



# Cat® 621H

## WHEEL TRACTOR-SCRAPER

### FEATURES:

- **New Powertrain** – New engine, Cat® C13 ACERT™, at a higher power rating. New transmission software maintains speed during shifts for better performance – especially on grades. Electronic Clutch Pressure Control (ECPC) controls for the transmission clutch pressures prevent torque spikes and reduce wear.
- **Emissions Standards** – The C13 ACERT meets either U.S. EPA Tier 4 Interim/EU Stage IIIB or achieves U.S. EPA Tier 3/EU Stage IIIA emission levels, depending on customer requirements.
- **Sequence Assist** – Sequence Assist simplifies control over the implements and reduces usage of the implement control lever by using integrated software and position-sensing cylinders to automate many of the tasks that an operator performs when loading, hauling and dumping.
- **Load Assist** – Load Assist allows the scraper to control the cutting edge depth during loading in push-pull, push-loading and self-loading applications making inexperienced operators productive more quickly.
- **Cat Grade Control** – Cat Grade Control integrates with Sequence Assist and Load Assist to control the implements to achieve a desired, pre-loaded grade. Cat Grade Control features automatic overcut protection which provides operators the confidence of knowing that they are always moving the correct amount of material with each load to help control cost.
- **New Bowl** – Hydraulic tubes are now enclosed in the bowl sides for improved reliability. The 621H uses a new, larger bowl design with capacity increased to 18.4 m<sup>3</sup> (24 yd<sup>3</sup>). The new bowl, despite its larger capacity is easier and faster to load. A push-pull option is available.
- **Non-Metallic Hood, Fenders and Fuel Tanks** – The hood and fenders are constructed from a non-metallic material that sheds sticky materials. The new, non-metallic fuel tank is larger to provide enough fuel for 10-12 hour shifts while remaining easy to clean out.
- **New Brakes** – Wet-disc hydraulic brakes are used. The standard Cat Engine Brake replaces the hydraulic retarder used on former models.
- **Improved Hydraulics** – The improved electro-hydraulic implement system provides improved multifunction capability. Piston-type hydraulic pumps are used.
- **Improved Cushion Hitch** – The cushion hitch uses two accumulators – one high pressure accumulator for loaded hauls, one low pressure accumulator for empty hauls.

## Specifications

### Tractor Engine – U.S. EPA Tier 4 Interim/EU Stage IIIB

Tractor Engine	Cat® C13 ACERT™	
Max Power (All Gears) (ISO 14396)	304 kW	407 hp
Max Power Reference Engine Speed	1,700 rpm	
Displacement	12.5 L	763 in <sup>3</sup>
Bore	130 mm	5.1 in
Stroke	157 mm	6.2 in

- Max power advertised is the max power available at max power reference engine speed of 1,700 rpm, measured at the flywheel when the engine is equipped with air cleaner, alternator, and exhaust losses.

### Tractor Engine – U.S. EPA Tier 3/EU Stage IIIA\*

Tractor Engine	Cat® C13 ACERT™	
Max Power (All Gears) (ISO 14396)	304 kW	407 hp
Max Power Reference Engine Speed	1,700 rpm	
Displacement	12.5 L	763 in <sup>3</sup>
Bore	130 mm	5.1 in
Stroke	157 mm	6.2 in

- Max power advertised is the max power available at max power reference engine speed of 1,700 rpm, measured at the flywheel when the engine is equipped with air cleaner, alternator, and exhaust losses.

\*For Jurisdictions other than the U.S. and the European Union.

### Scraper Bowl

Heaped Capacity	18.4 m <sup>3</sup>	24 yd <sup>3</sup>
Rated Load	26 127 kg	57,600 lb
Struck Capacity	13 m <sup>3</sup>	17.1 yd <sup>3</sup>
Maximum Depth of Cut	315 mm	12.4 in
Width of Cut, Outside Router Bits	3136 mm	123.5 in
Maximum Ground Clearance at Cutting Edge	594 mm	23.4 in
Thickness of Cutting Edge	22 mm	0.9 in
Maximum Hydraulic Penetration Force	580 kN	130,390 lbf
Maximum Depth of Spread	540 mm	21.3 in
Maximum Apron Opening	1767 mm	69.6 in
Maximum Apron Closure Force	225 kN	50,580 lbf



# 621H Wheel Tractor-Scraper

## Weights

### Machines meeting U.S. EPA Tier 4 Interim/ EU Stage IIIB emissions standards

	Standard	
Shipping Weight – 10% Fuel	35 507 kg	78,279 lb
Operating Weight – Full Fuel Tanks	36 185 kg	79,774 lb
Loaded, Based on a Rated Load	62 312 kg	137,374 lb

