

613G

Wheel Tractor-Scraper

CATERPILLAR®



Engine

| | | |
|----------------|-----------------|--------|
| Tractor Engine | Cat® C6.6 ATAAC | |
| Net Power | 135 kW | 181 hp |

Scraper Bowl

| | | |
|-----------------|--------------------|--------------------|
| Rated Load | 11 975 kg | 26,400 lb |
| Capacity Heaped | 8.4 m ³ | 11 yd ³ |

Weights

| | | |
|-------------------------|-----------|-----------|
| Total Operating – empty | 16 887 kg | 37,229 lb |
|-------------------------|-----------|-----------|

613G Features

New Cab – Standard

Greater visibility from a 30% larger cab – standard with air conditioning, heat and a rotating Cat Comfort seat.

Power Train

New power train components boost rimpull and power, improving load times by as much as 13%.

AccuGrade

Factory mounted platforms, hand holds and a GPS receiver mast are available to help you use AccuGrade to move dirt one-time and accurately.

Structures

New fuel tank with 95-gallon capacity can run a full 10-12 hour shift.

Hydraulics

New all-hydraulic brakes replace air over hydraulics, improving machine availability.

Serviceability

All new hose and harness routings reduce rub and pinch points.

Safety

A new steering disable valve locks the steering and eliminates unplanned machine articulation when entering or exiting the cab.

Elevator Structures

Made simpler and more robust with larger, greased rollers and fewer parts to service.

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The G-Series 613 carries on a unique tradition of clearing, cut and fill, and finish grade earthwork with a new emphasis on operator comfort and performance. The tractor frame has been redesigned to support a spacious new cab with a Cat Comfort seat that rotates 30 degrees for ease of loading. The cab is standard and comes with air conditioning and heat. Performance improvements – primarily in the cut – are the result of a new power train that features the Cat C6.6 with a horsepower increase and new torque converter. The result is more rimpull that when combined with more hydraulic flow to the elevator yields 13% faster loading. Order the machine with indicate-only AccuGrade and you'll move dirt more efficiently and profitably.

Operator Station

A spacious new cab, standard, offers room to operate more efficiently.

Operator Comfort

- Air conditioning and heat standard
- Hand holds and room to enter and exit freely
- Fully adjustable steering wheel and seat accommodate operator sizes, rotates for easy loading, durable yet soft cloth surface, adjustable seat suspension for hauling
- Arm rests, left foot rest for support and reduced fatigue
- Ergonomic, low-effort controls with auto-kickouts and detents improve efficiency and speed
- Radio ready

Productivity

- AccuGrade™ ready
- Cab mounted display for accurate material placement
- Excellent visibility to cutting edge facilitates fine grading, with more glass than 613CII
- Rotating seat for viewing the cutting edge and loading
- Fatigue-fighting comfort in the seat, roomy interior
- With all-new hydraulic system, implement and steering controls are quick to respond to operator input
- 76 dB(A) operator sound levels

Safety

- Improved visibility to the work site
- Steering disabled when operator is not in seat and machine speed is zero
- Low cab sound levels reduce fatigue
- Integrated ROPS protects the operator when combined with seat belt use
- Primary and secondary braking systems hydraulically actuated eliminates the air-over-hydraulic system
- Parking brake with 304 mm (12 inch) drum has more slope holding ability
- Front and rear windshield wipers

Instruments

- Simple gauge cluster is easy to read
- Backlit switches are close at hand
- Messaging alerts technicians and operator to service needs



Power Train

Cat® C6.6 and torque converter deliver horsepower and rimpull gains.



Cat C6.6 Engine with ACERT™ Technology

- Net power increase from the C6.6 engine (181 hp/135 kW)
- Electronically controlled for quick load response and emissions control
- Common rail fuel injection facilitates emissions compliance through pilot ignition and control over injection timing and pressures
- 500 hr engine oil and oil filter change intervals
- Easy access fuel filters
- Modular cooling package with swing out cores facilitates maintenance



Torque Converter

- New torque converter, proven in the D6N, increases rimpull by 11% in 2nd gear and shortens load times
- Efficient at delivering power to the ground converting fuel dollars into more dirt moved
- Built tough for constant directional changes typical of track-type tractor applications

Transmission

- Planetary powershift manual transmission
- 6 speeds forward/1 reverse
- Design proven for the application

Differential Lock

- Foot activated differential lock evenly distributes power, minimizing wheel spin
- Improves traction in slippery underfoot conditions



Hydraulics

Newly updated hydraulics enhance 613G performance and serviceability.

