

14L AWD

Motor Grader



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 strips save you money and make it easy to maintain factory tightness of components for better grading results.

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 for improved machine utilization.

Safety

The safety of your operators and those on the job site is key in the design of every Cat® machine. Features like outstanding visibility, hydraulic lockout and redundant steering and braking systems help you meet your goals of getting everyone home safely at the end of each work day.

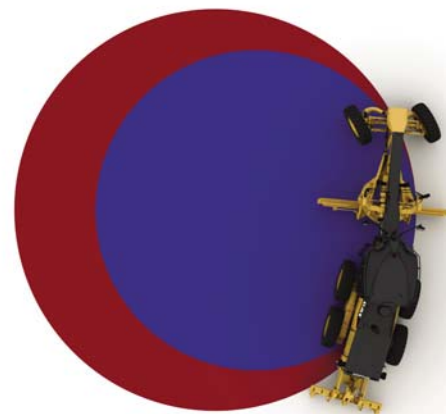
All Wheel Drive (AWD)

If you work in soft underfoot conditions where traction can be a challenge, optional All Wheel Drive (AWD) can give you the additional power to the ground you need to work more efficiently in mud, gravel, sand or snow. The added traction helps reduce sliding on side slopes.

- Dedicated left and right pumps give you more precise hydraulic control. The infinitely variable pumps and motors maximize torque in each gear.
- AWD automatically increases horsepower to maximize your power to the ground.
- Standard Hydrostatic Mode disengages the transmission and provides hydraulic power to the front wheels only. Infinitely variable ground speed between 0-8 km/h (0-5 mph) is ideal for precise finish work.
- Cat Steering Compensation System enables a “powered turn” by adjusting the outside front tire speed up to 50% faster than the inside tire. This gives you improved control, reduces surface damage and greatly reduces turning radius in poor underfoot conditions.

■ Without Steering Compensation

■ With Steering Compensation



14L AWD Motor Grader Specifications

Engine – AWD Model

Engine Model*	Cat C9 ACERT™	
Base Power (1st gear, AWD off) – Net	159 kW	213 hp
Base Power (1st gear) – Net (Metric)	216 hp	
VHP Plus Range – Net	159-200 kW	213-268 hp
VHP Plus Range – Net (Metric)	216-272 hp	
Displacement	8.8 L	537 in ³
Bore	112 mm	4.4 in
Stroke	149 mm	5.9 in
Torque Rise (VHP Plus)	40%	
Maximum Torque (AWD on)	1344 N·m	991 lb-ft
Speed @ Rated Power	2,000 rpm	
Number of Cylinders	6	
Derating Altitude	3048 m	10,000 ft
High Ambient – Fan Speed		
Maximum	1,650 rpm	
Minimum	600 rpm	
High Ambient Capability	50° C	122° F

- Maximum torque (VHP Plus) measured at 1,000 rpm.
 - Net power is tested per ISO 9249, SAE J1349, and EEC 80/1269 Standards in effect at the time of manufacture.
 - Net power advertised is the power available at rated speed of 2,000 rpm, measured at the flywheel when engine is equipped with fan running at minimum speed, air cleaner, muffler and alternator.
 - Power as declared per ISO 14396
Rated Speed = 2,000 rpm
AWD = 201 kW (269 hp)
 - No engine derating required up to 3048 m (10,000 ft).
- * Note: Meets non-current U.S. EPA Tier 3 or EU Stage IIIA emission standards.

