



Cat[®] 637

Coal Bowl

The Cat[®] 637 Large Capacity Wheel Tractor-Scraper Coal Bowl is longer and higher than standard scraper bowls and engineered to conquer challenges of low-density loose coal. With its size, strength, and durability, it works effectively compacting coal, which reduces the risk of spontaneous combustion of coal stockpiles by eliminating the air spaces. Built with twin engines, the 637 has high rolling resistance and additional power for loading, traveling up grades, and over fill areas – ultimately creating faster cycle times.

Be More Productive

- Up to 12% improvement in productivity.
- Large size capacity coal scraper bowl to accommodate low density loose coal.
- Advanced productivity electronic control system (APECS) allows the engine and transmission to communicate on a high level. This communication allows the machine to better utilize 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, allowing the machine to find the correct gear that works best for the engine and transmission. Pulling the load in the correct gear, in most cases, results in lower engine load factor and lower fuel burn.
- Auto-stall assists in quickly bringing the transmission to an operating temperature at startup when the machine is working in a cold climate region.
- Cat Payload Estimator for scrapers is an earthmoving solution for optimal payload and jobsite efficiency. Payload Estimator achieves on-the-go weighing by using bowl lift cylinder pressure during the loaded haul segment. Payload Estimator is optimized to be used with sequence assist, which provides increased productivity with less operator effort. Payload Estimator is an automatic feature when ordered with sequence assist.

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

- Get in and out of the cab easier with the new powered access ladder system (optional attachment).
- Enhance an operator's awareness of site surroundings with the optional work area vision system (WAVS).
- Seat belt indicator provides visual and audible alerts when the seat belt is not in use.
- Advanced cushion hitch allows the cushion hitch to prevent end stroke by having the ability to predict end stroke events and manage the rate of dampening, resulting in reduced hitch maintenance and improved operator ride in rough conditions.
- Easy ground level access to fuel, water, and engine oil.

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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 operation.
- Cat advanced ride management (ARM) seat suspension reduces end stroke 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 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 load assist (optional attachment).

Execute Efficiency

- The new tractor hydraulic on-demand fan helps assist in lower fuel consumption.
- 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 C18 engine with Mechanically Actuated Electronic Unit Injection (MEUI™)	✓		Keypad switches: throttle lock, wipers/washers, hazard lights, retarding level select, work lights on/off, information mode on messenger display	✓	
Cat engine brake	✓		Powered access		✓
Electric start, 24V	✓		Safety tab rocker switches	✓	
Fan, hydraulic	✓		Seat – Cat advanced ride management (ARM), Cat Comfort Series III, rotates 30 degrees	✓	
Ground level engine shutdown	✓		Steering wheel, tilt, telescoping, padded	✓	
Guard, crankcase	✓		Windows, right side emergency egress	✓	
Starting aid, ether	✓		Messenger display	✓	
Braking system: primary and secondary, wet disc, hydraulic; parking, hydraulic-released, spring-applied	✓		FLUIDS		
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	✓		Extended life coolant to -37° C (-34° F)	✓	
POWERTRAIN – SCRAPER			OTHER STANDARD EQUIPMENT – TRACTOR		
Cat C9.3 engine with high pressure common rail fuel	✓		Advanced cushion hitch	✓	
Cat engine brake	✓		Accumulators (cushion hitch and brake) with Canadian registration number (CRN)	✓	
Electric start, 24V	✓		Fast oil change (engine)	✓	
Fan, driveline	✓		Fenders, non-metallic	✓	
Ground engine shutdown	✓		Heater, engine coolant 120V	✓	
Muffler (Tier 2 or Tier 3 only)	✓		Tow pin, front	✓	
Starting aid, ether	✓		OTHER STANDARD EQUIPMENT – SCRAPER		
Braking system: primary and secondary, dry disc, hydraulic; 4 speed (torque converter drive), transmission planetary powershift	✓		Coal Bowl: 31.3 m³ (41.0 yd³) – struck, 37.8 m³ (49.4 yd³) – heaped	✓	
ELECTRICAL – TRACTOR			Hydraulic position sensing cylinders (bowl lift and apron)	✓	
Alternator, 115 amp	✓		STEERING ARRANGEMENTS		
Batteries (4), 12V, 1,000 CCA, maintenance free	✓		Secondary steering (ground driven)	✓	
Electrical system, 24V	✓		INTEGRATED TECHNOLOGIES		
Lighting system: LED low beam, high beam, and work lights	✓		Product Link™	✓	
Starting/charging receptacle	✓		Sequence Assist – Payload Estimator	✓	
ELECTRICAL – SCRAPER			Load assist	✓	
Alarm, backup	✓		Cat Grade Control with load assist	✓	
Lighting system: brake lights – LED, turn signals with hazard function – LED	✓		OTHER ATTACHMENTS		
OPERATOR ENVIRONMENT – TRACTOR			Fast-fill fuel tank	✓	
HVAC powered air precleaner	✓		Camera arrangement – work area vision system (WAVS)	✓	
HVAC system, heat, AC, defrost	✓		Steering lock – external	✓	
Thermostat control of HVAC system	✓		Cab beacon	✓	
Coat hook	✓		Air horn	✓	
Lunchbox platform with holding strap	✓		Fender, scraper	✓	
Diagnostic connection (2)	✓		Year of manufacture plate	✓	
Dome courtesy light	✓		SERVICE INSTRUCTIONS		
Horn, electric	✓		Film arrangement – U.S. (ANSI)	✓	
T-handle implement control	✓		Film arrangement – International (ISO)	✓	
Radio ready	✓				
Rollover protective structure (ROPS)/falling objects protective structure (FOPS) cab, pressurized	✓				

