14H
Motor Grader

Global Version

Cat® 3176C ATAAC Engine	
Net Power (all gears)	164 kW/220 hp
Variable Horsepower Arrangement	
gears 1-3	164 kW/220 hp
gears 4-8	179 kW/240 hp

Gross Vehicle Weight	
Base	18 810 kg
front wheels	5310 kg
rear wheels	13 500 kg
Maximum	26 540 kg
front wheels	8810 kg
rear wheels	17 730 kg
Moldboard Blade Width	4267 mm

14H Motor Grader

The 14H blends productivity and durability to give you the best return on your investment.

Engine

✔ The Cat 3176C ATAAC is designed to handle the tough loads. Variable Horsepower matches torque curves to the gear, to maximize response, power and efficiency. Low fuel consumption reduces operating costs and reduces environmental impact. **pg. 4**

Power Train

The power shift transmission takes full advantage of the powerful 3176C engine. The Variable Horsepower option uses specific torque curves for each gear range for optimum performance. Dual air system and multi-disc oil brakes assure reliable braking control. **pg. 5**

Hydraulics

The load-sensing hydraulic system lowers power consumption and system heat. The advanced PPPC control valves provide low lever effort, balanced flow and consistent cylinder speeds for outstanding blade control. Blade float is incorporated into the blade lift valves. **pg. 6**

Operator's Station

✔ Low effort blade controls, electronic throttle control, EMS III monitoring system, and improved ventilation provide world-class operator control and comfort. Improved visibility to the front and rear increase operator confidence and productivity. **pg. 10**

Environmentally Responsible Design

✔ New engine arrangements and operator station designs reduce emissions and meet current and anticipated regulations for interior and exterior sound levels, emissions, exhaust. **pg. 12**

Caterpillar has matched and balanced all power train components, hydraulic systems, and structural elements to deliver a superior motor grader. Include the best operator station in the industry and world-class dealer support, and the Cat 14H represents a reliable, cost-effective investment.

✔ *New feature*

Structures
The 14H frame is designed and built to exceed the expectations of the customer. **pg. 7**

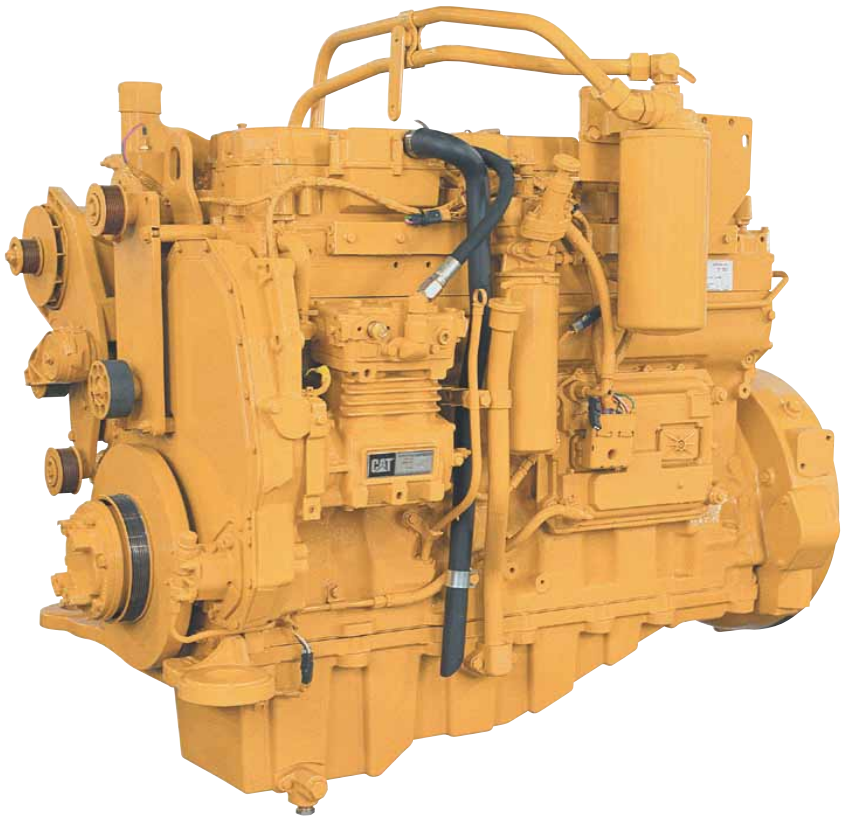
Drawbar, Circle, Moldboard
Versatile moldboard positioning and a long wheelbase improve material handling. Rugged construction and replaceable wear parts minimize operation costs. **pg. 8**

Serviceability
✔Caterpillar® re-engineered inspection and service points, grouping them into a convenient left-hand side, ground level 'service center.' Ground level fueling and extended engine and hydraulic oil change intervals help minimize downtime. **pg. 9**

Customer Support
Your Cat dealer offers a range of services that help you operate longer with lower costs. **pg. 13**

Cat 3176C ATAAC Engine

The six-cylinder, direct injection, turbocharged and air-to-air aftercooled engine is built for power, reliability, low maintenance, excellent fuel economy and low emissions.



Cat 3176C ATAAC Engine. The innovative 3176C diesel engine delivers large-engine performance from a compact engine design. The six-cylinder engine is turbocharged and air-to-air aftercooled. With high displacement and low rated speed, this engine provides excellent fuel economy and durability that can significantly reduce operating costs.

Improved Torque. Power curves customized for the 14H increase peak torque for higher ground speeds and enhanced productivity.

Variable Horsepower (VHP). Automatically increases horsepower in higher gears when the machine can use it. In lower gears where traction is limited, horsepower is limited, reducing wheel slip and conserving fuel. Rimpull has been increased in all gears for greater productivity.

Lugging Performance. High torque output and torque rise makes the 3176C very responsive. Its superior lugging maintains consistent grading speeds without the need to downshift.

Advanced fuel system. The advanced Diesel Engine Module (ADEM III) fuel system is a Caterpillar exclusive electronic control module which provides improved engine response, performance, fuel efficiency, troubleshooting, diagnostics, and reduced emissions. The ADEM III electronic engine control improves altitude capability to 3300 meters without deration.