14L AWD Net Power

Gear	VHP Plus kW (hp)	AWD On kW (hp)
Forward		
1st	159 (213)	166 (223)
2nd	162 (218)	177 (238)
3rd	166 (223)	181 (243)
4th	170 (228)	185 (248)
5th	174 (233)	200 (268)
6th	177 (238)	200 (268)
7th	181 (243)	200 (268)
8th	185 (248)	200 (268)
Reverse		
1st	159 (213)	159 (213)
2nd	162 (218)	162 (218)
3rd – 6th	166 (223)	166 (223)

Power Train

Forward/Reverse Gears	8 Forward/6 Reverse
Transmission	Direct drive, power shift, countershaft
Brakes	
Service	Multiple oil disc
Service, Surface Area	23 000 cm ² 3,565 in ²
Parking	Multiple oil disc
Secondary	Dual circuit control system

Hydraulic System

Circuit Type	Electro-hydraulic load sensing, closed center	
Pump Type	Variable piston	
Pump Output	210 L/min	55.7 gal/min
Maximum System Pressure	24 150 kPa	3,500 psi
Standby Pressure	3100 kPa	450 psi

- Pump output measured at 2,150 rpm.

14L AWD Motor Grader Specifications

Operating Specifications

Top Speed		
Forward	45.0 km/h	28.0 mph
Reverse	42.3 km/h	26.3 mph
Turning Radius, Outside Front Tires	7.6 m	24 ft 11 in
Steering Range – Left/Right	47.5 degrees	
Articulation Angle – Left/Right	20 degrees	
Forward		
1st	4.7 km/h	2.9 mph
2nd	6.3 km/h	3.9 mph
3rd	9.2 km/h	5.7 mph
4th	12.7 km/h	7.9 mph
5th	19.7 km/h	12.2 mph
6th	26.8 km/h	16.6 mph
7th	36.9 km/h	22.9 mph
8th	45.0 km/h	28.0 mph
Reverse		
1st	3.7 km/h	2.3 mph
2nd	6.9 km/h	4.3 mph
3rd	10.0 km/h	6.2 mph
4th	15.5 km/h	9.7 mph
5th	29.1 km/h	18.1 mph
6th	42.3 km/h	26.3 mph

Service Refill

Fuel Capacity	416 L	110 gal
Cooling System	40.0 L	10.6 gal
Hydraulic System – Tank	64.0 L	16.9 gal
Engine Oil	30.0 L	7.9 gal
Trans./Diff./Final Drives	65.0 L	17.2 gal
Tandem Housing (each)	80.0 L	21.1 gal
Front Wheel Spindle Bearing Housing	0.50 L	0.13 gal
Circle Drive Housing	7.0 L	1.8 gal

Frame

Circle		
Diameter	1553 mm	61.1 in
Height	160 mm	6.3 in
Blade Beam Thickness	40.0 mm	1.6 in
Drawbar		
Height	152 mm	6.0 in
Width	76.2 mm	3.0 in
Front Frame Structure		
Height	305 mm	12.0 in
Width	305 mm	12.0 in
Thickness	16.0 mm	0.60 in
Front Axle		
Height to Center	626 mm	24.6 in
Wheel Lean, Left/Right	18 degrees	
Total Oscillation Per Side	32 degrees	

Tandems

Height	572 mm	22.5 in
Width	204 mm	8.0 in
Sidewall Thickness		
Inner	25.0 mm	1.0 in
Outer	18.0 mm	0.70 in
Drive Chain Pitch	50.8 mm	2.0 in
Wheel Axle Spacing	1523 mm	60.0 in
Tandem Oscillation		
Front Up	15 degrees	
Front Down	25 degrees	

14L AWD Motor Grader Specifications

Moldboard

Moldboard		
Width	4.3 m	14 ft
Height	610 mm	24.0 in
Thickness	22.0 mm	0.87 in
Arc Radius	413 mm	16.3 in
Throat Clearance	95.0 mm	3.7 in
Cutting Edge		
Width	152 mm	6.0 in
Thickness	16.0 mm	0.60 in
End Bit		
Width	152 mm	6.0 in
Thickness	16.0 mm	0.60 in
Blade Pull		
Base GVW (AWD)	17 352 kg	38,255 lb
Maximum GVW (AWD)	19 840 kg	43,741 lb
Down Pressure		
Base GVW (AWD)	9465 kg	20,867 lb
Maximum GVW (AWD)	11 352 kg	25,026 lb

