

Cat® RM500

Reclaimer / Stabilizer

The Cat RM500 features simple operation, a robust rotor drive system and a versatile design that make this durable industry workhorse an exceptional value. High production and excellent material quality go hand-in-hand with low operating and maintenance costs. Rotor and spray system options provide the ability to adapt to a wide range of full-depth reclamation and soil stabilization applications.

Not all features available in all regions. Consult your Cat dealer for specific configurations available in your region.

Reliable, Efficient Operation

- A Cat® C15 engine meets regional emission standards
- Variable speed cooling fan operates at the lowest speed for optimal cooling
- Maximize traction with standard, electronically controlled All-Wheel Drive featuring four independent pumps and drive motors to propel in the most extreme conditions
- Four steering modes provide jobsite maneuverability:
  - Front wheels only, rear wheels only, crab steering, and coordinated steering

Operator Comfort and Visibility to Enhance Performance

- Sight lines are optimized with the full left-to-right sliding cab, allowing the operator to work comfortably from either side of machine
- A heated, 180° positioning suspension seat with fore and aft adjustment increases operator comfort and visibility
- Cab comes standard with heating and air conditioning for a comfortable work environment
- Good visibility to rotor housing and discharged material
- Performance and safety can be augmented with cameras that are viewed on a large, in-cab display
  - Fore and aft visibility is enhanced with front and rear mounted cameras
  - Gradation results can be viewed through the camera mounted above the rear mixing chamber door

Easy To Use

- Intuitive, easy to learn and operate
- Controls are ergonomically located and grouped by function for quick and easy access
- Precise machine control is delivered through hand-wheel steering
- Touch screen display provides clear instrumentation and controls

Durable Rotor Drive System

- High-strength rotor drive chains
- Cat Powershift automatic transmission
- Heavy-duty shear disk or optional torque limiter protects the rotor driveline

Superior Mix Quality

- Work efficiently on a variety of reclamation and stabilization projects with three rotor options: Universal, Combination and Soil
- Manage gradation for a wide variety of materials and applications with three selectable rotor speeds
- Advanced electronic controls with automatic load control deliver ideal mix quality by keeping the machine at an optimized speed for production efficiency
- Return-to-cut feature helps operators save time and maintain consistency with the simple tap of a button
- Floating variable volume mixing chamber allows the operator to control material size and gradation

CAT®

Optional Spray Systems Perform with Accuracy

- Water and emulsion additive systems for a variety of job site applications
- Application rate of additives is accurately monitored through a computerized metering system to ensure mix design specifications are met
- Ultra Low-flow Water Spray System available (for water use only– not for use with emulsions)
- Both Water and Emulsion Spray Systems can be installed to allow simultaneous or individual system operation
- A wide range of variable flow rates can be optimized for a variety of applications:
  - Water flow rates from 114-1136 liters per minute (30-300 gallons per minute)
  - Ultra-low water flow rates from 60-600 liters per minute (16-160 gallons per minute)
  - Emulsion flow rates from 114-946 liters per minute (30-250 gallons per minute)
- Easily set up the spray systems to deliver liquid additives according to specifications:
  - manual or automatic
  - volume per minute
  - volume per m^2 (yd^2)
  - percent of material density

Easy Service

- Safely access routine maintenance items from ground level
- Auto-reversing cooling fan helps prevent debris build-up extending maintenance intervals for cleaning the cooling package
- Rotor drive system utilizes automated bearing lubrication
- Self-lubricating rotor chain drive is adjustment-free and eliminates routine maintenance
- A service door on each side of the rotor chamber provides easy access to inspect or change endring bits without having to reach inside the rotor chamber to service
- Easy access to hydraulic components
- Monitor fluid conditions with regular sampling to help extend change intervals up to 500 hours engine oil, 6000 hours hydraulic oil and 12000 hours coolant
- Electrical system wiring is color-coded and numbered for easy identification and wrapped in a protective, abrasion-resistant nylon braid for longer life
- Electronic Control Modules (ECMs) monitor machine systems to alert the operator of performance issues and can be paired with Product Link to track location, machine hours, fuel usage, and idle time
- VisionLink® is a cloud-based software application that seamlessly provides data to your desktop or mobile device, taking the guesswork out of fleet management with key insights to maximize performance – regardless of fleet size or equipment manufacturer.
- Convenient parts availability and dealer locations