Turbocharged and Air-to-air aftercooled. Turbocharger packs more dense air into the cylinders for more complete combustion and lower emissions improving performance and engine efficiency. These benefits are especially useful at high altitudes. Air-to-air aftercooler reduces smoke and emissions by providing a cooler inlet air for more efficient combustion. This also extends the life of the piston rings and bore.

Extended Engine Life. The large bore-stroke design and conservative power rating minimize internal stresses and increase component life. The low engine speeds reduce engine wear and sound levels.

Hydraulic Demand Fan. The hydraulic demand fan control automatically adjusts cooling fan speed according to engine cooling requirements. This system reduces demands on the engine, putting more power to the ground and improving fuel efficiency.

Caterpillar engine oil. It is formulated to optimize engine life and performance and is strongly recommended for use in Cat diesel engines. The engine oil change interval is increased to 500 hours.

Factory remanufactured parts. A large choice of factory remanufactured parts and dealer proposed repair options increase machine availability and reduce total repair costs.

Emissions Compliant. The new 14H has reduced NOx, hydrocarbon, and particulate emissions. The Cat 3176C meets or exceeds all U.S. EPA Tier II and EU Stage II emissions control standards worldwide.

Power Train

Matched Caterpillar components deliver smooth, responsive performance and reliability.

Power Shift Transmission. Designed and built specifically for Cat motor graders, the rugged transmission provides on-the-go, full-power shifting as well as inching capability.

Direct Drive. Delivers superior fuel efficiency and "feel" of blade loads, material hardness and ground speed.

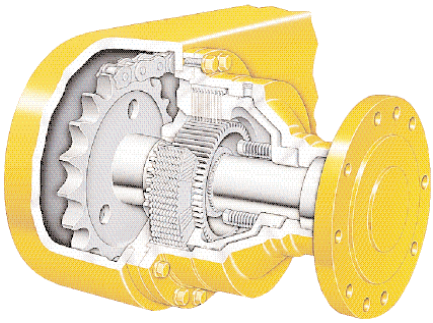
Gear Selection. Eight forward and reverse speeds offer a wide operating range for maximum flexibility. Four gears below 11 km/h match working speed to job conditions for maximum productivity in earthmoving jobs. Gears five, six and seven are optimal for efficient snow removal operations. Gear 8 is designed for roading.

Inching Pedal. Delivers precise control of machine movements in any gear with low pedal effort and excellent modulation, critical in close-quarter work or finish grading. A new pedal design and location improves modulation and operator comfort.

Dual Certified Air Tanks. Supply braking capacity to each side of the machine. This system ensures secondary braking capability in the event a failure occurs in a single brake line. The dual air system also has a large reserve for stalled-engine braking.

Oil-Disc Brakes. Caterpillar multi-disc brakes have a large brake surface for dependable braking capability and extended life before rebuild.
The brakes are

- located at each tandem wheel to eliminate braking loads on the power train and to reduce servicing time.
- completely sealed and adjustment-free.
- oil-bathed, air-actuated and spring-released.



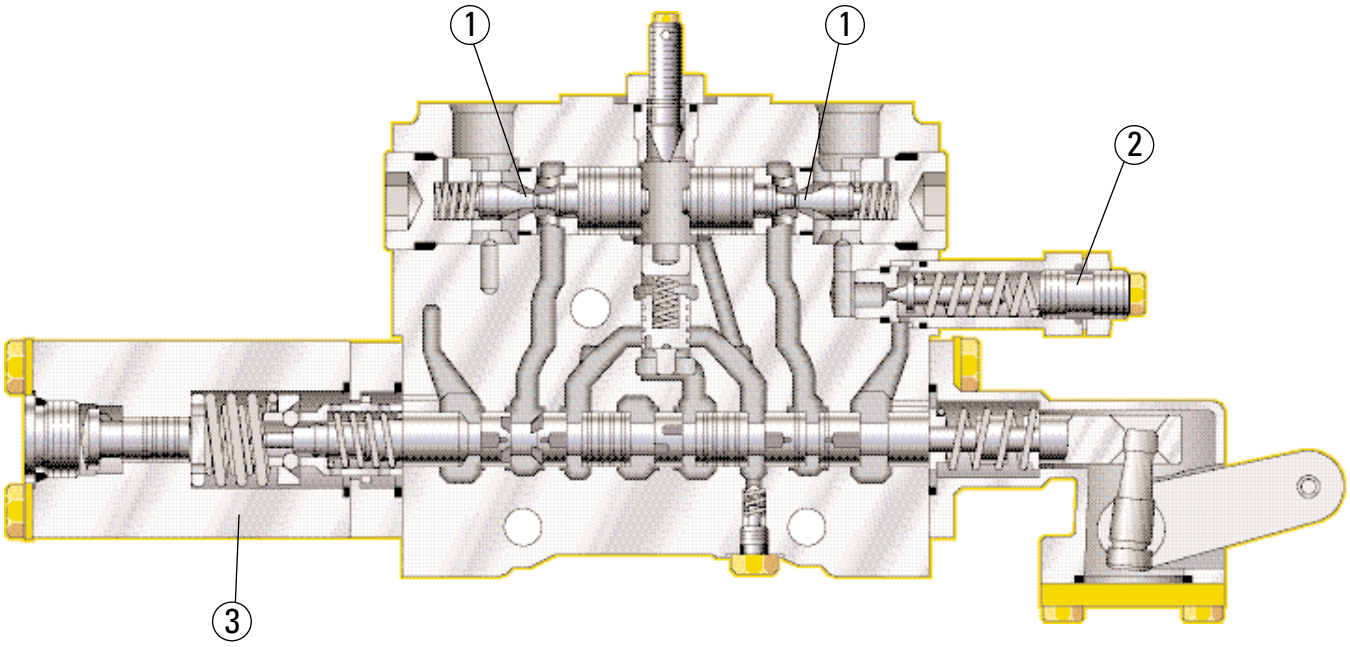
Hydraulics

Balanced hydraulics deliver consistent, precise and responsive control.

