

RM-250C

Reclaimer/Mixer

CAT[®]



Cat[®] 3406C DITA Diesel Engine

Gross Power	250 kW	335 hp
Rotor Width	2438 mm	96"
Rotor Depth (maximum)	457 mm	18"

Caterpillar® 3406C DITA Turbocharged Diesel Engine

Dependable, field-proven, efficient Cat power.

Adjustment-free fuel system includes separate fuel injection camshaft, field-replaceable injection nozzles and timing advance for fuel economy.

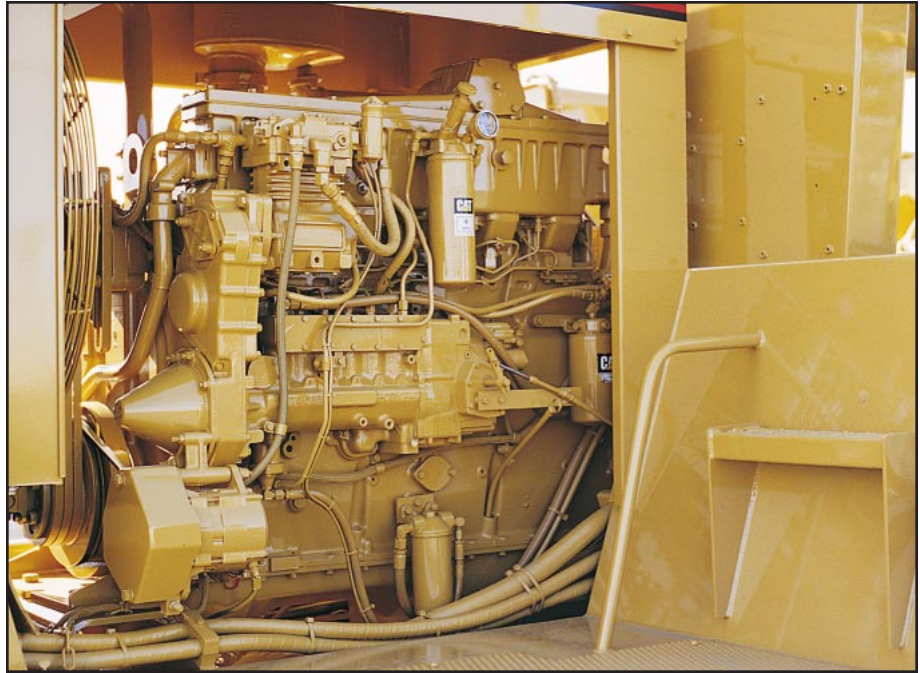
Turbocharger reacts to load demands while delivering full rated power up to 2286 meters (7500') elevation.

Pistons are cast aluminum alloy and gallery cooled for better performance, fuel consumption and improved emissions.

Crankshaft is steel forged and heat treated to eliminate soft metal in fillets or cheeks.

Cylinder block is high strength cast iron alloy with dual tube cooling jets for superior durability and performance.

Stainless steel sleeves used on cylinder head exhaust ports reduce heat rejection.



Propel System

Simple to operate, highly reliable for on-the-job efficiency.

Two-speed transaxle and two-speed hydrostatic motor provide four infinitely variable speeds.

