16M3
Motor Grader

Engine		
Model	Cat® C13 ACERT™	
Emissions	U.S. EPA Tier 4 Final/EU Stage IV/ Japan 2014 (Tier 4 Final)	
	Tier 3/Stage IIIA/Japan 2006 (Tier 3) Equivalent Emission Standards – depending on emission standards of specific country	
	Tier 2/Stage II/Japan 2001 (Tier 2) Equivalent Emission Standards – depending on emission standards of specific country	
Base Power (1st gear) – Net	216 kW	290 hp
Optimized VHP Range – Net	216-259 kW	290-348 hp

Moldboard		
Width	4.9 m	16 ft
Weight		
Operating Weight, Typically Equipped	32 411 kg	71,454 lb

Introduction

Enabling you to build and maintain haul roads to maximize mine-site productivity and lower your owning and operating cost.

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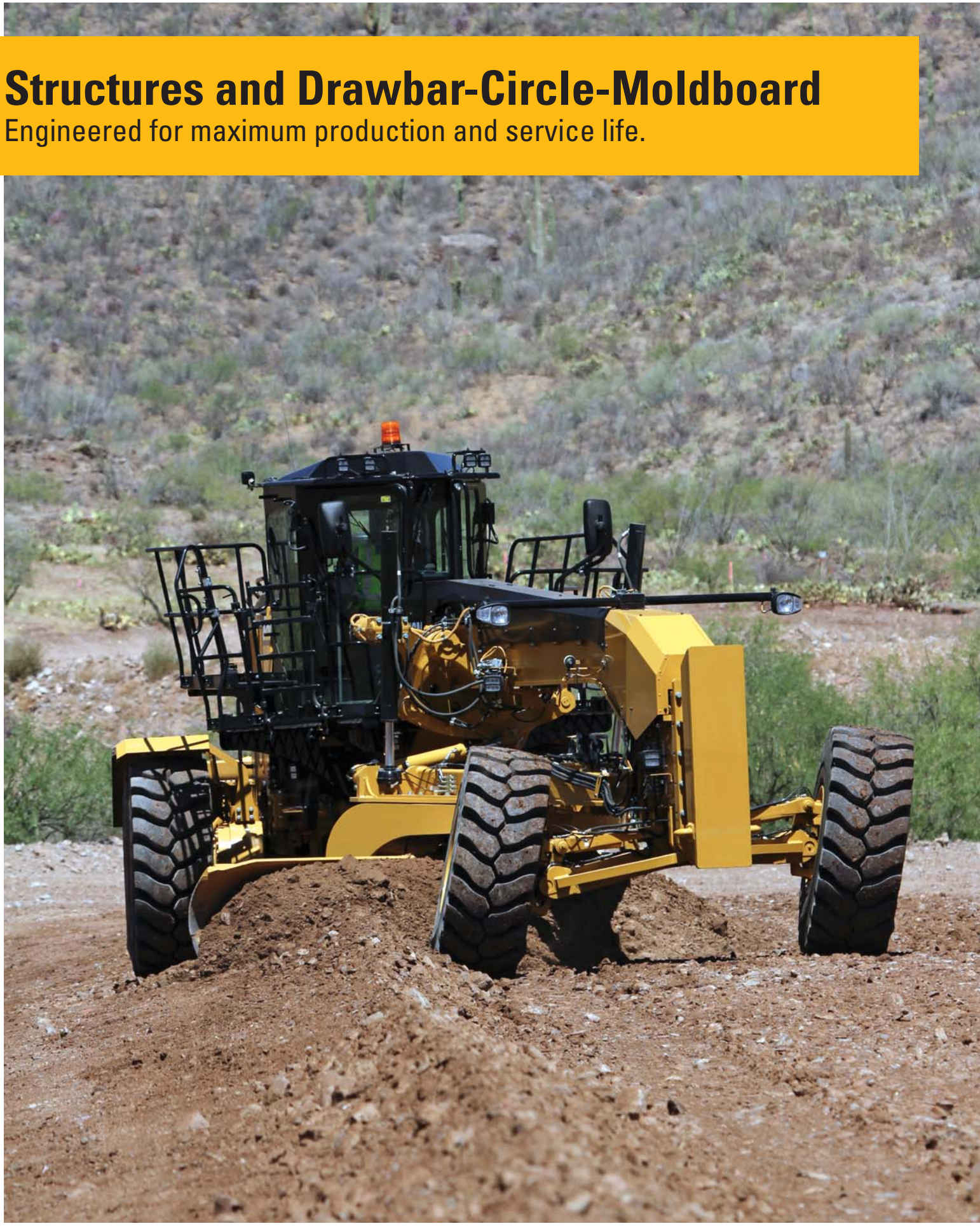
Good road conditions are key to extending truck life, reducing maintenance, lowering fuel costs and reducing tire damage. As a result, cycle times are improved and more ore is produced at a lower cost.

The 16M3 includes features that optimize operating cost reduction, uptime and performance improvements as well as enhanced safety for your mining operations.

Structures and Drawbar-Circle-Moldboard

Engineered for maximum production and service life.



Structure Strength – Built to Last

The 16M3's design to the front frame, hitch area and rear frame provides performance and durability in heavy duty applications.