1 Lock valve

2 Line relief valve

3 Blade float detent



Load Sensing Hydraulics. A load sensing variable displacement pump and the advanced proportional priority pressure-compensating (PPPC, or "triple-PC") hydraulic valves provide superior implement control and enhanced machine performance and efficiency. Continuously matching hydraulic flow and pressure to power demands creates less heat and reduces power consumption.

Implement Control Valves. PPPC valves have different flow rates for the head and rod ends of the cylinder. This insures consistent extension and retraction properties for each cylinder, and improves operator 'feel' and system response. All control valves use lock valves to maintain blade settings. Line relief valves protect cylinders from excessive pressure.

Balanced Flow. Hydraulic flow is proportioned to ensure all implements operate simultaneously. If demand exceeds pump capacity, all cylinders are reduced by the same ratio. The result is improved productivity in virtually any application.

Blade Float. Blade float, incorporated into the blade lift control valves, allows the blade to move freely under its own weight. By floating both cylinders, the blade can follow the contours of the road when removing snow. 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 supply prevents cross-contamination and provides proper oil cooling, which reduces heat build-up and extends component life.

Heavy Duty XT Hose. Caterpillar hose technology allows high pressures for maximum power and reduced downtime, and intelligent routing minimizes exposure to damage.

Optional Hydraulic Lockout. Mechanically locks all moldboard, machine, and attachment control levers during machine roading. This prevents implements from being accidentally engaged when the motor grader is travelling down the road.

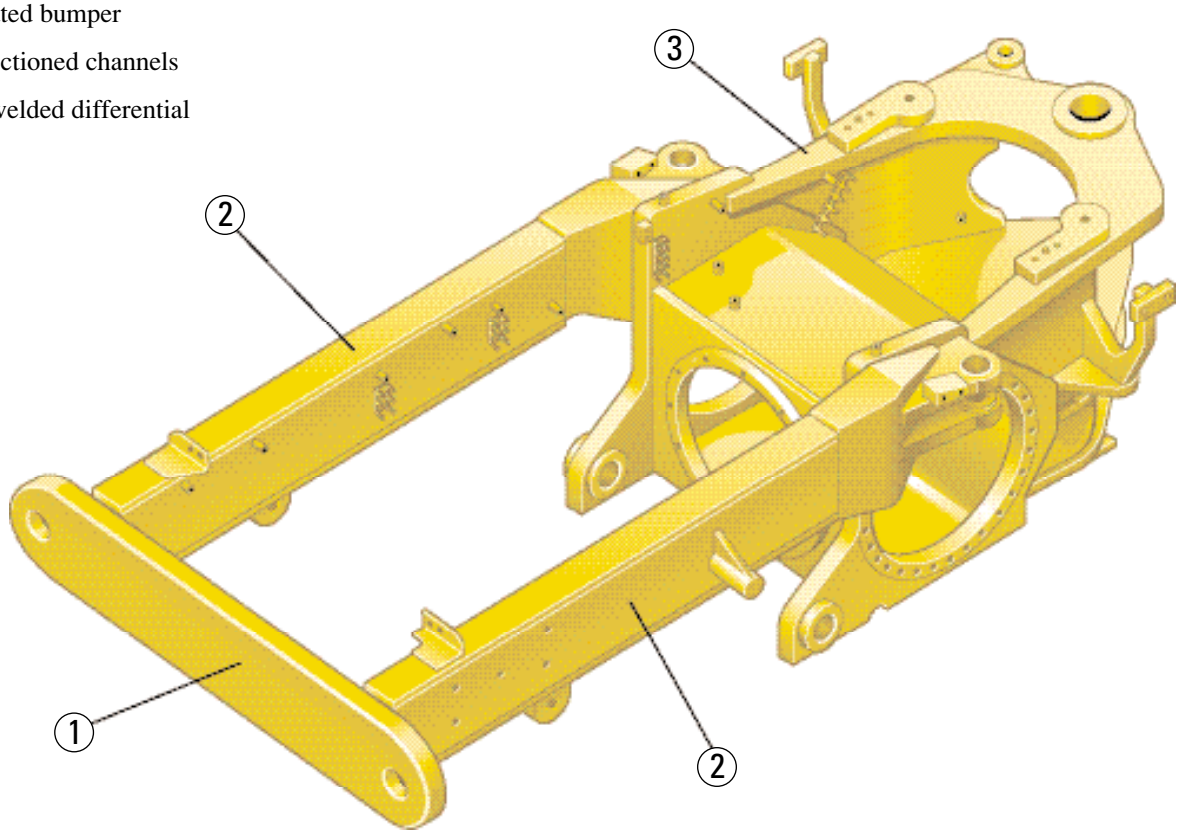
Structures

The 14H frame is designed and built to exceed the expectations of the customer.

