

# 14M

## Motor Grader



### Engine

Engine Model	Cat® C11 ACERT™ VHP	
Base Power (1st gear) – Net	193 kW	259 hp
Base Power (1st gear) – Net (Metric)		262 hp
VHP Range – Net	193-205 kW	259-275 hp
VHP Range – Net (Metric)		262-279 hp
VHP Plus Range – Net	193-221 kW	259-297 hp
VHP Plus Range – Net (Metric)		262-301 hp

### Moldboard

Width	4.3 m	14 ft
<b>Weights</b>		
Gross Vehicle Weight – Typically Equipped	24 375 kg	53,738 lb

## Features

### Operator Station

*Industry leading cab design gives you unmatched comfort, visibility and ease of use, so your operators can be more confident and productive.*

### Structures, Drawbar, Circle and Moldboard

*Durable structures with fast and simple DCM adjustments save you service time. Shims and wear inserts save you money and make it easy to maintain factory tightness of components.*

### Hydraulics

*Load sensing, proportional hydraulics mean operators can rely on consistent power. This precise, predictable implement response will save time and help assure quality work.*

### Integrated Technologies

*Grade control and machine monitoring technologies help you improve grading efficiency and enhance fleet management.*

### Safety

*The safety of your operators and those on the job site is key in the design of every Cat machine. A long list of safety features help you meet your goals of getting everyone home safely at the end of each work day.*

## Contents

Operator Station.....	4
Steering and Implement Controls .....	5
Engine .....	6
Power Train.....	7
Structures and Drawbar-Circle-Moldboard ...	8
Hydraulics .....	9
Safety .....	10
Integrated Technologies.....	12
Serviceability and Customer Support.....	13
Sustainability .....	14
Work Tools and Attachments.....	15
Specifications.....	16
Standard Equipment.....	20
Optional Equipment.....	21
Notes.....	22





**Cat M Series Motor Graders have become the industry standard in operational efficiency and overall productivity. From building roads to maintaining them, M Series Motor Graders are designed to help you get more work done in less time. Unprecedented operator comfort and ease of service help to maximize your return on investment.**

# Operator Station

## Comfort and productivity



### Comfort and Control

Experience the most spacious, comfortable cab in the industry. Simple, intuitive joystick controls replace conventional levers, steering wheel and transmission control handle so hand and arm movement is reduced by 78%, helping to reduce operator fatigue. Rocker switches and control levers are in easy reach.

A standard Cat Comfort Series suspension seat and electronically adjustable control pods add even more to comfort and productivity. Multiple isolation mounts significantly reduce sound and vibration for a more relaxed work environment.

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. A standard cage fan and dual pop-out louvers help improve fresh air circulation too.

An optional deluxe radio with CD features MP3 and Bluetooth technology.

### Visibility

Good visibility is key to your safety and efficiency. Large windows make it easy to see the moldboard and tires, as well as behind the machine. A rear vision camera is available to enhance your sight lines to the rear of the machine and an optional anti-icing window feature will help keep windows clear during cold and snowy conditions.

### In-Dash Instrument Cluster

Easy-to-read, high-visibility gauges and warning lamps keep you aware of critical system information. Cat Messenger offers multi-lingual real-time machine performance and diagnostic data to help you get the most from your machine.

# Steering and Implement Controls

Unprecedented precision and ease of operation



Two electro-hydraulic joysticks with electronically adjustable control pods help position operators for optimal comfort, visibility and productive operation.

## Joystick Functions

The left joystick controls steering, articulation (with standard push-button return-to-center feature), wheel lean, gear selection and directional control, and left moldboard lift cylinder (with standard float capability).

The right joystick controls drawbar, circle and moldboard functions as well as right moldboard cylinder (with standard float capability). It also houses the electronic throttle control and manual differential lock/unlock.

The steer tire angle mirrors the joystick lean angle or position, providing similar feel to steering. A brake tensioning system holds the joystick in position until the operator moves it. The steering control automatically reduces steering sensitivity at higher ground speeds.

A Programmable Auxiliary Hydraulic Pod controls up to six additional hydraulic circuits.



## Electronic Throttle Control

Operators get precise and consistent throttle operation, with automatic/manual modes that allow you to adjust for application and operator preferences.

## Articulation Return-to-Center

Automatically returns the machine to a straight frame position from any angle with the touch of a button.

## Selectable Blade Lift Modes

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

# Engine

Power and reliability



The Cat C11 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.

ACERT Technology lowers combustion chamber temperatures and optimizes fuel combustion to generate more work output for your fuel cost.

Variable Horsepower (VHP) is standard, delivering additional horsepower 3.73 kW (5 hp) in forward gears 1-4 and reverse gears 1-3.

This balances traction, speed and horsepower to optimize rimpull and conserves fuel. VHP Plus is optional, giving you an additional 3.73 kW (5 hp) in gears 5-8 for more power at higher speeds.

## Hydraulic Demand Fan

The hydraulic demand fan automatically adjusts fan speed to meet engine cooling requirements. When demand is reduced, you benefit from more power to the ground and improved fuel efficiency.

## Ether Starting Aid

A standard ether starting aid helps cold-weather startups in extreme temperatures.