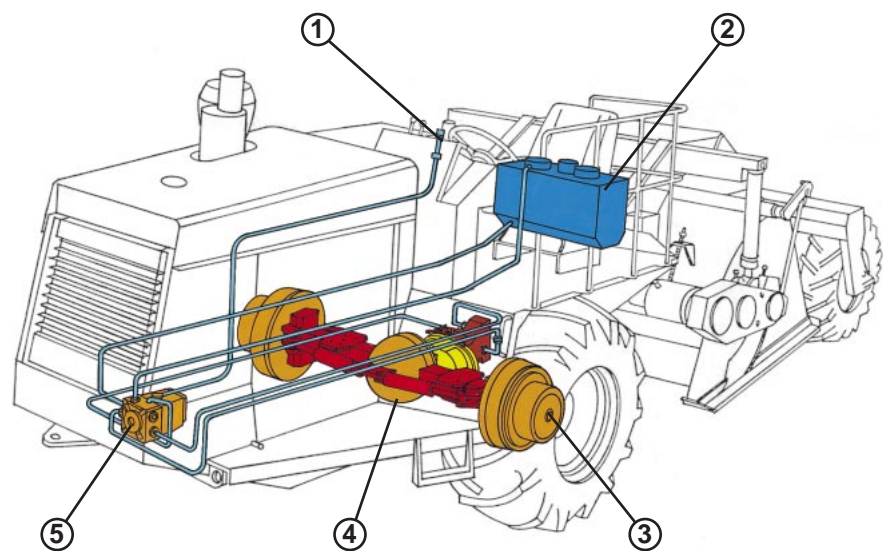
Single lever control of speed and direction with top speed 20 km/hr (12 mph).

Load-sensing control system matches forward speed with rotor load to help prevent engine overloading and maximize production.

No-Spin differential compensates for traction loss at one wheel by transmitting additional torque to opposite wheel.

Torsion flow axle shaft is heat treated for hardness to resist fatigue and reduce spline wear.

Air brake system on wheel-end provides secondary and parking brakes.



1 Forward/Reverse Control

2 Hydraulic Oil Reservoir

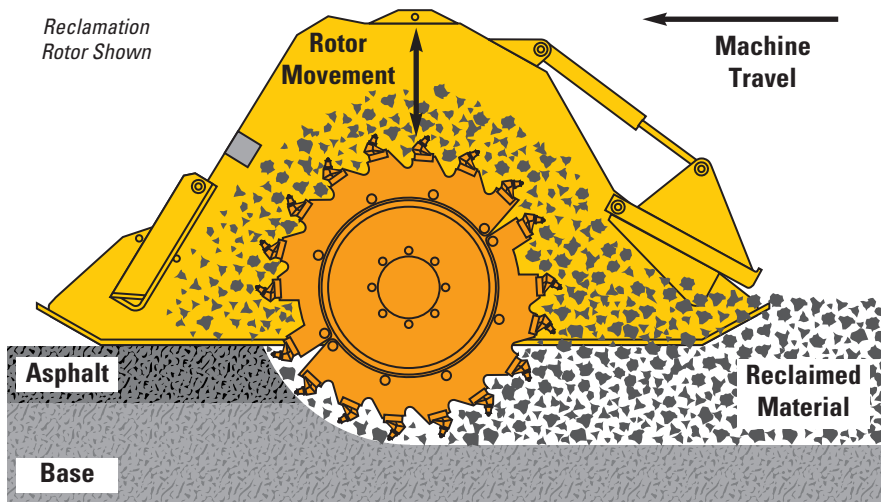
3 Planetary Wheel Ends with Brakes

4 No-Spin Differential

5 Propel Pump with Electronic Displacement Control

Mixing Chamber and Rotor

Assures depth control, proper sizing and thorough blending of materials.



Mid-machine rotor uses total machine weight to help keep rotor steady in the cut for uniform depth control.

Automatic depth control senses change in depth and corrects rotor level to maintain predetermined depth for precise control.

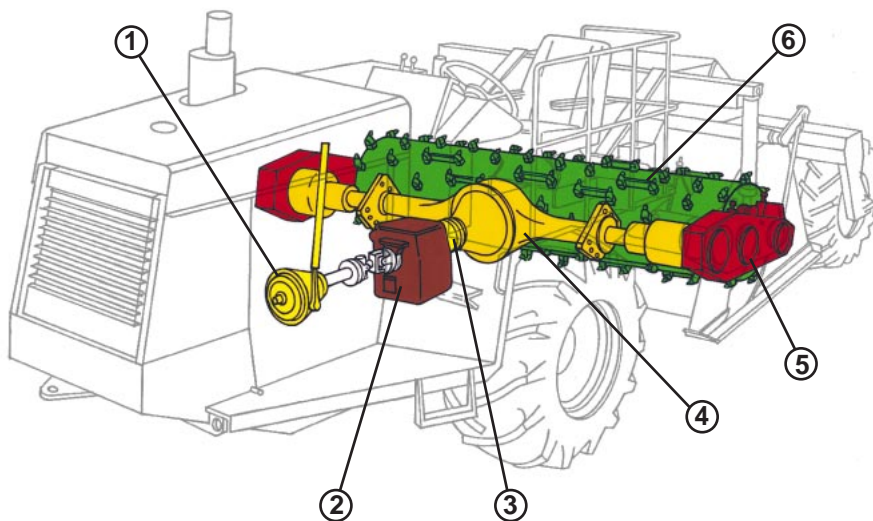
Interchangeable rotors – simple rotor swap permits both reclamation and stabilization.