- Front Frame Structure – Continuous top and bottom plate construction provides consistency and strength. The Center Shift Section is made of heavy duty steel casting which improves stress distribution to this high load area of the mainframe for enhanced durability.
- Rear Frame Structure – Is lengthened to provide easy service access to components in the engine enclosure as well as to improve machine balance. It also utilizes two bumper castings and thick hitch plates for improved durability. A mechanical locking pin prevents frame articulation to ensure safety when servicing or transporting the machine.

Optimized Machine Balance

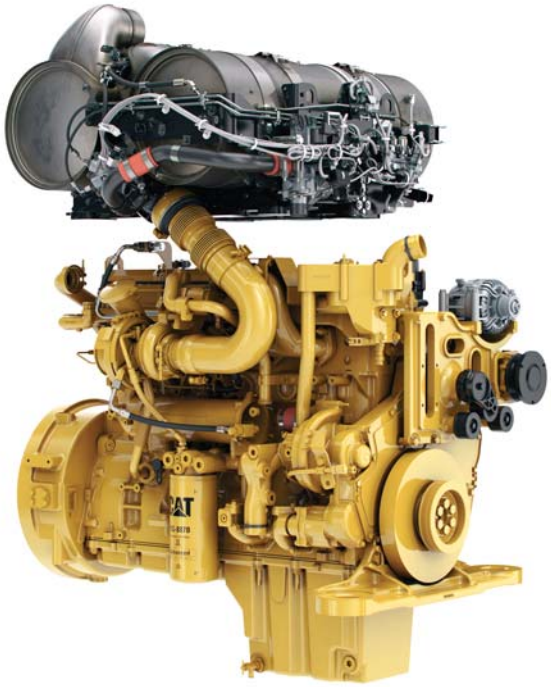
The 16M3 is designed to optimize machine balance and performance at your site. With optimized combination of weight and balance the 16M3 delivers improved traction and the ability to keep ground speed especially when carrying a large load on the board. Operators will find that the machine will be able to take corners better with improved turning.

Easy Maintenance for More Uptime

A series of shims, patented top-adjust wear strips and wear inserts are easy to add or replace. This keeps drawbar-circle-moldboard components factory-tight for higher quality work, and saves you service time and costs. An adjustable circle drive reduces service time and reduces wear by keeping components tight.

Engine

Consistent power and reliability for maximum productivity.



Engine

The Cat C13 engine with ACERT Technology gives you the performance to maintain consistent grading speeds for maximum productivity. Superior torque and lugging capability pulls through sudden, short-term load increases.

Standard optimized variable horse power (VHP) is designed to provide the ideal amount of power in all gears to efficiently perform diverse motor grader applications while protecting structure and drive train components.

Engine Economy (ECO) Mode

ECO Mode improves fuel economy by reducing high idle engine speed while maintaining machine power. ECO Mode controls the high engine idle speed (capped at 1,900 rpm in working gears) to ensure the engine is performing as efficiently as possible with respect to fuel consumption.

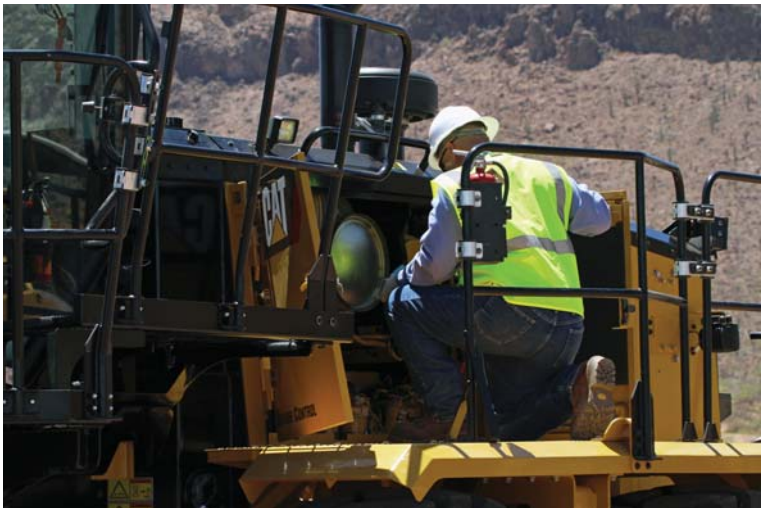
ECO Mode could provide significant fuel consumption savings especially in operations that are typically run at light to moderate loads, high idle and gear usage between 3R to 5F.

Consistent Power to the Ground

This standard, automatically enabled feature changes the engine power levels in real-time to offset cooling fan losses, resulting in consistent power to the ground independent of ambient temperatures and machine workloads. As a result the operator will get the best performance from the machine all the time.

Emission Technology

Providing you reliable, integrated solutions.



