



Cat[®] 140

Motor Grader

The Cat[®] 140 Motor Grader is 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.

Performance

- Programmable Autoshift option simplifies operation by allowing transmission to be programmed to shift at optimal points to match application.
- Power Shift Countershaft Transmission matches to engine, maximizing power to the ground.
- Electronic Throttle Control helps improve productivity by providing best match of horsepower and torque for application demands.

Efficiency

- Aggressive blade angle, optimized moldboard curvature and large throat clearance allow material to roll more freely along blade, increasing efficiency.
- Hydraulic demand fan automatically adjusts speed according to cooling requirements, resulting in more power to the ground and improved fuel efficiency.
- Engine idle shutdown is available to shut down engine after a set period of time saving fuel and helping reduce emissions.

Ease of Operation

- Selectable blade lift modes – fine, normal, or coarse – allow you to choose the blade lift modulation mode that best fits your application or operating style.
- Joystick controls with electronically adjustable control pods reduce hand and arm movement, helping reduce operator fatigue.
- Left joystick controls steering, articulation, return-to-center, wheel lean, gear selection, left moldboard lift cylinder and float.
- Right joystick controls drawbar, circle and moldboard functions as well as electronic throttle control and manual differential lock/unlock.
- Articulation Return-to-Center automatically returns machine to a straight frame position from any angle with the touch of a button.

Safety

- Angled cab doors, tapered engine enclosure and sloped rear window make it easy to see moldboard and tires, as well as behind the machine.
- Optional rear vision camera enhances sight to rear of machine.

Serviceability

- Sacrificial brass wear strips between 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.
- Optional High Performance Circle (HPC) improves machine performance, efficiency, and uptime availability. When paired with the Cat-exclusive extended life blade rail wear strips, the HPC reduces downtime and total cost of ownership for the drawbar circle moldboard. The HPC helps to eliminate hours of regular maintenance for frequent inspections, wear strip replacement, and circle shoe adjustments associated with conventional circles. The fully sealed bearing design in the HPC removes exposure to abrasive materials during grading.

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Comfort

- Control pods can be adjusted electronically, making it easy to set to ideal operating position.
- Standard Cat Comfort Series suspension seat is fully adjustable.
- High capacity heating, ventilation, and air conditioning (HVAC) system dehumidifies and pressurizes cab, sealing out dust, and helps keep windows clear.

Technology

- Shuttle Shift allows smooth, fast direction shifts without requiring manipulating throttle or inching pedal.
- Cat Product Link™ aids your equipment management with remote monitoring capabilities.
- Optional Stable Blade improves grading precision by decreasing engine speed at 15 percent intervals when machine bounce is detected then increases engine rpm systematically when grader stabilizes.
- Optional factory-installed 3D mastless Cat Grade enables operators to improve grading efficiency, accuracy, and productivity in both rough grading and finish grading applications. When mastless Grade is installed at factory, e-fence is not included.
- Optional Auto Articulation allows to articulate automatically while steering in tight spaces or around curves, obstacles, and turnarounds.
- Optional Cat Grade with Cross Slope helps maintain desired cross slope by automatically controlling one side of the blade.
- Optional Cat Grade uses positioning and guidance technologies, machine sensors, and automatic blade control to help get to grade faster, easier and more efficiently.
- Optional Cat Advanced Control Joysticks allows control of automated grading solutions efficiently and safely without removing hands from the joysticks.