1 Integrated bumper

2 Box-sectioned channels

3 Fully welded differential



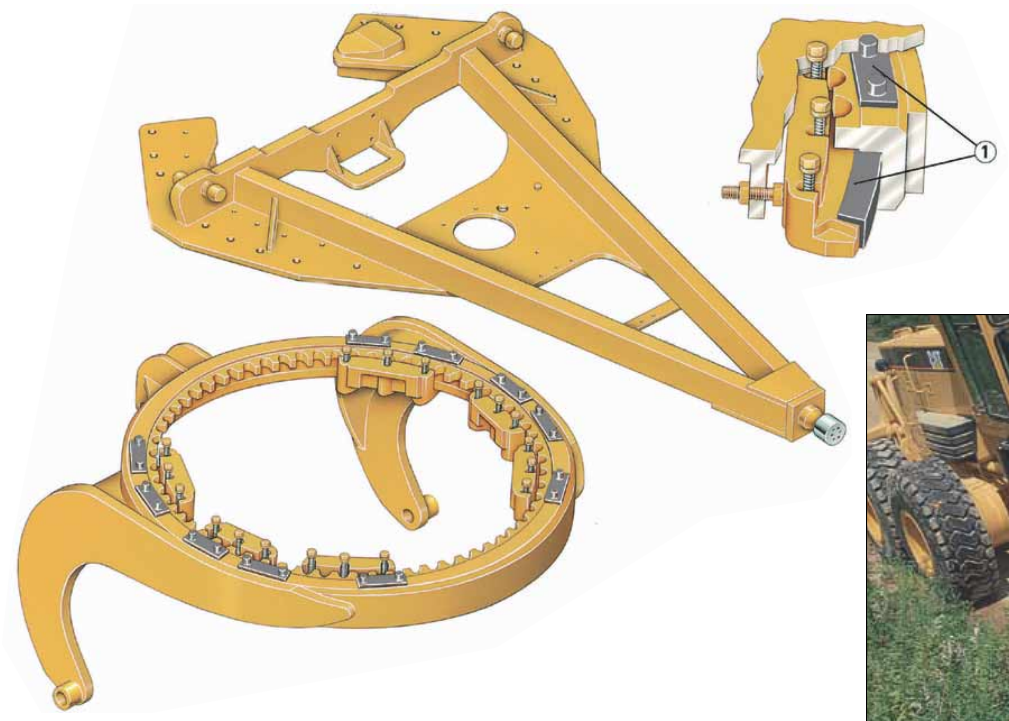
Integrated Bumper. The integrated bumper ties the rear frame together into a cohesive unit, to handle the loads possible with the new 3176C power train. This is especially important in ripping and snow removal applications where graders are equipped with snow wing attachments.

Rear Frame. Rear frame has two box-sectioned channels integral with fully welded differential case for a solid working platform.

Front Frame. Continuous top and bottom plate construction provides consistency and strength. The flanged box section design removes welds from high stress areas, improving reliability and durability, and increasing resale value for the customer.

Drawbar, Circle, Moldboard

Every component is designed for maximum productivity and durability.



1 Nylon composite wear inserts

Blade. Heat treated moldboard rails, tough-hardened cutting edge and end bits, and large diameter bolts assure reliability and longer service life.

Blade Positioning. The blade linkage design provides extensive moldboard positioning, most beneficial in mid-range bank sloping and in ditch cutting and cleaning.

Blade Angle. A long wheelbase allows the operator to obtain an aggressive moldboard angle. This aggressive angle permits material to roll more freely along the blade, which reduces power requirements. This is particularly helpful in handling very dry materials, cohesive soils, snow and ice.

Circle Construction. One-piece forged circle stands up to high stress loads. Raised wear surfaces prevent circle teeth wear against the drawbar. The 64 uniformly spaced circle teeth are flame cut and heat induction hardened to resist wear, and the circle is secured to the drawbar by six support shoes for maximum support.

Replaceable Wear Items. Tough, durable nylon composite wear inserts are located between the drawbar and circle, and between the support shoes and circle. This sacrificial wear system helps keep components tight for fine grading and allows easy replacement. These inserts reduce rotational friction resulting in extended component life.

Circle Drive Slip Clutch. The standard circle drive slip clutch protects the drawbar, circle and moldboard from shock loads when the blade encounters immovable objects. It also reduces the possibility of the grader making abrupt directional changes in poor traction conditions.

Drawbar Construction. The A-frame drawbar uses box-section design for high strength and optimum durability. The drawbar bottom face and the top surface of the circle are machined to provide accurate adjustment and precise blading.

Serviceability

Re-engineered inspection and service points save time and expense.

Service Center. A 'Service Center' on the left-hand side provides easy, centralized access to most check and maintenance points. Routine inspection and service are faster and easier, for better machine availability and lower operating costs.

- Large hinged doors provide easy access to the adjacent engine and maintenance service compartments.
- Engine and hydraulic oil checkpoints, coolant gauges, and air filters
- Spin-on filters for oils, fuel, coolant
- Remote lubrication points, purge valves and ecology drain lines
- Fuse panel with new automotive style fuses located inside cab
- Sample ports for engine, hydraulic, transmission fluids, coolant and fuel, encourage preventive maintenance and diagnostics like the S•O•S℠ program.

Fuel Tank. The 416 liter, ground level fuel tank allows longer work shifts and reduces refueling times. A fuel tank sediment drain enables the operator to remove sediment accumulation, reducing the risk of fuel system damage.

Extended Oil Change Interval. Operate a full 500 hours between engine oil and filter changes, and 4000 hours between hydraulic oil changes. This reduces downtime and operating expense.

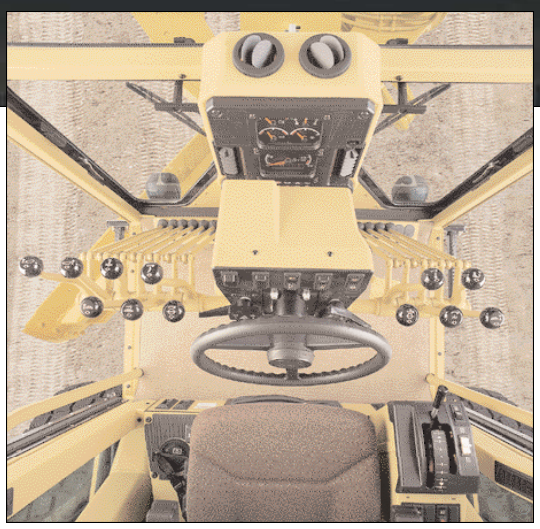
Cat XT Hose. Caterpillar XT hose technology allows high pressures for maximum power and reduced downtime, and intelligent routing minimizes exposure to damage.

O-Ring Face Seals. Cat O-ring face seals assure rock-solid connections that maintain pressure and reduce oil leaks. Intelligent hose routing minimizes exposure to damage, increasing hose life and enhancing reliability.

Radiator Cleanout Access. Radiator clean-out access gives the operator the ability to clear away debris and other materials that build up around the radiator. This ensures that the radiator functions properly keeping the engine cool and increasing component life.

Operator's Station

The 14H includes innovative changes to improve operator efficiency and, in turn, greater machine productivity.



Comfort and Convenience. Comfort and convenience are designed into every feature of the operator's station.