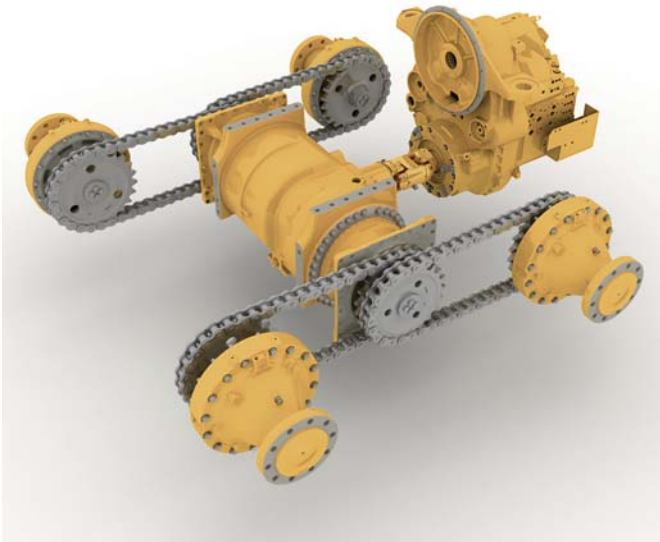
## Engine Idle Shutdown Timer

This standard feature can be software-enabled by your Cat dealer to shut down the engine after a set period of time to save you fuel and help reduce emissions.



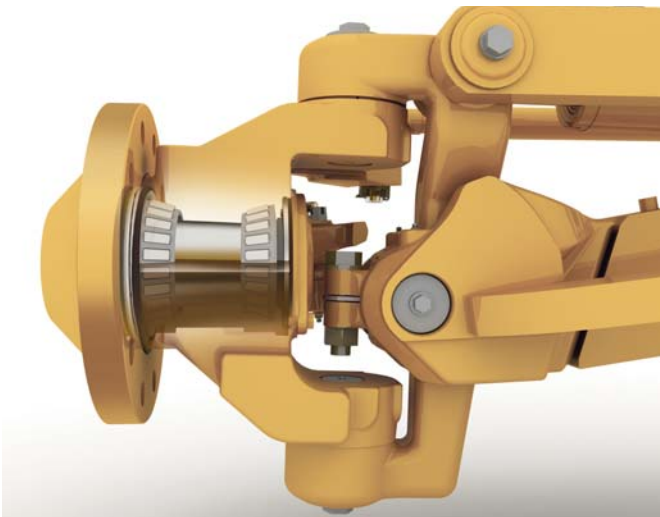
# Power Train

## Maximum power to the ground



We designed the 14M to give you efficiency and longevity in your most demanding applications.

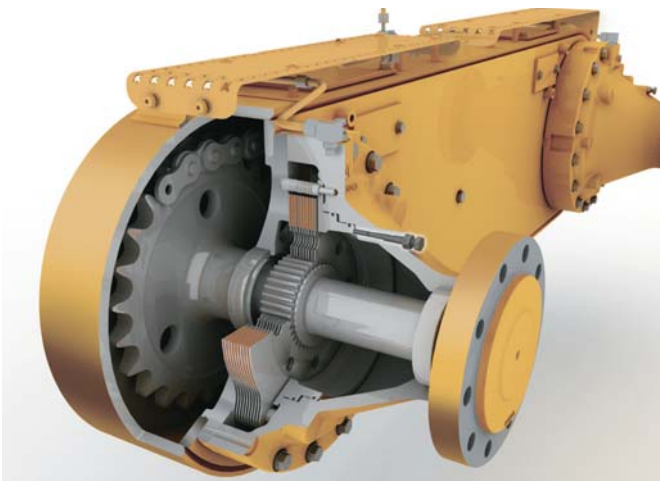
- Optional Automatic Differential Lock unlocks the differential during a turn and re-locks when straight for easier operation and improved power train protection.
- Full Electronic Clutch Pressure Control (ECPC) system optimizes inching modulation, smooth shifts and directional changes, reducing stress on gears.
- Optional Programmable Autoshift simplifies operation by allowing the operator to program the transmission to shift at optimal points to match your application.
- Power Shift Countershaft Transmission is directly matched to the Cat engine to maximize power to the ground.
- Eight forward and six reverse gears are specifically designed to give you a wide operating range for maximum productivity in all earthmoving applications.
- 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

Oil-bathed multi-disc service brakes are hydraulically actuated for smooth, predictable braking and lower operating costs. Brakes are located at each tandem wheel for a large total brake surface area to give you dependable stopping power and longer life.

# Structures and Drawbar-Circle-Moldboard

## Service ease and precise blade control

Caterpillar designs frame and drawbar components for performance and durability in heavy duty applications. The one-piece forged steel circle stands up to high stress loads, and a sacrificial wear system helps keep your service time and costs down.

The articulation hitch features a large tapered roller bearing to carry loads evenly and smoothly. It is sealed to prevent contamination and a locking pin prevents articulation for safety during service or transport.