Braking

Primary, secondary and tertiary braking is hydraulically controlled without the need for an air system.

Hoses

- All new routings avoid rubs and facilitate service.
- New service port on the bowl side improves access to hoses reducing service time.

Hydraulic Tank

- New tank offers simpler construction, better accessibility, greater capacity, low oil turbulence and aeration with reverse flow filtration for cleaner oil.

Pumps, Motors, Valves

- All new pumps work more efficiently and are sized for performance improvement.
- New elevator pump provides higher flow and turns the elevator at slightly faster speeds.
- New implement valve offers faster response to operator input.
- Steering disable valve engages when machine is in Park, operator is absent from the seat and ground speed is zero. Eliminates unwanted articulation when entering or exiting the cab.

AccuGrade™ Grade Control

The 613G offers factory-installed AccuGrade options.



Features

- The 613G offers indicate-only AccuGrade™ system.
- The AccuGrade system is cross slope, single GPS technology.
- AccuGrade allows the operator to manually place or cut dirt exactly where it's called for.
- This system is accurate and efficient, allowing the 613G to work on stake-less job sites.
- For easy mounting of the satellite receiver, the 613G features purpose built platforms and hand-holds assembled and durability tested at the factory.
- These platforms align for safe removal of the GPS (Global Positioning System) receiver when the machine is articulated 90 degrees to the right.
- The system, along with the mast, is purpose built to work with the 613G's cutting edge.
- Each component has been designed and validated to withstand scraper applications and life expectancies.





Electrical

All new harnesses, routings and lamps improve availability and visibility.

Key Updates

- LED lights offer superior life and reliability on the rear of the scraper.
- HID lighting options available on flood lamps offer 6X the output of conventional halogens.
- Front head lamps feature low and high beam settings with directional lamps for roading.
- An optional air horn gets respect under all job site conditions.
- Polyurethane coated harnesses, found across the hitch, are weather resistant and improve durability.

Serviceability

The 613G is easier than ever to service, monitor and inspect.



- Accessibility to filter and fluid sight gauges are either at ground level or have platforms with anti-skid plate.
- Thoughtful hydraulic hose routings reduce wear and improve accessibility.
- Electrical wiring harnesses over the hitch use weather resistant polyurethane jacketing.
- Smaller harness sections are easy to replace and resist pinching and stretching.
- Cab tilts for access to left side of the engine.
- Fuse and breaker box located in the cab for easy access.
- Recessed battery reduces the opportunity for damage.
- Electric priming located on primary fuel filter.
- Grease point for elevator pivot joint located outside the bowl at ground level.
- New elevator rollers include grease fittings for longer life.
- New, clean fuel tank design reduces fuel contamination risk.
- Fold out radiator cores make cleaning fast and simple.
- Fault code messaging through the Electronic Monitoring Center simplify service.



613G Wheel Tractor-Scraper Specifications

Engine

| | | |
|----------------|-----------------|---------------------|
| Tractor Engine | Cat® C6.6 ATAAC | |
| Bore | 100 mm | 3.94 in |
| Stroke | 127 mm | 5 in |
| Displacement | 6.6 L | 403 in ³ |
| Net Power | 135 kW | 181 hp |
| Gross Power | 144 kW | 193 hp |

Transmission

| | | |
|----------------------|-----------|----------|
| 1 Forward | 3.4 km/h | 2.1 mph |
| 2 Forward | 5.6 km/h | 3.5 mph |
| 3 Forward | 9 km/h | 5.6 mph |
| 4 Forward | 14.3 km/h | 8.9 mph |
| 5 Forward | 20.6 km/h | 12.8 mph |
| 6 Forward | 39.3 km/h | 24.4 mph |
| Travel Speed Maximum | 39.3 km/h | 24.4 mph |
| Reverse | 5.8 km/h | 3.6 mph |

