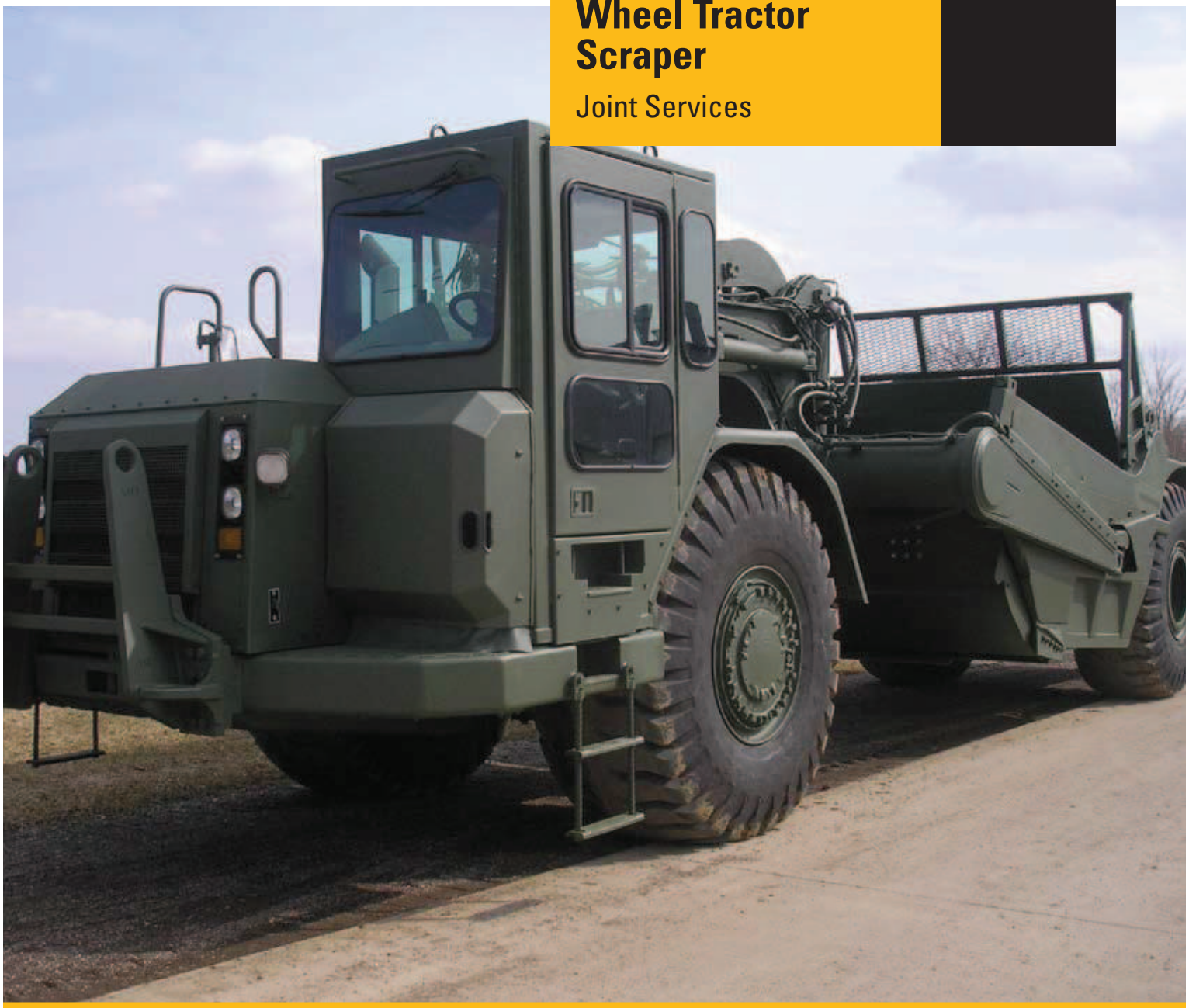
621G

Wheel Tractor Scraper

Joint Services



Cat® C15 ACERT™ Engine		
Net Power	246/272 kW	330/365 hp

Scraper Bowl		
Capacity Heaped	17 m^3	22 yd^3
Rated Load	23 950 kg	52,800 lb

MISSION CAPABLE

The Cat® 621G Wheel Tractor Scraper – Tested, Proven, and Reliable – Mission Capable

The Cat 621G Wheel Tractor Scraper (WTS) is equipped with a 22 cubic yard bowl that is capable of self loading and hauling up to 52,800 lbs of material. The 365 hp engine provides the power and torque rise needed for excellent lugging in the toughest loading conditions.