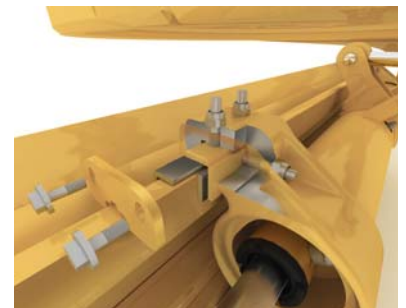
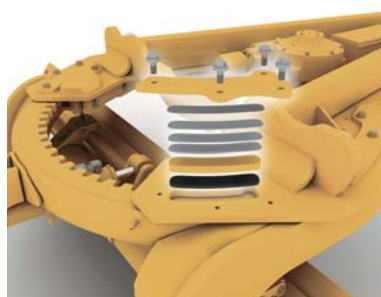
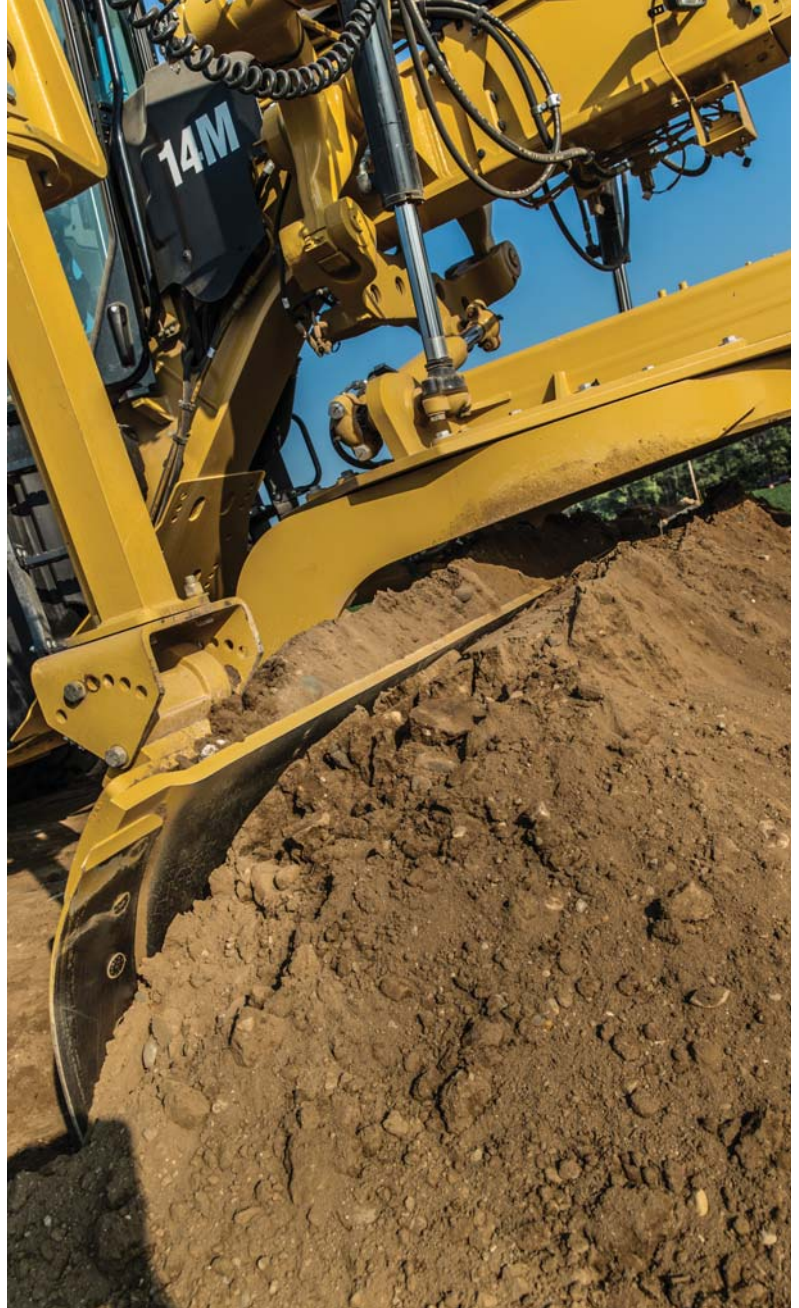
### Easy Maintenance for More Uptime

The drawbar, circle and moldboard are designed to make it easy to keep the components tight. One person can easily adjust or replace the patented top-adjust drawbar wear inserts from the top of the drawbar plate, reducing downtime to save you money. Durable nylon composite wear inserts maximize circle torque and component life. Sacrificial brass wear strips between the blade mounting group and moldboard can be easily adjusted and replaced. Shimless Moldboard Retention System uses vertical and horizontal adjusting screws to keep moldboard wear strips aligned for reduced blade chatter and precise blade control.

### Blade Angle and Moldboard

Aggressive blade angle allows material to roll more freely along the blade for better material control.

Heat-treated rails, hardened cutting edges and end bits, and heavy duty bolts to give you greater moldboard reliability and long service life. The 5-position link bar allows extreme moldboard positioning for easier bank sloping and ditch cutting/cleaning.





# Hydraulics

Precise, predictable control



## Responsive Hydraulics

A proven load-sensing system and advanced electro-hydraulics give you superior implement control and responsive hydraulic performance to make your operator's job easier. Continuously matching hydraulic flow/pressure to power demands creates less heat and reduces power consumption.

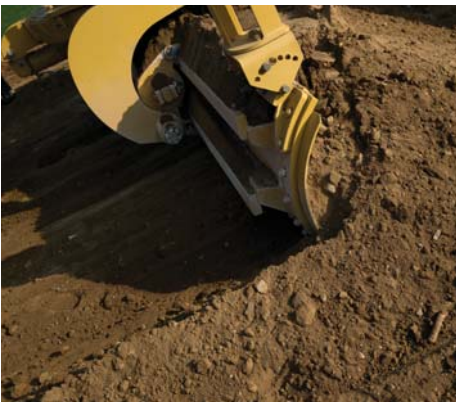
- Proportional Priority Pressure-Compensating (PPP-C) valves have different flow rates for the head and rod ends of the cylinder, so you can count on consistent, predictable implement response.
- Hydraulic flow is proportioned to give you confidence that all implements will operate simultaneously without slowing the engine or speed of some implements.