Emission Regulations

Emissions reduction technology on the 16M3 Motor Grader is designed to be transparent, with no action required from the operator. It delivers the same power and torque needed for optimal performance. The C13 ACERT engine variation with Tier 4 Final/EU Stage IV/Japan 2014 (Tier 4 Final) emission standards includes:

- **Diesel Particulate Filter (DPF)**
  The Diesel Particulate Filter can provide a particulate reduction of greater than 90%. It filters soot from the exhaust. Soot is then removed through the regeneration process automatically or manually.
- **Selective Catalytic Reduction (SCR)**
  The Selective Catalytic Reduction system can provide a NO_X reduction of greater than 90%. SCR operation is transparent to the operator during operation. The urea solution, Diesel Exhaust Fluid (DEF), is pumped from the DEF tank and is sprayed into the exhaust stream. The DEF reacts with the SCR catalyst to reduce NO_X.
- **Diesel Exhaust Fluid (DEF)**
  Diesel Exhaust Fluid is a liquid that is injected into the exhaust system of engines equipped with Selective Catalytic Reduction (SCR) systems. Diesel Exhaust Fluid that meets ISO 22241 specifications is required.
- **Ground Level Diesel Exhaust Fluid (DEF) Fill**
  16M3 DEF fill allows the DEF tank to be filled from ground level. This removes the burden of climbing onto and off of the machine to fill the DEF tank and allows the DEF tank to be filled at the same time the fuel tank is being filled.

Power Train

We designed the 16M3 to give you efficiency and longevity in your most demanding applications.

- Standard Automatic Differential Lock unlocks the differential during a turn and re-locks when straight for easier operation and improved power train protection.
- Advanced Productivity Electronic Control System (APECS) transmission is a key contributor to improved speed shift performance in the 16M3. The operator will notice enhanced comfort during shifting resulting in an increased level of operator productivity.
- Eight forward and six reverse gears are specifically designed to give you a wide operating range for maximum productivity.
- Engine Over-Speed Protection prevents downshifting until an acceptable safe travel speed has been established.

Front and Rear Axles

The sealed spindle keeps front axle bearings lubricated and protected from contaminants. The Cat "Live Spindle" design places the larger tapered roller bearing on the outside, where the load is greater, extending bearing life.

A bolt-on modular rear axle improves serviceability and contamination control with easy access to differential components.

Hydraulic Brakes

Additional brake capacity is achieved by increased brake disc diameter and piston area resulting in increased dynamic brake torque.

Manual standard brake wear indicator allows brake wear to be measured during maintenance work without removal of the brake pods and supports better maintenance planning.

Power Train

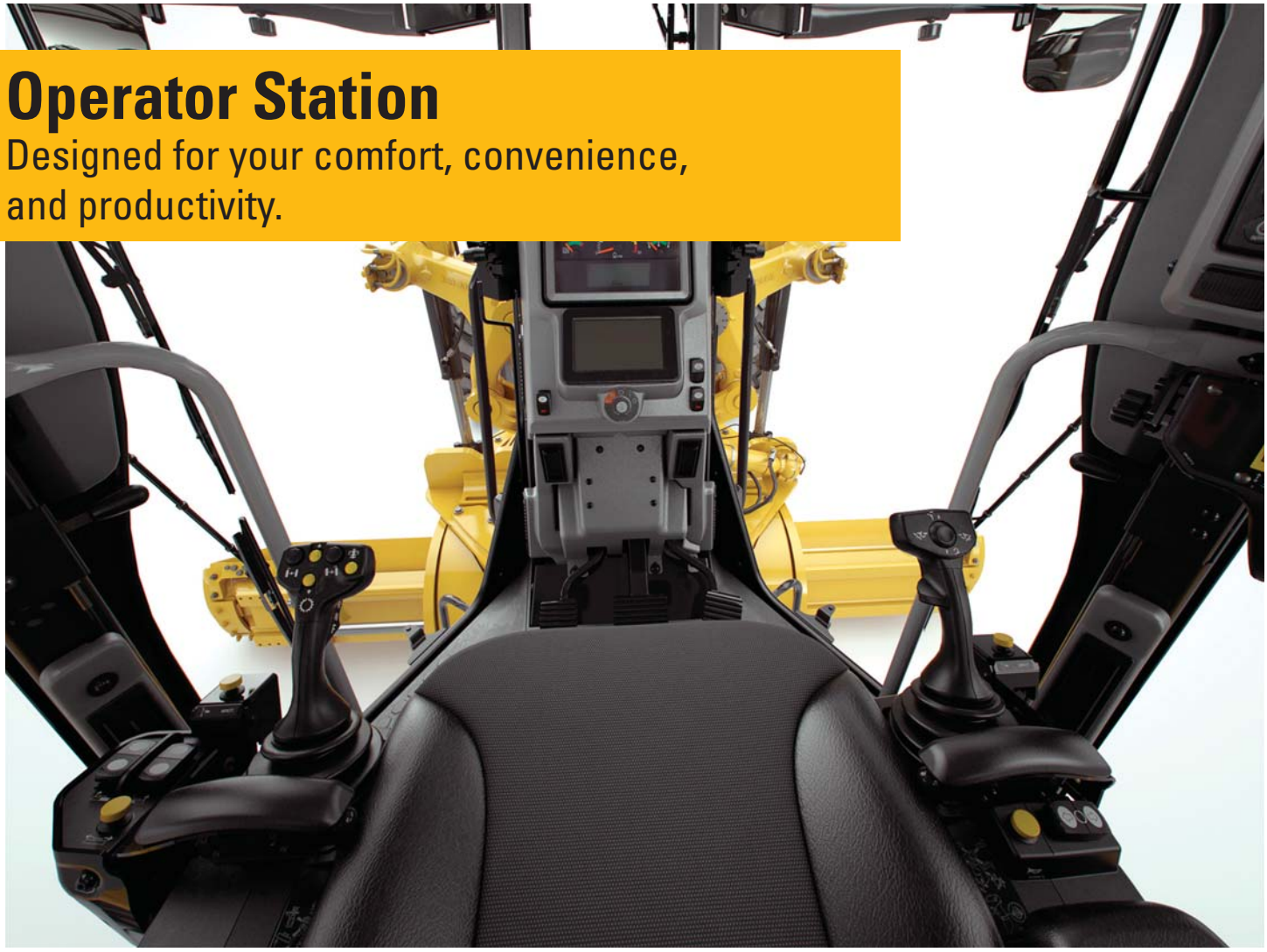
Maximum power to the ground.

