

RR-250B SS-250B

Road Reclaimer
Soil Stabilizer

CAT[®]



Cat[®] 3406C DITA Diesel Engine

Gross power	250 kW	335 hp
Cutting Width	2438 mm	96"

Mixing Depth (maximum)

Reclamation	381 mm	15"
Stabilization rotor	381 mm	15"
Deep mix stabilization	457 mm	18"

Cat® 3406C DITA 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 m (7500') elevation.

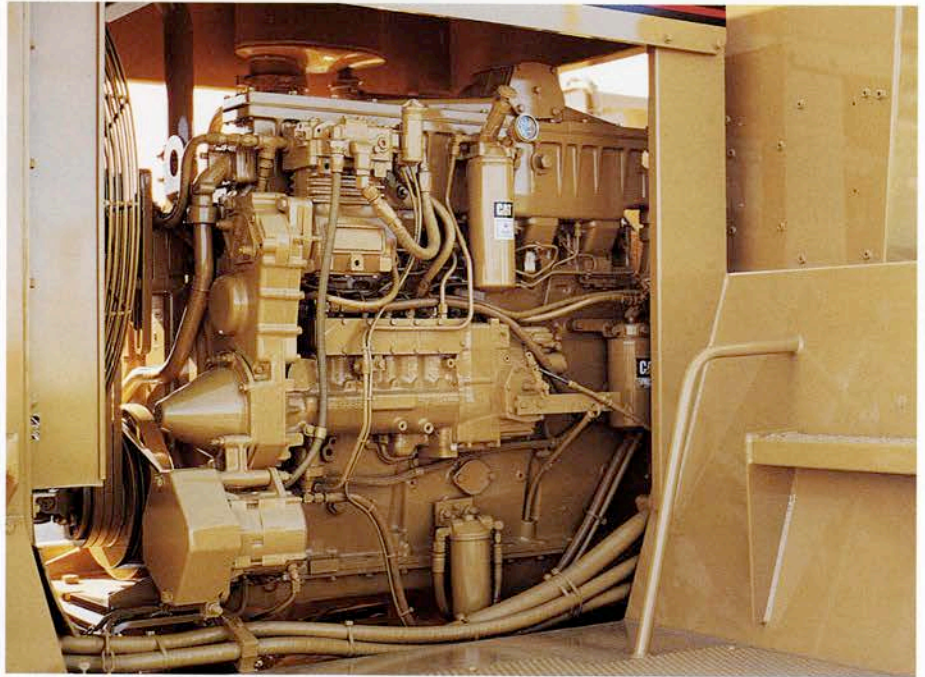
Pistons are cast aluminum alloy and gallery cooled for better performance, fuel consumption and improved emissions.

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.

Meets emissions standards through 2000.



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.

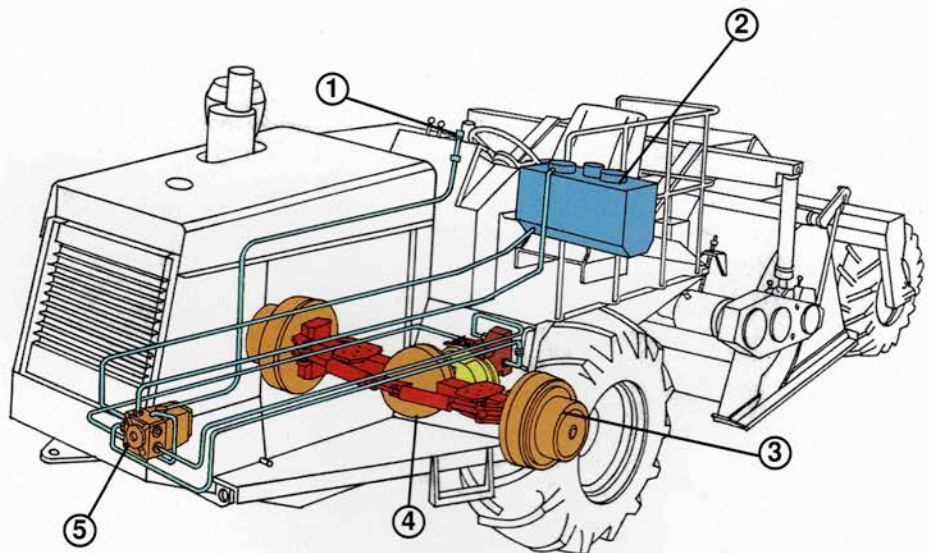
Single lever control of speed and direction with top speed 20 km/h (12 mph).