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

Blade Range

Circle Centershift		
Right	728 mm	28.7 in
Left	695 mm	27.4 in
Moldboard Sideshift		
Right	950 mm	37.4 in
Left	820 mm	32.3 in
Maximum Blade Position Angle	90 degrees	
Blade Tip Range		
Forward	40 degrees	
Backward	5 degrees	
Maximum Shoulder Reach Outside of Tires		
Right	2278 mm	89.7 in
Left	2090 mm	82.3 in
Maximum Lift Above Ground	583 mm	20.0 in
Maximum Depth of Cut	466 mm	18.3 in

Ripper

Ripping Depth, Maximum	373 mm	14.7 in
Ripper Shank Holders	5	
Ripper Shank Holder Spacing	533 mm	21.0 in
Penetration Force	9367 kg	20,651 lb
Pryout Force	12 061 kg	26,590 lb
Machine Length Increase, Beam Raised	995 mm	39.2 in

Scarifier

Front, V-Type, 5 or 11 Tooth		
Working Width	1205 mm	47.4 in
Scarifying Depth, Maximum	412 mm	16.2 in
Scarifier Shank Holders	5/11	
Scarifier Shank Holder Spacing	116 mm	4.6 in
Rear		
Working Width	2300 mm	91.0 in
Scarifying Depth, Maximum	211 mm	8.3 in
Scarifier Shank Holders	9	
Scarifier Shank Holder Spacing	267 mm	10.5 in

Weights – AWD

Gross Vehicle Weight – Base		
Total	19 280 kg	42,505 lb
Front Axle	5514 kg	12,156 lb
Rear Axle	13 766 kg	30,349 lb
Gross Vehicle Weight – Maximum		
Total	22 045 kg	48,601 lb
Front Axle	6614 kg	14,580 lb
Rear Axle	15 432 kg	34,021 lb
Gross Vehicle Weight – Typically Equipped		
Total	21 927 kg	48,341 lb
Front Axle	6543 kg	14,425 lb
Rear Axle	15 384 kg	33,916 lb

- Base operating weight on standard machine configuration is calculated with full fuel tank, coolant, lubricants, operator and 20.5R25 tires with multi-piece (MP) rims.