Mixing chamber is a heavy-duty hood with large volume to handle deep mixing.

Adjustable rear door for optimum control of gradation and uniformity.

Mechanical Rotor Drive System

Delivers continuous, smooth power for high production and optimum blending.



Direct mechanical rotor drive allows efficient and reliable transfer of engine power to rotor.

Three rotor speeds for maximum performance in a variety of materials and cutting depths.

Heavy-duty shear disc or optional torque limiter protects rotor drive components from torsional stress and shocks.

Rugged single strand drive chains rated at 135,000 lbs resists breakage and drives rotor on both ends. Simple tension adjustment and self-lubricating.

- 1 Master Clutch
- 2 Transmission
- 3 Shear Disc
- 4 Axle
- 5 Chain Case
- 6 Rotor

Operator's Station

Designed for comfort and efficiency.

Convenient controls located for operation in the seated position.

Propel lever provides forward/reverse speed control and primary braking.

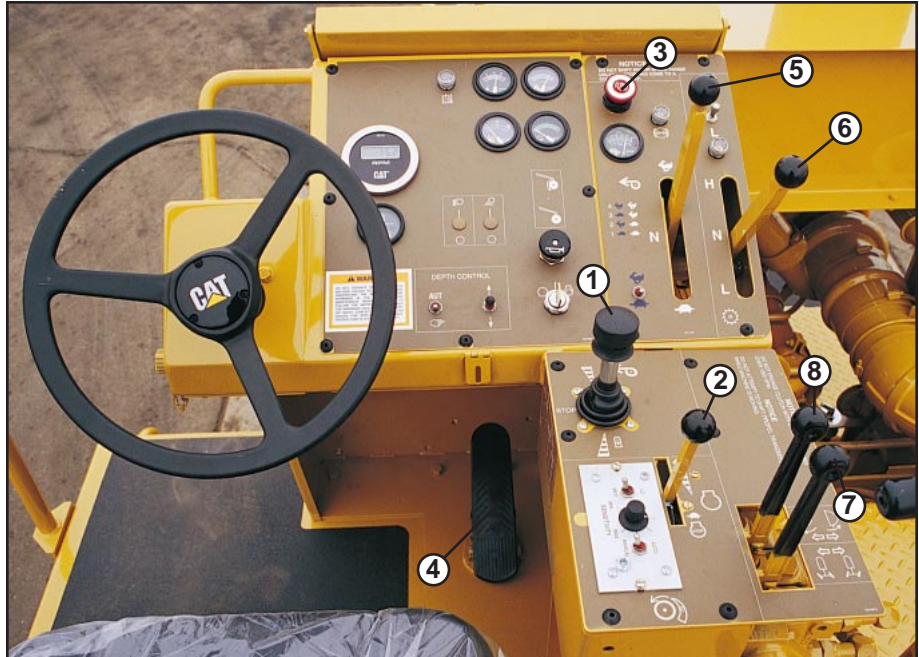
Clear instrumentation includes tachometer, air brake and engine system gauges.

Comfortable seat is padded, three-way adjustable with flip-up arm rests.

Secondary brake pedal when applied automatically destrokes propel pump and engages wheel brakes to stop machine.

Standard rear steering allows operator to maneuver in tight quarters.