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 Differential
- 5 Propel Pump with Electrical Displacement Control

Mixing Chamber and Rotor

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

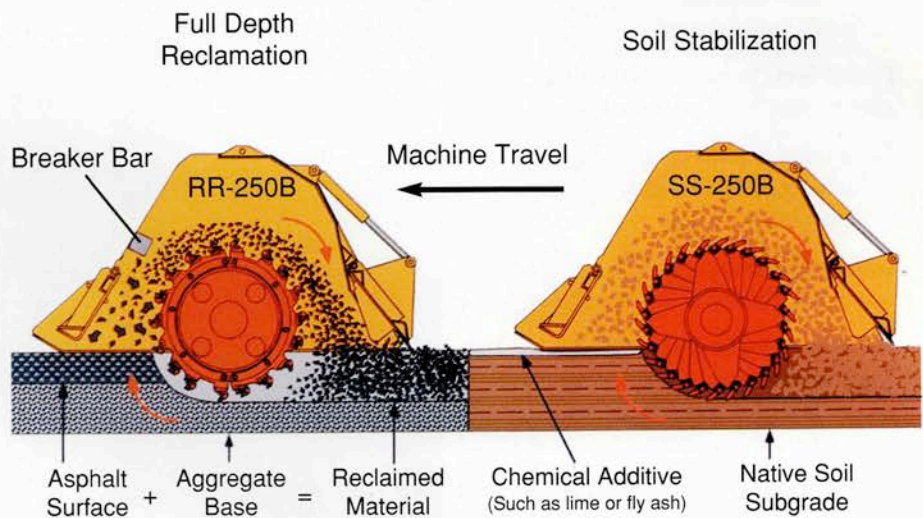
Mid-machine rotor uses total machine weight to help keep rotor steady in the cut for uniform depth control.

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.

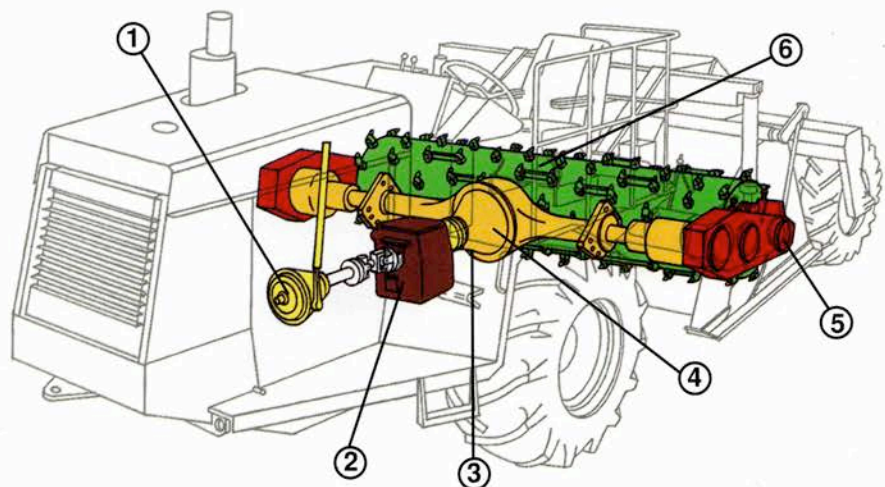
Mechanical drive allows efficient and reliable transfer of engine power to rotor.

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 drive chains. A single strand, 135,000 lb chain resists breakage and drives rotor on both ends. Simple tension adjustment and self-lubricating.

Direct Mechanical Rotor Drive



- 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.