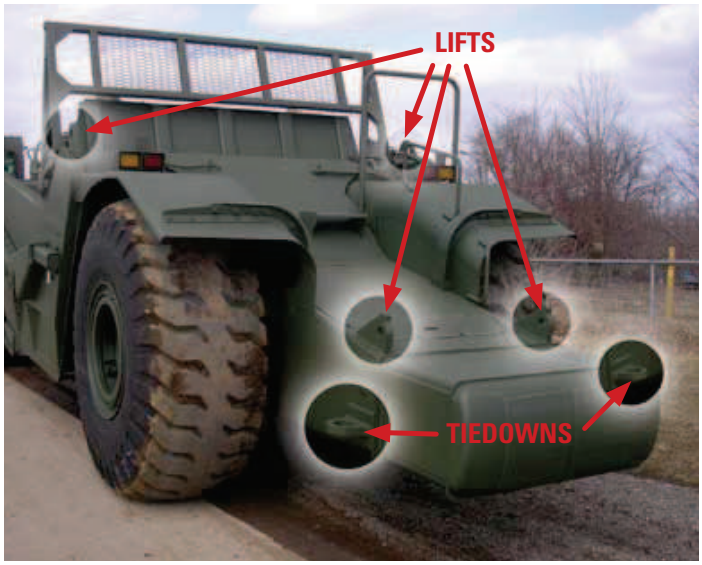
The 621G WTS is also well suited to be push loaded by a medium size Cat Bulldozer. This arrangement combines the horsepower of two machines into one cutting edge. Using this concentrated effort, along with the high transport speeds and the ability to eject the payload on the run, allows the machine to be loaded and unloaded in cycle times less than a minute.

The fast load capability, along with unsurpassed visibility to the cutting edge and comfortable operator environment make the 621G WTS an exceptionally productive hauling unit. All of these features make the 621G WTS a vital piece of equipment in the construction of roads, airfields, defensive berms, and other key military construction missions.

MANEUVERABILITY.

The 621G WTS articulates a total of 175 degrees (90 degrees to the right and 85 degrees to the left), for maximum maneuverability in a variety of conditions.

Transportability. MIL-STD-209K lift and tiedown provisions are standard on the Joint Services 621G WTS and were designed for durability and long life. The 621G WTS is self-deployable with top speeds of 32 mph and a travel range exceeding 200 miles.



Fuel Economy. Electronic controls yield a fuel savings by optimizing the timing set for varying conditions. The Electronic Control Modules (ECU) matches timing to the load on the engine, engine speed and temperature.

Operator Station. The interior incorporates convenient control placement and a comfortable work environment, which are several keys to high productivity. Features include electro-hydraulic controls, an air suspension seat and improved instrumentation.

Single Lever Implement Control. Simple and easy to operate, the joystick enhances the productivity of operators of all skill levels. Requires less force to control the critical implement functions and requires less lever travel. Grab handle/hand rest next to joystick controller so operator has a place to rest hand.

Retarder. The optional hydraulic retarder can be used on downgrades to reduce service brake wear and enhance machine control. The retarder acts as an internal brake on the driveline that minimizes the need to apply service brakes. Optimal retarding action occurs when the engine is turning at rated rpm.

Maintenance. The 621G provides unmatched serviceability with grouped service points that allow for easy access.

Power Train. Planetary powershift transmission delivers excellent load capability. High capacity axle design accommodates wide brake shoes and drums. The neutral coast inhibitor and programmable top gear reduce wear while increasing machine performance.

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Remanufactured Parts. Cat engines and major components are designed to be remanufactured and provide multiple life cycles. Components are remanufactured in the factory to original specifications with necessary product updates.

Monitoring Systems. The 621G WTS is also equipped with Electronic Technician (Cat ET), a service tool that helps in troubleshooting existing problems or identifying potential problems by displaying real-time pressures, temperatures, fuel settings, historical data, and other diagnostic information.

Worldwide Locations. The Caterpillar global network of authorized dealers supports the U.S. Military in every corner of the globe. With heavy construction equipment dealers located in over 200 countries, Caterpillar's support organization provides global coverage.

Service Capabilities. Cat field service technicians have the experience and tools necessary to service your equipment on-site. Field service trucks are fully loaded with state-of-the-art tools and diagnostic equipment as well as specifications and schematics for every Cat machine. Technical experts at the Dealership and at Caterpillar are available to provide assistance to field service technicians when needed. When on-site repair isn't enough, Cat Dealerships are fully-equipped to service your equipment quickly.