- | | |
|-------------------|----------------|
| 1 Propel Lever | 5 Propel Shift |
| 2 Throttle | 6 Rotor Shift |
| 3 Parking Brake | 7 Rear Steer |
| 4 Secondary Brake | 8 Rear Door |



Serviceability

Less time on maintenance means more time on the job.

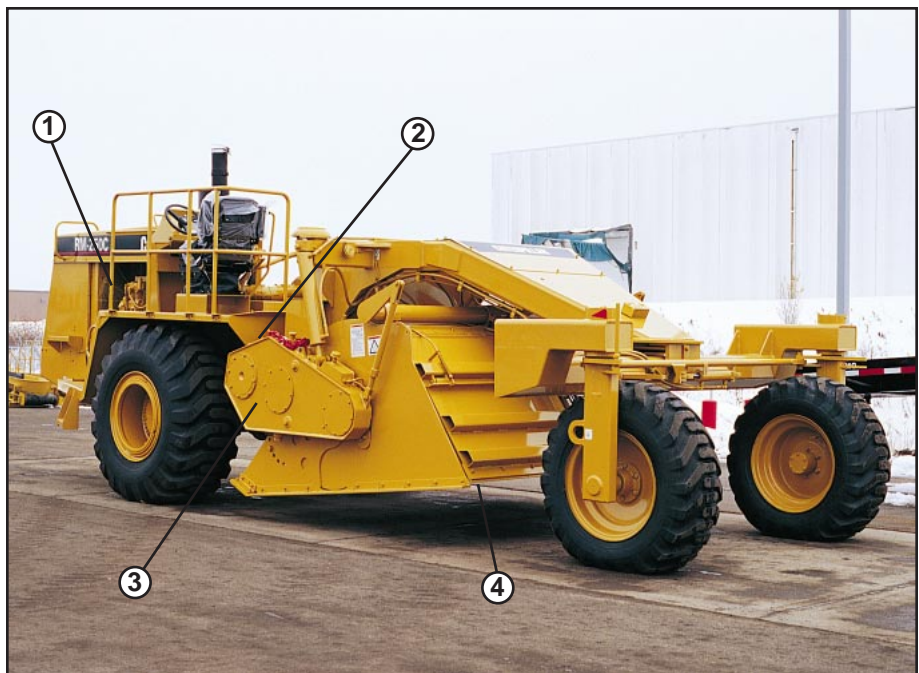
Electrical wiring is color-coded and numbered to simplify troubleshooting. Nylon braided wrap and all-weather connectors ensure electrical system integrity. Two Cat batteries provides 24-volts.

Hinged service doors open wide on top deck for access to rotor drive components and shear disc and bolt.

Reclaimer rotor maintenance is simple with drive-in, knock-out cutter bits. Rotor chamber and rear door lock up for access to rotor. Cutter bit removal tool included with machine tool box.

Self-lubricating rotor drive chains in sealed chain cases partially filled with oil.

- | |
|----------------------|
| 1 Engine Compartment |
| 2 Rotor Drive |
| 3 Chain Case |
| 4 Rotor Maintenance |



Rotor Selection

Choice of three rotor designs for different applications and depth specifications.

Breakaway Reclamation Rotor

Designed primarily to pulverize asphalt layers.