Front axle steering cylinder has been designed to enhance durability and hydraulic hoses have been routed to improve reliability.

An optional front guard is available to help protect the front axle from rocks or other debris that could damage the axle or its components.

Operator Station

Designed for your comfort, convenience, and productivity.



Ease of Operation

Two electro-hydraulic joysticks require up to 78% less hand and wrist movement than conventional lever controls for greatly enhanced operator comfort and efficiency. The intuitive control pattern allows both new and experienced operators to quickly become productive. Electronically adjustable control pods help position joysticks for optimal comfort, visibility and proper operation.

With the touch of a button, the articulation return-to-center feature automatically returns the machine to a straight frame position from any angle.

You can choose the blade lift modulation mode that best fits your application or operating style: Fine, Normal or Coarse.

Electronic throttle control provides easy, precise and consistent throttle operation. An automatic/manual mode switch offers flexibility for different applications and operator preferences.

Visibility

Good visibility is key to your safety and efficiency. The large windows and enhanced design of the rear frame provides exceptional visibility and additional clearance between moldboard and rear tires. A standard rear vision camera is available to enhance your sight lines to the rear of the machine.

Comfort and Control

Experience the most spacious, comfortable cab in the industry. Revolutionary joystick controls replace levers, so hand and arm movement is reduced by 78%, helping to reduce operator fatigue.

The multi-color/touch screen Information Display is the operator's gateway to monitoring machine performance, a convenient way of modifying machine parameters to tailor performance to the current task and access the service information for initial troubleshooting.

The keypad allows activation and deactivation of different functions in the machine with one touch and indicates whether a function is active or not through light emitting diode (LED) lights.

Standard Cat Comfort Series suspension seat has six way adjustment control for optimal support and comfort. Seat side bolsters restrain side-to-side movement, especially when working on side slopes. Multiple isolation mounts significantly reduce sound and vibration for a more relaxed work environment. Optional heated and ventilated seat provides enhanced comfort for operators in extreme weather conditions.

The high capacity Heating, Ventilation and Air Conditioning (HVAC) system dehumidifies and pressurizes the cab, circulates fresh air, seals out dust and keeps windows clear.

Additional storage space for common used cabin items is included inside the cab.

Optional Bluetooth and satellite radio are available.

Hydraulics

Advanced machine controls with precise and predictable movements.

Load Sensing Hydraulics (PPPC)

A proven load-sensing system and advanced Proportional Priority Pressure-Compensating (PPPC) electro-hydraulic valves give you superior implement control and enhanced machine performance. Continuously matching hydraulic flow/pressure to power demands creates less heat and reduces power consumption.

- Consistent, Predictable Movement – PPPC valves have different flow rates for the head and rod ends of the cylinder, so you can count on consistent, predictable implement response.
- Balanced Flow – Hydraulic flow is proportioned to give you confidence that all implements will operate simultaneously without slowing the engine or speed of some implements.

