



# Cat<sup>®</sup> 623

## Wheel Tractor-Scraper

*The Cat<sup>®</sup> 623 Wheel Tractor-Scraper is a cost effective, all-in-one system built for production and grading. Built for today's and tomorrow's work, its single engine and elevating bowl help you make the most of your investment by consistently delivering maximum productivity and fast cycle times at the lowest cost per ton.*

### Be More Productive

- Additional elevator torque.
- Improved chain life.
- Enhanced elevator drive sprocket for reduced chain wear.
- Improved scissor-style chain tension system for decreased sprocket wear, chain wear, and chain jumping.
- Advanced Productivity Electronic Control System (APECS) allows the engine and transmission to communicate on a high level. This communication allows the machine to utilize better the power and torque the engine is producing. The net result is moving more material.
- Use Ground Speed Control to set the desired top speed and the machine will find the gear that works best for the engine and the transmission, providing a lower fuel burn.
- The Machine Speed Limit feature replaces Top Gear Selection.
- Auto-Stall assists in quickly bringing the transmission to an operating temperature at start-up when the machine is working in a cold climate region.
- Cat Payload for scrapers is an earthmoving solution for optimal payload and jobsite efficiency. Cat Payload achieves on-the-go weighing by using bowl lift cylinder pressure during the loaded haul segment. Cat Payload is optimized to be used with Sequence Assist, which provides increased productivity with less operator effort.

### Work in Comfort

- Reduce up to 14 individual operator commands per cycle with Sequence Assist (optional attachment).
- Steer with less effort using the newly designed high-pressure steering system.
- Enjoy interior improvements and a more ergonomic work environment with a 21% larger cab than the G Series cab.
- Intuitive, ergonomic controls keep operators focused on their work.
- Maintain desired cab temperature with automatic temperature control.

### Designed for Safety

- Enhance an operator's awareness of site surroundings with the Work Area Vision System (WAVS).
- Seat belt indicator provides visual and audible alerts when the seatbelt is not in use.
- Advanced Cushion Hitch allows the cushion hitch to prevent endstroke by predicting endstroke events and managing the rate of dampening, resulting in reduced hitch maintenance and improved operator ride in rough conditions.
- Ground-level engine shutoff switch stops all fuel to the engine when activated and shuts down the machine.



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## Easy to Operate

- The spacious cab features easy, intuitive controls and excellent visibility. The cab provides a comfortable working environment for all-day operations.
- Cat Advanced Ride Management (ARM) seat suspension reduces endstroke movement of the load cylinder for a smoother ride.
- Engine overspeed protection will automatically engage with no operator input when the machine is in eighth gear. The machine will assist in slowing the machine's speed by canceling the throttle command and engaging the engine compression brake.

## Integrated Cat Technologies

- Monitor, manage, and enhance jobsite operations.
- Hit target grade faster and more accurately with Cat Grade technologies. Finish jobs in fewer passes and with less operator effort, saving you time and helping to increase profit.
- Product Link™ collects machine data that can be viewed online through web and mobile applications (optional attachment).
- Access information anytime, anywhere with VisionLink® – use it to make informed decisions that boost productivity, lower costs, simplify maintenance, and improve safety and security on your jobsite.
- Shorten the learning curve for inexperienced operators with Cat Grade Control and Load Assist (optional attachment).

## Execute Efficiency

- The new tractor hydraulic on-demand fan helps assist in lower fuel consumption.
- Using draft-arm overflow guards diverts material away from the bowl, preventing material from getting caught between the draft arms and the bowl sides.
- Cat Grade Control (optional attachment) intelligently ensures the machine does not cut below grade in a cut area or overfill in the fill area.

