressure level uncertainty is ± 2 dB(A)
Note (3)	Hearing protection may be needed when the machine is operated with a cab that is not properly maintained or when the doors or windows are open for extended periods or in a noisy environment.
Note (4)	The operator sound pressure level was measured according to the test procedures and conditions specified in ISO 6396:2008. The measurement was conducted at the maximum engine cooling fan speed.

Operator Sound Level (ISO 6396)	70 dB(A)
Machine Sound Level (ISO 6395)	109 dB(A)
Note (1)	The operator sound pressure level was measured according to the test procedures and conditions specified in ISO 6396:2008. The measurement was conducted at the maximum engine cooling fan speed.
Note (2)	The operator sound pressure level uncertainty is ± 2 dB(A)
Note (3)	Hearing protection may be needed when the machine is operated with a cab that is not properly maintained or when the doors or windows are open for extended periods or in a noisy environment.
Note (4)	The machine sound power level was measured according to the test procedures and conditions specified in ISO 6395:2008. The measurement was conducted at the maximum engine cooling fan speed.

Operator Sound Level (ISO 6396)	70 dB(A)
Machine Sound Level (ISO 6395)	112 dB(A)
Note (1)	The operator sound pressure level was measured according to the test procedures and conditions specified in ISO 6396:2008. The measurement was conducted at the maximum engine cooling fan speed.
Note (2)	The operator sound pressure level uncertainty is ± 2 dB(A)
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Operator Sound Level (ISO 6396)	70 dB(A)
Machine Sound Level (ISO 6395)	110 dB(A)
Note (1)	The operator sound pressure level was measured according to the test procedures and conditions specified in ISO 6396:2008. The measurement was conducted at the maximum engine cooling fan speed.
Note (2)	The operator sound pressure level uncertainty is ± 2 dB(A)
Note (3)	Hearing protection may be needed when the machine is operated with a cab that is not properly maintained or when the doors or windows are open for extended periods or in a noisy environment.
Note (4)	The machine sound power level was measured according to the test procedures and conditions specified in ISO 6395:2008. The measurement was conducted at the maximum engine cooling fan speed.

Machine Sound Level (ISO 6393)	107 dB(A)
Note (1)	The machine sound power level was measured according to the test procedures and conditions specified in ISO 6393:2008. The measurement was conducted at the rated engine cooling fan speed.

Weight	9720 lb
Outside Diameter	55.6 in
Drum Diameter	40.5 in
Drum Width	39 in
Tips per Row	12

Tips per Wheel	60
Replaceable	Weld On
Width - Over Drums	127.7 in
Width Between Drums	49.6 in
Tip Height	7.5 in

Capacity	2.69 yd^3
Overall Width	12.3 ft
Height	2.8 ft
Digging Depth	0.7 ft
Ground Clearance	2.6 ft
Maximum Tilt	1.1 ft
Turning Radius - Outside Corner of Blade	21.1 ft
Turning Radius - Inside Face of Pusharm	8.3 ft
Weight	1764 lb
Total Operating Weight	49652 lb

815 STANDARD EQUIPMENT

NOTE

NOTE

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

POWER TRAIN

Advanced Productivity Electronic Control System (APECS)
Air to air aftercooler
Brakes, full hydraulic, enclosed, wet multiple disc service brakes
Cat clean emission module (Tier 4 Final/Stage IV only)
Electro-hydraulic parking brake
Electronic Clutch Pressure Control (ECPC)
Engine, Cat C7.1 (configured for two emissions options): – Tier 4 Final/Stage V – Tier 3/Stage IIIA equivalent
Engine driven cooling fan – suction
Fuel priming pump (electric)
Fuel to air cooler
Ground level engine shutoff
Muffler (under hood) (Tier 3/Stage IIIA equivalent only)
Radiator, unit core
Starting aid (ether)
Throttle lock
Torque converter
Transmission, planetary, with 3F/3R speed range control

ELECTRICAL

Alarm, back-up
Alternator, 150 amp
Batteries, maintenance-free
Electrical system, 24V
Ground level lockable master disconnect switch
Lights, directional (rear)
Light, warning switched (LED strobe)
Lighting system, (front and rear)
Starter, electric
Starting receptacle for emergency start