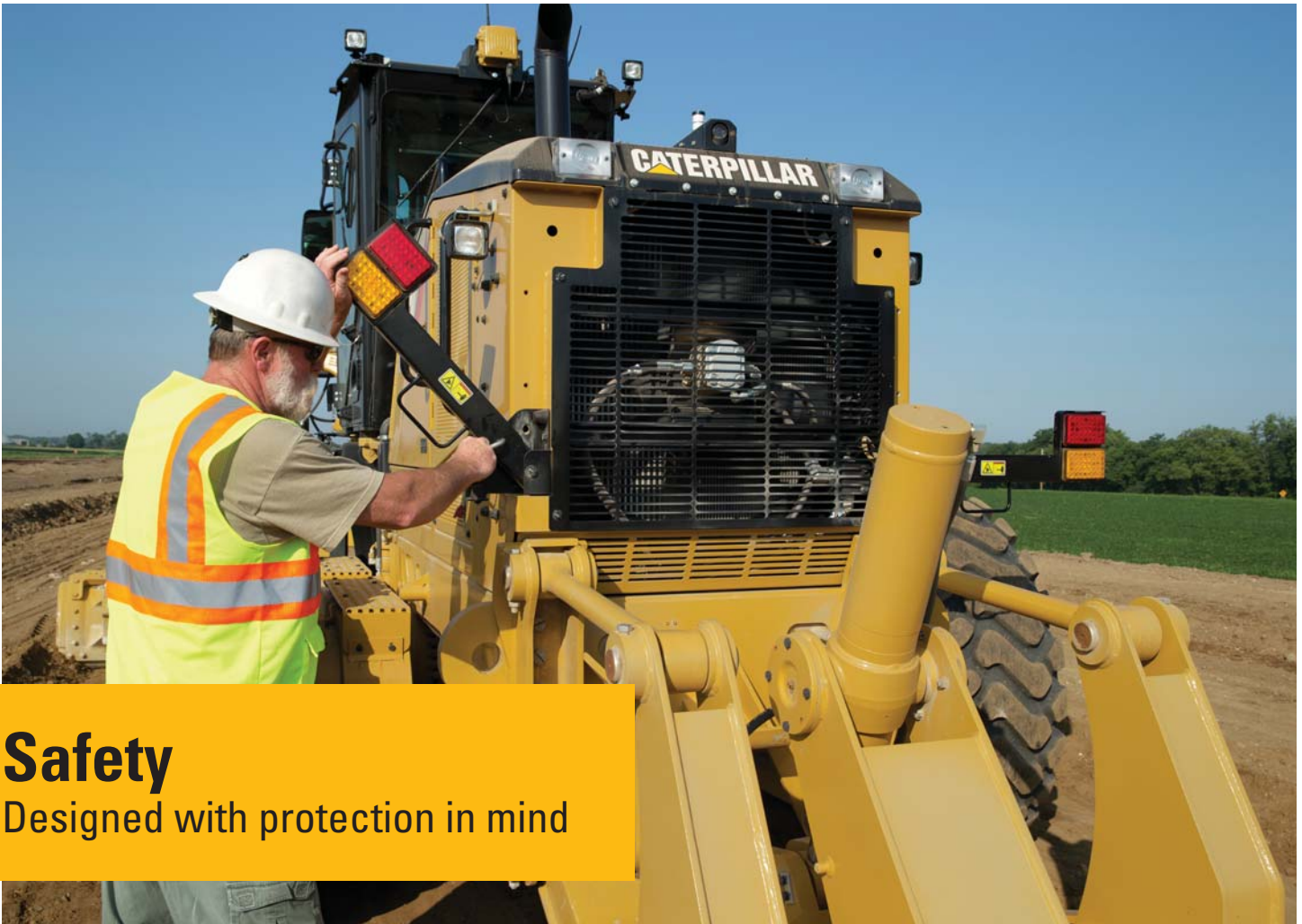
## Blade Float

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.

## 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.





# Safety

Designed with protection in mind



### M Series Safety Features

- Grouped, ground level service points
- Laminated front window glass
- Optional LED Lighting
- Ground-level electrical disconnect switch
- Ground-level engine shutoff switch
- Glare reducing paint for night operation

### **Operator Presence Monitoring System**

Standard feature keeps the parking brake engaged and hydraulic implements disabled until the operator is initially seated and the machine is ready for operation.

### **Speed Sensitive Steering**

Standard function makes steering less sensitive as ground speed increases for greater operator confidence and control.

### **Secondary Steering System**

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

### **Hydraulic Lockout**

Disables all implement functions while still providing machine steering control. This standard safety feature is especially useful while roading.

### **Brake Systems**

Brakes at each tandem wheel eliminate braking loads on the power train. Redundant brake systems utilize accumulators to enable stopping in case of engine failure.

### **Walkways and Grab Rails**

Perforated steel tandem walkways and convenient grab rails offer a sturdy platform and support for moving on, off and around the machine.

### **Rearview Camera**

An optional rear vision camera with in-cab monitor helps enhance your sight lines to the rear of the machine.

### **Circle Drive Slip Clutch**

Protects the drawbar, circle and moldboard from shock loads when the blade encounters an immovable object. This standard feature also reduces the possibility of abrupt directional changes in poor traction conditions.

### **Blade Lift Accumulators**

Help absorb impact loads to the moldboard by allowing vertical blade travel. This optional feature helps reduce wear and aids operator safety.



# Integrated Technologies

## Solutions to make work easier and more efficient

### Cat Grade Control

Cat Grade Control Cross Slope is an optional fully integrated, factory installed 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 with AccuGrade™ upgrade kits that provide additional 2D and/or 3D control.