Dealer Support. The Caterpillar global network of authorized dealers is the best in the world at providing support to keep your equipment up and running. With 99.7% of parts shipped within 24 hrs, Cat Dealers are supporting the 621G WTS.

Engine

Engine Model	Cat® C15 ACERT™	
Net Power – Gears 1-2	246 kW	330 hp
Net Power – Gears 3-8	272 kW	365 hp
Gross Power – Gears 1-2	268 kW	359 hp
Gross Power – Gears 3-8	294 kW	394 hp
Bore	140 mm	5.5 in
Stroke	165 mm	6.5 in
Displacement	15.2 L	928 in^3

- Net power advertised is the power available at rated speed of 1800 rpm, measured at the flywheel when the engine is equipped with fan, air cleaner, muffler and alternator.

Scraper Bowl

Heaped Capacity	17 m^3	22 yd^3
Rated Load	23 950 kg	52,800 lb
Struck Capacity	12 m^3	15.7 yd^3
Maximum Depth of Cut	333 mm	13.1 in
Width of Cut, to Router Bits	3023 mm	119 in
Maximum Ground Clearance	522 mm	20.6 in
Cutting Edge Thickness	22 mm	0.88 in
Hydraulic Penetration Force	150.4 kN	33,840 lb
Maximum Depth of Spread	522 mm	20.6 in
Apron Opening	1780 mm	70 in
Apron Closure Force	107 kN	24,075 lb

Transmission

1 Forward	5 kph	3.1 mph
2 Forward	7.6 kph	4.7 mph
3 Forward	10.9 kph	6.8 mph
4 Forward	14.8 kph	9.2 mph
5 Forward	19.9 kph	12.4 mph
6 Forward	26.9 kph	16.7 mph
7 Forward	36.4 kph	22.6 mph
8 Forward	51.5 kph	32 mph
Reverse	9.2 kph	5.7 mph

Steering

Steering Angle – Right	90°	
Steering Angle – Left	85°	
Width – 180° Turn	10.9 m	35.9 ft
Hydraulic Output	209 L/min	55 gal/min

- Optional supplemental steering system meets SAE J1511 (OCT 90) and ISO 5010 (1992) requirements
- Steering circuit at 1900 RPM

Weights (approximate)

Shipping with ROPS cab and 10% fuel

Tractor	69%	
	22 677 kg	49,994 lb
Scraper	31%	
	10 118 kg	22,461 lb
Total 100%	**32 865 kg**	**72,455 lb**

Operating empty with ROPS cab, full tank & operator

Front axle	68%	
	22 760 kg	50,176 lb
Rear axle	32%	
	10 710 kg	23,612 lb
Total 100%	**33 470 kg**	**73,789 lb**

Loaded, based on a rated load of:

	23 950 kg	**52,800 lb**
Front axle	53%	
	30 433 kg	67,092 lb
Rear axle	47%	
	26 987 kg	59,497 lb
Total 100%	**57 420 kg**	**126,589 lb**

Standards

- Rollover Protective Structure (ROPS) meets SAE J320a, SAE J1040 MAY 94, ISO 3471-1986 and ISO 3471-1994
- Falling Object Protective Structure (FOPS) meets SAE J231 JAN 81 and ISO 3449-1992
- The operator sound exposure Leq (equivalent sound pressure level) measured according to the work cycle procedures specified in ANSI/SAE J1166 OCT98 is 80.5 dB(A), for cab offered by Caterpillar, when properly installed and maintained and tested with the doors and windows closed.
- Hearing protection may be needed when operating with an open operator station and cab (when not properly maintained or doors/windows open) for extended periods or in noisy environments.
- Standard air conditioning system contains environmentally friendly R134a refrigerant.