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Technical Specifications

Engine – Tractor

Engine Model	Cat® C18	
Rated Engine Speed	1,900 rpm	
Engine Power (ISO 14396:2002)	425 kW	570 hp

Engine – Scraper

Engine Model	Cat C9.3	
Rated Engine Speed	2,150 rpm	
Engine Power (ISO 14396:2002)	216 kW	290 hp

- 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	3.94 m	12'11"
Overall Shipping Height	4.15 m	13'7"
Scraper Capacity:		
Struck	31.3 m³	41.0 yd³
Heaped	37.8 m³	49.4 yd³
Rated Load	34 473 kg	76,000 lb
	34.2 tonnes	38.0 tons
Width of Cut	3.51 m	11'6"
Maximum Depth of Cut	450 mm	17'7"
Maximum Depth of Spread	535 mm	21'1"
Top Speed (Loaded)	55.8 km/h	42.7 mph
180° Curb-to-Curb Turning Width	12.98 m	40'2"
Tires:		
Tractor Drive	33.25R29**E3	
Scraper	33.25R29**E3	

Non Push-Pull

Operating Weight (Empty)	53,130 kg	117,132 lb
Overall Length	15.48 m	50'8"

Transmission

Speed	km/h	mph	Speed	km/h	mph
Forward 1	5.5	3.4	Forward 6	30.6	19.0
Forward 2	10.0	6.2	Forward 7	41.4	25.7
Forward 3	12.4	7.7	Forward 8	55.8	34.7
Forward 4	16.9	10.5	Reverse 1	9.9	6.2
Forward 5	22.7	14.1			

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 (Tractor)	52.0 L	13.7 gal
Crankcase (Scraper)	24.5 L	6.5 gal
Transmission System (Tractor)	110.0 L	29.0 gal
Transmission System (Scraper)	49.0 L	12.9 gal
Cooling System (Tractor)	75.0 L	19.8 gal
Cooling System (Scraper)	61.0 L	12.9 gal
Fuel Tank	1400.0 L	370.0 gal
Hydraulic System	142.0 L	37.5 gal
Diesel Exhaust Fluid (DEF) Tank (Tractor)*	30.5 L	8.0 gal
Diesel Exhaust Fluid (DEF) Tank (Scraper)*	22.0 L	5.8 gal

*When equipped

Safety Criteria Compliance Standards

Rollover Protective Structure (ROPS)	ISO 3471:2008 for up to 21 282 kg (46,919 lb)
Falling Object Protective Structure (FOPS)	ISO 3449:2005 Level II
Brakes	ISO 3450:2011
Steering System	ISO 5010:2007
Seat Belt	SAE J386:FEB2006
Reverse Alarm	ISO 9533:2010

Implement Cycle Times

Bowl Raise	3.5 seconds
Bowl Lower	3.5 seconds
Apron Raise	4.0 seconds
Apron Lower	3.8 seconds
Ejector Extend	8.5 seconds
Ejector Retract	8.5 seconds
Bail Raise	1.5 seconds
Bail Lower	2.1 seconds

Cab

- ROPS/FOPS
ISO 3471:2008
ISO 3449:2005 Level II
- The exterior sound power level for the standard machine (ISO 6393:2008) is 111.5 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 lbs) of refrigerant which has a CO₂ equivalent of 2.71 metric tonnes (2.674 tons).

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