Sustainability

- The Cat C15 engine meets U.S. EPA Tier 4 Final, EU Stage V and Korea Stage V emission standards
- Cat U.S. EPA Tier 4 Final, EU Stage V and Korea Stage V engines are required to use ULSD (ultra-low sulfur diesel fuel with 15 ppm of sulfur or less) or ULSD blended with the following lower-carbon intensity fuels* up to: 20% biodiesel FAME (fatty acid methyl ester) or 100% renewable diesel, HVO (hydrotreated vegetable oil) and GTL (gas-to-liquid) fuels. Please consult your Cat dealer or "Caterpillar Machine Fluids Recommendations" (SEBU6250) for details.
- Cat engines meeting Brazil MAR-1 emission standards, equivalent to U.S. EPA Tier 3 and EU Stage IIIA standards, are compatible with diesel fuel blended with the following lower-carbon intensity fuels* up to: 20% biodiesel FAME (fatty acid methyl ester) or 100% renewable diesel, HVO (hydrotreated vegetable oil) and GTL (gas-to-liquid) fuels. Please consult your Cat dealer or "Caterpillar Machine Fluids Recommendations" (SEBU6250) for details.
- Automatic Load Control helps you save fuel and reduces greenhouse gas emissions by automatically matching propel speed to engine load for maximum production at peak efficiency
- Electronically controlled All-Wheel Drive with Traction Control maintains consistent traction to increase machine efficiency, helps reduce fuel burn and greenhouse gas emissions
- Performance and safety can be augmented with cameras that are viewed on a large, in-cab display
- Extended maintenance intervals not only reduce downtime but decrease the amount of fluid and filters that are replaced over the life of the machine
- Cat Scheduled Oil Sampling (S•O•S℠) Services helps reveal excessive wear, contaminated fluids or other "unseen" issues that can shorten component life. In many cases, you can extend oil and coolant change intervals by using fluid monitoring. Consult your Cat dealer or the machine's operation and maintenance manual for more information.
- The engine, hydraulic system and Diesel Exhaust Fluid (DEF) tank (if required) are equipped with ecology drains for easy servicing and to help prevent spillage
- Don't waste fuel idling. Cat VisionLink online fleet monitoring helps you manage idle time and reduce fuel burn and greenhouse gas emissions
- VisionLink displays the CO_2 emissions for monitored assets, calculated by fuel type for the Runtime Fuel Burned each day in a selected date range

**Tailpipe greenhouse gas emissions from lower-carbon intensity fuels are essentially the same as traditional fuels.*

Standard and Optional Equipment

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

	Standard	Optional
OPERATOR ENVIRONMENT		
Adjustable armrests	✓	
Heated suspension seat	✓	
180° rotating operating station	✓	
Audio-ready with speakers	✓	
Full width sliding cab with heat and air conditioning	✓	
Access ladder, right and left side	✓	
High visibility retractable seat belt	✓	
Mini-wheel steering control	✓	
Multifunction propel lever	✓	
Steering guides	✓	
LCD touch screen operator interface	✓	
POWERTRAIN		
Air to Air Aftercooler (ATAAC)	✓	
Dual element air cleaner with pre-cleaner	✓	
Extended Life Coolant (ELC) with protection to -37° C (-35° F)	✓	
Auto-reversing, on-demand cooling fan	✓	
Automatic load control	✓	
Four steering modes	✓	
All-Wheel Drive	✓	
Electronic differential	✓	
Oil-bath brake system	✓	
Powertrain guard	✓	
Cat Bio HYDO™ biodegradable hydraulic oil		✓
CE certificate		✓
ELECTRICAL SYSTEM		
150 amp alternator	✓	
24-volt charging system	✓	
Automotive-type fuse system	✓	
Remote start/charge receptacle	✓	
1365 CCA maintenance-free batteries (2)	✓	
SPRAY SYSTEMS		
Water spray system		✓
Ultra Low-flow water spray system		✓
Emulsion spray system (Vane Pump)		✓
Emulsion spray system (Gear Pump)*		✓
Folding telescoping push bar		✓