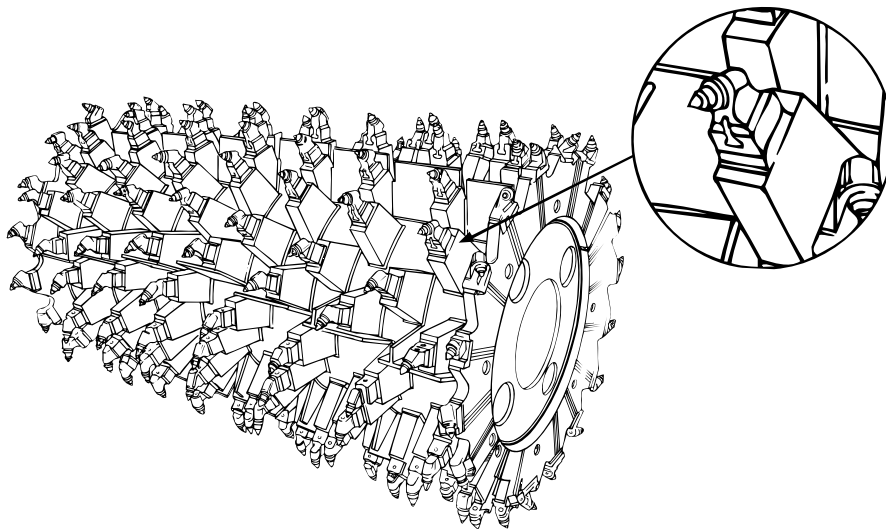
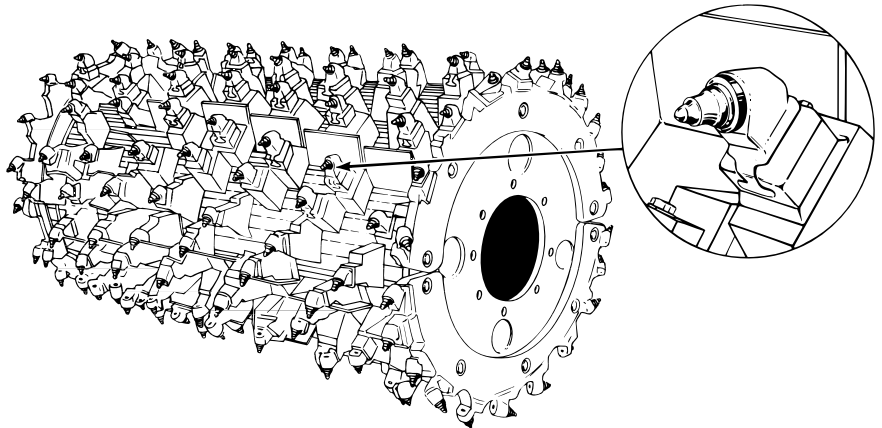
188 carbide-tipped tools are mounted in drive-in, knock-out tool holders and arranged in a chevron pattern for maximum breakout force.

Breakaway design tool holders allow for fast replacement without welding.

Kicker paddles strategically placed to help carry pulverized material over rotor.

Replaceable end rings protect rotor mandrel from wear. Rings are hard-faced for extended service.

Maximum depth is 330 mm (13").



Combination Rotor

Can be used for either reclamation or soil stabilization.

108 tools are mounted in drive-in, knock-out tool holders.

Holders accept either point-attack reclamation tools or spade-type 38 mm (1.5") wide stabilization tools.

Breakaway design tool holders allow for fast replacement without welding.

Replaceable, hard-faced end rings protect rotor mandrel from wear.

Maximum depth is 381 mm (15").

Quick Change Stabilization Rotor

Designed for soil stabilization.

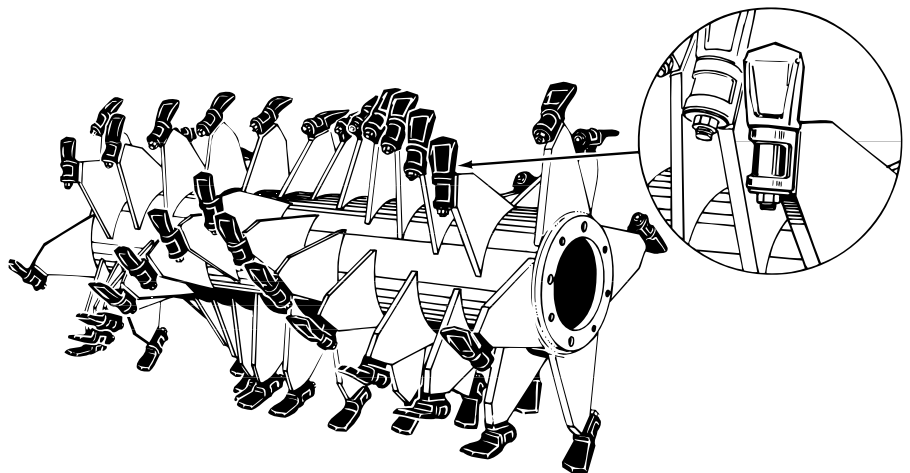
58 spade-type tools secured by a single nut and bolt for reduced maintenance time.

