



# Cat<sup>®</sup> 657

## Wheel Tractor-Scraper

*First introduced into the Cat<sup>®</sup> Wheel Tractor-Scraper lineup in 1962, the 657 continues to uphold its legacy as one of our signature machines. Its twin power gives it the ability to boost productivity and utilize push-pull loading. Combine this ability with improvements in productivity, enhancements in operator comfort, and new safety features – Powered Access System and effective wet disc brakes – and you have a machine offering high returns on profit and time.*

### Be More Productive

- Up to 6% of improvements in productivity.
- Advanced Productivity Electronic Control System (APECS) allow 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.
- 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<sup>®</sup> 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.

### Work in Comfort

- Steer with less effort with the newly designed High-Pressure Steering system.
- Reduce up to 14 individual operator commands per cycle with Sequence Assist (optional attachment).
- Enjoy interior improvements and a more ergonomic work environment with a 21% larger cab than the 657 G-Series cabs.
- Intuitive, ergonomic controls with multifunction display 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).
- Ground level access to fuel fill and daily maintenance points.
- 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 to Operate

- Cat Advance 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.



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## Integrated Cat Technologies

- Access information anytime, anywhere with Vision Link® – use it to make informed decisions that boost productivity, lower costs, simplify maintenance, and improve safety and security on your jobsite.
- Product Link™ collects machine data that can be viewed online through web and mobile applications (optional attachment).

## Execute Efficiency

- The Cat C18 tractor and C15 scraper engines 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.
- The new tractor hydraulic on-demand fan helps assist in lower fuel consumption.

## Standard and Optional Equipment

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

	Standard	Optional		Standard	Optional
<b>POWER TRAIN – TRACTOR</b>					
C18 (U.S. EPA Tier 4 Final only)	✓		Batteries (4), 12 volt, 1,000 CCA, maintenance free	✓	
Cat engine brake	✓		Electrical system, 24V	✓	
Electric start, 24 volt	✓		Starting/charging receptacle	✓	
Fan, hydraulic	✓		Lighting system: headlights – halogen, turn signals with hazard functions – LED, floodlights, (2) cutting edge and (1) bowl, side vision – halogen		
Ground level engine shutdown	✓		<b>ELECTRICAL – SCRAPER</b>		
Guard, crankcase	✓		Alarm, backup	✓	
Starting aid, ether	✓		Lighting system: brake lights (LED), turn signals with hazard function (LED)	✓	
Braking system: primary and secondary, wet disc, hydraulic; parking, hydraulic-released, spring-applied	✓		<i>(continued on next page)</i>		
Transmission: 8-speed planetary power shift, ECPC control, APECS software, programmable top gear selection, transmission hold, differential lock, guard – power train, ground speed control, machine speed limit	✓				
<b>POWER TRAIN – SCRAPER</b>					
Engine: C15; Cat engine brake; electric start, 24 volt; fan, mechanical drive; ground level engine shutdown; starting aid, ether	✓				
Braking system: primary and secondary, wet disc, hydraulic	✓				
8-speed planetary power shift	✓				
ECPC Control	✓				
Guard, power train	✓				
APECS software	✓				
Programmable top gear selection	✓				
Transmission hold	✓				
<b>ELECTRICAL – TRACTOR</b>					
Alternator, 115 amp	✓				

