



# CAT<sup>®</sup> 631

## PARTIAL WHEEL TRACTOR-SCRAPER

Caterpillar offers partial wheel tractor-scraper power units designed for specialty machines that complement the traditional Cat<sup>®</sup> product line. These tractor-only configurations are available for purchase directly from Caterpillar OEM Solutions. They can be leveraged for a variety of final machines, including water pulls, elevating scrapers, lowboy trailer power units, and more. With improvements in productivity combined with enhancements in operator comfort and new safety features – Powered Access System and effective wet disc brakes – this machine offers high returns on time and investment.

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### BE MORE PRODUCTIVE

- » **The Advanced Productivity Electronic Control System (APECS)** allows the machine to better utilize engine power and torque.
- » Set the desired top speed with **Ground Speed Control**, and the machine will find the gear that works best for the engine and transmission, providing a lower fuel burn in speed reduced areas.
- » **Auto-Stall** assists in quickly bringing the transmission to an operating temperature at start-up when working in colder climates.

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### EASY TO OPERATE

- » 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.
- » The spacious cab features easy, intuitive controls and excellent visibility.

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### WORK IN COMFORT

- » Steer with less effort with the newly designed high-pressure steering system.
- » Enjoy interior improvements with a larger, more ergonomic work environment.
- » Intuitive, ergonomic controls with multifunction display keep operators focused on their work.
- » Maintain desired cab temperature with automatic temperature control.

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### DESIGNED FOR SAFETY

- » Get in and out of the cab easier with the new optional powered access ladder system.
- » Enhance the 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.

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### SUPPORTED BY THE CAT DEALER NETWORK

- » Full support of Cat dealer and parts network
- » Eligible for Equipment Protection Plans (EPP) & Customer Value Agreements (CVAs)



# 631 Wheel Tractor-Scraper Technical Specifications (partial machine)

Configurations and features may vary by region. Please consult your Cat® dealer for availability in your area.

## Engine

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

## Weights – Approximate

Rated Load	37 200 kg	82,200 lb
	37.2 tonnes	41.1 tons

## Transmission

Forward 1	5.5 km/h	3.4 mph
Forward 2	10.0 km/h	6.2 mph
Forward 3	12.4 km/h	7.7 mph
Forward 4	16.9 km/h	10.5 mph
Forward 5	22.7 km/h	14.1 mph
Forward 6	20.6 km/h	19.0 mph
Forward 7	41.4 km/h	25.7 mph
Forward 8	55.8 km/h	34.7 mph
Reverse	9.9 km/h	6.2 mph

## 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
Transmission System	110.0 L	29.0 gal
Cooling System	75.0 L	19.8 gal
Fuel Tank	874.0 L	231.0 gal
Hydraulic System	142.0 L	37.5 gal
Diesel exhaust fluid (DEF) tank*	30.5 L	8.0 gal

\*when equipped

## Steering

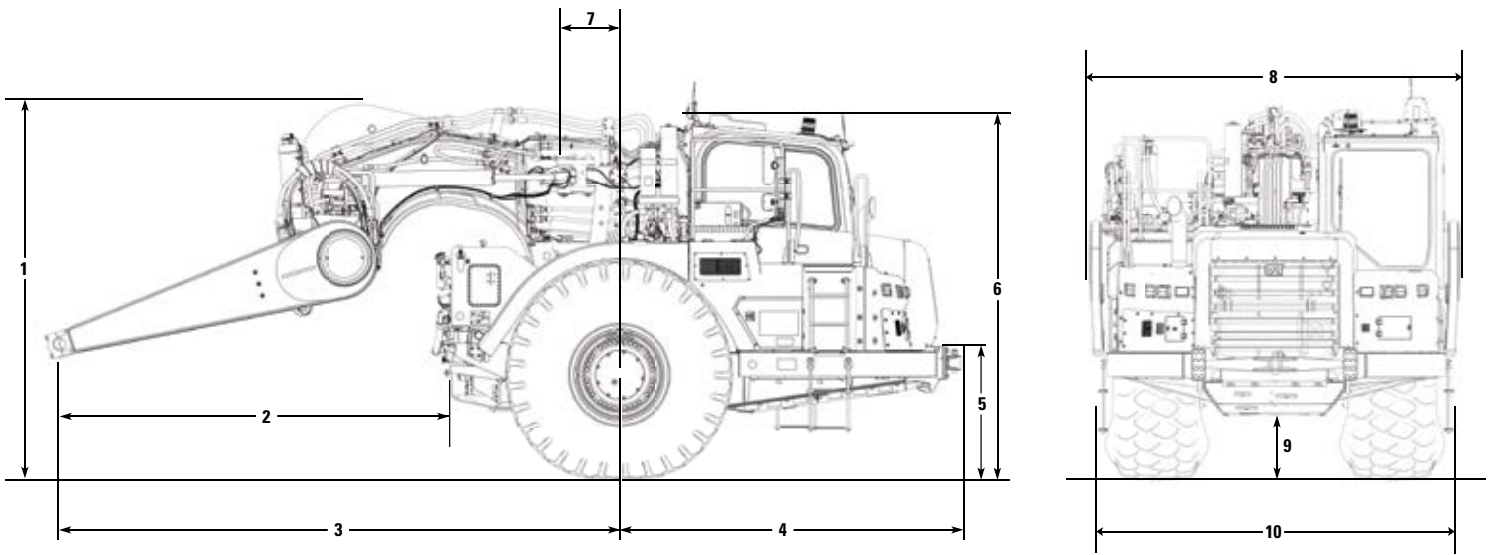
180° Curb-to-Curb Turning Width (Right)	12.23 m	40'2"
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## Safety Criteria Compliance Standards

Rollover Protection 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	
Exterior Sound power level for standard machine	ISO 6393:2008 is 111.5 dB(A)	

- Note: Welding on ROPS or making modifications to the ROPS may void the ROPS certification.
- Please contact Caterpillar OEM Solutions if the application requires welding on the machine frame.