OPERATOR ENVIRONMENT

12V power port for mobile phone or laptop connection
AccuGrade™ mapping (ready)
Air conditioner
Cab, sound-suppressed pressurized
Cab door, sliding window (LH)
Cat Compaction Control (ready)
Cat Detect: Object Detection (ready)
Coat and hard hat hooks

Finger tip shifting controls
Flip-up armrest
Heater and defroster
Horn, electric
Hydraulic controls – seat mounted
Implement hydraulic lockout
Instrumentation, gauges: – DEF fluid level (Tier 4 Final/Stage V only) – Engine coolant temperature – Fuel level – Hydraulic oil temperature – Speedometer/tachometer – Torque converter temperature
Instrumentation, warning indicators: – Action alert system, three categories – Brake oil pressure – Electrical system, low voltage – Engine failure malfunction alert and action lamp – Parking brake status
Light, (dome) cab
Lunch box and beverage holders
Mirror, internal (panoramic)
Mirrors, rearview (externally mounted)
Radio ready for entertainment: – Antenna – Speakers – Converter (12V, 10-15 amp)
Seat, Cat Premium Plus (leather)
Seat belt with minder, retractable, 76 mm (3 in) wide
STIC control system with lockout
Sun visor, front
Tinted glass
Transmission gear (indicator)
Vital Information Management System (VIMS): – Graphical information display – External data port – Customizable operator profiles – Event indicator light on rear grill
Wet-arm wipers/washers (front and rear): – Intermittent wipers (front and rear)

TIRES, RIMS AND WHEELS

Wheels, tamping foot

GUARDS

Cleaner bars with teeth
Guards, crankcase and power train
Guard, driveshaft

FLUIDS

Antifreeze, premixed 50% concentration extended life (–34° C/–29° F)

OTHER STANDARD EQUIPMENT

DEF tank fill gauge
Doors, service access (locking)
Ecology drains for engine, radiator, transmission, hydraulic tank
Engine, crankcase, 500 hour interval with CJ-4 oil
Emergency platform egress
Fire suppression ready
Fuel tank, 500 L (132.1 gal)

Hitch, drawbar with pin
Hoses, Cat XT™
Hydraulic, engine, and transmission oil coolers
Oil change system, high speed
Oil sampling valves
Steering, load sensing
Total hydraulic filtration system
Vandalism protection caplocks
Venturi stack

STANDARD ATTACHMENTS – HYDRAULICS

Hydraulics: – Standard or EU and Canada

STANDARD ATTACHMENTS – OPERATOR ENVIRONMENT

Glass (window): – rubber-mounted glass
Precleaner (cab): – powered
Seat (cab): – heated and ventilated
Mirrors – cab: – Standard or heated

STANDARD ATTACHMENTS – POWER TRAIN

Axles: – Standard or non-spin rear

STANDARD ATTACHMENTS – SPECIAL ARRANGEMENTS

Engine Precleaners: – Turbine or dual stage

STANDARD ATTACHMENTS – ELECTRICAL

Lights: – Standard or LED

STANDARD ATTACHMENTS – FUEL SYSTEMS

Fuel tank: – Non-fast or fast fill

STANDARD ATTACHMENTS – TECHNOLOGY PRODUCTS

Product Link: – GSM, satellite

STANDARD ATTACHMENTS – CLEANER BARS

Cleaner bars: – Standard or abrasive

STANDARD ATTACHMENTS – BLADES

Blades: – Straight or tilt-straight

815 OPTIONAL EQUIPMENT

NOTE

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

OPERATOR ENVIRONMENT

Camera, rear vision
Radio, AM/FM/AUX/USB/BLUETOOTH
Radio, CB (ready)

TECHNOLOGY PRODUCTS

Compaction control, basic

OTHER ATTACHMENTS

Sound suppression (required for Brazil)

FLUIDS

Antifreeze, –50° C (–58° F)

STARTING AIDS

Heater, engine coolant, 120V
Heater, engine coolant, 240V

MISCELLANEOUS

Film (ANSI) (Tier 4 Final/Stage V only)
EU certification (Tier 4 Final/Stage V only)
Plate – year of manufacture (Tier 3/Stage IIIA equivalent only)