Standard and Optional Equipment

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

	Standard	Optional		Standard	Optional
POWERTRAIN			OTHER STANDARD EQUIPMENT		
Demand fan, hydraulic	✓		Anti-glare paint	✓	
Differential Lock/Unlock, Automatic	✓		Articulated chassis with safety lock	✓	
Engine Cat® C7 diesel with automatic engine derate and idle control. Note: Emissions equivalent to Tier 3 and Stage IIIA.	✓		Blade – 3,658 × 610 × 22 mm (12 ft × 24 in × 7/8 in)	✓	
Fuel tank, ground level access and sediment drain	✓		Bumper, rear, integrated with hitch	✓	
Tandem command	✓		Cutting edges: – 152 × 16 mm (6 × 5/8 in) - curved DH-2 steel – 19 mm (3/4 in) mounting bolts	✓	
Transmission, 8F/6R, power shift, direct drive	✓		Fluid check, ground level	✓	
Variable Horsepower Plus (VHP Plus)	✓		Ground level engine shutdown	✓	
ELECTRICAL			Ground level fueling	✓	
Alarm, reverse gear	✓		Horn, electric	✓	
Breaker panel, ground accessible	✓		Hydraulic lines for base functions	✓	
Electrical system, 24V	✓		Lockout, hydraulic implement (for roading and servicing)	✓	
Level Control Installation – Cab wiring, software, hydraulic valves, bosses and brackets	✓		Moldboard – 3658 × 610 × 22 mm (12 ft × 24 in × 7/8 in)	✓	
Lamps, roof-mounted road, reversible, LED brake and tail lights	✓		Mounting, cab roof accessories	✓	
Starter, electric	✓		Pump, hydraulic, high capacity, 98 cm ³ (6 in ³)	✓	
OPERATOR ENVIRONMENT			Radiator, access for cleaning	✓	
Accelerator	✓		Serviceability, left-hand side		
Air conditioning with heater	✓		S-O-S SM ports: engine, hydraulic, transmission, coolant, fuel	✓	
Arm and wrist rest, electronically adjustable	✓		Tool box	✓	
Articulation, automatic Return-to-Center	✓		OTHER ACCESSORIES		
Coat hook	✓		Camera, rearview		✓
Cup holder	✓		Heater, engine coolant: 120V		✓
Display, digital speed and gear	✓		Heater, engine coolant: 240V		✓
Fan, defroster, rear window		✓	Security system		✓
Gauge, machine level	✓		Sound suppression		✓
Gauge cluster (analog) – fuel, articulation, engine coolant temp, engine RPM, hydraulic oil temp	✓		ATTACHMENTS AVAILABLE FROM FACTORY		
Joystick hydraulic controls right/left blade lift with float position, circle drive, blade sideshift and tip, centershift, front wheel lean, articulation and steering	✓		Push block		✓
Joystick, adjustable armrests	✓		Ripper		✓
Joystick, speed selection		✓	Scarifier		✓
Joystick, power steering		✓	Front lift group		✓
Mirror, inside rearview, adjustment angle	✓		Top adjust circle		✓
Power port, 12V	✓		High performance circle		✓
Rollover protective structure (ROPS) cab, sound suppressed	✓		ADDITIONAL ATTACHMENTS		
Seat, cloth-covered, comfort suspension	✓		Snow wings		✓
Seat belt, retractable	✓		Plows		✓
Shade, sun		✓	Blades		✓
Storage area for cooler/lunchbox	✓		Blade extensions		✓
Throttle control, electronic	✓		Brooms		✓

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Technical Specifications

Powertrain

Engine Model	Cat® C7	
Emissions	Brazil MAR-1, equivalent to U.S. EPA Tier 3 and EU Stage IIIA	
Net Power	159kW	213 hp
VHP Plus Range – Net	136-159 kW	183-213 hp
Displacement	7.2 L	439 in ³
Bore	110 mm	4.3 in
Stroke	127 mm	5 in
Torque Rise	39%	
Maximum Torque	1052 N·m	776 lbf·ft
Speed @ Rated Power	2,000 rpm	
Number of Cylinders	6	
Derating Altitude	3048 m	10,000 ft
Standard – Maximum Fan Speed	1,450 rpm	
Standard – Minimum Fan Speed	600 rpm	
High Ambient – Maximum Fan Speed	1,650 rpm	
High Ambient – Minimum Fan Speed	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.
- Rated Speed = 2,000 rpm.
- No engine derating required up to 3048 m (10,000 ft).

Frame

Circle Diameter	1530 mm	60.2 in
Drawbar Height	152 mm	6 in
Drawbar Width	76.2 mm	3 in
Front Frame Structure – Height	305 mm	12 in
Front Frame Structure – Width	305 mm	12 in
Front Frame Structure – Thickness	16 mm	0.6 in
Front Axle – Wheel Lean, Left/Right	18°	
Front Axle – Total Oscillation per Side	32°	

Weights

Operating Weight, Typically Equipped*

Total	18 400 kg	40,565 lb
Front Axle	5090 kg	11,221 lb
Rear Axle	13 310 kg	29,343 lb

*Typically equipped operating weight is calculated with push block, rear ripper/scarifier, 14.0R24 tires with single-piece (SP) rims, and other equipment.

Moldboard

Moldboard – Width	3.7 m	12 ft
Moldboard – Height	610 mm	24 in
Arc Radius	413 mm	16.3 in
Throat Clearance	166 mm	6.5 in

Blade Range

Circle Centershift – Right	728 mm	28.7 in
Circle Centershift – Left	695 mm	27.4 in
Moldboard Sideshift – Right	660 mm	26 in
Moldboard Sideshift – Left	510 mm	20.1 in
Blade Tip Range – Forward	40°	
Blade Tip Range – Backward	5°	
Maximum Shoulder Reach Outside of Tires – Right	1978 mm	77.9 in
Maximum Shoulder Reach Outside of Tires – Left	1790 mm	70.5 in
Maximum Lift Above Ground	480 mm	18.9 in
Maximum Depth of Cut	715 mm	28.1 in

Air Conditioning System

- The air conditioning system on this machine contains the fluorinated greenhouse gas refrigerant R134a or R1234yf. See the label or instruction manual for identification of the gas.
- If equipped with R134a (Global Warming Potential = 1430), the system contains 1.8 kg (4.0 lb) of refrigerant which has a CO₂ equivalent of 2.574 metric tonnes (2.837 tons).



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.

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