

Product Specifications For R1600H



Engine

Engine Model	Cat® C11
Engine Power - Tier 3 Engine - ISO 14396:2002	271 hp
Engine Power - VR Engine - ISO 14396:2002	271 hp
Bore	5.1 in
Stroke	5.5 in
Displacement	680.4 in ³
Note (1)	Power ratings apply at a rated speed of 1,800 rpm when tested under the reference conditions for the specified standard.
Note (2)	All rating conditions are based on ISO/TR14396:2002, inlet air standard conditions with a total barometric pressure of 100 kPa (29.5 in Hg), with a vapor pressure of 1 kPa (0.295 in Hg), and 25° C (77° F). Performance measured using fuel to EPA specifications in 40 CFR Part 1065 and EU specifications in Directive 97/68/EC with a density of 0.845-0.850 kg/L @ 15° C (59° F) and fuel inlet temperature 40° C (104° F).
Note (3)	No engine derating required up to 3048 m (10,000 ft) for Tier 3 Engine and 1828 m (6,000 ft) for VR Engine.
Note (4)	Optional Ventilation Reduction package available.
Note (5)	Optional engine with emissions equivalent to U.S. EPA Tier 3 and EU Stage IIIA is also available.

Operating Specifications

Nominal Payload Capacity	22487 lb
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Gross Machine Mass	97453 lb
Static Tipping Load - Straight Ahead - Lift Arms Horizontal	57110 lb
Static Tipping Load - Full Turn - Lift Arms Horizontal	46067 lb
Breakout Force - Tilt (ISO)	39524 lb
Breakout Force - Lift (ISO)	42333 lb

Weights

Operating Mass*	66469 lb
Operating Mass* - Front Axle	28404 lb
Operating Mass* - Rear Axle	38065 lb
Operating Mass + Rated Payload*	88956 lb
Operating Mass + Rated Payload* - Front Axle	62011 lb
Operating Mass + Rated Payload* - Rear Axle	26944 lb
Note	*Calculated weights.

Transmission

Forward - 1	2.8 mile/h
Forward - 2	5.6 mile/h
Forward - 3	10.4 mile/h
Forward - 4	17.1 mile/h
Reverse - 1	3.1 mile/h
Reverse - 2	6.8 mile/h

Reverse - 3

11.8 mile/h

Reverse - 4

18.2 mile/h

Hydraulic Cycle Times

Raise

7.6 s

Dump

1.6 s

Lower, Empty, Float Down

2 s

Total Cycle Time

11.2 s

Bucket Capacities

Bucket Capacities

4.2-5.9 m³ (5.5-7.7 yd³)

Dump Bucket - 1

5.5 yd³

Dump Bucket - 2 - Standard Bucket

6.3 yd³

Dump Bucket - 3

7.3 yd³

Dump Bucket - 4

7.7 yd³

Ejector Bucket

6.3 yd³

Bolt Together Bucket

6.9 yd³

Turning Dimensions

Outside Clearance Radius*

261.3 in

Inner Clearance Radius*

129.6 in

Axle Oscillation

10°

Articulation Angle

42.5°

Note

*Clearance dimensions are for reference only.

Tires

Tire Size	18 × R25
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Service Refill Capacities

Engine Crankcase - With Filter	8.98 gal (US)
Transmission	12.4 gal (US)
Hydraulic Tank	33 gal (US)
Cooling System	16.1 gal (US)
Front Differential and Final Drives	21.1 gal (US)
Rear Differential and Final Drives	21.1 gal (US)
Fuel Tank	105.7 gal (US)
Secondary Fuel Tank - If Equipped	87.2 gal (US)

Standards

Standards	ROPS/FOPS Certified Cab
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R1600H Standard Equipment

ELECTRICAL

- Alarm, reversing
- Alternator, 95 amp
- Battery disconnect switch, ground level
- Batteries, low maintenance
- Diagnostic connector
- Engine shutdown switch
- Lighting:
 - External, front, rear, halogen
 - Stop, single, halogen
- Receptacle group, auxiliary start
- Starter, electric, 24-volt

Starting and charging system

TIRES, RIMS, AND WHEELS

Tires must be selected from the Mandatory Attachments section

- Tire, 18 × R25 VSMS L5S Bridgestone

OPERATOR ENVIRONMENT

Automatic Brake Application (ABA)

Cab, ROPS and/or FOPS certified

Color Multi Purpose Display (CMPD):