	Standard	Optional
ROTOR DRIVE SYSTEM		
Maintenance-free drive shafts	✓	
Self-lubricating roller chain and bearings	✓	
Shear disk driveline protection	✓	
Torque limiter driveline protection		✓
Automatic Return-to-cut	✓	
Powershift 3-speed transmission	✓	
Three rotor speeds	✓	
Variable volume mixing chamber	✓	
Rotor – Universal 16		✓
Rotor – Universal 18		✓
Rotor – Combination		✓
Rotor – Soil (Stabilization)		✓
Material sizing breaker bar		✓
Bolt-on counterweight – 1600 kg (3500 lb)		✓
SERVICE AND MAINTENANCE		
Grouped filters with ground level access	✓	
Cat® Product Link™ – Cellular	✓	
Cat Product Link – Satellite		✓
Remote access drains	✓	
Ports for Scheduled Oil Sampling (S·O·S℠)	✓	
Fluid level sight gauges	✓	
Toolbox	✓	
Additional toolbox		✓
SAFETY		
Back-up alarm	✓	
Remote cameras (front, rear and rear rotor chamber door)	✓	
Ground level emergency shutdown switch	✓	
Horn (front and rear)	✓	
ROPS	✓	
Platform handrails and guardrails	✓	
Mirrors	✓	
Halogen working lights	✓	
Roading lights		✓
Folding LED safety beacon		✓

* Not available in all regions. Please consult your local Cat dealer for availability.

Technical Specifications

Powertrain		
Engine Model	Cat® C15	
Emissions		
U.S. EPA Tier 4 Final, EU Stage V, Korea Stage V		
Gross Power – SAE J1995:2014	407 kW	546 hp
Engine Power – ISO 14396:2002	402 kW	539 hp
Brazil MAR-1, equivalent to U.S. EPA Tier 3 and EU Stage IIIA		
Gross Power – SAE J1995:2014	406 kW	544.4 hp
Engine Power – ISO 14396:2002	401 kW	537.7 hp
Build Number		02A
Operating Speed	0-3.0 km/h	0-1.9 mph
Maximum Travel Speed	10.5 km/h	6.5 mph

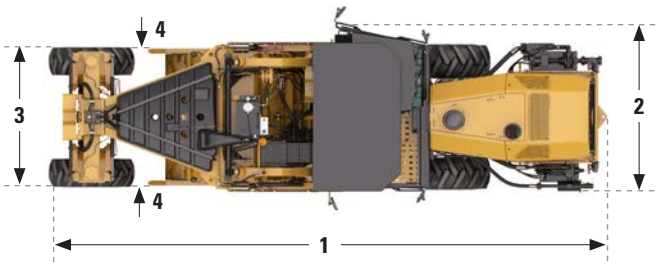
Drive System	
Propel	Hydrostatic – All-wheel Drive
Rotor Drive	3-Speed Chain
Rotor Speeds	110 / 152 / 205 rpm