Hydraulics

| | | |
|---|------------|--------------|
| Bowl Cylinder Bore | 101.6 mm | 4 in |
| Bowl Cylinder Stroke | 419 mm | 16.5 in |
| Floor Cylinder Bore | 130 mm | 5.1 in |
| Floor Cylinder Stroke | 624.8 mm | 24.6 in |
| Ejector Cylinder Bore | 88.9 mm | 3.5 in |
| Ejector Cylinder Stroke | 914.4 mm | 36 in |
| Steering Circuit | 96 L/min | 25.4 gal/min |
| Scraper Circuit | 323 L/min | 85.3 gal/min |
| Supplemental Steering Circuit | 16 L/min | 4.23 gal/min |
| Relief Valve – Steering Circuit | 19 000 kPa | 2,756 psi |
| Relief Valve – Implement Circuit | 17 250 kPa | 2,502 psi |
| Compensator Settings – Elevator Circuit | 17 225 kPa | 2,498.3 psi |

Scraper Bowl

| | | |
|------------------------------|--------------------|---------------------|
| Capacity Heaped | 8.4 m ³ | 11 yd ³ |
| Rated Load | 11 975 kg | 26,400 lb |
| Capacity Struck | 6.8 m ³ | 8.9 yd ³ |
| Depth of Cut – max | 160 mm | 6.3 in |
| Width of Cut, to Router Bits | 2430 mm | 95.7 in |
| Ground Clearance – max | 450 mm | 17.7 in |
| Cutting Edge thickness | 22 mm | 0.87 in. |
| Hydraulic Penetration Force | 280 kN | 62,946 lb |
| Depth of Spread – max | 571 mm | 22.5 in |

Elevator

| | | |
|----------------------|---------|---------|
| Length – overall | 2438 mm | 96 in |
| Width of Flight Face | 176 mm | 6.9 in |
| Length of Flights | 1680 mm | 66.1 in |
| Spacing of Flights | 406 mm | 16 in |
| Number of Flights | 15 | |

Steering

| | | |
|---|----------|--------------|
| Width – 180° Turn | 8.93 m | 29 ft 4 in |
| Steering Angle – Right | 90° | |
| Steering Angle – Left | 90° | |
| Hydraulic Output | 96 L/min | 25.4 gal/min |
| Ground-Driven Secondary Steering System | 16 L/min | 4.23 gal/min |

Service Refill Capacities

| | | |
|-------------------------|---------|----------|
| Fuel Tank | 359.6 L | 95 gal |
| Crankcase | 20 L | 5.3 gal |
| Transmission | 35 L | 9.2 gal |
| Differential | 19 L | 5 gal |
| Final Drive (each side) | 5.8 L | 1.5 gal |
| Cooling System | 38.5 L | 10.2 gal |
| Hydraulic Reservoir | 128 L | 33.8 gal |

Weights

| | | |
|----------------------------|-----------|-----------|
| Total Operating – empty | 16 887 kg | 37,229 lb |
| Front Axle | 11 177 kg | 24,641 lb |
| Rear Axle | 5710 kg | 12,588 lb |
| Total Shipping | 16 626 kg | 36,653 lb |
| Tractor Shipping | 11 083 kg | 24,434 lb |
| Scraper Shipping | 5542 kg | 12,219 lb |
| Total Operating – loaded | 28 862 kg | 63,629 lb |
| Front Axle Weight – loaded | 15 134 kg | 33,364 lb |
| Rear Axle Weight – loaded | 13 728 kg | 30,266 lb |