Electronic Throttle Control. ETC provides easier, more precise, more consistent throttle operation. Two modes on a single switch offer flexibility for varying applications and operator preference. Like cruise control, ETC improves fuel efficiency.

Electronic Monitoring System. Powerful monitoring and diagnostic capabilities allow more efficient and safer machine operation. The Cat Electronic Monitoring System (EMS III) keeps operators better informed of machine status with:

- Continuous tracking of all critical machine parameters on a dash display
- Warnings/alerts for abnormal conditions
- Retrieval or adjustment of over 200 electronic system parameters using the powerful ET service tool

Controls On Steering Console. Controls and switches are located on the steering console, shift console and right cab post, all within easy reach. Gauges are located inside the cab, directly in front of the operator.

Backlit Controls. Rocker switches and transmission shifter are backlit for nighttime operation.

Optional Air Conditioner/Heater. The optional heater and air conditioner arrangement help create a comfortable work environment. The high-capacity system dehumidifies air and pressurizes the cab, which circulates fresh air and seals out dust. Multiple additional vents evenly distribute air throughout the cab for clear windows and operator comfort.

Suspension Seat. Standard contour series suspension seat features fold-up armrests and a retractable seat belt. The seat can easily adjust for optimal support and comfort. Seat controls are located within easy reach and in plain view.

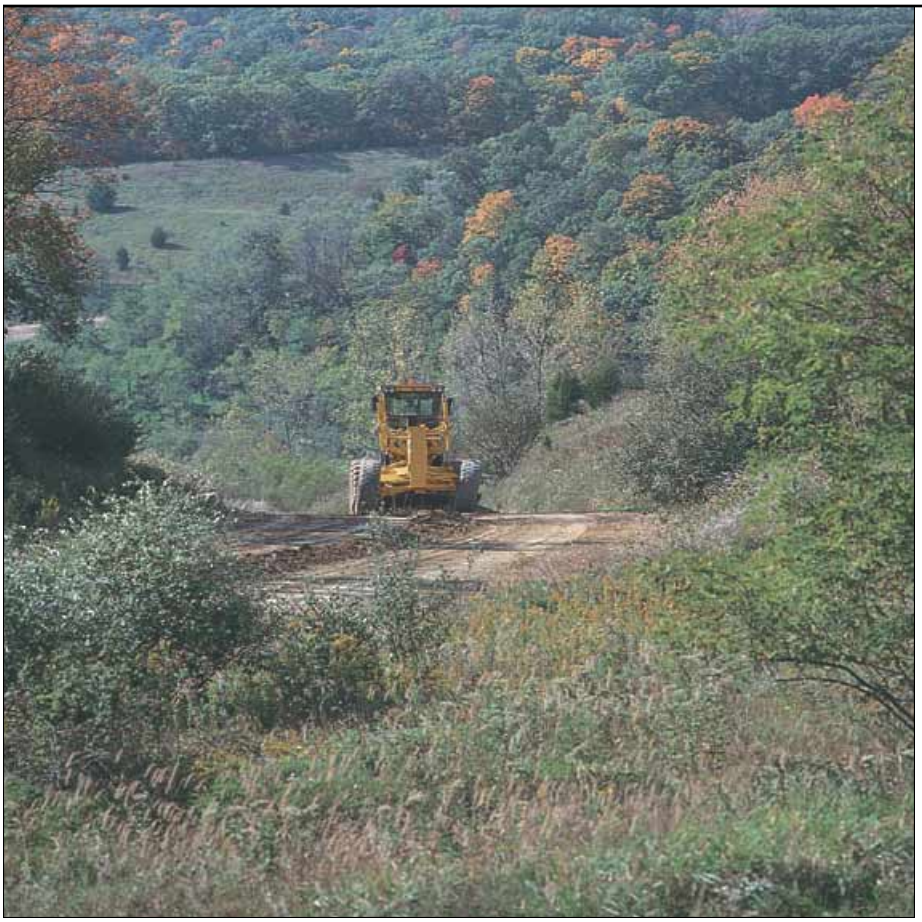
Fresh Air Filters. Located above each cab door for quick replacement.

Optional 12V Power Port. Available for use with computers, cellular phones or other electronic equipment.

Exceptional Visibility. A redesigned operator's console improves forward visibility. Large side windows allow a clear view of the moldboard heel and tandem tires. A wide rear window and tapered engine hood provide a good view to the rear of the machine. Moving the air dryer and air cleaner, and aligning the precleaner and muffler, improves visibility to the rear of the machine. Operators can work more confidently and efficiently.

Environmentally Responsible Design

Caterpillar builds machines that help you create a better world.



Quiet Cab. With the doors closed, interior sound level is less than 80dB(A) when tested using ISO 6394 standards. The quiet environment helps keep the operator focused and alert.

Quiet Machine. The sound suppression group lowers exterior sound levels below 109 dB(A), complying with the EU 2000/14/EC sound limit of 109 dB(A). This quiet operation lets the 14H work with minimal disturbance to the surroundings.

Low Emissions. The 14H Motor Grader is even more environmentally friendly than its predecessors with reductions in NOx, hydrocarbon, and particulate emissions. It meets or exceeds all U.S. EPA Tier II and EU Stage II emissions control standards worldwide.

Fuel Efficient. Caterpillar state-of-the-art electronically controlled, unit injection fuel system has high injection pressure for complete fuel combustion, increased fuel efficiency and reduced emissions.

Dry Machine. Lubricant fill points and filters are designed to minimize spillage. O-ring face seals, Cat XT hose and Cat hydraulic cylinders protect against leaks.

Extended Oil Change Interval. Operate a full 500 hours between engine oil and filter changes, and 4000 hours between hydraulic oil changes. This reduces machine downtime and operating expense, and helps preserve our natural resources.

Ecology Drains. Make regular maintenance easier and help prevent spills when changing fluids.

Ozone Protection. To help protect the earth's ozone layer, air-conditioning units use a refrigerant free of chloro-flourocarbons (CFCs).

Customer Support

Cat dealer services help you operate longer with lower costs.