### Push-Pull

Shipping Weight – 10% Fuel	36 782 kg	81,090 lb
Operating Weight – Full Fuel Tanks	37 440 kg	82,541 lb
Loaded, Based on a Rated Load	63 567 kg	141,141 lb

### Machines achieving U.S. EPA Tier 3/ EU Stage IIIA emission levels

	Standard	
Shipping Weight – 10% Fuel	35 260 kg	77,735 lb
Operating Weight – Full Fuel Tanks	35 938 kg	79,230 lb
Loaded, Based on a Rated Load	62 065 kg	136,830 lb

### Push-Pull

Shipping Weight – 10% Fuel	36 515 kg	80,502 lb
Operating Weight – Full Fuel Tanks	37 193 kg	81,996 lb
Loaded, Based on a Rated Load	63 320 kg	135,597 lb

## Service Refill Capacities – Tractor

Engine Crankcase	33 L	8.75 gal
Transmission	70 L	18.5 gal
Differential	173 L	45.8 gal
Final Drive (per side)	19 L	5.0 gal
Cooling System	64 L	17.0 gal
Hydraulic Reservoir	83 L	22.0 gal
Windshield Washer Reservoir	5 L	1.3 gal

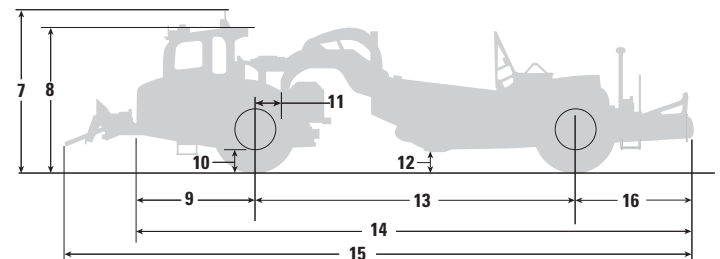
## Service Refill Capacities – Scraper

Non-Powered Wheel	3.8 L	1.0 gal
Fuel Tank	763 L	201.6 gal

## Standards

- Steering System meets ISO 5010:2007 for up to a maximum approved operating weight.
- Brakes meet ISO 3450:1996 for up to a maximum approved operating weight.
- Rollover Protective Structure (ROPS) is certified to a tractor only mass of 18 800 kg (41,447 lb) as tractor portion of tractor-scrappers per Table 1 of ISO 3471:2008. This excludes scraper weight and payload.
- Falling Object Protective Structure (FOPS) meets ISO 3449:2005 Level II.
- Seat Belts meet SAE J386 June 1985.
- Forward and Reverse Alarms meet ISO 9533:1989.
- The dynamic operator sound pressure level is 76 dB(A) when "ISO 6396:2008" is used to measure the value for an enclosed cab. The measurement was conducted at 100% of the maximum engine cooling fan speed. The sound level may vary at different engine cooling fan speeds. The cab was properly installed and maintained. The measurement was conducted with the cab doors and the cab windows closed. The cab was properly installed and maintained. Hearing protection may be needed when the machine is operated with an open operator station for extended periods or in a noisy environment. Hearing protection may be needed when the machine is operated with a cab that is not properly maintained or when the doors and windows are open for extended periods or in a noisy environment.
- The average exterior sound pressure level is 80 dB(A) when the "SAE J88FEB06 – Constant Speed Moving Test" procedure is used to measure the value for the standard machine. The measurement was conducted under the following conditions: distance of 15 m (49.2 ft) and "the machine moving forward in an intermediate gear ratio."
- The exterior sound power level is 113 dB(A) when the value is measured according to the static pressure test procedures and the conditions that are specified in "ISO 6393:2008."