### AccuGrade Attachment Ready Option

The AccuGrade Attachment Ready Option can be ordered as a factory or dealer-installed option. It includes built-in mounting points and internal wiring to make installation of the AccuGrade system faster and easier.

### Cat AccuGrade

AccuGrade uses positioning and guidance technologies, machine sensors, and automatic blade control to help your operators get to grade faster, easier and more efficiently. Digital design plans, real-time cut/fill data, and in-cab guidance give operators detailed information to work more confidently and accurately, in fewer passes, using less material. Operators can stay on grade and improve productivity and accuracy by nearly 50 percent over conventional methods. Grade stakes and checkers are minimized, helping to make the work site safer and more cost effective. AccuGrade technologies include Cross Slope, Sonic, Laser, GPS, and/or Universal Total Station (UTS).

### Cat Product Link™

Product Link gives you remote monitoring capabilities for one machine or your entire fleet. Track asset location, hours, fuel usage, diagnostic codes, idle time and more through the secure VisionLink® user interface. Knowing where your equipment is and how it's performing enables you or your Cat dealer to manage your fleet in real-time so you can maximize efficiency, improve productivity and lower operating costs.\*

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





# Serviceability and Customer Support

When uptime counts



Cat motor graders are designed to help you increase uptime and reduce costs. Grouped service points and extended service intervals save maintenance time. Optional Fast-Fill allows you to refuel in less than two minutes to get back on the job quickly.

## Advanced Diagnostics

- Cat Messenger, combined with full systems integration, enhances diagnostic capability for quick analysis of critical data.
- Electronic Technician (Cat ET) lets service technicians access stored diagnostic data and configure machine parameters through the Cat Data Link.
- Low Battery Elevated Idle raises idle speed when low system voltage is detected, ensuring adequate system voltage and improving battery reliability.
- Automatic Engine Deration protects the engine by automatically lowering engine torque output and alerting the operator if critical conditions are detected.



## Unparalleled Dealer Support

When it comes to supporting you, Cat dealers are second to none. From machine selection and purchase to maintenance support and rebuilds, Cat dealers have the experience and capabilities to keep you up and running.



# Sustainability

Thinking generations ahead

### Fuel Efficiency

- Integrated machine systems and technologies improve productivity for greater accuracy, allowing the machine to do more work per gallon/liter of fuel.

### Green House Gas Emissions

- Emissions reduction technologies reduce NO<sub>x</sub> + HC (hydrocarbon) emissions by 38% (g/kW-hr) as compared to the previous model.

### Material Efficiency and Lifecycle Costs

- Replaceable wear parts save maintenance time and cost, and extend major component life.
- Major components are built to be rebuilt, eliminating waste and saving you money by giving the machine and/or major components a second – and even third – life.
- Machine is built with a 97% recyclability rate (ISO 16714) to conserve valuable natural resources and further enhance machine end-of-life value.

### Sound

- Reduced engine noise and quieter cabs mean lower operator and spectator sound levels.

### Safety

- A variety of safety features help safeguard operators and others on the job site.

# Work Tools and Attachments

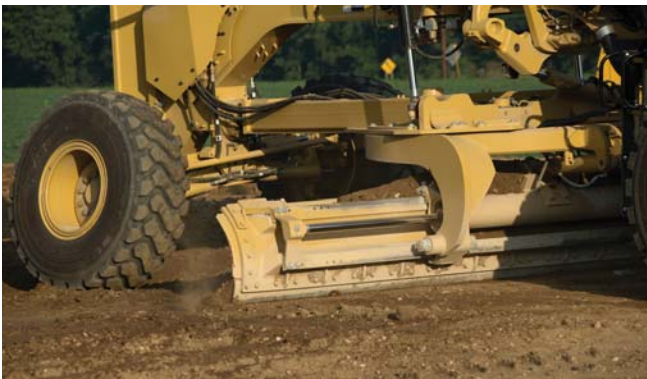
Equip your machine for the job

## Moldboard Options

A 4.3 m (14 ft) moldboard is standard on the 14M, with a 4.9 m (16 ft) moldboard available as an option.

## Ground Engaging Tools (GET)

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



## Front Mounted Groups

A front mounted push plate/counterweight or front lift group are available. The front lift group can be combined with a front dozer blade for added versatility.



## 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.

# 14M Motor Grader Specifications

## Engine

Engine Model	Cat C11 ACERT VHP	
Base Power (1st gear) – Net	193 kW	259 hp
Base Power (1st gear) – Net (Metric)	262 hp	
VHP Range – Net	193-205 kW	259-275 hp
VHP Range – Net (Metric)	262-279 hp	
VHP Plus Range – Net	193-221 kW	259-297 hp
VHP Plus Range – Net (Metric)	262-301 hp	
Displacement	11.1 L	677 in <sup>3</sup>
Bore	130 mm	5.1 in
Stroke	140 mm	5.5 in
Torque Rise	21%	
Maximum Torque (VHP Plus) – Net	1422 N·m	1,049 lbf·ft
Speed @ Rated Power	1,800 rpm	
Number of Cylinders	6	
Derating Altitude	3962 m	13,000 ft
Standard – Fan speed		
Maximum	1,450 rpm	
Minimum	550 rpm	
Standard – Ambient Capability	43° C	109° F
High Ambient – Fan speed		
Maximum	1,650 rpm	
Minimum	550 rpm	
High Ambient Capability	50° C	122° F

- Power as declared per ISO 14396  
Rated Speed = 1,800 rpm  
VHP = 206 kW (277 hp)  
VHP Plus = 222 kW (298 hp)
- VHP Plus is an optional attachment.
- Net power advertised is the power available at rated speed of 1,800 rpm, measured at the flywheel when engine is equipped with fan running at minimum speed, air cleaner, muffler and alternator.
- No engine derating required up to 3962 m (13,000 ft).