Carbide faced tools standard for long service life.

Universal application – blends additives with cohesive, semi-cohesive or granular materials.

Maximum depth for up-cut is 381 mm (15").

Maximum depth for down-cut is 457 mm (18").



Diesel Engine

Caterpillar® 3406C DITA turbocharged, after-cooled diesel engine.

Ratings at	RPM	kW	hp
Gross power	2100	250	335
Net power	2100	230	309

The following ratings apply at 2100 RPM when tested under the specified standard conditions:

Net Power	kW	hp	Ps
Caterpillar	230	309	—
EEC 80/1269	230	309	—
ISO 9249	230	309	—
SAE J1349 Jan90	228	305	—
DIN 70020	—	—	320

Gross Power	kW	hp	Ps
ISO 3046-2	250	335	340

Dimensions

Bore	137 mm	5.4"
Stroke	165 mm	6.5"
Displacement	14.6 liters	893 cu in.

Power rating conditions

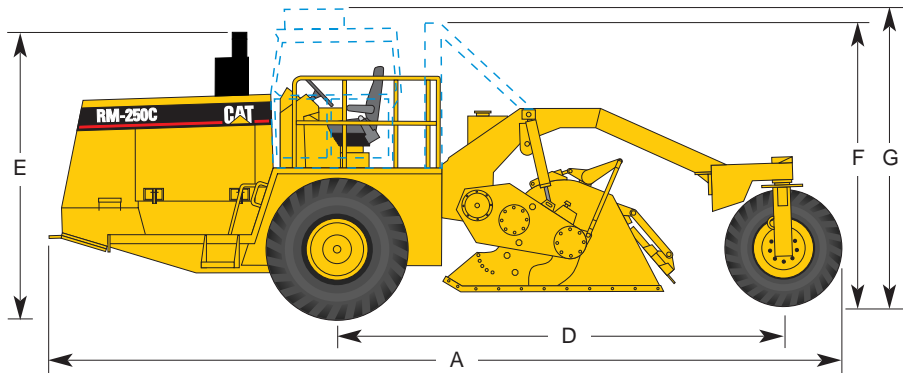
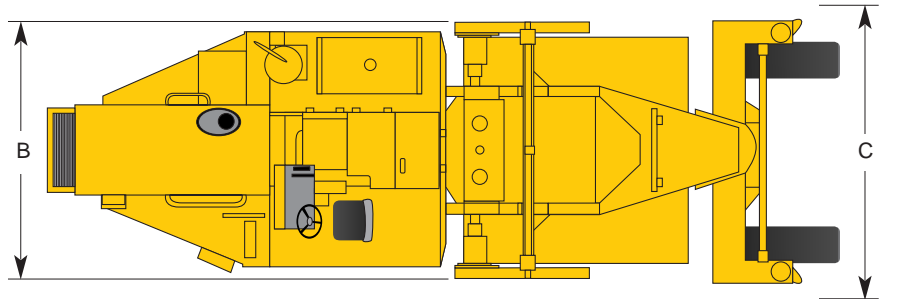
- Based on standard air conditions of 25°C (77°F) and 99 kPa (29.32" Hg) dry barometer.
- Used 35° API gravity fuel having an LHV of 42 780 kJ/kg (18,390 Btu/lb) when used at 30°C (86°F) [ref. a fuel density of 838.9 g/L (7.001 lb/U.S. gal)].
- Net power advertised is the power available at the flywheel when the engine is equipped with a fan, air cleaner, muffler and alternator.
- No derating required up to 2286 m (7500') altitude.

The dry-type air cleaner with primary and secondary elements has an automatic dust ejector with visual restriction indicator.

24-volt direct electric starting and charging system.

