140 GC
Motor Grader

Technical Specifications

Engine

Engine Model	Cat® C7.1	
Emissions	U.S. EPA Tier 3 Equivalent/EU Stage IIIA Equivalent	
Base Net Power ISO 9249/SAE J1349	131 kW	176 hp
Base Net Power EEC 80/1269 (metric)	178 hp	
Power Range – Net	131 kW-147 kW	176 hp-196 hp
Power Range – Net (metric)	178 hp-199 hp	
Bore	105 mm	4.1 in
Displacement	7.01 L	427.8 in^3
Stroke	135 mm	5.3 in
Engine RPM	2,200	
Number of Cylinders	6	
Torque Rise – ISO 9294	40%	
Maximum Torque – ISO 9294	889 N·m	656 lbf-ft
Derating Altitude	4500 m	14,764 ft
Maximum – Fan Speed	1,500 rpm	
Minimum – Fan Speed	550 rpm	
Ambient Capacity	50° C	122° F

- Net Power is tested per ISO 9249, SAE J1349, and EEC 80/1269 Standards in effect at the time of manufacture.
- Rated speed at 2,200 rpm.

Net Power

Gear	VHP	
Forward		
1st	131 kW	176 hp
2nd	139 kW	186 hp
3rd	147 kW	196 hp
4th	147 kW	196 hp
5th	147 kW	196 hp
6th	147 kW	196 hp
Reverse		
1st	131 kW	176 hp
2nd	139 kW	186 hp
3rd	147 kW	196 hp

Power Train

Forward/Reverse Gears	6 Forward/3 Reverse
Transmission	Countershaft Torque Convertor Powershift
High Idle Speed	2,250 rpm
Low Idle Speed	800 rpm
Air Cleaner	Dry

140 GC Motor Grader Specifications

Hydraulic System

Type	Closed – Center	
Type Circuit	Parallel	
Pump Type	Variable Piston	
Output	24 150 kPa at 2,200 rpm	3,503 psi at 2,200 rpm
	0-155 L/min	0-40.9 gal/min
System Flow	0-155 L/min	0-40.9 gal/min

Transmission Hydraulic System

Lube Oil Pressure	20-90 kPa	3-13 psi
Pump Type	Gear	
Clutch Supply	78 L/min at 1600-1800 kPa	20.6 gal/min at 232-261 psi

Steering

Rated Metering Capacity	159 cc/rev
Front Steering Maximum Angle	47.5°
Frame Steering Angle Left or Right	20°

Front Axle

Lean Angle	18° Left and Right	
Oscillation	32° Total	
Ground Clearance at Center	612 mm	24.1 in

Operating Specifications

Top Speed Forward	41.7 km/h	25.9 mph
Top Speed Reverse	24.0 km/h	14.9 mph
Turning Radius, Outside Front Tires	7.8 m	25.6 ft
Steering Range	47.5° Left and Right	
Articulation Range	20° Left and Right	
Forward		
1st	4.7 km/h	2.9 mph
2nd	8.2 km/h	5.1 mph
3rd	10.9 km/h	6.8 mph
4th	18.9 km/h	11.7 mph
5th	24.0 km/h	14.9 mph
6th	41.7 km/h	25.9 mph
Reverse		
1st	4.7 km/h	2.9 mph
2nd	11.9 km/h	6.8 mph
3rd	24.0 km/h	14.9 mph

- Machine speed measured at 2,250 rpm with 14.00R24 radial tires, no slip.

Base Machine Weight

Weight*	14 310 kg	31,548 lb
Front Axle	4007 kg	8,834 lb
Rear Axle	10 303 kg	22,714 lb

*Base operating weight on standard machine configuration is calculated with full fuel tank, coolant, lubricants, operator open canopy, and 14.0R24 tires on single-piece rims.