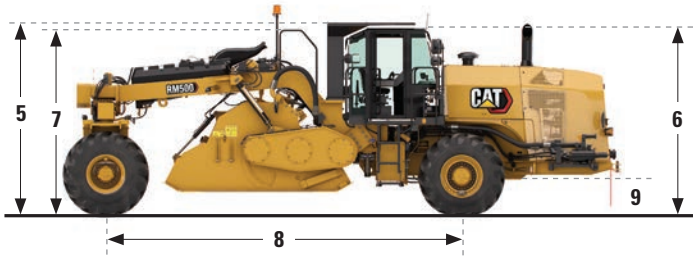
Service Refill Capacities		
Fuel Tank	1056 L	279 gal
Diesel Exhaust Fluid (DEF) Tank (U.S. EPA Tier 4 Final, EU Stage V, Korea Stage V)	46 L	12.2 gal
Cooling System	70 L	18.5 gal
Engine Oil	52 L	13.7 gal
Hydraulic Oil	224 L	59.2 gal

Operating Weight		
U.S. EPA Tier 4 Final, EU Stage V, Korea Stage V		
Operating	28 540 kg	62,920 lb
Maximum	31 533 kg	69,518 lb
Brazil MAR-1, equivalent to U.S. EPA Tier 3 and EU Stage IIIA		
Operating	26 378 kg	58,154 lb
Maximum	29 372 kg	64,753 lb

- *Operating weight includes base machine, no options, ROPS, cab, coolant, lubricants, Universal 16 rotor, 50% full fuel tank, 50% full water tank and 75 kg (165 lb) operator.*
- *Maximum weight includes base machine, all options, ROPS, cab, coolant, lubricants, Universal 16 rotor, full fuel tank, full water tank and 75 kg (165 lb) operator.*

Dimensions		
1 Overall Length	10.32 m	33.83 ft
2 Overall Width	2.98 m	9.58 ft
3 Width at Rear Wheels	2.82 m	9.17 ft
4 Rotor Hood Width	2.53 m	8.25 ft
5 Height at ROPS	3.59 m	11.78 ft
6 Height at Cab	3.50 m	11.48 ft
7 Height at Handrail	3.47 m	11.38 ft
8 Wheelbase	6.55 m	21.33 ft
9 Ground Clearance	506 mm	19.9 in
Inside Turning Radius	4.33 m	14.2 ft





Rotors										
Rotor	**Width**		**Diameter**		**Tools**	**Maximum Depth**		**Weight**	
Universal 16	2438 mm	96 in	1375 mm	54 in	200	406 mm	16 in	4003 kg	8,824 lb
Universal 18	2438 mm	96 in	1375 mm	54 in	200	457 mm	18 in	4373 kg	9,642 lb
Combination	2438 mm	96 in	1625 mm	64 in	114	508 mm	20 in	3042 kg	6,706 lb
Soil (Stabilization)	2438 mm	96 in	1625 mm	64 in	238	508 mm	20 in	3864 kg	8,496 lb

Environmental Declaration

The following information applies to the machine at the time of final manufacture as configured for sale in the regions covered in this document. The content of this declaration is valid as of the date issued; however, content related to machine features and specifications are subject to change without notice. For additional information, please see the machine's Operation and Maintenance Manual.

For more information on sustainability in action and our progress, please visit www.caterpillar.com/en/company/sustainability.html.

ENGINE

- The Cat C15 is available in configurations that meet U.S. EPA Tier 4 Final, EU Stage V and Korea Stage V emission standards or Brazil MAR-1 emission standards, equivalent to U.S. EPA Tier 3 and EU Stage IIIA standards.
- Cat U.S. EPA Tier 4 Final, EU Stage V and Korea Stage V engines are required to use ULSD (ultra-low sulfur diesel fuel with 15 ppm of sulfur or less) or ULSD blended with the following lower-carbon intensity fuels* up to:
  - ✓ 20% biodiesel FAME (fatty acid methyl ester)
  - ✓ 100% renewable diesel, HVO (hydrotreated vegetable oil) and GTL (gas-to-liquid) fuels
- Cat engines meeting Brazil MAR-1 emission standards, equivalent to U.S. EPA Tier 3 and EU Stage IIIA standards, are compatible with diesel fuel blended with the following lower-carbon intensity fuels* up to:
  - ✓ 20% biodiesel FAME (fatty acid methyl ester)
  - ✓ 100% renewable diesel, HVO (hydrotreated vegetable oil) and GTL (gas-to-liquid) fuels

Refer to guidelines for successful application. Please consult your Cat dealer or "Caterpillar Machine Fluids Recommendations" (SEBU6250) for details.