Product Support. You will find nearly all parts at our dealer parts counter. Cat dealers use a world-wide computer network to find in-stock parts to minimize machine down time. Save money with genuine Cat Reman parts. You receive the same warranty and reliability as new products at substantial cost savings.

Machine Selection. Make detailed comparisons of the machines under consideration before purchase. Cat dealers can estimate component life, preventive maintenance cost, and the true cost of lost production.

Purchase. Look past initial price. Consider the financing options available as well as day-to-day operating costs. Look at dealer services that can be included in the cost of the machine to yield lower equipment owning and operating costs over the long run.

Customer Support Agreements. Cat dealers offer a variety of product support agreements, and work with customers to develop a plan that best meets specific needs. These plans can cover the entire machine, including attachments, to help protect the customer's investment.

Operation. Improving operating techniques can boost your profits. Your Cat dealer has videotapes, literature and other ideas to help you increase productivity, and Caterpillar offers certified operator training classes to help maximize the return on your machine investment.

Maintenance Services. Talk to your dealer about the range of available maintenance services. Repair option programs guarantee the cost of repairs up front. Diagnostic programs such as S•O•S℠ and Coolant Sampling and Technical Analysis help avoid unscheduled repairs.

Replacement. Repair, rebuild or replace? Your Cat dealer can help you evaluate the cost involved so you can make the right choice.

Engine

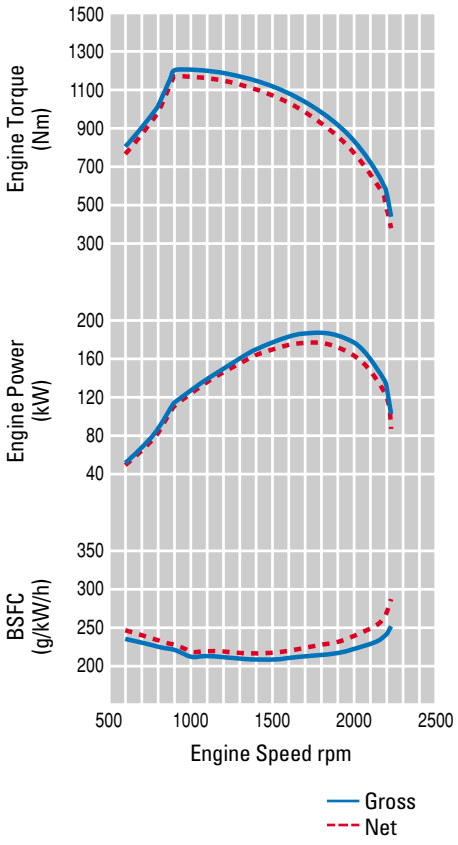
Cat 3176C ATAAC engine, Variable horsepower (VHP)

Net power	kW	hp
All gears	164	220
VHP		
gears 1-3	164	220
gears 4-8	179	240
Gross power		
All gears	177	237
VHP		
gears 1-3	177	237
gears 4-8	192	257

Displacement	10.3 liters
Bore	125 mm
Stroke	140 mm
Torque rise	50 %
Max torque at 1000 rpm	1282 Nm
Speed at rated power	2000 rpm
Number of cylinders	6
Derating altitude	3300 m
Standard Fan speed	
maximum	1210 rpm
minimum	500 rpm
Standard Ambient Capability	47 C°
High Ambient Fan speed	
maximum	1300 rpm
minimum	500 rpm
High Ambient Capability	50 C°

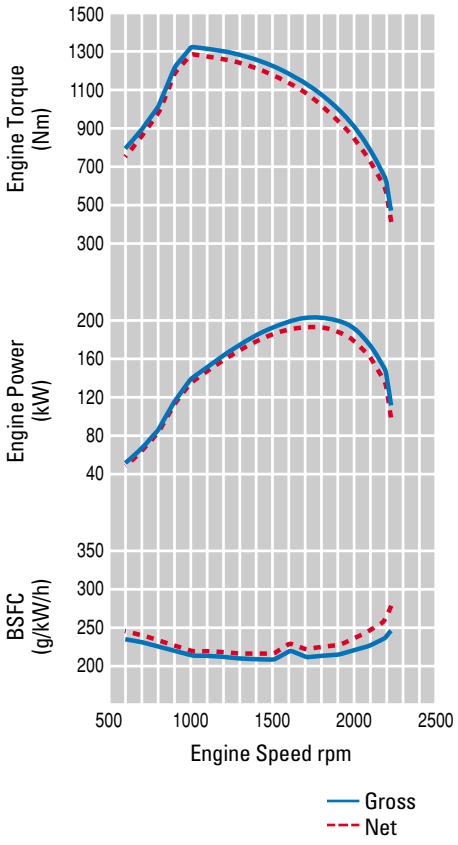
- The engine is certified according to the EU Directive 97/68/EC, Stage II
- Net power is tested per ISO 9249, and EEC 80/1269 standards in effect at the time of manufacture.
- VHP is optional.
- Net power advertised is the power available at rated speed of 2000 rpm, measured at the flywheel when engine is equipped with fan, air cleaner, muffler and alternator.
- No derating required up to 3300 m altitude. Deration rate of 1.5% per 300 m above 3300 m.

All gears
VHP



Gears 1-8
Gears 1-3

Gears 4-8



Power Train

Gears	
Forward	8
Reverse	8
Transmission	Direct drive, power shift
Brakes	
Service	air-actuated, oil-disc
surface area	28 135 cm^2
Parking	manual, multiple oil-disc
Secondary	air actuated, oil-disc

Hydraulic System

Circuit type	Closed center load sensing
Pump type	axial piston
Pump output at 2100 rpm	206 L/min
Maximum system pressure	24 150 kPa
Standby pressure	3100 kPa

Tandems

Height	616 mm
Width	214 mm
Sidewall thickness	
inner	20 mm
outer	20 mm
Drive chain pitch	57 mm
Wheel axle spacing	1656 mm
Tandem oscillation	
forward	15°
reverse	25°