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## Dimensions

<b>1</b>	Overall Machine Height (with gooseneck)	3.9 m	11.1 ft
<b>2</b>	Draft Arm Pivot Point to Rear Tractor Bumper	4 m	13.1 ft
<b>3</b>	Centerline of Wheel Hub to Rear Draft Arm Pivot Point	5.8 m	19 ft
<b>4</b>	Front of Tractor to Front Axle	3.6 m	11.8 ft
<b>5</b>	Height of front bumper attachment pin	1.9 m	6.2 ft
<b>6</b>	Height to Top of Cab	3.8 m	12.5 ft
<b>7</b>	Axle to Vertical Hitch Pin	2.1 m	6.8 ft
<b>8</b>	Width of Draft Arms	3.9 m	12.7 ft
<b>9</b>	Tractor Ground Clearance	0.6 m	1.9 ft
<b>10</b>	Tractor Width	3.4 m	11.1 ft

\*\* These dimensions may vary based on tire size, pressure, and load. All dimensions are for reference only and may change for different machine configurations.

# 631 Wheel Tractor-Scraper Technical Specifications (partial machine)

## Standard and Optional Equipment

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

	Standard	Optional
<b>POWERTRAIN</b>		
Cat® C18 engine with Mechanically Actuated Electronic Unit Injection (MEUI™)	•	
Cat engine brake	•	
Electric start, 24V	•	
Fan, hydraulic	•	
Ground level engine shutdown	•	
Guard, crankcase	•	
Starting aid, ether	•	
Braking system: primary and secondary, wet disc, hydraulic; parking, hydraulic-released, spring-applied	•	
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	•	

### ELECTRICAL

Alternator, 115 amp	•	
Batteries (4), 12V, 1,000 CCA, maintenance free	•	
Electrical system, 24V	•	
Lighting system: LED low beam, high beam, and work lights	•	
Starting/charging receptacle	•	

### OPERATOR ENVIRONMENT

HVAC powered air precleaner		•
HVAC system, heat, AC, defrost	•	
Thermostat control of HVAC system	•	
Coat hook	•	
Lunchbox platform with holding strap	•	
Diagnostic connection (2)	•	
Dome courtesy light	•	
Horn, electric	•	
T-handle implement control	•	
Radio ready	•	
Rollover protective structure (ROPS)/falling objects protective structure (FOPS) cab, pressurized	•	

	Standard	Optional
Keypad switches: throttle lock, wipers/washers, hazard lights, retarding level select, work lights on/off, information mode on messenger display	•	
Powered access		•
Safety tab rocker switches	•	
Seat – Cat advanced ride management (ARM), Cat Comfort Series III, rotates 30 degrees	•	
Steering wheel, tilt, telescoping, padded	•	
Windows, right side emergency egress	•	
Messenger display	•	
Gauges, warnings include: coolant temperature, engine oil temperature, hydraulic oil temperature, diesel particulate filter (DPF) temperature, fuel level, park brake, implement lockout, brake system, regeneration required, throttle lock, system voltage, secondary steering, bail down, ejector auto, differential lock, apron float, transmission hold, cushion hitch, high beam lights, action lamp, engine speed – rpm, gear selection, diesel exhaust fluid (DEF)* fill level	•	

\*when equipped

### FLUIDS

Extended life coolant to -37° C (-34° F)	•	
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## Standard and Optional Equipment

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	Standard	Optional
<b>CAT TECHNOLOGY PRODUCTS</b>		
Product Link™		•

<b>OTHER EQUIPMENT</b>		
Advanced cushion hitch	•	
Accumulators (cushion hitch and brake) with Canadian registration number (CRN)	•	
Fast oil change (engine)	•	
Fenders, non-metallic	•	
Heater, engine coolant 120V	•	
Tow pin, front	•	

<b>OTHER ATTACHMENTS</b>		
Fast-fill fuel tank	•	
Camera arrangement – work area vision system (WAVS)		•
Steering lock – external	•	
Cab beacon		•
Air horn		•
Guard, overflow	•	
Kingbolt housing		•
Rear wheel arrangement (set of 2)		•
Scraper draft arm package		•
Steering cylinder group (set of 2)		•
Year of manufacture plate		•

<b>STEERING ARRANGEMENTS</b>		
Secondary steering (ground driven)	•	

<b>SERVICE INSTRUCTIONS</b>		
Film arrangement – U.S. (ANSI)		•
Film arrangement – International (ISO)		•

**For more information on Cat partial machines, contact OEM Solutions:**

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Materials and specifications are subject to change without notice. Featured machines in photos may include additional equipment. See your Cat dealer for available options.

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(Global)

