



# Cat<sup>®</sup> 120

## Motor Grader

***The Next Generation Cat<sup>®</sup> 120 Motor Grader offers the options of joystick or steering wheel and lever controls with the all-wheel drive option. Save up to 15 percent in fuel consumption. Cab and comfort options help improve performance. Factory integrated technology, such as Cat GRADE with Cross Slope and Stable Blade options ensure grade for any project. Not all features are available in all regions. Consult your Cat dealer for specific configurations available in your region.***

### **High Performance with Lower Fuel Consumption**

- Get to work with balanced weight and power in the Cat C7.1 engine.
- Increase your fuel economy up to 15 percent with the standard ECO mode.
- Cat GRADE technology helps you get to the target grade in fewer passes by using up to 40 percent less material.
- The powershift transmission works hard with machine balance to ensure drawbar power to the ground.
- Power train components are specifically made to be rebuilt.
- The all-wheel drive (AWD) option assists with traction and maneuvering the machine. The increased power with all-wheel drive handles the extra traction for slopes and loose material.

### **New Cab Keeps You Comfortable All Day Long**

- Choose your comfort level in the cab with standard, comfort plus, and premium plus options.
- With one 203 mm (8 in) color touchscreen, view your machine information from fuel levels to GRADE technology options and machine alerts. The anti-glare screen makes it easy to read no matter how bright it gets.
- Connect your phone with Bluetooth<sup>™</sup> or auxiliary cord option to listen to music and podcasts throughout your work day.
- Decrease clutter with more storage areas in the cab.
- The high capacity Heating, Ventilation and Air Conditioning (HVAC) system dehumidifies and pressurizes the cab, circulates fresh air, seals out dust and keeps windows clear from fogging.
  - With the auto-controlled climate option, you can set your ideal temperature.
- Easily add a radio to the cab using the built-in mounting location.
- Keep your phone charged with the optional USB charging port along with a spot designed to hold your phone.

### **Enhance Efficiency and Productivity with Integrated Cat Technology**

- The next generation motor grader offers updated GRADE technology displayed on the 203 mm (8 in) color touchscreen option.
- Use the Digital Blade Slope Meter to get to grade without relying on manual grade checkers.
- Cat GRADE with Cross Slope Indicate option provides a real-time readout of cross slope and can be scaled to Cat GRADE with Cross Slope for automatic blade movement.
- Cat GRADE Attachment Ready Option (ARO) gives you the connections that you need to add grade control technologies.
- Stable Blade senses blade bounce before you to reduce manual throttle use and site rework.
- Product Link<sup>™</sup> provides location, machine hours, fuel usage, productivity, idle time, diagnostic codes, and other machine data on demand through the VisionLink<sup>®</sup> online interface, which helps you improve job site efficiency with lower operating costs.
- Update machine software with Remote Services without taking the machine out of service.



# Cat® 120 Motor Grader

---

## Safety

- View your surroundings with the rear camera option to ensure the safety of you and those around you. The dedicated display can be always on to ensure a safe work environment.
  - The heated lens keeps the rearview camera clear.
- In the event of an engine stall, count on the secondary steering system to help stop the machine safely.
- Ensure three points of contact when entering and exiting the machine with strategically placed walk ways and grab rails.
- Ground level engine shut-off switch stops all fuel to the engine when activated and shuts down the machine.
- See the rear of your machine with connecting windows.
- Work past sundown using the LED light option for increased night time visibility.
- Keep your work site safer with Cat GRADE technology, which reduces the need for manual grade checking with working machines.

## Maintenance

- Filters, such as fuel, engine air, and oil filters, are grouped together for easy access and preventative maintenance.
- Be more environmentally friendly with the next generation filters to get up to 15 percent in reduced filtration costs.
- Maintain roads with the standard drawbar circle moldboard with hardened circle teeth for increased durability.
- For tight finish grading, consider the top adjust drawbar option for applications that require maximum accuracy. It offers up to 20 percent reduction in maintenance cost over the standard.
- Hydraulic brakes are well oiled to keep them maintenance free.
- Lower costly repairs to your circle and pinion with the Circle Saver.