Typically Equipped Machine Weight – Non-ROPS[1]

Weight	16 620 kg	36,640 lb
Front Axle	4670 kg	10,295 lb
Rear Axle	11 950 kg	26,345 lb

Typically Equipped Machine Weight – ROPS[2]

Weight	17 390 kg	38,338 lb
Front Axle	5217 kg	11,502 lb
Rear Axle	12 173 kg	26,836 lb

[1] Typically equipped operating weight is calculated with full fuel tank, coolant, lubricants, operator, push block, rear ripper/scarifier, 3.7 m (12 ft) blade, 14.0R24 tires on multi-piece rims, and other equipment.

[2] Typically equipped operating weight is calculated with full fuel tank, coolant, lubricants, operator, push block, ROPS close cab, rear ripper/scarifier, 4.3 m (14 ft) blade, 17.5-25 MP tires on multi-piece rims, and other equipment.

Major Component Weights

Moldboard (with cutting edge)		
3669 mm × 610 mm × 20 mm (12 ft × 24 in × 7/8 in)	660 kg	1,455 lb
3669 mm × 689 mm × 20 mm (12 ft × 24 in × 7/8 in)	701 kg	1,545 lb
4279 mm × 659 mm × 20 mm (14 ft × 24 in × 7/8 in)	819 kg	1,806 lb
Guards		
Transmission	63 kg	139 lb
Fender	245 kg	540 lb
Push Plate	1005 kg	2,216 lb
Rear Ripper	983 kg	2,167 lb

Service Refill Capacities

Fuel Tank	295 L	77.9 gal
Circle Drive		
STD	1.5 L	0.4 gal
Slip Clutch	7 L	1.8 gal
Engine Crankcase	19 L	5 gal
Cooling System	57 L	15.1 gal
Hydraulic System	55 L	14.5 gal
Transmission	18 L	4.8 gal
Differential Group	33 L	8.7 gal

- The air conditioning system on this machine contains the fluorinated greenhouse gas refrigerant R134a (Global Warming Potential = 1430). The system contains 2.0 kg of refrigerant which has a CO_2 equivalent of 2.86 metric tonnes.

Tandems

Oscillation Front Up	15°
Oscillation Rear Up	25°

Service Brakes

Type System	Dual Circuit Hydraulic	
Type Brake	Multiple Oil Disc	
Number of Brakes	4	
Number of Disc Assemblies (each)	6	
Size (outer diameter)	355 mm	14 in
Size (inner diameter)	255 mm	10 in
Lining Area Per Brake	5749 cm^2	226.3 in^2

Parking Brake

Type System	Hydraulic Actuated
Type Brake	Drum Type
Slope Holding Ability	30% Grade
Meets ISO 3450	
Secondary Brakes	Dual Circuit Control System, Applies Two Service Brakes

140 GC Motor Grader Specifications

Moldboard

	Standard		Option 1		Option 2	
Width	3.7 m	12 ft	3.7 m	12 ft	4.3 m	14 ft
Height	509 mm	20 in	509 mm	20 in	543 mm	21.4 in
End Bit	152 mm	6 in	152 mm	6 in	152 mm	6 in
Cutting Edge	152 mm	6 in	200.7 mm	7.9 in	200.2 mm	7.9 in
Arc Radius	413 mm	16.3 in	413 mm	16.3 in	413 mm	16.3 in
Throat Clearance	112 mm	4.7 in	112 mm	4.7 in	112 mm	4.7 in

Drawbar Circle Moldboard

Range of Motion	Standard	
Lift Cylinders	2	
Maximum Depth of Cut	735 mm	28.9 in
Maximum Lift Above Ground	480 mm	18.9 in
Throat Clearance	112 mm	4.4 in
Circle Center Shift Cylinder		
Center Shift Right	728 mm	28.7 in
Center Shift Left	752 mm	29.6 in
Moldboard Side Shift Cylinder		
Side Shift Left	663 mm	26.1 in
Side Shift Right	512 mm	20.2 in
Blade Tip Cylinder		
Maximum Blade Tip Forward	40°	
Maximum Blade Tip Backward	5°	
Circle Drive	360° of Blade Rotation	
Link Bar	7 Positions to adjust the drawbar circle moldboard range of motion	
Drawbar Shoes	4 with replaceable wear strips	