## 14M Net Power

Gear	VHP	VHP+	VHP	VHP+
1/1R	193 kW	193 kW	259 hp	259 hp
2/2R	197 kW	197 kW	265 hp	265 hp
3/3-6R	201 kW	201 kW	270 hp	270 hp
4	205 kW	205 kW	275 hp	275 hp
5	205 kW	209 kW	275 hp	281 hp
6	205 kW	213 kW	275 hp	286 hp
7	205 kW	217 kW	275 hp	291 hp
8	205 kW	221 kW	275 hp	297 hp

## Power Train

Forward/Reverse Gears	8 Forward/6 Reverse	
Transmission	Direct drive, power shift, Countershaft	
Brakes		
Service	Oil-actuated, oil-disc	
Service, Surface Area	34 500 cm <sup>2</sup>	5,347 in <sup>2</sup>
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	24 150 kPa	3,500 psi
Standby Pressure	3100 kPa	450 psi

- Pump output measured at 2,150 rpm.



## Operating Specifications

Top Speed		
Forward	50.4 km/h	31.3 mph
Reverse	39.8 km/h	24.7 mph
Turning Radius, Outside Front Tires		
	7.9 m	25 ft 11 in
Steering Range – Left/Right		
	47.5°	
Articulation Angle – Left/Right		
	20°	
Forward		
1st	4.4 km/h	2.7 mph
2nd	6.0 km/h	3.7 mph
3rd	8.7 km/h	5.4 mph
4th	12.0 km/h	7.4 mph
5th	18.5 km/h	11.5 mph
6th	25.1 km/h	15.6 mph
7th	34.6 km/h	21.5 mph
8th	50.4 km/h	31.3 mph
Reverse		
1st	3.5 km/h	2.2 mph
2nd	6.5 km/h	4.0 mph
3rd	9.4 km/h	5.9 mph
4th	14.6 km/h	9.1 mph
5th	27.3 km/h	17.0 mph
6th	39.8 km/h	24.7 mph
Service Refill		
Fuel Capacity	492 L	130 gal
Cooling System	46.5 L	12.3 gal
Hydraulic System – Tank	64 L	16.9 gal
Engine Oil	30 L	7.9 gal
Transmission/Differential/ Final Drives	89 L	23.5 gal
Tandem Housing (each)	106 L	28.0 gal
Front Wheel Spindle Bearing Housing	0.9 L	0.2 gal
Circle Drive Housing	10 L	2.6 gal

## Frame

Circle		
Diameter	1822 mm	71.8 in
Blade Beam Thickness	50 mm	2 in
Drawbar		
Height	203.2 mm	8 in
Width	76.2 mm	3 in
Front Frame Structure		
Height	406.4 mm	16 in
Width	304.8 mm	12 in
Thickness	15.9 mm	0.6 in
Front Axle		
Height to Center	640 mm	25.2 in
Wheel Lean, Left/Right	17.1°	
Total Oscillation per Side	32°	

## Tandems

Height	616 mm	24.3 in
Width	214 mm	8.4 in
Sidewall Thickness		
Inner	20 mm	0.8 in
Outer	20 mm	0.8 in
Drive Chain Pitch	57 mm	24.2 in
Wheel Axle Spacing	1656 mm	65 in
Tandem Oscillation		
Front Up	15°	
Front Down	25°	

## Moldboard

Moldboard		
Width	4.3 m	14 ft
Height	688 mm	27 in
Thickness	25 mm	1 in
Arc Radius	413 mm	16.3 in
Throat Clearance	117 mm	4.6 in
Cutting Edge		
Width	203 mm	8 in
Thickness	16 mm	0.6 in
End Bit		
Width	152 mm	6 in
Thickness	16 mm	0.6 in
Blade Pull		
Base	14 117 kg	31,123 lb
Maximum	18 352 kg	40,460 lb
Down Pressure		
Base	10 123 kg	22,318 lb
Maximum	16 662 kg	36,734 lb

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

# 14M Motor Grader Specifications

## Blade Range

Circle Centershift		
Right	520 mm	20.5 in
Left	650 mm	25.5 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	2279 mm	89.7 in
Left	2169 mm	85.4 in
Maximum Lift Above Ground	419 mm	16.5 in
Maximum Depth of Cut	438 mm	17.3 in

## Ripper

Ripping Depth, Maximum	401 mm	15.8 in
Ripper Shank Holders	7	
Shank Holder Spacing		
Minimum	373 mm	15 in
Maximum	472 mm	19 in
Penetration Force	12 348 kg	27,222 lb
Pryout Force	12 767 kg	28,146 lb
Machine Length Increase, Beam Raised	1156 mm	45.5 in

## Weights

Gross Vehicle Weight – Base		
Total	21 423 kg	47,230 lb
Front Axle	5737 kg	12,648 lb
Rear Axle	15 686 kg	34,582 lb
Gross Vehicle Weight – Maximum		
Total	29 834 kg	65,773 lb
Front Axle	9442 kg	20,816 lb
Rear Axle	20 392 kg	44,957 lb
Gross Vehicle Weight – Typically Equipped		
Total	24 375 kg	53,738 lb
Front Axle	6216 kg	13,704 lb
Rear Axle	18 159 kg	40,034 lb