Operating Specifications

Top Speed	
Forward	46.1 km/h
Reverse	51.1 km/h
Turning radius (outside front tires)	8 m
Steering range	
left/right	50°
Articulation angle	
left/right	20°
Maximum travel speeds*	
Forward	km/h
1st	4.0
2nd	5.7
3rd	7.7
4th	11.1
5th	16.8
6th	23.5
7th	31.9
8th	46.1
Reverse	
1st	4.5
2nd	6.3
3rd	8.5
4th	12.3
5th	18.6
6th	26.1
7th	35.3
8th	51.1

* at rated rpm with conventional base 16.00-24 12PR tires

Frame

Circle diameter	1822 mm
Drawbar	
height	165 mm
thickness	89 mm
Front-top/bottom plate	
width	330 mm
thickness	25 mm
Front-side plates	
width	286 mm
thickness	12 mm
Front-liner weights	
minimum	182 kg/m
maximum	228 kg/m
Front-section modulus	
minimum	2649 cm^3
maximum	5091 cm^3
Front axle	
ground clearance	625 mm
front wheel lean	18°
oscillation angle	32°
Circle blade beam thickness	45 mm

Moldboard

Blade width	4267 mm
Moldboard height	686 mm
Thickness	25 mm
Arc radius	413 mm
Throat clearance	90 mm
Cutting edge	
width	203 mm
thickness	16 mm
End bit	
width	152 mm
thickness	16 mm
Blade pull*	
max GVW	23 886 kg
base GVW	16 928 kg
Down pressure	
max GVW	15 657 kg
base GVW	9532 kg

* Blade Pull calculated at 0.9 traction coefficient, which is equal to ideal no-slip conditions, and Gross Vehicle Weight (GVW).

Blade Range

Circle centershift	
right	520 mm
left	650 mm
Moldboard sideshift	
right	790 mm
left	650 mm
Maximum blade position angle	90°
Blade tip range	
forward	40°
backward	5°
Maximum shoulder reach outside of tires	
right	2082 mm
left	2057 mm
Maximum lift above ground	419 mm
Maximum depth of cut	438 mm

Ripper

Ripping depth, maximum	401 mm
Ripper shank	
holders	7
holder spacing	373-472 mm
Penetration force	10 676 kg
Pryout force	11 804 kg
Machine length increase, beam raised	1130 mm

Weights

	kg
Gross Vehicle Weight*	
maximum	26 540
front wheels	8810
rear wheels	17 730
base	18 810
front axles	5310
rear axles	13 500

* Base operating weight calculated on standard machine configuration with 16.00-24 12PR (G-2) tires, full fuel tank, coolant, lubricants and operator.

Service Refill

	Liters
Fuel tank	416
Cooling system	48
Hydraulic system	
total	125
tank	63
Engine oil	39
Differential/Final drives	83
Tandem housing (each)	98
Circle drive housing	6

ROPS/FOPS

- ROPS (Rollover Protective Structure) offered by Caterpillar for the machine meets ROPS criteria ISO 3471-1994.
- FOPS (Falling Object Protective Structure) meets ISO 3449-1992 Level II.

Brakes

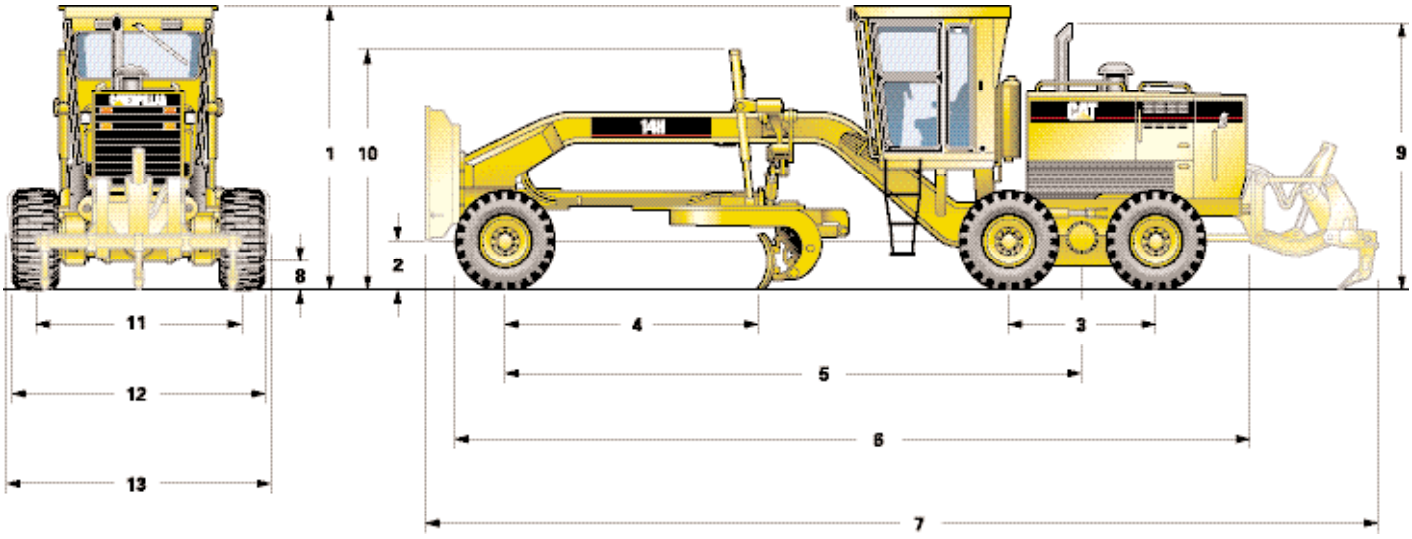
- Brakes meet the standard ISO 3450:1996.

Cab

- The operator sound level measured according to the procedures specified in ISO 6394:1998 is 80 dB(A), for cab offered by Caterpillar, when properly installed and maintained and tested with the doors and windows closed.
- Hearing protection may be needed when operating with an open operator station and cab (when not properly maintained or doors/windows open) for extended periods or in noisy environment.
- The labeled sound power level is 109 dB(A) measured according to the test procedures and conditions specified in 2000/14/EC.

Dimensions

All dimensions are approximate. Based on standard machine configuration with 16.00-24 12PR tires.