Blade Float

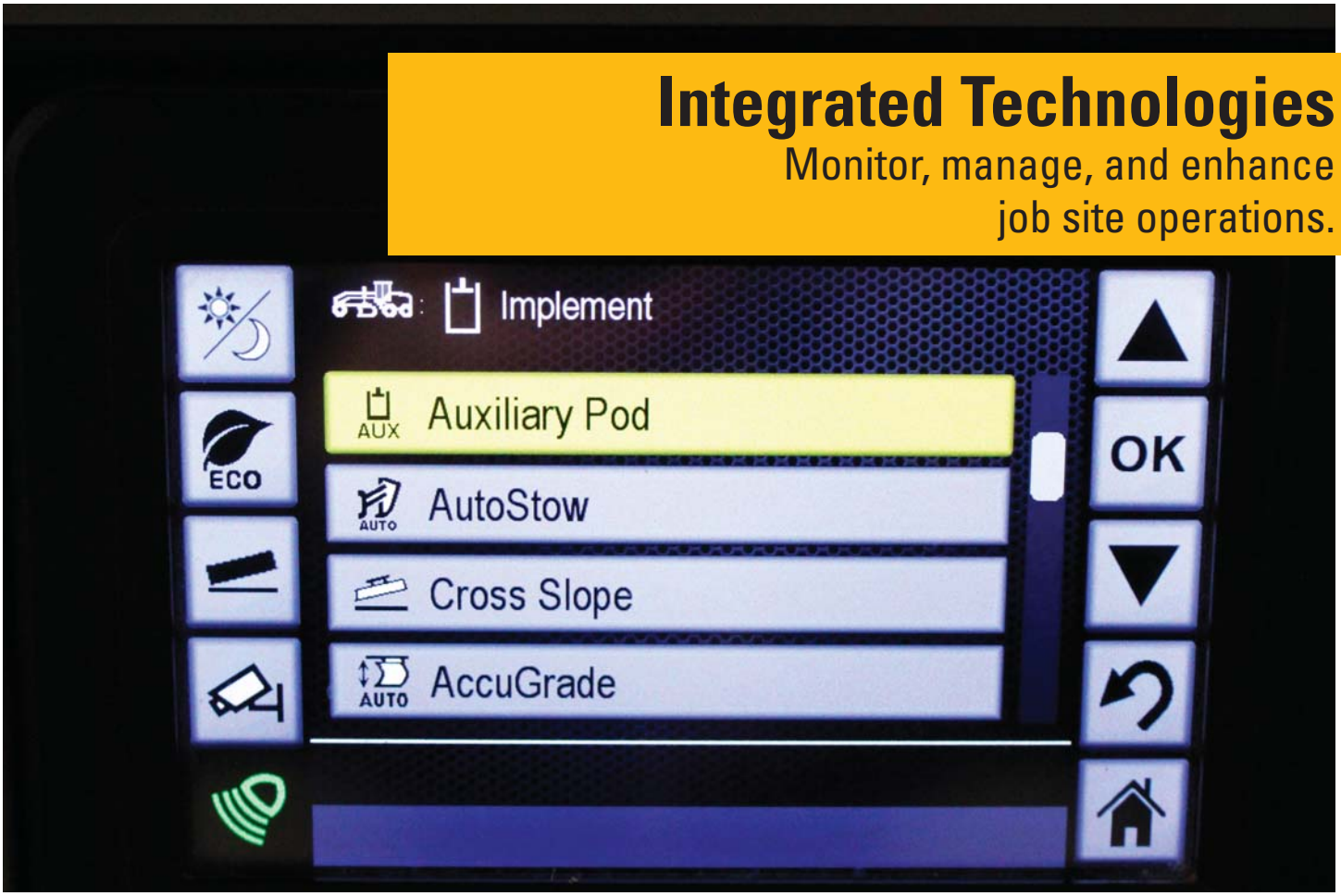
Allows the blade to move freely under its own weight. By floating both cylinders, the blade can follow the contours of the haul road. Floating only one cylinder permits the toe of the blade to follow a hard surface while the operator controls the slope with the other lift cylinder. An optional Variable Down Pressure feature allows you to select the amount of down force when the blade is in float. This helps you extend cutting edge life and is effective for removing snow and mud from a road surface.

Independent Oil Supply

Large, separate hydraulic oil supplies prevent cross-contamination and provide proper oil cooling, which reduces heat build-up and extends component life. Cat XT™ hose allows high pressures for maximum power and reduced downtime.

Integrated Technologies

Monitor, manage, and enhance job site operations.



Cat Product Link™ Elite

Product Link is deeply integrated into your machine, helping you take the guesswork out of equipment management. Easy access to timely information like machine location, hours, fuel usage, idle time and event codes via the online VisionLink® user interface can help you effectively manage your fleet and lower operating costs.

Product Link licensing not available in all areas. Please consult your Cat dealer for availability.

Cat Grade Control

Cat Grade Control Cross Slope is a standard, fully integrated, factory installed grade control system that helps your operator more easily maintain desired cross slope by automatically controlling one side of the blade. The system is job-ready from day one, and scalable for the future with AccuGrade™ upgrade kits that provide additional 2D and/or 3D control features.

Cat MineStar™ System

Cat MineStar helps you manage everything from material tracking to sophisticated real-time fleet management, machine health systems, autonomous equipment systems and more. The capability sets – Fleet, Terrain, Detect, Health and Command – can be used in combination or individually to allow your operation the flexibility and scalability it needs to be more productive, efficient and safe.

For more information visit *cat.com*

Safety

Focused on keeping everyone safe.

Access Platform – Optional

The access platform provides a full second access path to the engine compartment and cab of the machine. This arrangement includes ladder, walkways, handrails and access to the cab from both the left and right side of the machine.

Service Access Platform – Optional

This service access configuration provides ladders, walkways and handrails for enhanced fall protection access to the engine compartment from both sides of the machine. In this type of configuration the operator accesses the cab through the regular ladders installed to the sides of the cab.

Access to Tandem

Two strategically placed grab handles and a non-slip step are provided on the back right side of the engine compartment of the 16M3 for access to tandem walkways, particularly when fenders are installed.

Speed Sensitive Steering

Makes steering less sensitive as ground speed increases for greater operator confidence and control.

Secondary Steering System

Automatically engages an electric hydraulic pump in case of a drop in steering pressure so the operator can safely steer the machine to a stop.

Light Emitting Diode (LED) Enclosure Service Lights – Optional

The enclosure lights provide better visibility to field technicians for machine services and maintenance as well as operator's walk around performed at night. A set of two LED 4×4 lights are offered as an optional feature in the interior of the engine compartment of the 16M3.

Seat Belt Indication

Provides visual and audible alert to the operator when the seat belt is not used, codes generated are recorded in VisionLink or VIMS™ PC. Additionally, the machine is pre-wired so customer will be able to easily install a beacon on top of the cab which will serve as an external indicator of the seat belt usage.

Fire Suppression Ready System – Optional

Provides the 16M3 with the required provisions and brackets to mount a fire suppression system. It allows the customer to install a fire suppression system faster without compromising other machine components.