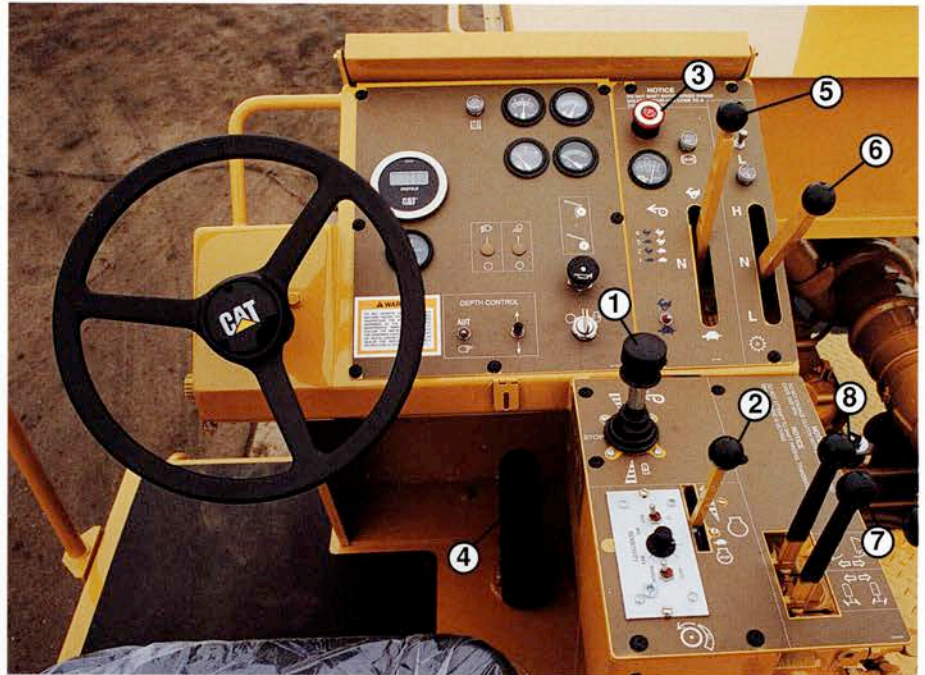
Clear instrumentation includes tachometer, air brake and engine system gauges.

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 |



Service

Less time on maintenance means more time on the job.

Electrical system features color-coded, numbered wiring harnesses for easy trouble-shooting. Kevlar wrapped for cut resistance. Cat batteries.

Hinged service doors open wide on top deck for access to rotor drive, including 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. Tooth puller included with machine tool box.

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

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

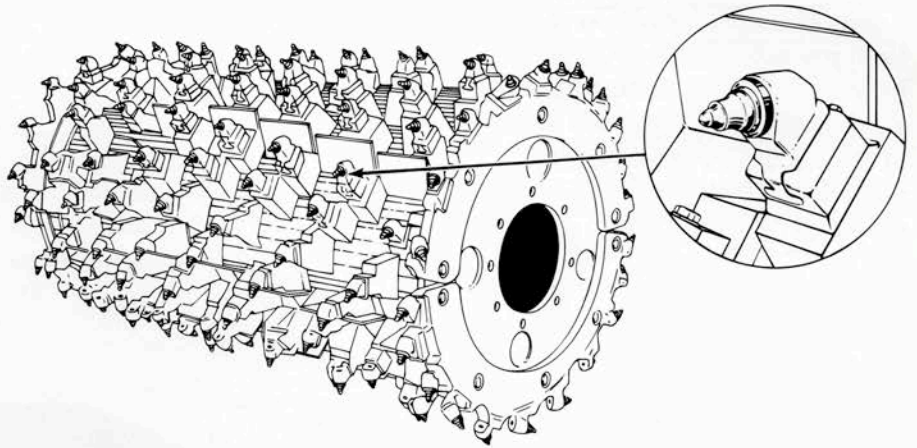


Rotor Selection

Choice of rotor designs for different applications and depth specifications.

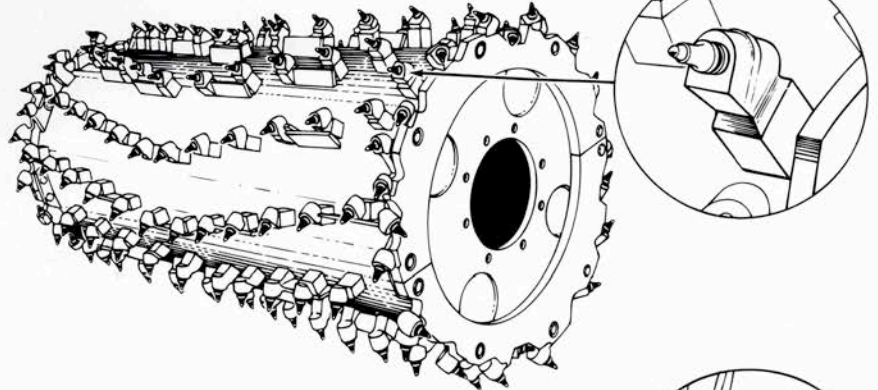
Breakaway Reclamation Rotor

- 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 rotor has bolt-on tool holders for fast replacement without welding.
- Kicker paddles 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").