1	Height	
	low profile cab	3341 mm
	high profile cab	3556 mm
	no cab	3170 mm
2	Height to axle	645 mm
3	Length	
	between tandem axles	1656 mm
4	Length	
	front axle to moldboard	2860 mm
5	Length	
	front axle to mid tandem	6557 mm
6	Length	
	front tire to end of rear frame	9342 mm
7	Length	
	counterweight to ripper	10 765 mm
8	Ground clearance at transmission case	378 mm
9	Height to exhaust stack	3170 mm
10	Height to top of cylinders	2844 mm
11	Width	
	tire center lines	2316 mm
12	Width	
	outside rear tires	2745 mm
13	Width	
	outside front tires	2817 mm

Standard Equipment

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

Electrical

Alarm, back up
Alternator, 75-ampere, sealed
Batteries, maintenance free, 1100 CCA
Electrical system, 24V
Kill switch, external
Lights, stop and tail
Motor, starting
Product Link Connection

Operator Environment

Accelerator
Ashtray and lighter
Coat hook
Control console, adjustable
Cup holder
EMS III operator warning system
Panel gauges inside the cab
  fuel
  articulation
  engine coolant temp
  system voltage
  air brake pressure
Hydraulic controls, load sensing
  right/left blade lift with float position
  blade sideshift and tip
  circle drive
  centershift
  front wheel lean
  articulation
Meter, hour, digital
Mirror, inside rearview, wide angle
Mounting bracket, general purpose
Power steering, hydraulic
ROPS cab, sound suppressed, low profile
Seat, cloth-covered, contour suspension
Seat belt, retractable 76 mm
Steering wheel, tilt, adjustable
Storage area for cooler/lunchbox
Sunscreen, front windshield
Throttle control, electronic
Washer and wipers (3), front windshields
Windows, fixed lower front

Powertrain

Air cleaner
dry type radial seal
service indicator
automatic dust ejector
Air-to-air after cooler (ATAAC)
Brakes - oil disc, four-wheel air
  actuated
Demand fan
Differential, lock-unlock
Engine, 3176C ATAAC diesel
  automatic derate
  idle control, automatic
Fuel tank sediment drain
Fuel-water separator
Lube for life pump drive shaft
Muffler, under hood
Parking brake - multi-disc,
  sealed and oil cooled
Pre-screener
Priming pump, fuel
Serpentine belt w/auto tensioner
Tandem drive
Transmission
  power shift
  direct drive
  8 forward/8 reverse speeds

Other Standard Equipment

Antifreeze -35°C
Bumper, rear, integrated, with hitch
Clutch, circle drive slip
Cutting edges
  curved DH-2 steel
  203 mm x 16 mm
  19 mm mounting bolts
Doors, engine compartment, locking
Drawbar
  6 shoe with replaceable wear strips
Endbits
  16 mm DH-2 steel
  19 mm mounting bolts
End bits overlay
  203 mm x 16 mm
Frame, articulated, with safety lock
Fuel tank, 416 liters
Fueling, ground level
Ground level fluid check
Horn, air
Moldboard
4267 mm x 686 mm x 25 mm
  hydraulic sideshift and tip
Radiator cleanout access
S•O•S℠ ports: engine, hydraulic,
  transmission, coolant, fuel
Starting aid, ether
Tool box

Tires, Rims and Wheels

Partial allowance: 16.00-24 12PR on
  10" multi-piece rims

Optional Equipment

With approximate changes in operating weights.

	kg
Accumulators, blade lift	71
Air conditioner with heater and pressurizer	84
Air dryer	13
Batteries, extreme-duty, 1300 CCA	16
Blade	
4877 mm x 688 mm x 25 mm	149
Cab, ROPS, high profile, sound-suppressed	77
Canopy, ROPS, high profile, with rear wall and window	-41
Converter, 25-amp, 24V to 12V	5
Cutting edges for 25 mm thick blade	
4.2 m blade: 203 mm x 19 mm	24
4.9 m blade: 203 mm x 25 mm	43
Engine, VHP	
Extensions, blade 610 mm right/left for 25 mm thick blade	148
Fan, defroster, front and rear	2
Fuel system, fast fill	11
Graderbit system, standard bit type	
4.2 m blade	127
4.9 m blade	172
Guard, brake lines	8
Guard, lower platform	23
Guard, transmission	98
Hammer with mounting	5
Heater, engine coolant	1
Heater, cab, with pressurizer	18
Hydraulic lockout	2
Hydraulic arrangements with one or more additional hydraulic valves are available for rear ripper, dozer, snow plow and snow wing. See dealer price list.	
Lighting systems:	
bar mounted, directional and headlights	13
cab mounted, directional and headlights	9
cab and bar mounted, directional, headlights and work lights	22
cab and bar mounted, high, directional, headlights and work lights	22
work lights, front and rear	6
snow wing light, right	18
warning light, cab or canopy mounted	3

	kg
Louver covers, with screen	7
Mirrors, dual inside mounted	–
Mirrors, outside mounted	8
Mirrors, outside mounted, heated	11
Mount, snow wing, frame-ready	91
Oil change system	2
Power port, 12V	2
Push plate, front mounted	586
Radio ready, entertainment	–
Receptacle, starting, plug-in	2
Rims, tires – refer to dealer price list	
Ripper, rear	1552
Ripper tooth, one	33
Seat, cloth-covered, contoured air suspension	–
Seat, vinyl-covered, contour suspension	–
Snow arrangements, refer to Snow Arrangement Supplement	
Sound suppression	5
Speedometer, ground sensing/tachometer	12
Steering, secondary	52
Sunshade, rear window	3
Windows, lower front, opening	33
Windows, sliding side	4
Wipers, intermittent (3), front	0.5
Wiper and washer, rear, intermittent	7
European roading group which provides an additional air tank, air circuit protection valve and two position lights with integral turn signals. Dealer supplied equipment is required to meet some specific country on-road requirements	23

14H Motor Grader

HEHG5451 (04/2002) hr

Featured photos of machines may not always include standard equipment.
See your Caterpillar Dealer for available options.
Materials and specifications are subject to change without notice.

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