Dimensions

A Length	8.78 m	28' 10"
B Width with wheels in	2.9 m	9' 7"
C Width with wheels out	3.5 m	11' 8"
D Wheelbase	4.97 m	16' 4"
E Height at exhaust stack	3.22 m	10' 7"
F Height at ROPS/cab	3.28 m	10' 9"
G Height at conditioner	3.48 m	11' 5"



Operating Weights (approximate)

Weights include lubricants, full fuel and hydraulic tanks and a 80 kg (175 lb) operator.

Reclamation Configuration without Rotor*

machine without ROPS	16 160 kg	35,635 lb
machine with ROPS	16 435 kg	36,235 lb
machine with ROPS/cab	16 780 kg	37,000 lb

Stabilization Configuration without Rotor

machine without ROPS	13 640 kg	30,070 lb
machine with ROPS	13 910 kg	30,670 lb
machine with ROPS/cab	14 270 kg	31,430 lb

Rotor Configurations

breakaway reclamation	2630 kg	5800 lb
combination	2950 kg	6500 lb
15" quick change stabilization up-cut	1092 kg	2410 lb
18" quick change stabilization down-cut	1795 kg	3960 lb

*Reclamation configuration includes 1815 kg (4000 lb) of steel plates along with 1690 kg (765 lb) of calcium chloride in the rear tires as standard equipment.

Brakes

Normal usage brake

- Closed-loop hydrostatic drive provides dynamic braking.

Pedal brake features

- Pedal actuated air drum brakes in wheel ends.
- Propel pump destroyed when brake pedal is applied.

Parking brake features

- Button-actuated, spring-applied, air-released drum brakes in wheel ends.
- Propel pump is destroyed when parking brake is engaged. Propel lever must be returned to neutral after brake is released before machine will propel.

Tires

Rear wheels pivot 180° to positions inside or outside of cut.

Reclamation

Front	600 mm (23.5") x 635 mm (25") 16-ply SSG L-2, 45 psi
Rear	395 mm (15.5") x 635 mm (25") 8-ply lug type L-2, 30 psi

Stabilization

Front	715 mm (28") x 660 mm (26") 10-ply lug R-1, 24 psi
Rear	395 mm (15.5") x 635 mm (25") 8-ply lug type L-2, 30 psi

Service Refill Capacities

	Liters	Gallons
Fuel tank	416	110
Cooling system	61	16
Crankcase	34	9
Differential (propel)	14	3.6
Wheel ends (each)	3.31	0.88
Hydraulic system	200	53
Rotor bearing lube (each)	2.4	0.6
Rotor axle	22.7	6
Rotor transmission	12	3
Propel transmission	4	1
Rotor chain case (each)	3.8	1

Propel System

Features

- A variable displacement pump driving a two-speed motor.
- Motor drives a two-speed transmission directly mounted to a steerable drive axle with planetary gear reduction in each wheel end.
- Infinitely variable machine speed determined by propel lever.
- Load sensing system matches propel speed to load on rotor.

Speeds (forward and reverse):

First	40 mpm – 132 fpm
Second	4 km/hr – 3 mph
Third	10 km/hr – 6 mph
Fourth	20 km/hr – 12 mph

Frame

Fabricated from heavy gauge steel plates, steel tubes and structural steel shapes. Frame joined to rear bolster with a heavy-duty horizontal pin in self lubricated, wound, composite bearings to allow rear bolster oscillation of ± 15°.

Rotor Options

Three rotor styles are available. All mount to the standard mixing chamber. Breaker bar included with breakaway and combination rotors.

Rotor	Width	Diameter	Tools	Cut	Max. Depth
Breakaway Reclamation	2438 mm (96")	1130 mm (45")	188	Up	330 mm (13")
Combination	2438 mm (96")	1220 mm (48")	108	Up	381 mm (15")
15" Quick Change	2286 mm (90")	1220 mm (48")	58	Up	381 mm (15")
18" Quick Change	2286 mm (90")	1372 mm (54")	58	Down	457 mm (18")

Rotor Drive System

Operates through engine P.T.O. clutch.