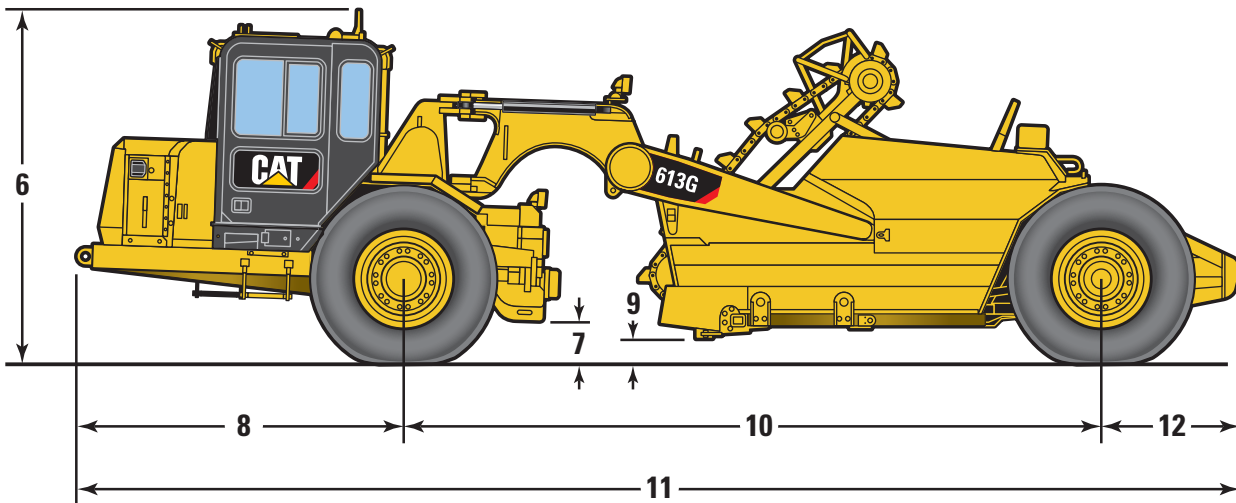
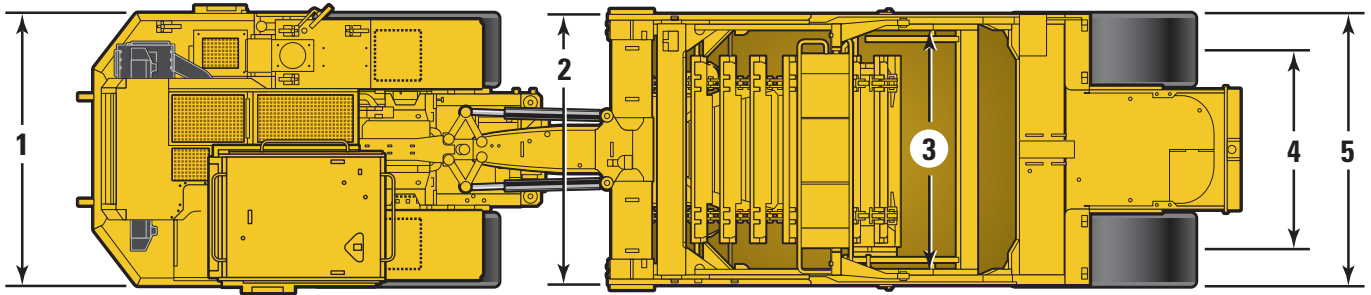
613G Wheel Tractor-Scraper Specifications

| Dimensions | | | Standards | |
|------------------------------------|-----------|----------|-----------|--|
| Height – overall shipping | 3190 mm | 125.6 in | ROPS/FOPS | ISO 3471-1994, SAE J1040-MAY 2003; ISO 3449-2005 |
| Length – overall machine | 10 419 mm | 410.2 in | | |
| Width – overall machine | 2430 mm | 95.7 in | Brakes | ISO 3450-1996 |
| Height – top of cab | 3190 mm | 125.6 in | | |
| Height – top of AccuGrade receiver | 3476 mm | 136.9 in | | |
| Height – scraper blade max. | 571 mm | 22.5 in | | |
| Width – tractor | 2430 mm | 95.7 in | | |
| Width – inside of bowl | 2203 mm | 86.7 in | | |
| Width – rear tire center lines | 1797 mm | 70.8 in | | |
| Width – outside rear tires | 2430 mm | 95.7 in | | |
| Rim radius | 635 mm | 25 in | | |
| Front of Tractor to Front Axle | 2934 mm | 115.5 in | | |
| Wheelbase | 6264 mm | 246.6 in | | |
| Rear Axle to Rear of Machine | 1221 mm | 48.1 in | | |
| Ground Clearance, Tractor | 367 mm | 14.4 in | | |

- Shipping height does not include GPS mast

Dimensions

All dimensions are approximate.