## Versatility

- Improve the balance of your machine with the counterweight or push block for increased performance and efficiency.
- Ripper and scarifier options are available to assist with grading hardened ground.
- The front lift group option is ready for attachments like the straight or front blade.
- For more road coverage, add a moldboard extension to add 605 mm (24 in).

## Standard and Optional Equipment

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

|   | Standard | Optional |                                 | Standard | Optional |
|---|----------|----------|---------------------------------|----------|----------|
| <b>CAB</b>                                |          |          | <b>ENGINE</b>                   |          |          |
| Vinyl Seat                                | ✓        |          | Cat C7.1                        | ✓        |          |
| Cloth or Leather Seat                     |          | ✓        | ECO Mode                        | ✓        |          |
| Steering Wheel/Lever Controls             |          | ✓        | All-Wheel Drive (AWD)           |          | ✓        |
| Joystick Controls                         |          | ✓        | Hydraulic Demand Fan            | ✓        |          |
| ROPS, Standard Sound Suppression          | ✓        |          | <b>DRAWBAR CIRCLE MOLDBOARD</b> |          |          |
| Heating/Cooling Cab System                | ✓        |          | Standard                        | ✓        |          |
| Rear Wiper                                |          | ✓        | Top Adjust                      |          | ✓        |
| Base Cab                                  | ✓        |          | Circle Drive Slip Clutch        | ✓        |          |
| Comfort Plus                              |          | ✓        | Circle Saver                    |          | ✓        |
| Premium Plus                              |          | ✓        | <b>SAFETY</b>                   |          |          |
| Seat Belt Indicator                       |          | ✓        | Parking Brake                   | ✓        |          |
| 203 mm (8 in) Touchscreen Monitor         |          | ✓        | Signaling/Warning Horn          | ✓        |          |
| 254 mm (10 in) Hybrid Information Display | ✓        |          | Rearview Mirror                 | ✓        |          |
| Heated/Cooled Seat                        |          | ✓        | Rearview Camera                 |          | ✓        |
| Bluetooth/Auxiliary Radio                 |          | ✓        | Hydraulic Brakes                | ✓        |          |
| Halogen Lighting                          | ✓        |          | Secondary Steering System       | ✓        |          |
| LED Lighting                              |          | ✓        | Side View Mirrors               | ✓        |          |
| Rear Window Screen                        |          | ✓        | Walkways and Grab Rails         | ✓        |          |
| <b>CAT CONNECT TECHNOLOGY</b>             |          |          | <b>VERSATILITY</b>              |          |          |
| Cat GRADE with Digital Blade Slope Meter  |          | ✓        | Counterweight                   |          | ✓        |
| Cat GRADE with Cross Slope Indicate       |          | ✓        | Push Block                      |          | ✓        |
| Cat GRADE with Cross Slope                |          | ✓        | Ripper                          |          | ✓        |
| Cat GRADE Attachment Ready Option (ARO)   |          | ✓        | Scarifier                       |          | ✓        |
| Stable Blade                              |          | ✓        | Front Lift Group                |          | ✓        |
| Product Link                              | ✓        |          | Front Blade                     |          | ✓        |
| Remote Services                           |          | ✓        |                                 |          |          |

# Cat® 120 Motor Grader

## Technical Specifications

### Engine

|  |  |                       |
|--|--|-----------------------|
| Engine Model   | Cat 7.1  |                       |
| Emissions  | China Nonroad Stage III and Brazil MAR-1 emission standards, equivalent to U.S. EPA Tier 3/EU Stage IIIA |                       |
| Net Power Range  | 93 kW-116 kW   | 125 hp-156 hp         |
| All-Wheel Drive Net Power Range  | 97 kW-129 kW   | 130 hp-173 hp         |
| Engine RPM   | 2,000 rpm  |                       |
| Displacement   | 7.01 L   | 427.8 in <sup>3</sup> |
| Bore   | 105 mm   | 4.1 in                |
| Stroke   | 135 mm   | 5.3 in                |
| Torque Rise ISO 9249   | 42%  |                       |
| Maximum Torque ISO 9249  | 822 N·m  | 606 lbf-ft            |
| Maximum Torque (AWD on)  | 828 N·m  | 611 lbf-ft            |
| Number of Cylinders  | 6  |                       |
| Derating Altitude  | 3000 m   | 9,842.5 ft            |
| Derating Altitude (AWD)  | 1676 m   | 5,499 ft              |
| Standard Capability  | 50° C  | 122° F                |
| <ul style="list-style-type: none"> <li>• Net power is tested per ISO 9249, SAE J1349, and EEC 80/1269 Standards in effect at the time of manufacture.</li> <li>• Net power advertised is the power available at rated speed of 2,000 rpm, measured at the flywheel when engine is equipped with fan, air cleaner, muffler and alternator.</li> <li>• Power as declared per ISO 14396.</li> </ul> |  |                       |