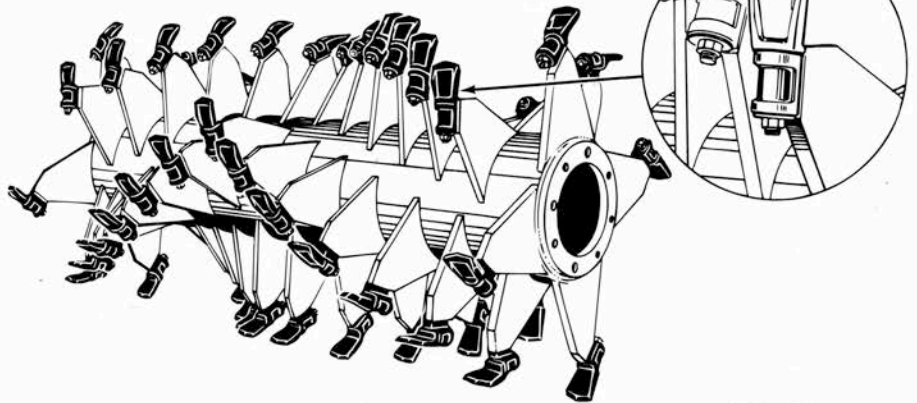
Cone Tool Reclamation Rotor

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



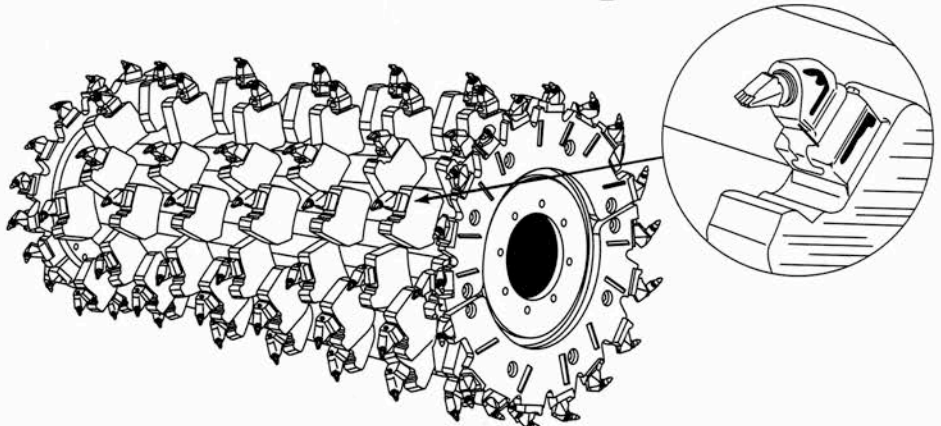
Quick Tool Change Stabilization Rotor

- 58 spade-type tools with 381 mm (15") or 457 mm (18") maximum depth.
- Carbide faced tools standard for long service life.
- Tool secured by single nut for reduced maintenance time.
- Universal application—blends additives with cohesive, semi-cohesive or granular materials.



Combination Reclamation/Stabilization Rotor

- 108 tools are mounted in drive-in, knock-out tool holders.
- Rotor can be used for reclamation or stabilization by changing between point attack or spade-type tools.
- Flighting designed to protect holders from premature wear.
- Replaceable end rings protect rotor mandrel from wear. End rings have wear strips for extended service.
- Maximum depth is 381 mm (15").



Diesel Engine

Caterpillar® 3406C DITA turbo-charged, after-cooled diesel engine. 1996 emissions certified.

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

ISO 3046-2	250	335	340
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Dimensions

Bore	137 mm	5.4"
Stroke	165 mm	6.5"
Displacement	14,6 liters	893 cu in.