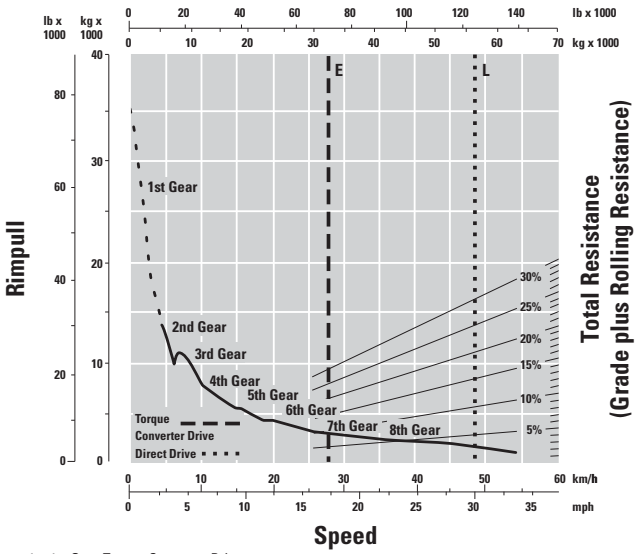
Services Refill Capacities

Fuel Tank	606 L	160 gal
Crankcase	36 L	9.5 gal
Transmission	72 L	19 gal
Differential	144 L	38 gal
Final Drive (per side)	19 L	5 gal
Cooling System	107 L	28 gal
Hydraulic Reservoir	140 L	37 gal
Wheel Coolant (each)	45 L	12 gal
Windshield Washer	6 L	1.5 gal

Gradeability/Speed/Rimpull

To determine gradeability performance: Read from gross weight down to the percent of total resistance. Total resistance equals actual percent grade plus 1% for each 9 kg/t (20 lb/ton) of rolling resistance. From this weight-resistance point, read horizontally to the curve with the highest obtainable gear, then down to maximum speed. Usable rimpull will depend upon traction available and weight on drive wheels.

621G Tier 3 — Rimpull
Standard Arrangement*
Gross Weight



1—1st Gear Torque Converter Drive
2—2nd Gear Direct Drive
3—3rd Gear Direct Drive
4—4th Gear Direct Drive
5—5th Gear Direct Drive
6—6th Gear Direct Drive
7—7th Gear Direct Drive
8—8th Gear Direct Drive

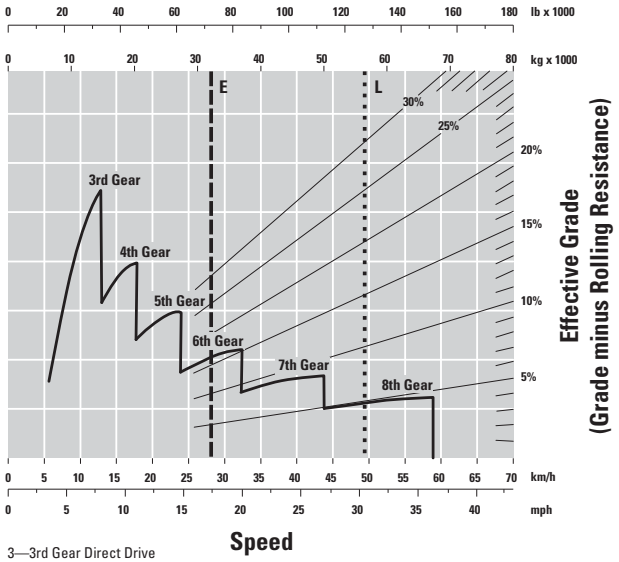
E—Empty 32 865 kg (72,455 lb)
L—Loaded 57 420 kg (126,589 lb)

* at sea level

Retarding

To determine retarding performance: Read from gross weight down to the percent effective grade. (Effective grade equals actual percent grade minus 1% for each 9 kg/t (20 lb/ton) of rolling resistance). From this weight-effective grade point, read horizontally to the curve with the highest obtainable speed range, then down to maximum descent speed the retarder can properly handle.

621G Tier 3 — Retarding*
Gross Weight



3—3rd Gear Direct Drive
4—4th Gear Direct Drive
5—5th Gear Direct Drive
6—6th Gear Direct Drive
7—7th Gear Direct Drive
8—8th Gear Direct Drive

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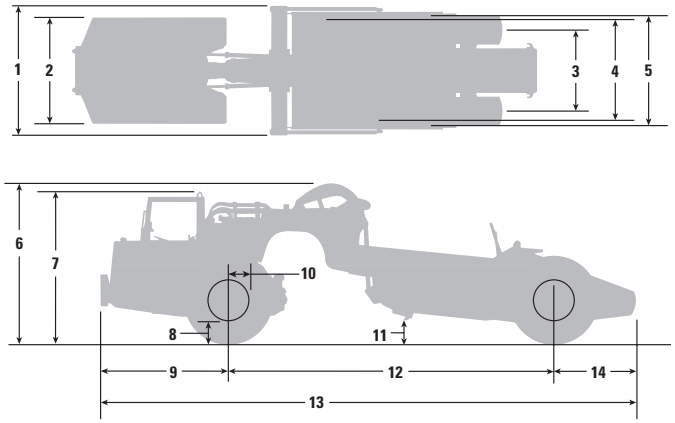
* at sea level