### Air Conditioning System

The air conditioning system on this machine contains the fluorinated greenhouse gas refrigerant R134a (Global Warming Potential = 1430). The system contains 1.6 kg of refrigerant which has a CO<sub>2</sub> equivalent of 2.288 metric tonnes.

### Service Refill Capacities

|                               |        |          |
|-------------------------------|--------|----------|
| Fuel Tank                     | 246 L  | 65 gal   |
| Circle Drive                  | 7 L    | 1.8 gal  |
| Engine Crankcase              | 18 L   | 4.8 gal  |
| Cooling System                | 52.5 L | 14 gal   |
| Hydraulic System              | 75 L   | 19.8 gal |
| Transmission and Differential | 60 L   | 15.9 gal |

### Machine Weight

|   |           |           |
|---|-----------|-----------|
| Lever/Steering Wheel*                       | 15 699 kg | 34,610 lb |
| Joystick*                                   | 15 824 kg | 34,886 lb |
| Lever/Steering Wheel All-Wheel Drive (AWD)* | 16 454 kg | 36,275 lb |
| Joystick All-Wheel Drive (AWD)*             | 16 499 kg | 36,374 lb |

\*Typically equipped includes 4267 mm (14 ft) plus blade, tires, push plate, ripper, bottom guard, operator, and full fluids.

### Dimensions

|                             |         |          |
|-----------------------------|---------|----------|
| Length of Machine*          | 9838 mm | 387 in   |
| Maximum Height              | 3832 mm | 151 in   |
| Width                       | 2592 mm | 102 in   |
| Width All-Wheel Drive (AWD) | 2551 mm | 100.4 in |

\*Typically equipped with push block and ripper.

### Moldboard

|                    |        |         |
|--------------------|--------|---------|
| Blade Width        | 3.7 m  | 12 ft   |
| Blade Height       | 610 mm | 24 in   |
| Arc Radius         | 413 mm | 16.3 in |
| Throat Clearance   | 105 mm | 4.1 in  |
| End Bit Width      | 152 mm | 6 in    |
| Cutting Edge Width | 152 mm | 6 in    |

### Blade Range

|                                |         |         |
|--------------------------------|---------|---------|
| Circle Center Shift – Right    | 656 mm  | 26 in   |
| Circle Center Shift – Left     | 656 mm  | 26 in   |
| Moldboard Side Shift – Right   | 663 mm  | 26.1 in |
| Moldboard Side Shift – Left    | 512 mm  | 20.1 in |
| Blade Tip Range – Forward      | 40°     |         |
| Blade Tip Range – Backward     | 5°      |         |
| Maximum Shoulder Reach – Right | 1928 mm | 76 in   |
| Maximum Shoulder Reach – Left  | 1764 mm | 69.4 in |
| Maximum Lift Above Ground      | 410 mm  | 16.1 in |
| Maximum Depth of Cut           | 775 mm  | 30.5 in |



For more complete information on Cat products, dealer services, and industry solutions, visit us on the web at [www.cat.com](http://www.cat.com)

© 2018 Caterpillar  
All rights reserved

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

CAT, CATERPILLAR, SAFETY.CAT.COM, their respective logos, "Caterpillar Yellow" and the "Power Edge" trade dress, as well as corporate and product identity used herein, are trademarks of Caterpillar and may not be used without permission.

VisionLink is a trademark of Trimble Navigation Limited, registered in the United States and in other countries.

AEXQ2472 (10-2018)

Build Number: 14A

(Afr-ME, Aus-NZ, CIS, China, India, Indonesia, S Am, SE Asia, Turkey)