Other Standard Safety Features

- Rearview camera
- Operator not present monitoring system
- Hydraulic lockout
- Laminated front window glass
- Ground-level electrical disconnect switch
- Ground-level engine shutoff switch
- Glare reducing paint for night operation

Serviceability

Reduce service time to increase your uptime.

High mechanical availability is one of your top concerns. The 16M3 helps increase uptime by making our machine easier to repair and maintain. Major components are modular in design, so most can be removed and reinstalled without disturbing other components.

Fluid Level Monitoring Strategy

Helps prevent critical components from damage when low fluid levels are present. All information is available via the Information Display within the cab, and diagnostic codes are logged.

- **Ok-to-Start** strategy provides electronic fluid level verification at startup on the coolant, engine and hydraulic oil.
- **Critically Low Fluid Level Monitoring System** monitors the coolant, engine oil, hydraulic fluid and trans-axle oil during regular operation.

Long Life Service Intervals

Key service intervals*:

- 2× engine air filter life.
- 1,000 hours for hydraulic main and pilot filters as well as the transmission filter.
- 2,000 hours for transmission and rear axle.

*When S·O·S℠ sampling and Cat branded filters are used.

Modular Cooling Package

The modular cooling package makes for simple removal and installation of components on the cooling system which reduces service time. The radiator also uses a bar plate design which is durable, rugged, and able to handle the most demanding applications. Additionally, clean out access doors provide easy clean out of the cores as needed.

Serviceability Enhancements

- French style engine enclosure doors – without post
- Easy access to the engine valve cover and injectors
- Optimized filter and S·O·S port placement
- Rear axle modular design
- Metallic fuel and shunt tanks
- Brake wear indication
- Gen 2 Electro-Hydraulic (EH) steering – optimized warning strategy
- In-chassis – final drive removal
- Transmission and axle – cold and hot dipstick fluid marks
- Platform door for ground level access to cab air filter
- Electronic Technician (Cat ET)
- VIMS – optimizes machine availability and component life
- Automatic lubrication system – optional

Work Tools and Attachments

Provide flexibility to match the machine to your job.

Moldboard Options

A 4.9 m (16 ft) moldboard is standard on the 16M3.

Ground Engaging Tools (GET)

A variety of tools are available from Cat Work Tools, including cutting edges, grader bits and end bits, all designed for maximum service life and productivity.

Rear Ripper/Scarifier

Made to penetrate tough material fast and rip thoroughly for easier movement with the moldboard. The ripper includes three shanks with the ability to add four more for additional versatility.

Sustainability

Thinking generations ahead.

Sustainable Development for Caterpillar means leveraging technology and innovation to increase efficiency and productivity with less impact on the environment. This helps customers by enabling their businesses to become more productive by providing products, services and solutions that use resources more efficiently. The new 16M3 offers a number of sustainable benefits:

- Fuel saving features like Engine Economy (ECO) Mode help decrease overall fuel consumption.
- Major components on Cat Motor Graders are designed to be rebuilt. The Cat Certified Rebuild program conserves natural resources by delivering a cost effective second and even third life for our machines.
- Standard Cat Grade Control Cross Slope improves operator productivity, as well as saving fuel and wear and tear on the machine. The need for grade checking crews on the ground is eliminated which increases site safety.

Customer Support

Your Cat dealer knows how to keep your mining machines moving.

From helping you choose the right machine to knowledgeable ongoing support, Cat dealers provide you with unmatched sales and service.

- Preventive maintenance programs and guaranteed maintenance contracts.
- Best-in-class parts availability.
- Operator training to help boost your profits.
- Genuine Cat Remanufactured parts.

16M3 Motor Grader Specifications

Engine

Engine Model	Cat C13 ACERT VHP	
Base Power (1st gear) – Net	216 kW	290 hp
Base Power (1st gear) – Net (metric)		294 hp
VHP Range – Net	216-259 kW	290-348 hp
VHP Range – Net (metric)		294-353 hp
Displacement	12.5 L	763 in^3
Bore	130 mm	5.1 in
Stroke	157 mm	6.2 in
Torque Rise		
Tier 4/Stage IV/Japan 2014 (Tier 4)	43%	
Tier 3/Stage IIIA/Japan 2006 (Tier 3) Equivalent	39%	
Tier 2/Stage II/Japan 2001 (Tier 2) Equivalent	39%	
Maximum Torque ISO 9249		
Tier 4/Stage IV/Japan 2014 (Tier 4)	1771 N·m	1,306 lbf-ft
Tier 3/Stage IIIA/Japan 2006 (Tier 3) Equivalent	1721 N·m	1,270 lbf-ft
Tier 2/Stage II/Japan 2001 (Tier 2) Equivalent	1721 N·m	1,270 lbf-ft
Speed @ Rated Power	2,000 rpm	
Number of Cylinders	6	
Derating Altitude		
Tier 4/Stage IV/Japan 2014 (Tier 4)	3810 m	12,500 ft
Tier 3/Stage IIIA/Japan 2006 (Tier 3) Equivalent	3711 m	12,176 ft
Tier 2/Stage II/Japan 2001 (Tier 2) Equivalent	3954 m	12,973 ft
Standard – Fan Speed		
Maximum	1,450 rpm	
Minimum	550 rpm	
Standard – Ambient Capability	50° C	122° F

