



Cat[®] 150

Motor Grader

The Cat[®] 150 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

- Cat[®] C7 engine meets Brazil MAR-1 emission standards, equivalent to U.S. EPA Tier 3 and EU Stage IIIA.
- 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 allows 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 timer is available to shut down engine after a set period of time saving fuel and helping reduce emissions.

Serviceability

- Durable nylon composite wear inserts maximize circle torque and component life.
- 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.

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 helping keep windows clear.



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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.
- Rocker and control switches are in easy reach.

Technology

- Shuttle Shift allows smooth, fast direction shifts without requiring manipulating throttle or inching pedal.
- Cat Product Link™ aids equipment management with remote monitoring capabilities.
- Optional Cat Grade Control Cross Slope helps maintain desired cross slope by automatically controlling one side of the blade.
- 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 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 (ACJs) allow control of automated grading solutions efficiently and safely without removing hands from the joysticks.

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 the rear of the machine.

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	✓		Bumper, rear, integrated with hitch	✓	
Engine Cat® C7 diesel with automatic engine derate and idle control. Note: Emissions equivalent to Tier 3 and Stage IIIA.	✓		CD ROM Parts Book	✓	
Fuel tank, ground level access and sediment drain	✓		Clutch, circle drive slip	✓	
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	✓	
Transmission, autoshift		✓	Ground level engine shutdown	✓	
Variable Horsepower Plus (VHP Plus)	✓		Ground level fueling	✓	
ELECTRICAL			Horn, electric	✓	
Alarm, reverse gear	✓		Hydraulic lines for base functions	✓	
Breaker panel, ground accessible	✓		Lockout, hydraulic implement (for roading and servicing)	✓	
Electrical system, 24V	✓		Moldboard – 3658 × 610 × 22 mm (12 ft × 24 in × 7/8 in)	✓	
Starter, electric	✓		Pump, hydraulic, high capacity, 98 cm³ (6 in³)	✓	
OPERATOR ENVIRONMENT			S-O-S SM ports: engine, hydraulic, transmission, coolant, fuel	✓	
Accelerator	✓		Tool box	✓	
Air conditioning with heater	✓		OTHER ACCESSORIES		
Arm and wrist rest, electronically adjustable	✓		Camera, rearview		✓
Articulation, automatic Return-to-Center	✓		Heater, engine coolant: 120V		✓
Coat hook	✓		Heater, engine coolant: 240V		✓
Cup holder	✓		Security system		✓
Display, digital speed and gear	✓		Sound suppression		✓
Fan, defroster, rear window		✓	ATTACHMENTS AVAILABLE FROM FACTORY		
Gauge, machine level	✓		Push block		✓
Gauge cluster (analog) – fuel, articulation, engine coolant temp, engine RPM, hydraulic oil temp	✓		Ripper		✓
Joystick hydraulic controls right/left blade lift with float position, circle drive, blade sideshift and tip, centershift, front wheel lean, articulation and steering	✓		Scarifier		✓
Mirror, inside rearview, wide angle	✓		Front lift group		✓
Mirrors, outside: heated 24V		✓	Top adjust circle		✓
Mirrors, outside: mounted		✓	High performance circle		✓
Night lights in the cabin		✓	ADDITIONAL ATTACHMENTS		
Power port, 12V	✓		Snow wings		✓
Rollover protective structure (ROPS) cab, sound suppressed	✓		Plows		✓
Seat, cloth-covered, comfort suspension	✓		Blades		✓
Seat belt, retractable	✓		Blade extensions		✓
Shade, sun		✓	Brooms		✓
Stairs, cabin, left and right sides		✓			
Storage area for cooler/lunchbox	✓				
Throttle control, electronic	✓				

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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 (1st gear)	174 kW	233 hp
VHP Plus Range – Net	136-174 kW	183-233 hp
Displacement	7.2 L	439 in³
Bore	110 mm	4.3 in
Stroke	127 mm	5 in
Torque Rise (VHP Plus)	39%	
Maximum Torque (VHP Plus)	1159 N·m	855 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	
Standard – Ambient Capability	43° C	109° F
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).

Weights

Gross Vehicle Weight – Typically Equipped*

Total	18 991 kg	41,868 lb
Front Axle	5314 kg	11,716 lb
Rear Axle	13 677 kg	30,152 lb

- Base operating weight calculated on standard machine configuration with 14.00R24 tire with multi-piece rim, full fuel tank, coolant, lubricants and operator.

*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 degrees	
Blade Tip Range – Backward	5 degrees	
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).



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