Circle

Section	Rolled Ring Forging
Number of Teeth	64
Rotation	360°

Maximum Shoulder Reach Outside of Tires

Blade	3.7 m (12 ft)		4.3 m (14 ft)	
Right	1928 mm	75.9 in	2233 mm	87.9 in
Left	1764 mm	69.4 in	2201 mm	86.7 in

- An additional 300 mm (11.8 in) of reach can be achieved to the right or left by changing the side shift mounting bracket on the 4.3 m (14 ft) blade.

Ripper

Ripping Depth Maximum	410 mm	16.1 in
Ripper Shank Holder	5	
Ripper Shank Holder Spacing	500 mm	19.7 in
Machine Length Increase, Beam Raised	1170 mm	46.1 in

Rear Scarifier

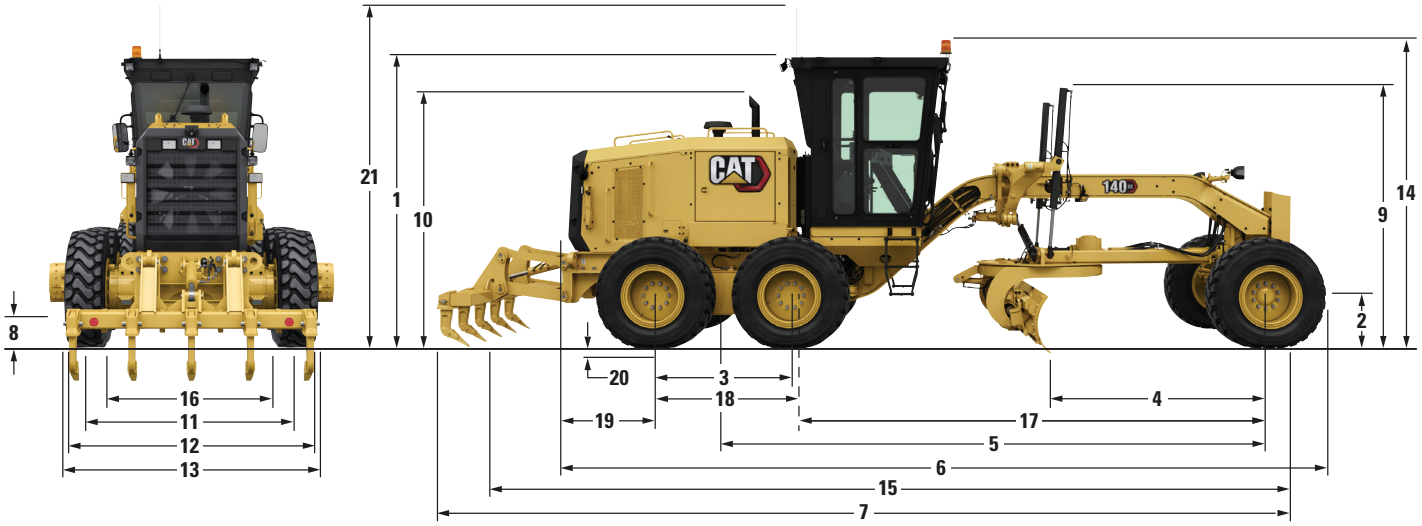
Working Width	2137 mm	84.1 in
Number of Shanks	9	
Shank Spacing	250 mm	9.8 in
Scarifying Depth, Maximum	281 mm	11.1 in

Electrical

Starting System Type	Direct Electric
Heavy Duty Battery	
CCA at –18°	1,400 amp
Volts	12V
Quantity	2
Standard Battery	
CCA at –18°	900 amp
Volts	12V
Quantity	2
Standard Alternator	115 amps at 24V

Dimensions

All dimensions are approximate.