- Notes: The 16M3 is offered with three variations of the C13 engine with ACERT Technology. One meets U.S. EPA Tier 4 Final/EU Stage IV/Japan 2014 (Tier 4 Final) emission standards and is required for 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.
- Power as declared per ISO 14396 Tier 4 Final/Stage IV/Japan 2014 (Tier 4 Final) 272 kW (365 hp) Tier 3/Stage IIIA/Japan 2006 (Tier 3) or Tier 2/Stage II/Japan 2001 (Tier 2) equivalent emissions standards 267 kW (359 hp) at 2,000 rpm rated speed.
- Net power is measured per ISO 9249 at rated speed of 2,000 rpm and includes an engine equipped with fan, air cleaner, muffler and alternator.
- On Tier 4/Stage IV/Japan 2014 (Tier 4) machines, Ultra Low Sulfur Diesel (ULSD) and low ash oil are required.
- On Tier 4/Stage IV/Japan 2014 (Tier 4) machines, Diesel Exhaust Fluid (DEF) that meets ISO 22241 specifications is required.

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)

Gear	Net kW	Net HP	Metric HP
Forward			
1st	216	290	294
2nd	216	290	294
3rd	222	298	302
4th	227	304	309
5th	232	311	315
6th	239	320	325
7th	244	328	332
8th	259	348	353
Reverse			
1st	216	290	294
2nd	216	290	294
3rd–6th	222	298	302

Power Train

Forward/Reverse Gears	8 Forward/6 Reverse	
Transmission	Direct drive, power shift, countershaft	
Brakes		
Service	Oil-actuated, oil disc	
Dynamic Brake Torque per Wheel	36 701 N·m	27,069.27 lbf-ft
Parking	Spring applied, hydraulically released	
Secondary	Oil-actuated, oil-disc	

Hydraulic System

Circuit Type	Electro-hydraulic load sensing, closed center	
Pump Type	Variable piston	
Pump Output*	280 L/min	74 gal/min
Maximum System Pressure	24 750 kPa	3,590 psi
Standby Pressure	5900 kPa	856 psi

- Pump output measured at 2,150 rpm.

Operating Specifications

Top Speed		
Forward	51.7 km/h	32.1 mph
Reverse	40.8 km/h	25.4 mph
Turning Radius (outside front tires)	9.3 m	30 ft 6 in
Steering Range – Left/Right	47.5°	
Articulation Angle – Left /Right	20°	
Forward		
1st	4.5 km/h	2.8 mph
2nd	6.1 km/h	3.8 mph
3rd	8.9 km/h	5.5 mph
4th	12.3 km/h	7.6 mph
5th	19.0 km/h	11.8 mph
6th	25.8 km/h	16.0 mph
7th	35.5 km/h	22.0 mph
8th	51.7 km/h	32.1 mph
Reverse		
1st	3.6 km/h	2.2 mph
2nd	6.6 km/h	4.1 mph
3rd	9.7 km/h	6.0 mph
4th	15.0 km/h	9.3 mph
5th	28.0 km/h	17.4 mph
6th	40.8 km/h	25.3 mph

• Calculated with no slip and 23.5 R25 L-3 tires.

Service Refill

Fuel Capacity	496 L	131 gal
DEF Tank	16 L	4.2 gal
Cooling System	70 L	18.5 gal
Hydraulic System		
Total	146 L	38.6 gal
Tank	70 L	18.5 gal
Engine Oil	36 L	9.5 gal
Transmission/Differential/Final Drives	98.5 L	34 gal
Tandem Housing (each)	129 L	34 gal
Front Wheel Spindle Bearing Housing	0.9 L	0.24 gal
Circle Drive Housing	10 L	2.6 gal

Frame

Circle		
Diameter	1822 mm	71.7 in
Blade Beam Thickness	50 mm	2 in
Drawbar		
Height	203 mm	8 in
Width	76 mm	3 in
Front Frame Structure		
Height	460 mm	18.1 in
Width	356 mm	14.0 in
Thickness	14 mm	0.6 in
Front Axle		
Height to Center	670 mm	26.4 in
Wheel Lean	18° Left/17° Right	
Total Oscillation per Side	35°	

Tandems

Height	648 mm	25.5 in
Width	236 mm	9.3 in
Sidewall Thickness		
Inner	22 mm	0.9 in
Outer	22 mm	0.9 in
Drive Chain Pitch	63.5 mm	2.5 in
Wheel Axle Spacing	1841 mm	72.5 in
Tandem Oscillation		
Front Up	15°	
Front Down	25°	

Moldboard

Width	4.9 m	16 ft
Height	787 mm	31 in
Thickness	25 mm	1 in
Arc Radius	413 mm	16.3 in
Throat Clearance	126 mm	5 in
Cutting Edge		
Width	203 mm	8 in
Thickness	25 mm	1 in
End Bit		
Width	152 mm	6 in
Thickness	19 mm	0.75 in
Blade Pull*		
Base GVW	18 615 kg	41,039 lb
Maximum GVW	23 985 kg	52,878 lb
Down Force		
Base GVW	13 945 kg	30,743 lb
Maximum GVW	19 895 kg	43,861 lb