Dimensions



1	Width – Overall Machine	3467 mm	136.5 in
2	Width – Tractor	3130 mm	123.2 in
3	Width – Rear Tire Center Lines	2180 mm	85.8 in
4	Width – Inside of Bowl	2946 mm	116 in
5	Width – Outside Rear Tires	3048 mm	120 in
6	Height – Overall Shipping	3705 mm	145.9 in
7	Height – Top of Cab	3423 mm	134.8 in
8	Ground Clearance, Tractor	553 mm	21.8 in
9	Front of Tractor to Front Axle	3058 mm	120.4 in
10	Rim Radius	432 mm	17 in
11	Height – Scraper Blade Max.	522 mm	20.6 in
12	Wheelbase	7722 mm	304 in
13	Length – Overall Machine	12 917 mm	508.5 in
14	Rear Axle to Rear of Machine	2142 mm	84.3 in

Standard equipment may vary. Consult Caterpillar Defense & Federal Products for details.

Electrical

Alarm, backup
Alternator, 75 amp
Batteries (4), 12V Maintenance Free, High Output
Lighting System - Tractor
  Directional Signals; Hazard Lights; Headlights, Stop/Tail Halogen with Dimmer; Floodlight, Cutting Edge
Starting Receptacle

Operator Environment

Air Conditioner (includes heater and defroster)
Cigarette Lighter and Ashtray
Coat Hook
Defroster fan
Diagnostic Connection Port (12V)
Dome Courtesy Light
Engine Speed Control Lock
Gauge Group
  Air Pressure
  Converter/Retarder temperature
  Electronic Monitoring System (EMS III)
  Engine Coolant Temperature
  Actual Transmission Gear Indicator
  Fuel
  Speedometer
  Tachometer
  Transmission Gear Indicator
Horn
Implement Control Joystick
Rearview Mirrors
Radio Ready
(two bays, speakers, 5-amp converter)
ROPS Cab with Sound Suppression and Pressurization
Static Seat belt
Seat, Air Suspension, Cat Comfort, Cloth, Rotates
Steering Wheel – Tilt and Telescoping
Storage Compartment
Throttle lock
Transmission Hold
Windows – Sliding Side, Swing out
Windshield – Laminated Glass
Windshield Wiper/Washer – Front and Rear

Powertrain

Engine
  Electronic Unit Injection (EUI)
  Electric Start, 24V
  Fan, Suction
  Ground Level Engine Shutdown
  Muffler
  Starting Aid, Ether
  Thermo-shield, Laminated
  Cat® C15, 6-cylinder Diesel with ACERT™ Technology
  Air Cleaner, Dry-type with Pre-cleaner
  Radiator, NGMR (9 fins per inch)
  Guard, Crankcase
Braking System
  Parking/Primary/Secondary
  Shields – Brake
Transmission
  8-speed Automatic Powershift with Electronic Control
  Control Throttle Shifting
  Differential – Lockup
  Downshift Inhibitor
  Guard, powertrain
  Neutral Coast Inhibitor
  Programmable Top-Gear Selection
  Throttle lock, variable
  Transmission hold

Other Standard Equipment

Extended Life Coolant, –36°C (–33°F)
Fast Oil Change
Fenders
Rims – 29 in (736.6 mm)
Tires – 33.25-R29 Radial
Air Dryer
Cushion Hitch
Locks, Vandalism Protection
Product Link Ready
Tow Pins – Front and Rear

MILITARY MODIFICATIONS

- Armored Cab (Optional)
- NATO Start Receptacle
- Blackout Lighting System
- Keyless Engine Start Switch
- Rifle Bracket
- Military Data Plates
- Shipping Data Plates
- Cold Start Aid for -25° F
- Arctic Kit for (-40° F) Cold Start (Optional)
- Military Towing Lugs
- Decontamination Bracket
- Vandalism Protection
- Fresh Water Fordable to 36" Depth
- MIL-STD-209 Lift and Tiedown Provisions
- Tool Box
- Fire Extinguisher
- CARC or Special Paint
- Military Oil Sampling Valves
- Sorbent Decontamination System Mounting Bracket
- Pulse Solar Charger
- Military (Hawker) Batteries

All dimensions are approximate. Dimensions may vary with configuration. Specific military service configurations are available upon request.

For more information visit: **www.catdfp.com**

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