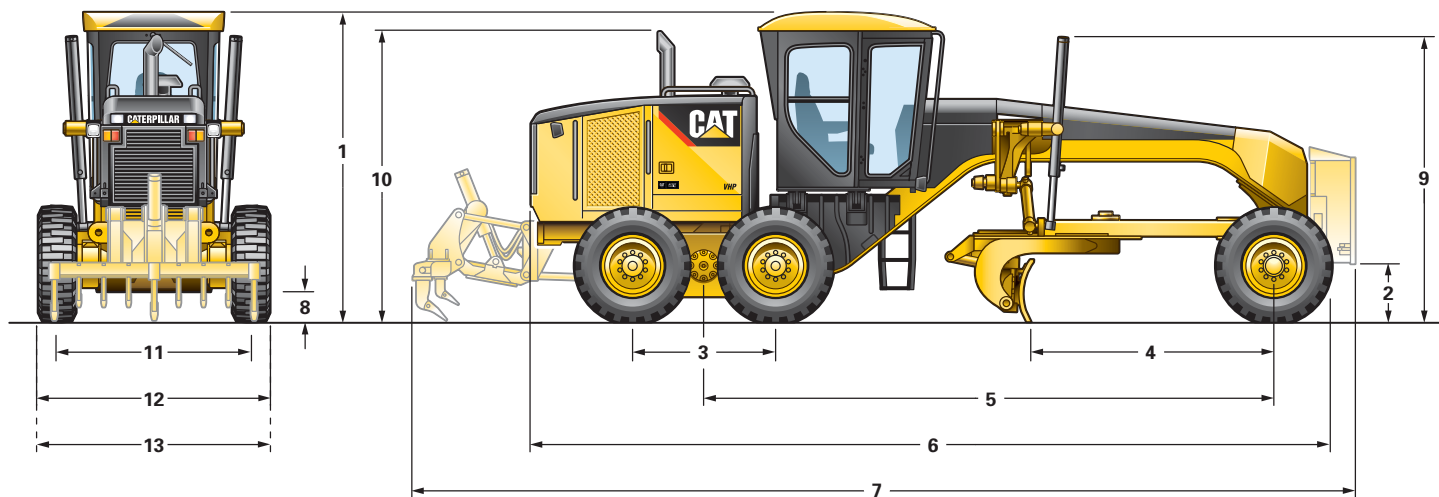
Standards

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

- 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.

14L AWD Motor Grader Specifications

Dimensions



14L AWD

	mm	in
1 Height – Top of Cab	3363	132
Height – Top of Cab Product Link™	3433	135
2 Height – Front Axle Center	651	25.6
3 Length – Between Tandem Axles	1523	60.0
4 Length – Front Axle to Moldboard	2552	100
5 Length – Front Axle to Mid Tandem	6123	241
6 Length – Front Tire to Rear of Machine	8809	347
7 Length – Push Plate to Ripper	10 136	399
Length – Push Plate to Ripper Retracted	9818	386
8 Ground Clearance at Rear Axle	394	15.5
9 Height to Top of Cylinders	3095	122
10 Height to Exhaust Stack (AWD)	3311	130
11 Width – Tire Center Lines Front (AWD)	2401	94.5
12 Width – Outside Rear Tires	2684	106
13 Width – Outside Front Tires (AWD)	2767	109

• Dimensions based on 20.5R25 tire on multi-piece rim. Dimensions may vary with tire selection.

Optional Tire Arrangements

14L AWD

Rim Size	Wheel Group	Tires
17 × 25	Multi-Piece	20.5R25

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

14L AWD Motor Grader Standard Equipment

Standard Equipment

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

POWER TRAIN

- Air cleaner, dual stage, dry type, diesel, with automatic engine derate and automatic dust ejector, service indicator through Cat Messenger
- Air-to-air after cooler (ATAAC)
- Belt, serpentine, automatic tensioner
- Brakes, oil disc, four-wheel, hydraulic
- Demand fan, hydraulic
- Differential Lock/Unlock, Automatic
- Drain, engine oil, ecology
- Electronic over speed protection
- Engine
 - Cat C9 with ACERT Technology, diesel, with automatic engine derate and idle control
- Note: Engine meets non-current U.S. EPA Tier 3 or EU Stage IIIA emission standards.
- Engine Idle Shutdown (EIS)
- Fuel tank, 416 L (110 gal), ground level access and sediment drain
- Fuel-water separator
- Muffler, underhood
- Parking brake – multi-disc, sealed, oil-cooled
- Priming pump, fuel
- Rear axle, modular
- Sediment drain, fuel tank
- Tandem drive
- Transmission, 8F/6R, power shift, direct drive
- Variable Horsepower Plus (VHP Plus)

ELECTRICAL

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

OPERATOR ENVIRONMENT

- Accelerator
- Air conditioning with heater
- Arm and wrist rest, electronically 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) – fuel, articulation, engine coolant temp, engine RPM, hydraulic oil temp
- Hour meter, digital
- Joystick hydraulic controls right/left blade lift with float position, circle drive, blade sideshift and tip, centershift, front wheel lean, articulation and steering
- Joystick, adjustable armrests
- Joystick gear selection
- Joystick hydraulic power steering
- Ladders, cab, left and right side
- 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)

FLUIDS

- Antifreeze
- Extended Life Coolant to -35°C (-30°F)

TIRES, RIMS AND WHEELS

- Partial allowance for tires on 432×635 mm (17×25 in) multi-piece rims is included in the base machine price and weight