Power rating conditions

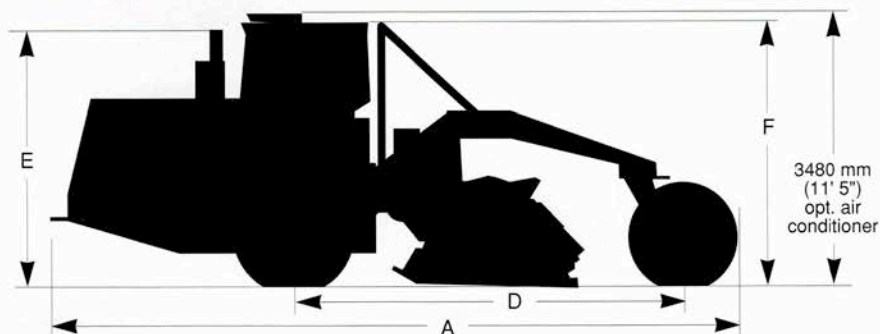
- Based on standard air conditions of 25°C (77°F) and 99kPa (29.32" Hg) dry barometer.
- Used 35° API gravity fuel having an LHV of 42,780 kJ/kg (18,390 Btu/lb) when used at 30°C (86°F) [ref. a fuel density of 838.9 g/L (7.001 lb/U.S. gal)].
- Net power advertised is the power available at the flywheel when the engine is equipped with fan, air cleaner, muffler, and alternator.
- No derating required up to 2286 m (7,500 ft.) altitude.

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

24-volt direct electric starting and charging system with ether aid (ether canister not included).

Dimensions

Length (A)	8,78 m	28' 10"
Width (wheels in) (B)	2,9 m	9' 7"
Width (wheels out) (C)	3,5 m	11' 8"
Wheelbase (D)	4,97 m	16' 4"
Height (E)	3,22 m	10' 7"
Height (w/ROPS) (F)	3,28 m	10' 9"
Weight RR-250B	18 506 kg	40,799 lb
On front wheels	12 728 kg	28,059 lb
On rear wheels	5 779 kg	12,740 lb
Weight SS-250B	14 288 kg	31,500 lb
On front wheels	10 787 kg	23,780 lb
On rear wheels	3 502 kg	7,720 lb



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.

RR-250B

Front

23.5 x 25-16 ply Lug Type E-2, 45 psi

Rear—fluid filled (calcium chloride)

15.5 x 25-8 ply Lug Type E-2, 30 psi

SS-250B

Front 28.1 x 26-10 Lug PR, 24 psi

Rear 14.9 x 24-6 PR Lug, 18 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:

First	0-40 mpm	0-132 fpm
Second	0-4 km/hr	0-3 mph
Third	0-10 km/hr	0-6 mph
Fourth	0-20 km/hr	0-12 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 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.

Rotor 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 wheel and rear wheel steering are standard.

Minimum inside turning radius	5,5 m	18'
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Rotor Options

Four rotor styles are available. All are 2438 mm (96") wide and mount to the standard mixing chamber. Breaker bar included with reclamation rotors.

Rotor	Diameter	Tools	Cut	Max. Depth
Quick Change	1220 mm (48")	58	Up	381 mm (15")
Deep Mix Quick Change	1372 mm (54")	58	Down	457 mm (18")
Breakaway Reclamation	1130 mm (45")	188	Up	330 mm (13")
Cone Tool Reclamation	1130 mm (45")	188	Up	330 mm (13")
Combination	1220 mm (48")	108	Up	381 mm (15")

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Optional Equipment

Roll Over Protective Structure (ROPS)

Designed to meet SAE recommended practice J1040APR88. Can be field installed.

FPM Indicator Measures machine speed and displays it on analog readout. Helps operator maintain efficient speed for higher production. Meters per minute display available.

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

Cab includes heater, defroster and optional 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 wide flow range.

Water Spray System For accurate addition of water to processed material. System includes 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.

Rear Wheel Assist On-demand rear wheel assist in all gears 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.

Sound Package Sound suppression with engine enclosures.

Torque Limiter The adjustment-free torque limiter installs on the rotor drive line between the rotor transmission and rotor drive axle differential 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 loading in excess of approximately 4300 foot pounds occurs, the limiter slips momentarily without interrupting normal machine operation. It eliminates the need to stop to replace broken shear bolts.

European Certification Arrangement

Cab, sound package, mirrors, guards, treads and special seat.

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

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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