## Standard and Optional Equipment (continued)

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

	Standard	Optional		Standard	Optional
<b>OPERATOR ENVIRONMENT – TRACTOR</b>			<b>FLUIDS</b>		
HVAC system, heat, AC, defrost	✓		Extended life coolant to –37° C (–34° F)	✓	
Thermostat control of HVAC system	✓		<b>OTHER STANDARD EQUIPMENT</b>		
Coat hook	✓		<b>TRACTOR</b>		
Lunch box platform with holding strap	✓		Accumulators (brake and cushion hitch with Canadian Registration Number (CRN))	✓	
Diagnostic connection (2)	✓		Fast oil change	✓	
12V power ports (2)	✓		Vandalism locks	✓	
Differential lock (1)	✓		Steering locks	✓	
Dome courtesy light	✓		Heater, engine coolant 120V	✓	
Horn, electric	✓		Cushion push plate/bail – standard open bowl only	✓	
T-Handle implement control	✓		<b>SCRAPER</b>		
Radio ready	✓		Bowl	✓	
ROPS/FOPS cab, pressurized	✓		Fast oil change	✓	
Keypad switches: rear engine start; throttle lock; wipers/washers; hazard lights; work lights on, off; information mode; messenger display; safety tab rocker switches, parking brake	✓		Vandalism locks	✓	
Seat belt, static two-piece	✓		Rear hook/radiator guard – standard open bowl only	✓	
Seat, Cat Advanced Ride Management	✓		Guard, overflow – standard open bowl only	✓	
Cat Comfort Series 3, rotates 30 degrees	✓		Heater, engine coolant 120V	✓	
Steering wheel, tilt, telescoping, padded	✓		Hydraulic position sensing cylinders (bowl lift and apron)	✓	
Windows, right side emergency egress	✓		<b>OTHER ATTACHMENTS</b>		
Windows, sliding	✓		Cab beacon		✓
Messenger display	✓		Air horn		✓
Powered access ladder		✓	Wiring group		✓
Safety tab rocker switches	✓		<b>SERVICE INSTRUCTIONS</b>		
Seat – Cat Advanced Ride Management (ARM), Cat Comfort Series III, rotates 30 degrees	✓		Film arrangement – U.S. (ANSI)		✓
Windows, right side emergency egress	✓		Film arrangement – International (ISO)		✓
			<b>INTEGRATED TECHNOLOGIES</b>		
			Cat Production Measurement		✓
			Product Link	✓	
			Sequence Assist with Payload Estimator		✓

# Cat® 657 Wheel Tractor-Scraper

## Technical Specifications

### General Data

Fuel Tank Refill Capacity	1628 L	430 gal
Shipping (split configuration)		
Tractor Width	3.9 m	12.80 ft
Tractor Height	4.52 m	14.83 ft
Scraper Width	4.08 m	13.39 ft
Scraper Height	4.04 m	13.25 ft
Scraper Capacity		
Struck	24.5 m <sup>3</sup>	32 yd <sup>3</sup>
Heaped	33.6 m <sup>3</sup>	44 yd <sup>3</sup>
Rated Load	47 174 kg	104,000 lb
Rated Load	46.4 mt	52.0 ton
Width of Cut	3.8 m	12.47 ft
Maximum Depth of Cut	440 mm	17.32 in
Maximum Depth of Spread	660 mm	25.98 in
Top Speed (loaded)	56.1 km/h	34.85 mph
180° Curb-to-Curb Turning Width (right)	13.6 m	44.62 ft
180° Curb-to-Curb Turning Width (left)	14.5 m	47.57 ft
Tire Size	40.5/75 R39 ★★ E-3	
Operating Weight (Michelin tires, full fuel, without operator)		
Unloaded	74 253 kg	163,700 lb
With Rated Load	121 427 kg	267,700 lb
Overall Length (bail down)	17.97 m	58.96 ft

### Engine

	Tractor		Scraper	
Engine Model	Cat C18		Cat C15	
Rated Engine RPM	2,000 rpm		2,100 rpm	
Power – Net (SAE J1349/ISO 9249)	436 kW	585 hp	333 kW	447 hp
Power – Gross (SAE J1995)	475 kW	637 hp	359 kW	481 hp
Advertised-Net (ISO 14396)	469 kW	629 hp	353 kW	473 hp
Emissions	Tier 4 Final/EU Stage V			

- Maximum Speed: Length × Width × Height.

### Safety Criteria Compliance Standards

Rollover Protective Structure (ROPS)	ISO 3471:2008 for up to 26 600 kg (58,642.96 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
Forward Horn and Reverse Alarm	ISO 9533:2010
Operator Sound	ISO 6396:2008
Exterior Sound	ISO 6393:2008

### Service Refill Capacities

	Tractor		Scraper	
Crankcase	52 L	13.7 gal	34 L	8.9 gal
Transmission System	136 L	35.9 gal	121 L	31.9 gal
Cooling System	88.6 L	23.4 gal	63.2 L	16.6 gal
Fuel Tank	1628 L	430 gal	1628 L	430 gal
Hydraulic System	195 L	51.5 gal	195 L	51.5 gal
Diesel Exhaust Fluid	30.5 L	8 gal	30.5 L	8 gal

### Travel Speeds (Runout)

Transmission Gear		
Eighth	56.1 km/h	34.8 mph
Reverse	10.8 km/h	6.7 mph



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AEXQ2531-00 (06-2020)  
(Global except Japan and China)  
Build Number: WSJ