OTHER STANDARD EQUIPMENT

- Anti-glare paint
- Bumper, rear, integrated with hitch
- CD ROM Parts Book
- Clutch, circle drive slip
- Cutting edges
 - 152×16 mm ($6 \times 5/8$ in)
 - curved DH-2 steel
 - 19 mm (3/4 in) mounting bolts
- Doors (3), engine compartment, locking
- Drawbar – 6 shoes, replaceable wear strips
- Electrical hydraulic valves, hydraulic lines for base 8 functions
- Endbits
 - 16 mm (5/8 in) DH-2 steel
 - 19 mm (3/4 in) mounting bolts
- Fluid check, ground level
- Frame, articulated, with safety lock
- Ground level engine shutdown
- Ground level fueling
- Hammer (emergency exit)
- Horn, electric
- Hydraulic lines for base functions
- Lockout, hydraulic implement (for roading and servicing)
- Moldboard – $3658 \times 610 \times 22$ mm ($12 \text{ ft} \times 24 \text{ in} \times 7/8 \text{ in}$)
- Mounting, cab roof accessories
- Pump, hydraulic, high capacity, 98 cm^3 (6 in^3)
- Radiator, cleanout access
- Secondary steering
- Serviceability, left-hand side
- S•O•SSM ports: engine, hydraulic, transmission, coolant, fuel
- Tandem walkway/guards
- Tool box
- Tow hitch

14L AWD Motor Grader Optional Equipment

Optional Equipment

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

	kg	lb		kg	lb		kg	lb
ELECTRICAL			POWER TRAIN			WORK TOOLS/ GROUND ENGAGING TOOLS		
Alternator, 150 ampere	2	5	Transmission, autoshift	2	5	Blade extension, left hand, 610 mm (2 ft)	113	249
Batteries:			OTHER ATTACHMENTS			Endbits, overlay	24	52
extreme duty, 1,400 CCA	14	30	AccuGrade ARO	39	85	Front lift group, mounting	5	11
Converter, communication (CB)	5	11	Accumulators, blade lift	77	170	Front lift group	680	1,500
Lights:			Camera, rearview	9	20	Moldboard		
Headlights, high	5	11	Cat Grade Control	75	165	3658 × 610 × 22 mm (12 ft × 24 in × 7/8 in)	-100	-220
Headlights, low	5	11	Cross Slope			4267 × 686 × 25 mm (14 ft × 27 in × 1 in)	137	302
Working lights, basic	9	20	Cat Product Link 321 (Satellite)	13	29	4877 × 686 × 25 mm (16 ft × 27 in × 1 in)	314	692
Working lights, plus	10	22	Cat Product Link 522 (Cellular)	13	29	Push plate	1285	2,833
Warning: beacon or strobe	2	5	Compressor/tank, air	27	50	Ripper, mounting	32	70
Mounting for warning light	5	11	Heater, engine coolant:			Ripper, rear	962	2,120
GUARDS			120V	1	3	Ripper tooth	28	61
Articulation guard	13	30	240V	1	3	Scarifier, front	434	956
Axle hose guard	7	15	Hydraulic arrangements with one or more additional hydraulic valves are available for ripper, dozer, snow wings, front lift group, mid-mount scarifier.					
Sound guard (bottom)	110	243	Security system	5	11			
Transmission guard	141	311	Sound suppression	15	33			
OPERATOR ENVIRONMENT								
Deluxe CD radio with MP3 and Bluetooth technology								
Fan, defroster, rear window	2	4						
Mirrors, outside:								
mounted	15	33						
Precleaner, HVAC	5	10						
Radio ready, AM/FM	9	20						
Seat, air suspension, cloth	2	5						
Shade, sun	2	5						
Wiper/washer, rear	2	4						

14L AWD Motor Grader

Materials and specifications are subject to change without notice.

Featured machines in photos may include additional equipment.

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Product ID: 14L AWD

AEHQ7352
(AME)

October 2014