## Standard Equipment and Optional Attachments

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

	Standard	Optional		Standard	Optional
<b>POWERTRAIN – TRACTOR</b>			<b>OPERATOR ENVIRONMENT – TRACTOR (CONTINUED)</b>		
Cat C13 engine with Mechanically Actuated Electronic Unit Injection (MEUI™)	✓		Safety tab rocker switches	✓	
Cat engine brake	✓		Seat – Cat Advanced Ride Management (ARM), Cat Comfort Series III, rotates 30 degrees	✓	
Electric start, 24V	✓		Steering wheel, tilt, telescoping, padded	✓	
Fan, hydraulic	✓		Windows, right side emergency egress	✓	
Ground level engine shutdown	✓		Camera arrangement – Work Area Vision System (WAVS)	✓	
Guard, crankcase	✓		<b>FLUIDS</b>		
Starting aid, ether	✓		Extended life coolant to -37° C (-34° F)	✓	
Braking system: primary and secondary, wet disc, hydraulic; parking, hydraulic-released, spring-applied	✓		<b>OTHER STANDARD EQUIPMENT – TRACTOR</b>		
Transmission: 8-speed planetary powershift, Electronic Clutch Pressure Control (ECPC), Advanced Productivity Electronic Control Strategy (APECS) software, programmable top gear selection, transmission hold, differential lock, transmission guard, ground speed control, machine speed limit	✓		Advanced cushion hitch	✓	
<b>POWERTRAIN – SCRAPER</b>			Accumulators (cushion hitch and brake) with Canadian registration number (CRN)	✓	
Braking system: primary and secondary, wet disc, hydraulic	✓		Fast oil change (engine)	✓	
<b>ELECTRICAL – TRACTOR</b>			Fenders, non-metallic	✓	
Alternator, 115 amp	✓		Heater, engine coolant 120V	✓	
Batteries (4), 12V, 1,000 CCA, maintenance free	✓		Tow pin, front	✓	
Electrical system, 24V	✓		<b>OTHER STANDARD EQUIPMENT – SCRAPER</b>		
Lighting system: LED	✓		Bowl: 18.4 m³ (24 yd³) – heaped, 14.1 m³ (18.4 yd³) – struck	✓	
Starting/charging receptacle	✓		Hydraulic position sensing cylinders (bowl lift and apron)	✓	
<b>ELECTRICAL – SCRAPER</b>			Fast-fill fuel tank	✓	
Alarm, backup	✓		Fender, scraper	✓	
Lighting system: LED low beam, high beam, and work lights	✓		Bowl overflow guard	✓	
<b>OPERATOR ENVIRONMENT – TRACTOR</b>			<b>STEERING ARRANGEMENTS</b>		
HVAC powered air precleaner		✓	Secondary steering (electrically powered)		✓
HVAC system, heat, AC, defrost	✓		<b>INTEGRATED TECHNOLOGIES</b>		
Thermostat control of HVAC system	✓		Product Link™		✓
Coat hook	✓		Sequence Assist – Cat Payload	✓	
Lunchbox platform with holding strap	✓		Cat Grade Control, Cat Payload, Sequence Assist, and Load Assist		✓
Diagnostic connection (2)	✓		<b>OTHER ATTACHMENTS</b>		
Differential lock (1)	✓		Push-pull		✓
Dome courtesy light	✓		Cold start engine flywheel clutch		✓
Horn, electric	✓		Steering lock – external	✓	
T-handle implement control	✓		Cab beacon with air horn		✓
Radio ready	✓		Year of manufacture plate		✓
Rollover protective structure (ROPS)/falling objects protective structure (FOPS) cab, pressurized	✓		<b>SERVICE INSTRUCTIONS</b>		
Keypad switches: throttle lock, wipers/washers, hazard lights, retarding level select, work lights on/off, information mode on messenger display	✓		Film arrangement – U.S. (ANSI)		✓
			Film arrangement – International (ISO)		✓

# Cat® 623 Wheel Tractor-Scraper

## Technical Specifications

### Engine

Engine Model: Tractor	Cat® C13	
Rated Engine Speed: Tractor	1,700 rpm	
Engine Power: Tractor	304 kW	407 hp

- Meets U.S. EPA Tier 4 Final and EU Stage V emission standards, or equivalent to U.S. EPA Tier 2, or equivalent to U.S. EPA Tier 3 and EU Stage IIIA.
- Net power available at the flywheel when the engine is equipped with fan, air cleaner, aftertreatment, and alternator with engine speed at 2,000 rpm.

### General Data

Overall Width	3.57 m	11' 8"
Overall Shipping Height	3.77 m	12' 3"
Scraper Capacity:		
Struck	14.4 m³	18.8 yd³
Heaped	17.6 m³	23.0 yd³
Rated Load	25 038 kg 25.1 tonnes	55,200 lb 27.6 tons
Width of Cut	3.14 m	10' 4"
Maximum Depth of Cut	262 mm	10.3"
Maximum Depth of Spread	465 mm	18.3"
Top Speed (Loaded)	53.9 km/h	33.5 mph
180° Curb-to-Curb Turning Width	11.8 m	38' 7"
Tires:		
Tractor Drive	33.25R29**E3	
Scraper	33.25R29**E3	

### Transmission

Speed	km/h	mph
Forward 1	5.0	3.1
Forward 2	8.9	5.5
Forward 3	12.1	7.5
Forward 4	16.3	10.1
Forward 5	21.9	13.6
Forward 6	29.6	18.4
Forward 7	39.9	24.8
Forward 8	53.9	33.5
Reverse 1	9.2	5.7

### Service Refill Capacities

Differential	158.0 L	41.7 gal
Final Drive (Each)	19.0 L	5.0 gal
Rear Wheels (Each)	4.0 L	1.0 gal
Brake Cooling (Scraper)	33.0 L	8.7 gal
Crankcase	37.0 L	9.7 gal
Transmission System	97.0 L	25.5 gal
Cooling System	42.0 L	11.0 gal
Fuel Tank	818.0 L	216.1 gal
Hydraulic System	83.0 L	21.9 gal
Diesel Exhaust Fluid (DEF)*	30.5 L	8.1 gal

\*When equipped

### Safety Criteria Compliance Standards

Rollover Protective Structure (ROPS)	ISO 3471:2008 for up to 17 084 kg (37,664 lb)
Falling Objects Protective Structure (FOPS)	ISO 3449:2005 Level II
Brakes	ISO 3450:2011
Steering System	ISO 5010:2019*
Seat Belt	ISO 6683:2005, SAE J386
Reverse Alarm	ISO 9533:2010

\*If equipped with optional secondary steering

### Implement Cycle Times

Bowl Raise	3.0 Seconds
Bowl Lower	3.5 Seconds
Ejector Extend	6.5 Seconds
Ejector Retract	9.7 Seconds

### Sound

The exterior sound pressure level for the standard machine (ISO 6395:2008) is 115 dB(A).

The interior sound pressure level for the standard machine (ISO 6396:2008) is 75 dB(A).

### Air Conditioning

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<sub>2</sub> equivalent of 2.71 metric tonnes (2.674 tons).

AEXQ2706-01 (11-2024)  
Replaces AEXQ2706-00  
Build Number: 11A  
(Global, excluding Japan)