



# Cat<sup>®</sup> 150/ 150 AWD

## Motor Graders

***The 150/150 AWD Cat<sup>®</sup> Motor Graders are 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 timer is available to shut down engine after a set period of time saving fuel and helping reduce emissions.

### 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.

### 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.

## 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 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 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 |
|--|----------|----------|---|----------|----------|
| <b>POWERTRAIN</b>  |          |          | <b>OTHER STANDARD EQUIPMENT</b>   |          |          |
| 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.  | ✓        |          | Cutting edges: - 152 × 16 mm (6 × 5/8 in) - curved DH-2 steel - 19 mm (3/4 in) mounting bolts | ✓        |          |
| Fuel tank, ground level access and sediment drain  | ✓        |          | Fluid check, ground level   | ✓        |          |
| Tandem drive   | ✓        |          | Ground level engine shutdown  | ✓        |          |
| Transmission, 8F/6R, power shift, direct drive   | ✓        |          | Ground level fueling  | ✓        |          |
| Transmission, autoshift  |          | ✓        | Horn, electric  | ✓        |          |
| Variable Horsepower Plus (VHP Plus)  | ✓        |          | Hydraulic lines for base functions  | ✓        |          |
| <b>ELECTRICAL</b>  |          |          | Lockout, hydraulic implement (for roading and servicing)                                      | ✓        |          |
| Alarm, back up   | ✓        |          | Moldboard - 3658 × 610 × 22 mm (12 ft × 24 in × 7/8 in)                                       | ✓        |          |
| Breaker panel, ground accessible   | ✓        |          | Pump, hydraulic, high capacity, 98 cm³ (6 in³)  | ✓        |          |
| Electrical system, 24V   | ✓        |          | S-O-S <sup>SM</sup> ports: engine, hydraulic, transmission, coolant, fuel                     | ✓        |          |
| Starter, electric  | ✓        |          | Tool box  | ✓        |          |
| <b>OPERATOR ENVIRONMENT</b>  |          |          | <b>OTHER ACCESSORIES</b>  |          |          |
| Accelerator  | ✓        |          | Camera, rearview  |          | ✓        |
| Air conditioning with heater   | ✓        |          | Heater, engine coolant: 120V  |          | ✓        |
| Arm and wrist rest, electronically adjustable  | ✓        |          | Heater, engine coolant: 240V  |          | ✓        |
| Articulation, automatic Return-to-Center   | ✓        |          | Security system   |          | ✓        |
| Coat hook  | ✓        |          | Sound suppression   |          | ✓        |
| Cup holder   | ✓        |          | <b>ATTACHMENTS AVAILABLE FROM FACTORY</b>   |          |          |
| Display, digital speed and gear  | ✓        |          | Push block  |          | ✓        |
| Fan, defroster, rear window  |          | ✓        | Ripper  |          | ✓        |
| Gauge, machine level   | ✓        |          | Scarifier   |          | ✓        |
| Gauge cluster (analog) – fuel, articulation, engine coolant temp, engine RPM, hydraulic oil temp   | ✓        |          | Front lift group  |          | ✓        |
| Joystick hydraulic controls right/left blade lift with float position, circle drive, blade sideshift and tip, centershift, front wheel lean, articulation and steering | ✓        |          | Top adjust circle   |          | ✓        |
| Mirror, inside rearview, wide angle  | ✓        |          | High performance circle   |          | ✓        |
| Mirrors, outside: heated 24V   |          | ✓        | <b>ADDITIONAL ATTACHMENTS</b>   |          |          |
| Mirrors, outside: mounted  |          | ✓        | Snow wings  |          | ✓        |
| Power port, 12V  | ✓        |          | Plows   |          | ✓        |
| Rollover protective structure (ROPS) cab, sound suppressed   | ✓        |          | Blades  |          | ✓        |
| Seat, cloth-covered, comfort suspension  | ✓        |          | Blade extensions  |          | ✓        |
| Seat belt, retractable   | ✓        |          | Brooms  |          | ✓        |
| Shade, sun   |          | ✓        |   |          |          |
| Storage area for cooler/lunchbox   | ✓        |          |   |          |          |
| Throttle control, electronic   | ✓        |          |   |          |          |

# Cat® 150/150 AWD Motor Graders

## Technical Specifications

### Powertrain

|  |  |            |
|--|--|------------|
| Engine Model   | Cat® C7                                  |            |
| Emissions  | U.S. EPA Tier 3/EU Stage IIIA equivalent |            |
| 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 |
| Maximum Torque (AWD On)  | 1344 N·m                                 | 991 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 |

\*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 CO<sub>2</sub> equivalent of 2.574 metric tonnes (2.837 tons).

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AEXQ2158-03 (07-2025)  
Replaces AEXQ2158-02  
Build Number: 14A  
(Aus-NZ, Eurasia, Türkiye, S Am)