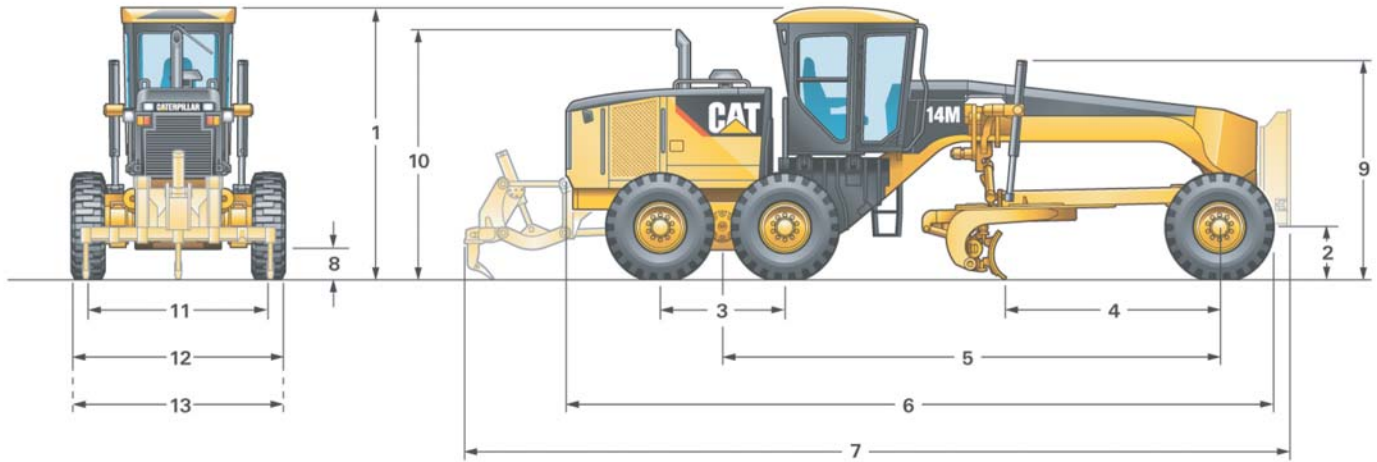
- Base operating weight calculated on standard machine configuration with 16.0R24 radial (G-2) tires, full fuel tank, coolant, lubricants and operator.

## Standards

ROPS/FOPS	ISO 3471/ISO 3449
Steering	ISO 5010:1992
Brakes	ISO 3450
Sound	ISO 6394/ISO 6395

- The static operator sound pressure level is 73 dB(A) when “ISO 6394:2008” is used to measure the value for an enclosed cab. The measurement was conducted with the cab doors and the cab windows closed. The cab was properly installed and maintained.
- The dynamic spectator sound pressure level is 107 dB(A) when “ISO 6395:2008” is used to measure the value for an enclosed cab. The measurement was conducted at 70% of the maximum engine cooling fan speed.

## Dimensions



<b>1</b> Height – Top of Cab	3535 mm	139 in
Height – Top of Cab Product Link (cell)	3747 mm	148 in
<b>2</b> Height – Front Axle Center	630 mm	24.8 in
<b>3</b> Length – Between Tandem Axles	1656 mm	62.2 in
<b>4</b> Length – Front Axle to Moldboard	2840 mm	112 in
<b>5</b> Length – Front Axle to Mid Tandem	6559 mm	258 in
<b>6</b> Length – Front Tire to Rear of Machine	9349 mm	368 in
<b>7</b> Length – Counterweight to Ripper	10 896 mm	429 in
Length – Push Plate to Ripper Retracted	10 632 mm	419 in
<b>8</b> Ground Clearance at Rear Axle	369 mm	14.5 in
<b>9</b> Height to Top of Cylinders	2835 mm	112 in
<b>10</b> Height to Exhaust Stack	3245 mm	128 in
<b>11</b> Width – Tire Center Lines	2366 mm	93.1 in
<b>12</b> Width – Outside Rear Tires	2801 mm	110 in
<b>13</b> Width – Outside Front Tires	2801 mm	110 in

All dimensions are approximate, based on standard machine configuration with 16.0R24 radial (G-2) tires.

## Optional Tire Arrangements

Common tire options for the 14M.

Rim Size	Wheel Group	Tires
10 × 24	Multi-piece	16.0R24
17 × 25	Multi-piece	20.5R25

Note: Consult your dealer for individual tire width, size, and brand.

# 14M Standard Equipment

## Standard Equipment

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

### OPERATOR ENVIRONMENT

- Accelerator
- Air Conditioning with heater
- Arm and wrist rest, adjustable
- Articulation, automatic Return-to-Center
- Cat Messenger, operator information system
- Centershift pin indicator
- Coat hook
- Cup holder
- Display, digital speed and gear
- Doors, left and right side with wiper
- Gauge, machine level
- Gauge cluster (analog) inside the cab – articulation, engine coolant temp, engine RPM, fuel, and hydraulic oil temp
- Hour meter, digital
- Joystick hydraulic controls implements, steering, transmission
- Lights, night time cab
- Mirror, inside rearview, wide angle
- Power port, 12V
- Radio Ready, Entertainment
- ROPS cab, sound suppressed
- Seat, cloth-covered, comfort suspension
- Seat belt, retractable 76 mm (3 in)
- Storage area for cooler/lunchbox
- Throttle control, electronic
- Windows: laminated glass
  - fixed front with intermittent wiper
  - side and rear (3)

