



Cat[®] 627

Wheel Tractor-Scraper

The principal choice for moving material on an earthmoving site is the Cat[®] 627 Wheel Tractor-Scraper. Twin-powered for high rolling resistance and steep grades, this machine is engineered to work effectively in a wide range of conditions and material types. Whether traveling through sand, clay, or shot rock, it's specifically designed to fit an earthmover's needs for today's and tomorrow's work.

Be More Productive

- 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.
- Boost productivity with the Cat Payload feature (optional attachment). Cat Payload is an automatic feature when ordered with Sequence Assist.
- 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.

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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.
- The Cat C13 tractor engine meets U.S. EPA Tier 4 Final or EU Stage V emission standards, contributing to 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
POWERTRAIN – TRACTOR			OPERATOR ENVIRONMENT – TRACTOR (CONTINUED)		
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	✓		FLUIDS		
Starting aid, ether	✓		Extended life coolant to -37° C (-34° F)	✓	
Braking system: primary and secondary, wet disc, hydraulic; parking, hydraulic-released, spring-applied	✓		OTHER STANDARD EQUIPMENT – TRACTOR		
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	✓	
POWERTRAIN – SCRAPER			Accumulators (cushion hitch and brake) with Canadian registration number (CRN)	✓	
Braking system: primary and secondary, wet disc, hydraulic	✓		Fast oil change (engine)	✓	
ELECTRICAL – TRACTOR			Fenders, non-metallic	✓	
Alternator, 115 amp	✓		Heater, engine coolant 120V	✓	
Batteries (4), 12V, 1,000 CCA, maintenance free	✓		Tow pin, front	✓	
Electrical system, 24V	✓		OTHER STANDARD EQUIPMENT – SCRAPER		
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)	✓	
ELECTRICAL – SCRAPER			Fast-fill fuel tank	✓	
Alarm, backup	✓		Fender, scraper	✓	
Lighting system: LED low beam, high beam, and work lights	✓		Bowl overflow guard	✓	
OPERATOR ENVIRONMENT – TRACTOR			STEERING ARRANGEMENTS		
HVAC powered air precleaner		✓	Secondary steering (electrically powered)		✓
HVAC system, heat, AC, defrost	✓		INTEGRATED TECHNOLOGIES		
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)	✓		OTHER ATTACHMENTS		
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	✓		SERVICE INSTRUCTIONS		
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)		✓

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Technical Specifications

Engine		
Engine Model:	Tractor Cat® C13	Scraper Cat C9.3
Rated Engine Speed:	Tractor 2,000 rpm	Scraper 2,150 rpm
Engine Power (ISO 14396:2002):	Tractor 304 kW (407 hp)	Scraper 216 kW (290 hp)
<ul style="list-style-type: none"> Meets U.S. EPA Tier 4 Final or EU Stage V emission standards, or equivalent to U.S. EPA Tier 3 and EU Stage IIIA, or equivalent to U.S. EPA Tier 2. Net power available at the flywheel when the engine is equipped with fan, air cleaner, aftertreatment, and alternator with engine speed specified. 		

General Data		
Overall Width	3.57 m	11' 7"
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	55,200 lb
	25.1 tonnes	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	

Non Push-Pull		
Operating Weight (Empty)	40 982 kg	90,350 lb
Overall Length	14.02 m	45' 10"

Push-Pull		
Operating Weight (Empty)	42 328 kg	93,317 lb
Overall Length (With Bail Down)	15.58 m	51' 1"

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

Service Refill Capacities					
	Tractor		Scraper		
	L	gal	L	gal	
Crankcase	37.0	9.7	24.5	6.5	
Transmission System	97.0	25.5	49.0	12.9	
Cooling System	42.0	11.1	41.0	10.8	
Brake Cooling			33.0	8.7	
Final Drive	19.0	5.0	19.0	5.0	
Differential	158.0	41.7	42.0	11.0	
Diesel Exhaust Fluid*	30.5	8.1	22.0	5.8	
Fuel Tank		1272.0 L		336.0 gal	
Hydraulic System		83.0 L		21.9 gal	

*When equipped

Safety Criteria Compliance Standards	
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
Apron Raise	3.0 Seconds	Apron Lower	3.8 Seconds
Ejector Extend	5.2 Seconds	Ejector Retract	6.7 Seconds
Bail Raise	1.8 Seconds	Bail Lower	3.2 Seconds

Sound	
<ul style="list-style-type: none"> The exterior sound pressure level for the standard machine (ISO 6395:2008) is 120 dB(A). The interior sound pressure level for the standard machine (ISO 6396:2008) is 78 dB(A). 	

Air Conditioning	
<ul style="list-style-type: none"> 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 lbs) of refrigerant which has a CO₂ equivalent of 2.71 metric tonnes (2.674 tons). 	

AEXQ2710-01 (11-2024)
Replaces AEXQ2710-00
Build Number: 11A
(Global, excluding Japan)