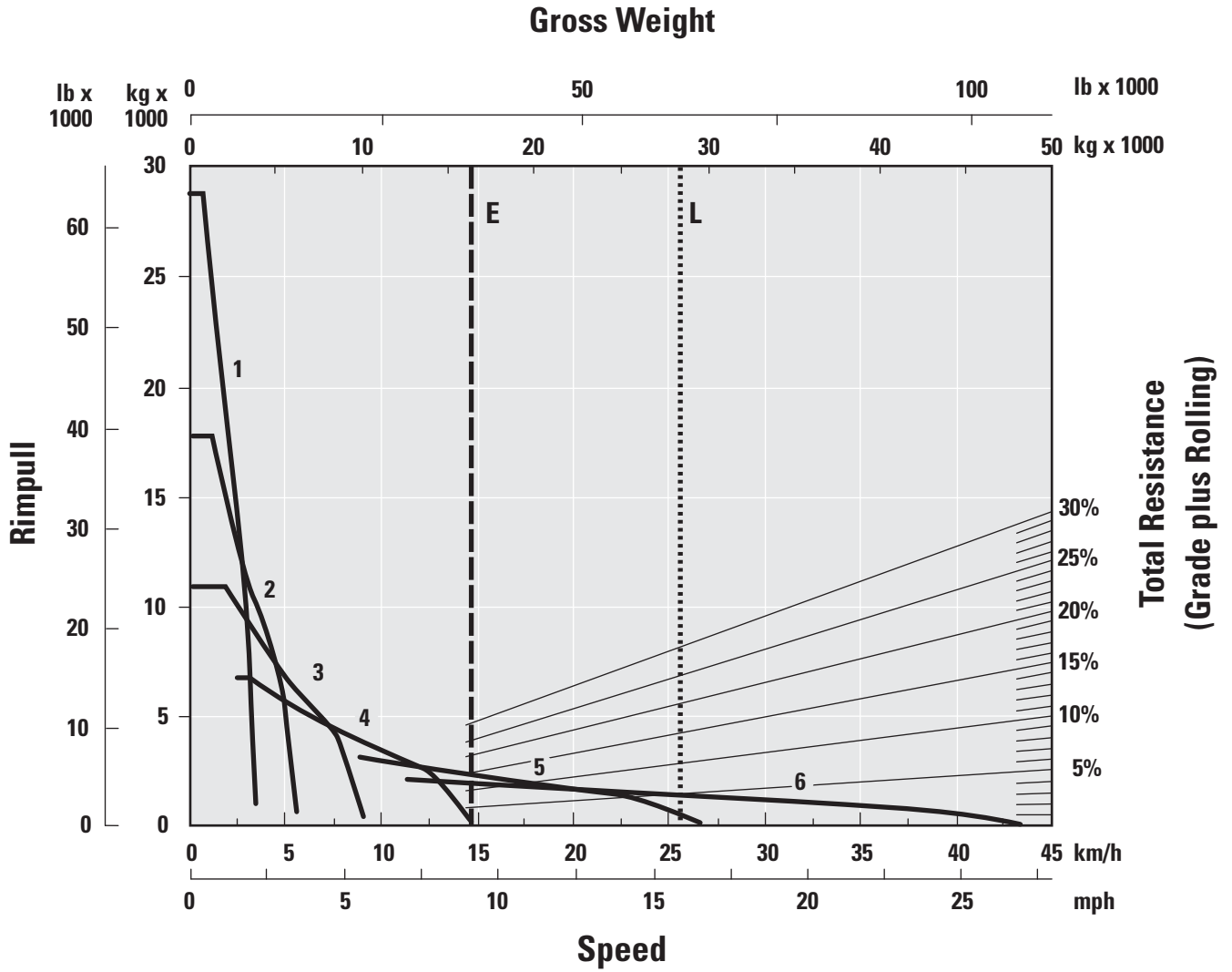


| | mm | in |
|---|------|-------|
| 1 Width – tractor | 2430 | 95.7 |
| 2 Width of cut, to router bits | 2430 | 95.7 |
| 3 Width – inside of bowl | 2203 | 86.7 |
| 4 Width – rear tire center lines | 1797 | 70.7 |
| 5 Width – outside rear tires | 2430 | 95.7 |
| 6 Height – overall shipping | 3190 | 125.6 |

| | mm | in |
|---|--------|-------|
| 7 Ground clearance – tractor | 367 | 14.4 |
| 8 Front of tractor to front axle | 2934 | 115.5 |
| 9 Height – scraper blade maximum | 571 | 22.5 |
| 10 Wheelbase | 6264 | 246.6 |
| 11 Length – overall machine | 10 419 | 410.2 |
| 12 Rear axle to rear of machine | 1221 | 48.1 |