- Front and rear brake gauges
- Transmission pressure
- System diagnostics
- Residual brake warning

Horns, electric

Instrumentation/gauges:

- Speedometer/tachometer
- Fuel level
- Hydraulic oil temperature
- Engine coolant temperature
- Transmission oil temperature

Operator Presence System

Pilot hydraulic implement controls (single joystick)

Suspension operator seat with retractable seat belt:

- Seat, suspension, vinyl

Secondary steering system

STIC™ steering

Throttle:

- Pedal, throttle

OTHER STANDARD EQUIPMENT

Brake axle cooling

Cap, radiator, manual release

Catalytic exhaust purifier/muffler

Bucket dump (4.8 m³/6.3 yd³)

Decals, international picto graphics

Draw bar attachment, bolt-on

Fast Fill System:

- Coolant
- Engine oil
- Fuel
- Hydraulic oil
- Transmission oil

Fenders, front, rear

Firewall

Guards, engine and transmission

Handholds

Lubrication system:

- Semi central

Protection bars, rear frame

Radiator grill, swing out

Service oil sample

Valve, drain, transmission oil filter

Windows:

- Window, single pane

POWER TRAIN

Brakes, full hydraulic enclosed wet multiple-disc (SAFR™)

Engine:

- Cat. C11 6 cylinder, diesel
- Air-to-air aftercooler (ATAAC)

Fuel adapters:

- Fuel tank, single, standard adapter

Fuel priming aid

Heat shields

Precleaner, engine air intake

Torque converter with automatic lock up clutch

Transmission, automatic planetary power shift (4F/4R)

Transmission neutralizer

R1600H Optional Equipment

ELECTRICAL

Lighting:

- Work lights, LED

POWER TRAIN

Brakes, full hydraulic enclosed wet multiple-disc (SAFR™)

Engine:

- After-Treatment Options - DPF (Flow Thru)

Engine options:

- Engine, VR
- VR engine, Flow Thru Ready
- Engine, Tier 3

Fuel adapters:

- Fuel tank, dual, standard adapter
- Fuel tank, single, fast fill
- Fuel tank, dual, fast fill

Park brake switch engagement - push to apply/pull to apply

Radiator, high efficiency

Reversible steering

OPERATOR ENVIRONMENT

Operators station ROPS/FOPS enclosed:

- Air conditioning
- Cab pressurizer and filter
- Dome light
- Door strut
- Heater
- Radio ready compartment for radio and speakers
- Wiper control, intermittent

Duct, air, flow diverter

Idle timer (enclosed cab or open cab)

Suspension operator seat with retractable seat belt:

- Seat, suspension, TEE, vinyl
- Seat, suspension, air, vinyl
- Seat, suspension, TEE, air
- Seat cover

Throttle:

- Pedal, throttle

TECHNOLOGY

Command for Underground*

* Please consult with your regional commercial or technology representative prior to upgrading your machine to Command for Underground.

Remote control interface (excludes transmitter and receiver), includes warning lights (green)

- Cattron
- RCT

TIRES, RIMS, AND WHEELS

Rims:

- Spare, tubeless
- Rim identification numbering

OTHER OPTIONAL EQUIPMENT

Brake release arrangements, includes steering release:

- Recovery hook
- Recovery bar

Buckets:

- Various sizes, dump (4.2 m³/5.5 yd³, 5.6 m³/7.3 yd³, 5.9 m³/7.7 yd³)
- Bolt-together (5.3 m³/6.9 yd³)
- Ejector (4.8 m³/6.3 yd³)
- Standard lip or bolt-on lip
- Cutting edge, bolt-on
- Cutting edge, Cat modular weld on
- Lip fully welded or tack welded
- Heel shrouds, ejector and dump buckets
- Mechanically Attached Wear Plate System (MAWPS)
- Wear bars, ejector and dump buckets
- Wear liner

Draw bar attachment, bolt-on

Fast Fill System:

- Coolant
- Engine oil
- Fuel
- Hydraulic oil
- Transmission oil

Fluids:

- Arctic fuel
- Arctic coolant

Guards, light and window

Lifting Group, Mine Transfer

Lubrication system:

- Centralized
- Automatic

Ride Control System

Service tools

Wear protection bars:

- Cab
- Hydraulic tank
- Radiator

Wheel chocks

Windows:

- Window, single pane