Features

- Three rotor speeds are created through rotor drive axle and rotor transmission.
- Choice of rotor speeds permits working in wide range of materials and depths.
- Single strand rotor drive chains on both sides are contained in heavy-duty chain cases. Shear disc or optional torque limiter protect rotor drive components.

Speeds:

Low/Low	124 rpm
Low/High	168 rpm
High/Low	284 rpm

Steering

Equipped with hydraulic powered steering for smooth machine handling. System includes three 76 mm (3") bore, double-acting steering cylinders powered by a vane-type pump. Front and rear wheel steering are standard.

Minimum turning radius:

Inside	5.5 m (18')
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Optional Equipment

Roll Over Protective Structure (ROPS) is designed to meet SAE standard J1040 Apr88, which can be field installed.

FPM Indicator measures machine speed and displays on an analog readout. Helps operator maintain efficient speed for higher production. A meters per minute display is also available.

Working Light Package includes four adjustable flood lights, two positioned in front and two in the rear. For use under working conditions only, not highway transport purposes.

Cab includes heater, defroster and air conditioner.

Liquid Additive System (Emulsion or Water) improves processed material with precisely metered liquid additives at a flow of 45 – 832 liters (12 – 220 U.S. gallons) per minute. System includes pump, in-line flow meter, FPM indicator, microprocessor control, spray bar with hydraulic shut-off and three sets of spray nozzles to cover a wide flow range.

Water Spray System for accurate addition of water to processed material. System includes a 190 – 1135 liters (50 – 300 U.S. gallons) per minute centrifugal pump, 76 mm (3") in-line flow meter, spray bar with nozzles and hydraulically operated single valve spray bar shut-off.

Roading Light Package includes two headlights, two clearance lights and two turn signal lights installed on the front of the machine and rear bolster.

Mirror Package includes a mirror and mounting bracket located on both the left and right sides of the engine compartment.

Rear Wheel Assist provides on-demand rear wheel assist in all gears which can be selected by the operator using a switch at the operator's station. When engaged, a portion of the hydraulic flow from the standard propel pump is sent to high torque, high displacement motors on the rear wheels. Tractive effort increases by; 22% in first gear, 34% in second gear, 53% in third gear and 64% in fourth gear when rear wheel assist is engaged. The rear wheels freewheel when rear wheel assist is not engaged.

Counterweight System for the reclamation configuration includes 1815 kg (4000 lb) of steel plates when field installed.

Sound Suppression Package includes a louvered grill in front of the radiator and engine enclosures with sound suppression.

Torque Limiter is adjustment-free and installs on the rotor drive line between the rotor transmission and the rotor drive axle and replaces the standard shear disc arrangement. It protects the rotor drive train by limiting force sent to the transmission in the event the rotor strikes a large object. When rotor loading in excess of approximately 5830 N-m (4300 lb-ft) occurs, the limiter slips momentarily without interrupting normal machine operation. It eliminates the need to stop to replace a broken shear bolt.

Front Tires for reclamation – 600 mm (23.5") x 635 mm (25") 16-ply SSG L-2, 45 psi. are available as a field installed attachment.

Front Tires for stabilization – 715 mm (28") x 660 mm (26") 10-ply lug R-1, 24 psi. are available as a field installed attachment.

Total Customer Support

Parts availability – most parts on dealer's shelf when you need them. Computer-controlled, emergency search system backup.

Parts stock lists – dealer helps you plan on-site parts stock to minimize your parts investment while maximizing machine availability.

Service capability – dealer's shop or fast field service by trained technicians using latest tools and technology.

Machine management services – effective preventive maintenance programs, cost-effective repair options, customer meetings, operator and mechanic training.

PM Planner – Cat software program helps you schedule preventive maintenance, plan required parts purchases and track total maintenance costs.

Remanufactured parts – pumps and motors, engines, fuel system and charging system components available from dealer at 20-50% of new part cost.

Literature support – easy-to-use parts books, operation and maintenance manuals and service manuals help you get maximum value from equipment.

Flexible financing – your dealer can arrange attractive financing on the entire line of Caterpillar equipment. Terms structured to meet cash flow requirements. See how easy it is to own, lease or rent Cat equipment.

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