613G Wheel Tractor-Scraper Specifications

613G Rimpull



Standard equipment may vary. Consult your Caterpillar dealer for details

| | | |
|---|---|---|
| Bowl | Diff lock | Shields, brake |
| 8 m ³ /11 yd ³ heaped | Operator not present | Transmission |
| Elevator | High beam | 6 speed Powershift, torque converter drive |
| Backup alarm | Brake system | Differential, lock-up |
| AccuGrade ready option weldments for bracket & mast | Transmission system | Scraper |
| Electrical | Hydraulic system | Braking system |
| Alternator, 80 ampere | Torque converter temp | Fuel pump, electric |
| Electrical system, 24 volt | Fuel level | Parking |
| Batteries (2), 70 ampere hr. 880 CCA, maintenance-free | Hyd. oil temp | Secondary |
| Lighting system | Mirrors, right side & rearview | Shields, brake |
| Headlights, highway signal (T) | Radio ready | Other Standard Equipment |
| Lights (LED), highway signals (S) | Seat, cloth, air suspension, rotates 30° | Tractor |
| AccuGrade ready option wiring embedded in machine harnesses | Seat belt (non-retractable) | Product Link |
| Starting/charging receptacle | Steering wheel, tilt & telescopic | Fenders |
| | Windshield washer-wiper | Hydraulic system |
| | Air conditioner and heater | Locks, vandalism protection |
| | Power train | Rims (2), center mounted |
| Operator Environment | Tractor | Steering, variable flow modulated |
| Cab, ROPS, sound suppressed | Engine, Cat C6.6 ACERT | Tow pins, front and rear |
| Gauges/Indicators | I-6, 4 stroke diesel, turbocharged, aftercooled | Scraper |
| Turn signals | Electric start, 24 volt | Rims (2), center mounted |
| Battery charge | Air cleaner w/ precleaner | Tires, Rims, & Wheels |
| Fuel pressure | Fan, suction | An allowance for 23.5R25 radial tires is included in the base machine price. Tires MUST be selected from the Mandatory Attachments section. |
| Engine monitoring | Guard, crankcase | Antifreeze |
| Throttle lock | Muffler | Extended Life Coolant to -36° C (-33° F) |
| Primary steering | Braking system (hydraulic) | |
| Action Light | Caliper disc (front & rear) | |
| Tachometer | Parking | |
| Parking brake | Secondary | |
| Steering disable | | |

613G Optional Equipment

Optional equipment may vary. Consult your Caterpillar dealer for details

Ground Engaging Tools

Teeth, GET, Long set of 4

Bolt-on, set of 4, with replaceable tips

Antifreeze, -50° C (-58° F)

NOTE: Standard machine is protected with Extended Life Coolant to -36° C (-33° F)

Packing

Domestic Packing

Domestic Truck, Tractor only

Domestic Rail, Tractor only

Domestic Truck, TR/SCR Combined

Domestic Rail, TR/SCR Combined

Export Packing

Tractor only, Cab or Canopy remains mounted for shipment

Export Protection, Bundled

Tractor and Scraper. Units are detached for shipment

Additional Packing

Domestic Truck

For use with OP-0685 Miscellaneous

Material only

Note: Custom Product Ordering Instructions Include OP-5203 Custom Modification on all orders with Custom Product part numbers. Contact 217-475-6523 for additional information.

Electrical

Lights, 5×5 flood, Work Lamps

Flood lamps located on top of gooseneck and drive train pointing into the bowl and cutting edge

CANNOT BE USED WITH: 289-2630 lights, 5×5 flood, work lamps

Guard, Power train

Other Attachments

Tractor

Steering, Secondary

Starting Aid, Ether

Does not include cylinder. For temperatures below -9° C (15° F).

Scraper

Fenders, Standard

AccuGrade

AccuGrade ARO (Attachment Ready Option) installed by the factory. Includes mast, access platforms, and hand holds, electrical, structural and hardware and GPS receivers. Required for all North American, Europe, Africa and Middle East orders as well as Latin American orders.

613G Wheel Tractor-Scraper

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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