1	Height – Top of Cab	3335 mm	131.3 in
2	Height – Front Axle Center	600 mm	23.6 in
3	Length – Between Tandem Axles	1523 mm	60 in
4	Length – Front Axle to Moldboard	2537 mm	100 in
5	Length – Front Axle to Mid Tandem	6138 mm	241.7 in
6	Length – Front Tire to Rear of Machine	8784 mm	345.8 in
7	Length – Push Plate to Ripper	10 332 mm	406.8 in
8	Ground Clearance at Rear Axle	337 mm	13.3 in
9	Height to Top of Cylinders	2970 mm	116.9 in
10	Height to Exhaust Stack	2970 mm	116.9 in
11	Width – Tire Center Lines	2090 mm	82.3 in
12	Width – Outside Rear Tires	2425 mm	95.5 in
13	Width – Outside Front Tires (Non AWD)	2428 mm	95.6 in
14	Maximum Height – with Attachments (Beacon and Antenna in Shipment Position)	3409 mm	134.2 in
15	Length – Push Plate to Raised Ripper	9778 mm	385 in
16	Width – Inside Rear Tires	1755 mm	69.1 in
17	Length – Front Axle to Articulation Hitch (Non AWD)	5328 mm	209.8 in
18	Length Rear Axle to Articulation Hitch	810 mm	31.9 in
19	Length – Rear Axle to Rear of Frame	1904 mm	75 in
20	Height – Tire Deflection at Performance Weight	65 mm	2.6 in
21	Maximum Height – with Attachments (Beacon and Antenna in Operating Position)	3890 mm	153.1 in

140 GC Standard and Optional Equipment

Standard and Optional Equipment

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

	Standard	Optional
CAB		
Vinyl seat	✓	
Mechanical suspension seat		✓
Air suspension seat		✓
Adjustable steering wheel/lever controls	✓	
Seat belt	✓	
Electric throttle control	✓	
No-spin differential	✓	
ROPS		✓
Heating/cooling cab system		✓
Defrost fans		✓
Rear wiper		✓
Base cab	✓	
Canopy		✓
Cab Plus		✓
Cab storage	✓	
Information display screen	✓	
Halogen lighting	✓	
Entertainment Radio Ready	✓	
Cup holder	✓	
Dome interior light	✓	
Coat hook	✓	
Rear window screen		✓
Front wipers		✓
Digital blade slope meter		✓
Product Link™		✓
POWER TRAIN		
Cat C7.1	✓	
ECO mode	✓	
On-demand fan	✓	
Heavy duty starter		✓
50° C (122° F) ambient capacity	✓	
Transmission, autoshift		✓
DRAWBAR CIRCLE MOLDBOARD		
Standard drawbar circle moldboard	✓	
Circle drive slip clutch		✓
Circle saver		✓

(continued on next page)

Standard and Optional Equipment *(continued)*

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

	Standard	Optional
SAFETY		
Parking brake	✓	
Signaling/warning horn	✓	
Back-up alarm	✓	
Rearview mirror	✓	
Rearview camera		✓
Warning beacon		✓
Hydraulic brakes	✓	
Secondary steering system		✓
Side view mirrors	✓	
Walkways and grab rails	✓	
ELECTRICAL		
Sealed alternator	✓	
Reversing lights	✓	
Breaker panel	✓	
900 CCA standard duty batteries	✓	
1,400 CCA heavy duty batteries		✓
Electric starter	✓	
SERVICE AND MAINTENANCE		
Grouped location for engine oil and fuel filters	✓	
Extended Life Coolant	✓	
GUARDS		
Fender		✓
Transmission	✓	
Cover, under cab platform		✓
VERSATILITY		
Push block		✓
Ripper		✓
Scarifier		✓
Front blade		✓
Towing hitch		✓

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

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

AEXQ2498 (01-2019)
Build Number: 01A
(Afr-ME, Aus-NZ, CIS, China, India, Indonesia, S Am, SE Asia, Turkey)

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