## Dimensions (All dimensions are approximate.)



	mm	in
<b>1</b> Width – Overall Machine	3565	140.4
<b>2</b> Width – Tractor (Ladder Down)	3688	145.2
<b>3</b> Width – Tractor	3381	133.1
<b>4</b> Width – Rear Tire Centers	2290	90.2
<b>5</b> Width – Inside Bowl	3048	120.0
<b>6</b> Width – Outside Rear Tires	3165	124.6
<b>7</b> Height – Overall Shipping	4029	158.6
<b>8</b> Height – Top of Cab	3612	142.2

	mm	in
<b>9</b> Front of Tractor to Front Axle	3119	122.8
<b>10</b> Ground Clearance, Tractor	557	21.9
<b>11</b> Axle to Vertical Hitch Pin	540	21.3
<b>12</b> Height – Scraper Blade Maximum	540	21.3
<b>13</b> Wheelbase	7998	314.9
<b>14</b> Length – Overall Machine (Standard)	14 015	551.8
<b>15</b> Length – Maximum (Push-Pull)	15 575	613.2
<b>16</b> Rear Axle to Rear of Machine	2898	114.1

## STANDARD EQUIPMENT

### POWERTRAIN

#### ■ TRACTOR:

- C13 ACERT engine with MEUI
- Cat Engine Brake
- Electric start, 24 Volt
- Air cleaner, dry type with precleaner
- Fan, hydraulic
- Diesel Particulate Filter (DPF) aftertreatment (for engine meeting U.S. EPA Tier 4 Interim/EU Stage IIIB emissions standards)
- Ground level engine shutdown
- Radiator, aluminum unit core
- Guard, crankcase
- Muffler (for engines achieving U.S. EPA Tier 3/EU Stage IIIA emission levels)
- Starting aid, ether
- Braking system:
  - Primary and Secondary, wet disc, hydraulic
  - Parking, hydraulically-released, spring-applied
- Throttle Lock
- Transmission:
  - 8-speed planetary powershift
  - ECPC Control
  - APECS software
  - Programmable top gear selection
  - Transmission hold
  - Differential lock
  - Guard, powertrain

#### ■ SCRAPER:

- Braking system:
  - Primary and Secondary, wet disc, hydraulic
  - Parking, hydraulically-released, spring-applied

### ELECTRICAL

#### ■ TRACTOR:

- Alternator, 150 Amp
- Batteries (4), 12 Volt, 1,000 CCA, maintenance free, high output
- Electrical system, 24V
- Lighting system:
  - Headlights, halogen
  - Turn signals with hazard function
  - LED Floodlights, halogen (2), cutting edge (1), bowl (2), side vision (2)
- Starting/charging receptacle

#### ■ SCRAPER:

- Alarm, backup
- Lighting system:
  - Brake lights, LED
  - Turn signals with hazard function, LED

### OPERATOR ENVIRONMENT

#### ■ TRACTOR:

- HVAC system, heat, AC, defrost
- Thermostat control of HVAC system
- Coat hook
- Lunch box platform with holding strap
- Diagnostic connection (2)
- 12V power ports (2)
- Differential lock (1)
- Dome courtesy light

- Horn, electric
- T-Handle implement control
- Mirror, rearview
- Radio ready, 12V
- ROPS/FOPS cab, pressurized
- Keypad Switches
- Safety Tab Rocker Switches
- Parking Brake
- Seat belt, static two-piece
- Seat, air suspension, Comfort Series 3, rotates 30 degrees
- Steering wheel, tilt, telescoping, padded
- Storage in dash if WAVS or Cat Grade Control is not equipped
- Windows, right side emergency egress
- Windows, sliding
- Windows, laminated, zipped in
- Windshield wipers, front and rear windows, includes washers
- Door lock
- Messenger Display – gauges, warnings include:
  - Coolant temp
  - Engine oil temp
  - Hydraulic oil temp
  - DPF temp
  - 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 out
  - DPF fill levels

### FLUIDS

- Extended Life Coolant to –37° C (–34° F)

### OTHER STANDARD EQUIPMENT

#### ■ TRACTOR:

- Cushion hitch
- Accumulators (cushion hitch) with Canadian Registration Number (CRN)
- Fast oil change
- Fenders, non-metallic
- Heater, engine coolant 120V
- Tow pin, front
- Vandalism locks

#### ■ SCRAPER:

- Quick drop bowl valve
- Vandalism locks
- Extended push block

# 621H Wheel Tractor-Scraper

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## OPTIONAL EQUIPMENT

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- Push-pull arrangement
- Sequence Assist
- Load Assist
- Cat Grade Control
- Secondary Steering
- Guard, overflow
- Fender extension, scraper
- Powered access ladder
- Fast fuel fill
- HID Work lights
- Low ambient fluids –51° C (–61° F)
- Work Area Vision System (WAVS) – three cameras showing right side, cutting edge and directly behind machine, display in cab
- External steering lock
- Cab precleaner
- Cab rotating beacon
- Air horn

For more complete information on Cat products, dealer services, and industry solutions, visit us on the web at [www.cat.com](http://www.cat.com)

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