613G
Wheel Tractor-Scraper

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

Scraper Bowl
Rated Load
Capacity Heaped
11 975 kg
8.4 m³
26,400 lb
11 yd³

Weights
Total Operating – empty
16 887 kg
37,229 lb
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.

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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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.
### Engine
- **Tractor Engine**: Cat® C6.6 ATAAC
- **Bore**: 100 mm 3.94 in
- **Stroke**: 127 mm 5 in
- **Displacement**: 6.6 L 403 in³
- **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 m³ 11 yd³
- **Rated Load**: 11 975 kg 26,400 lb
- **Capacity Struck**: 6.8 m³ 8.9 yd³
- **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

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Measurement</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Height – overall shipping</td>
<td>3190 mm</td>
<td>125.6 in</td>
</tr>
<tr>
<td>Length – overall machine</td>
<td>10,419 mm</td>
<td>410.2 in</td>
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<tr>
<td>Width – overall machine</td>
<td>2430 mm</td>
<td>95.7 in</td>
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<tr>
<td>Height – top of cab</td>
<td>3190 mm</td>
<td>125.6 in</td>
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<tr>
<td>Height – top of AccuGrade receiver</td>
<td>3476 mm</td>
<td>136.9 in</td>
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<tr>
<td>Height – scraper blade max.</td>
<td>571 mm</td>
<td>22.5 in</td>
</tr>
<tr>
<td>Width – tractor</td>
<td>2430 mm</td>
<td>95.7 in</td>
</tr>
<tr>
<td>Width – inside of bowl</td>
<td>2203 mm</td>
<td>86.7 in</td>
</tr>
<tr>
<td>Width – rear tire center lines</td>
<td>1797 mm</td>
<td>70.8 in</td>
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<tr>
<td>Width – outside rear tires</td>
<td>2430 mm</td>
<td>95.7 in</td>
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<tr>
<td>Rim radius</td>
<td>635 mm</td>
<td>25 in</td>
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<tr>
<td>Front of Tractor to Front Axle</td>
<td>2934 mm</td>
<td>115.5 in</td>
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<tr>
<td>Wheelbase</td>
<td>6264 mm</td>
<td>246.6 in</td>
</tr>
<tr>
<td>Rear Axle to Rear of Machine</td>
<td>1221 mm</td>
<td>48.1 in</td>
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<tr>
<td>Ground Clearance, Tractor</td>
<td>367 mm</td>
<td>14.4 in</td>
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</table>

- Shipping height does not include GPS mast

## Standards

<table>
<thead>
<tr>
<th>Component</th>
<th>Standard</th>
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<tbody>
<tr>
<td>Brakes</td>
<td>ISO 3450-1996</td>
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### Dimensions

All dimensions are approximate.

<table>
<thead>
<tr>
<th></th>
<th>mm</th>
<th>in</th>
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<tbody>
<tr>
<td>1</td>
<td>Width – tractor</td>
<td>2430</td>
</tr>
<tr>
<td>2</td>
<td>Width of cut, to router bits</td>
<td>2430</td>
</tr>
<tr>
<td>3</td>
<td>Width – inside of bowl</td>
<td>2203</td>
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<tr>
<td>4</td>
<td>Width – rear tire center lines</td>
<td>1797</td>
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<tr>
<td>5</td>
<td>Width – outside rear tires</td>
<td>2430</td>
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<tr>
<td>6</td>
<td>Height – overall shipping</td>
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<tr>
<td>7</td>
<td>Ground clearance – tractor</td>
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<tr>
<td>8</td>
<td>Front of tractor to front axle</td>
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<tr>
<td>9</td>
<td>Height – scraper blade maximum</td>
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<tr>
<td>10</td>
<td>Wheelbase</td>
<td>6264</td>
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<tr>
<td>11</td>
<td>Length – overall machine</td>
<td>10 419</td>
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<tr>
<td>12</td>
<td>Rear axle to rear of machine</td>
<td>1221</td>
</tr>
</tbody>
</table>
613G Wheel Tractor-Scraper Specifications

613G Rimpull

Gross Weight

Rimpull

Total Resistance (Grade plus Rolling)

E – Empty
L – Loaded
Standard equipment may vary. Consult your Caterpillar dealer for details

Bowl
8 m³/11 yd³ heaped
Elevator
Backup alarm
AccuGrade ready option weldments for bracket & mast

Electrical
Alternator, 80 ampere
Electrical system, 24 volt
Batteries (2), 70 ampere hr.
880 CCA, maintenance-free

Lighting system
Headlights, highway signal (T)
Lights (LED), highway signals (S)
AccuGrade ready option wiring embedded in machine harnesses
Starting/charging receptacle

Operator Environment
Cab, ROPS, sound suppressed
Gauges/Indicators
Turn signals
Battery charge
Fuel pressure
Engine monitoring
Throttle lock
Primary steering
Action Light
Tachometer
Parking brake
Steering disable
Diff lock
Operator not present
High beam
Brake system
Transmission system
Hydraulic system
Torque converter temp
Fuel level
Hyd. oil temp
Mirrors, right side & rearview
Radio ready
Seat, cloth, air suspension, rotates 30°
Seat belt (non-retractable)
Steering wheel, tilt & telescopic
Windshield washer-wiper
Air conditioner and heater

Power train
Tractor
Engine, Cat C6.6 ACERT
I-6, 4 stroke diesel, turbocharged, aftercooled
Electric start, 24 volt
Air cleaner w/ precleaner
Fan, suction
Guard, crankcase
Muffler
Braking system (hydraulic)
Caliper disc (front & rear)
Parking
Secondary

Shields, brake
Transmission
6 speed Powershift, torque converter drive
Differential, lock-up
Scraper
Braking system
Fuel pump, electric
Parking
Secondary
Shields, brake

Other Standard Equipment
Tractor
Product Link
Fenders
Hydraulic system
Locks, vandalism protection
Rims (2), center mounted
Steering, variable flow modulated
Tow pins, front and rear
Scraper
Rims (2), center mounted
Tires, Rims, & Wheels
An allowance for 23.5R25 radial tires is included in the base machine price. Tires MUST be selected from the Mandatory Attachments section.
Antifreeze
Extended Life Coolant to –36° C (–33° F)
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

Other Attachments
- Tractor
  - Steering, Secondary
  - Starting Aid, Ether
  - Does not include cylinder. For temperatures below –9° C (15° F)

- Scraper
  - Fenders, Standard

- 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

- 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.

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.
613G Wheel Tractor-Scraper

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