**Tailpipe greenhouse gas emissions from lower-carbon intensity fuels are essentially the same as traditional fuels.*

AIR CONDITIONING SYSTEM

The air conditioning system on this machine contains the fluorinated greenhouse gas refrigerant R134a (Global Warming Potential = 1430). The system contains 1.9 kg (4.2 lb) of refrigerant, which has a CO_2 equivalent of 2.717 metric tonnes (2.995 tons).

PAINT

- Based on best available knowledge, the maximum allowable concentration, measured in parts per million (PPM), of the following heavy metals in paint are:
  - Barium < 0.01%
  - Cadmium < 0.01%
  - Chromium < 0.01%
  - Lead < 0.01%

SOUND PERFORMANCE

With cooling fan speed at 100% of maximum value: (EN 500)

U.S. EPA Tier 4 Final, EU Stage V and Korea Stage V
Operator Sound Pressure Level – 88 dB(A)
Exterior Sound Power Level – 118 dB(A)
Brazil MAR-1, equivalent to U.S. EPA Tier 3 and EU Stage IIIA
Operator Sound Pressure Level – 86 dB(A)
Exterior Sound Power Level – 119 dB(A)

- When properly installed and maintained, the cab offered by Caterpillar, when tested with doors and windows closed according to ISO 11201, meets OSHA and MSHA requirements for operator sound exposure limits in effect at time of manufacture.
- Hearing protection may be needed when operating with an open operator station and cab (when not properly maintained or doors/windows open) for extended periods or in a noisy environment.

OILS AND FLUIDS

- Caterpillar factory fills with ethylene glycol coolants. Cat Diesel Engine Antifreeze/Coolant (DEAC) and Cat Extended Life Coolant (ELC) can be recycled. Consult your Cat dealer for more information.
- Cat Bio HYDO™ Advanced is an EU Ecolabel approved biodegradable hydraulic oil.
- Additional fluids are likely to be present, please consult the Operations and Maintenance Manual or the Application and Installation guide for complete fluid recommendations and maintenance intervals.

FEATURES AND TECHNOLOGY

- The following features and technology may contribute to fuel savings and/or carbon reduction. Features may vary. Consult your Cat dealer for details.
  - Automatic Load Control automatically matches propel speed to engine load
  - Variable speed cooling fan operates at the lowest speed for optimal cooling
  - All-wheel drive with traction control maintains consistent traction
  - Extended maintenance intervals reduce fluid and filter consumption

RECYCLABILITY

- The materials included in machines are categorized as below with approximate weight percentage. Because of variations of product configurations, the following values in the table may vary.

Material Type	Weight Percentage
Steel	80.93%
Iron	5.84%
Nonferrous Metal	2.99%
Mixed Metal	0.43%
Mixed-Metal and Nonmetal	0.79%
Plastic	1.38%
Rubber	4.47%
Mixed Nonmetallic	0.02%
Fluid	1.46%
Other	0.68%
Uncategorized	1.01%
Total	100%

- A machine with higher recyclability rate will ensure more efficient usage of valuable natural resources and enhance End-of-Life value of the product. According to ISO 16714 (Earthmoving machinery – Recyclability and recoverability – Terminology and calculation method), recyclability rate is defined as percentage by mass (mass fraction in percent) of the new machine potentially able to be recycled, reused or both.

  All parts in the bill of material are first evaluated by component type based on a list of components defined by the ISO 16714 and Japan CEMA (Construction Equipment Manufacturers Association) standards. Remaining parts are further evaluated for recyclability based on material type.

  Because of variations of product configurations, the following value in the table may vary.

  Recyclability – 97%

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

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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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