### POWER TRAIN

- Air cleaner, dual stage, dry type, automatic dust ejector, service indicator through Cat Messenger
- Air-to-air after cooler (ATAAC)
- Belt, serpentine, automatic tensioner
- Brakes, four-wheel hydraulic
- Differential, lock/unlock
- Drain, engine oil, ecology
- Electronic over speed protection
- Engine, Cat C11 with ACERT Technology
- Engine Idle Shutdown (EIS)
- Ether starting aid
- Fuel-water separator
- Hydraulic demand fan
- Muffler, under hood
- Parking brake – multi-disc, sealed, oil-cooled
- Priming pump, fuel
- Rear axle, modular
- Sediment drain, fuel tank
- Transmission, 8F/6R, power shift, direct drive
- VHP (Variable Horsepower)

### ELECTRICAL

- Alarm, back up
- Alternator, 80 ampere, sealed
- Batteries, maintenance free, heavy duty, 1,125 CCA
- Breaker panel, ground accessible
- Electrical system, 24V
- Grade Control Ready – Cab harness, software, electrical hydraulic valves, bosses and brackets
- Lights, reversing
- Lights, roading, roof-mounted
- Lights, stop and tail, LED
- Product Link Ready

### OTHER STANDARD EQUIPMENT

- Brake accumulators, dual certified
- Bumper, rear, integrated with hitch
- CD ROM Parts Book
- Clutch, circle drive slip
- Cutting edges
  - curved DH-2 steel
  - 203 mm × 16 mm (8 in × 5/8 in)
  - 19 mm (3/4 in) mounting bolts
- Doors (3), engine compartment, locking
- Drawbar – 6 shoe with replaceable wear strips
- Endbits
  - 16 mm (5/8 in) DH-2 steel
  - 19 mm (3/4 in) mounting bolts
- Extended Life Coolant to –35° C (–30° F)
- Fluid check, ground level
- Frame, articulated, with safety lock
- Fuel tank, 492 L (130 gallon), ground level access
- Guards, debris, underside
- Guards, service center debris
- Ground level engine shutdown
- Hammer (emergency exit)
- Horn, electric
- Hydraulics, base 8 implement controls
- Hydraulics, load-sensing
- Lockout, hydraulic implement for roading
- Moldboard
  - 4287 mm × 686 mm × 25 mm (14 ft × 27 in × 1 in)
  - hydraulic sideshift and tip
- Paint, glare reducing – top of front frame and rear enclosure
- Radiator cleanout access
- Secondary steering
- Serviceability, LH side
- S•O•S<sup>SM</sup> ports: engine, hydraulic, transmission, coolant, fuel
- Tandem walkway/guards
- Tool box
- Tow hitch

### TIRES, RIMS, & WHEELS

- Partial allowance for tires and multi-piece rims

## Optional Equipment

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

	kg	lb		kg	lb		kg	lb
<b>ELECTRICAL</b>			Shade, sun			Hydraulic arrangements with one or more additional hydraulic valves are available for rear ripper, dozer, snow plow and snow wing.		
Alternator, 150 ampere	2	5	Wiper, each side	0	1	Security system	2	5
<b>Batteries:</b>			Wiper/washer, rear			Snow wing mounting, frame ready		
extreme duty, 1,400 CCA	14	30	<b>POWER TRAIN</b>			Sound suppression		
Converter, communications (CB)	5	11	Automatic Differential Lock/Unlock					
<b>Lights:</b>			Engine, Variable Horsepower Plus (VHP Plus)			<b>WORK TOOLS/ GROUND ENGAGING TOOLS</b>		
5 Lighting Arrangements and Rear Rooding, Drop Down			Fuel tank, fast fill			Blade/moldboard, 4877 mm × 686 mm × 25 mm (16 ft × 27 in × 1 in)		
Warning, LED strobe	1	2	Precleaner, Sy-Klone			Cutting Edges, curved		
Starter, electric, heavy duty	10	21	Transmission, autoshift			Push plate, counterweight		
<b>GUARDS</b>			<b>OTHER ATTACHMENTS</b>			Ripper, mounting		
Covers, screen	4	9	AccuGrade ARO			Ripper, rear		
Transmission	156	344	Accumulators, blade lift			Ripper tooth		
Sound	91	200	AutoLube, Lincoln			<b>MACHINE ARRANGEMENTS</b>		
<b>OPERATOR ENVIRONMENT</b>			AutoLube, Lincoln, ripper enhancement			Canadian Arrangement		
Deluxe CD radio with MP3 and Bluetooth technology			Cat Grade Control Cross Slope			European Arrangement		
Fan, defroster, rear window	2	4	Camera, rearview			Snow Arrangement		
Horn, air	7	15	Caterpillar Product Link 321SR					
<b>Mirrors, outside:</b>			Compressor/tank, Air					
heated 24V mounted	15	33	Fenders, rear					
Precleaner, HVAC	5	10	Heater, engine coolant:					
Seat, air suspension, cloth	2	5	120V					
			240V					





For more complete information on Cat products, dealer services, and industry solutions, visit us on the web at [www.cat.com](http://www.cat.com)

AEHQ7138 (10-2013)

© 2013 Caterpillar Inc.  
All rights reserved

Materials and specifications are subject to change without notice. Featured machines in photos may include additional equipment. See your Cat dealer for available options.

CAT, CATERPILLAR, SAFETY.CAT.COM, their respective logos, "Caterpillar Yellow" and the "Power Edge" trade dress, as well as corporate and product identity used herein, are trademarks of Caterpillar and may not be used without permission.

VisionLink is a trademark of Trimble Navigation Limited, registered in the United States and in other countries.