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

16M3 Motor Grader Specifications

Blade Range

Circle Centershift		
Right	560 mm	22 in
Left	690 mm	27.2 in
Moldboard Sideshift		
Right	790 mm	31.1 in
Left	740 mm	29.1 in
Maximum Blade Position Angle	65°	
Blade Tip Range		
Forward	40°	
Backward	5°	
Maximum Shoulder Reach Outside of Tires		
Right	2311 mm	91 in
Left	2311 mm	91 in
Maximum Lift above Ground	400 mm	15.7 in
Maximum Depth of Cut	470 mm	18.5 in

Ripper

Ripping Depth – Maximum	452 mm	17.8 in
Ripper Shank Holders	7	
Shank Holder Spacing		
Minimum	445 mm	17.5 in
Maximum	500 mm	20 in
Penetration Force	13 749 kg	30,311 lb
Pryout Force	19 822 kg	43,700 lb
Machine Length Increase, Beam Raised	1610 mm	63.4 in

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

Gross Vehicle Weight – Typically Equipped		
Total	32 411 kg	71,454 lb
Front Axle	8733 kg	19,253 lb
Rear Axle	23 678 kg	52,201 lb
Gross Vehicle Weight – Base**		
Total	28 816 kg	63,528 lb
Front Axle	8134 kg	17,932 lb
Rear Axle	20 682 kg	45,596 lb
Gross Vehicle Weight – Maximum Tested		
Total	38 500 kg	84,877 lb
Front Axle	11 850 kg	26,125 lb
Rear Axle	26 650 kg	58,753 lb

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

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

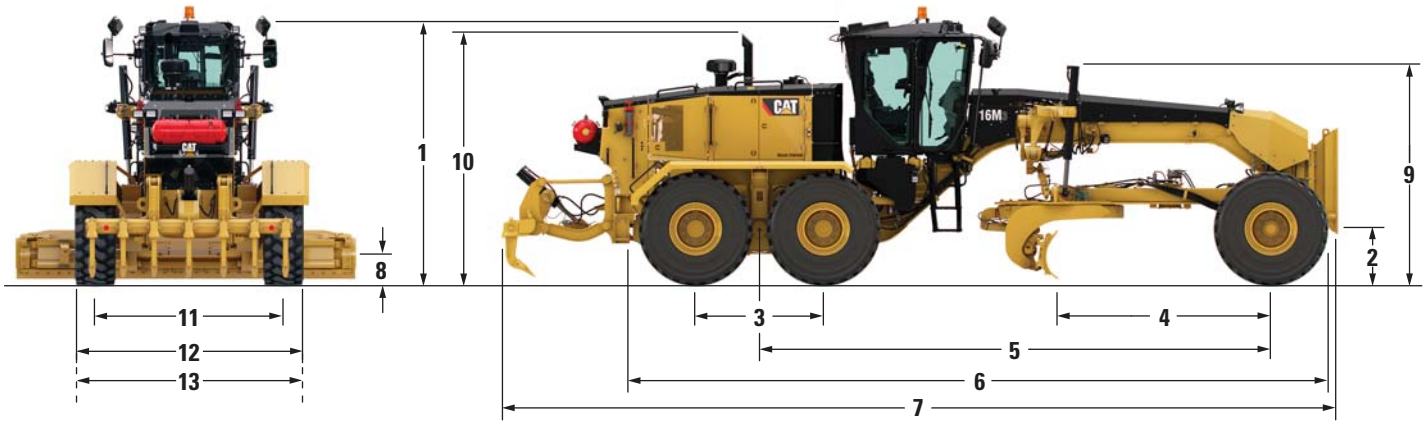
Standards

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

- 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.
- 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.

Dimensions

All dimensions are approximate, based on standard machine configuration with 23.5R25 tires.



	16M3	
1 Height – Top of Cab	3719 mm	146.4 in
2 Height – Front Axle Center	733 mm	28.9 in
3 Length – Between Tandem Axles	1841 mm	72.5 in
4 Length – Front Axle to Moldboard	3066 mm	120.7 in
5 Length – Front Axle to Mid Tandem	7365 mm	290 in
6 Length – Front Tire to Rear of Machine (includes tow hitch)	10 593 mm	417 in
7 Length – Counterweight to Ripper	12 051 mm	474.4 in
8 Ground Clearance at Rear Axle	396 mm	15.6 in
9 Height to Top of Cylinders	3088 mm	121.6 in
10 Height to Exhaust Stack	3557 mm	140 in
11 Width – Tire Center Lines	2703 mm	106.4 in
12 Width – Outside Rear Tires	3411 mm	134.3 in
13 Width – Outside Front Tires	3411 mm	134.3 in

Optional Tire Arrangements

Common tire options for the 16M3

Wheel Group	Tires
19.5×25 MP	23.5R25 Bridgestone VKT 2 Star
19.5×25 MP	23.5R25 Bridgestone VKT 1 Star
19.5×25 MP	23.5R25 Bridgestone VJT 1 Star
19.5×25 MP	23.5R25 Michelin XHA 2 Star
19.5×25 MP	23.5R25 Michelin XLDD 2 Star L5

*Factory options may vary based on availability.

Standard Equipment

Standard 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 with ACERT Technology. One meets U.S. EPA Tier 4 Final/EU Stage IV/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

Continued on next page

Standard Equipment *(Continued)*

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

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 (¾ 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 (⅝ in) DH-2 steel, 19 mm (¾ 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)

16M3 Optional Equipment

Optional Equipment

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)

Notes

For more complete information on Cat products, dealer services, and industry solutions, visit us on the web at **www.cat.com**

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