Cat®
637K

Wheel Tractor-Scraper

Main Features and Benefits:

- **Tractor Serviceability Improvement** – The fuel, water and engine oil are relocated at ground level on the right hand side of the machine for easy access.
- **Brakes** – Have been changed from an air actuated drum shoe brake to a hydraulic actuated tractor wet disc brake and a scraper dry caliper.
- **Tire Spin Reduction** – This feature will allow the machine to control the slip of the tractor tires only.
- **Engine Over Speed Protection** – In the event of an engine over speed situation, the compression brake or brakes will automatically engage with no operator input. The machine determines the over speed condition based on rate of acceleration and applies compression brakes automatically.
- **Advanced Cushion Hitch** – With similar technology as the Cat® Advanced Ride Management seat suspension, this software 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.
- **High Pressure Steering** – K Series steering system design requires significantly less steering effort. The reduced steering effort will allow for decreased operator fatigue and a more efficient operator resulting in possible higher rates of production late in the work cycle.
- **Differential Lock Engagement Protection** – This standard feature allows the machine to prevent the operator from engaging the differential lock when damage could occur.
- **Cab Improved** – The K Series cab interior improves operator comfort and visibility. The overall interior is 21% larger than the G Series cab.
- **Machine Speed Limit** – This feature is designed to take the place of top gear selection. If the machine top speed needs to be limited the operator can select the top speed through the display or the top speed can be set in ET. This will allow the machine to find the correct gear that works best for the engine and transmission. Allowing the engine and transmission to select the correct gear to pull the load in most cases resulting in a lower engine load factor and lower fuel burn verses using top gear selection that required the machine to run at engine speeds at or close to high idle.
- **Ground Speed Control** – Ground Speed Control sets the desired top speed by the operator if job site conditions or segment speed limits require a speed less than full run out. Machine Speed Limit is intended for use when top speed needs to be limited for longer durations and Ground Speed Control is intended for use when the top speed needs to be reduced for shorter segments or intermediate periods of time. The operator can set the desired top speed and the machine will find the correct gear that works best for the engine and transmission.
- **Fuel Economy Mode** – This is a two part feature when selected. The first part of the feature lowers the transmission shift points allowing shifting to take place at lower rpms to aid in fuel savings. The second part of the Fuel Economy Mode allows the machine when operated at engine rpms less than full throttle to automatically vary the power distribution between the tractor and the scraper.
- **Sequence Assist (Optional Attachment)** – This option uses cylinder position sensors to automate bowl, apron and further implement controls throughout the four core work cycles: Dig, Haul, Unload and Return. When utilized this can reduce up to 14 individual operator commands per cycle. Sequence Assist simplifies control over the implements, reduces joystick usage, automatically controls cushion hitch, transmission hold and ejector.
- **Payload Estimator (Optional Attachment)** – The Payload Estimator will calculate the payload of the machine in tonnes or tons by measuring the bowl lift cylinder pressures at the beginning of the loaded haul segment. This feature works best when using Sequence Assist. Using Payload Estimator during testing has achieved better than 95% accuracy when compared to actual scale weights. The Payload Estimator feature comes automatically when a machine is ordered with Sequence Assist.
- **Load Assist (Optional Attachment)** – Is designed to help shorten the learning curve of inexperienced operators to ensure consistency and faster loading of material while reducing effort of the operator. Based on the speed of the machine, Load Assist automatically adjusts the cutting edge height to manage wheel slip and to ensure consistent and efficient loading in bulk earthmoving applications.
- **Cat Grade Control (Optional Attachment)** – Intelligently ensures the machine does not cut below grade in the cut area or over fill in the fill area – avoiding rework and moving unnecessary material.

CAT®

Specifications

General Data

Fuel Tank Refill Capacity: Scraper	1400 L	370 U.S. gal
Overall Width	3.94 m	12'11"
Overall Shipping Height	4.15 m	13'7"
Scraper Capacity:		
Struck	18.3 m^3	24 yd^3
Heaped	26 m^3	34 yd^3
Rated Load	37 200 kg 37.2 tonnes	82,200 lb 41.1 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	34.7 mph
180° Curb-to-Curb Turning Width	12.23 m	40'2"
Tires:		
Tractor	37.25R35**E3	
Scraper	37.25R35**E3	

Non Push-Pull

Operating Weight (Empty)	52 140 kg	114,950 lb
Overall Length	15.04 m	49'4"

Push-Pull

Operating Weight (Empty)	54 005 kg	119,060 lb
Overall Length (With Bail Down)	16.64 m	54'7"

Engine

Engine Model:		
Tractor	Cat C18 ACERT™	
Scraper	Cat C9.3 ACERT	
Rated Engine RPM:		
Tractor	1,900 rpm	
Scraper	2,150 rpm	
Flywheel Power:		
Tractor	425 kW	570 hp
Scraper	216 kW	290 hp

- Cat C9.3 ACERT and C18 ACERT engines meet U.S. EPA Tier 4 Final/ EU Stage IV emission standards.

Cab

- ROPS/FOPS meet "ISO Standards."
- The exterior sound power level for the standard machine (ISO 6393) is 116 dB(A).

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

Travel Speeds (Runout)

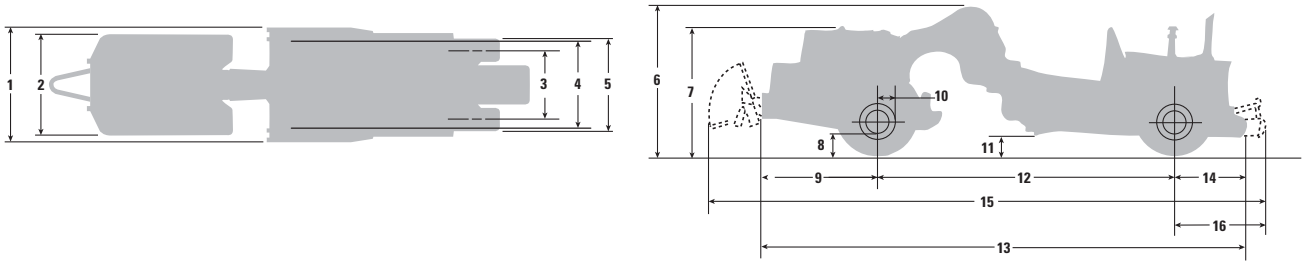
Transmission Gear:		
First	5.5 km/h	3.4 mph
Second	10.0 km/h	6.2 mph
Third	12.4 km/h	7.7 mph
Fourth	16.9 km/h	10.5 mph
Fifth	22.7 km/h	14.1 mph
Sixth	30.6 km/h	19.0 mph
Seventh	41.95 km/h	25.7 mph
Eighth	55.8 km/h	34.7 mph
Reverse	9.9 km/h	6.2 mph

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

Service Refill Capacities

Crankcase:		
Tractor	52 L	13.7 gal
Scraper	24.5 L	6.5 gal
Transmission System:		
Tractor	110 L	29 gal
Scraper	49 L	12.9 gal
Cooling System:		
Tractor	75 L	19.8 gal
Scraper	61 L	16.1 gal
Fuel Tank	1400 L	370 gal
Hydraulic System	142 L	37.5 gal
Diesel Exhaust Fluid:		
Tractor	30.5 L	8 gal
Scraper	22 L	5.8 gal



Dimensions

	mm	in
1 Width – Overall Machine	3937	155
2 Width – Tractor	3499	137.8
3 Width – Rear Tire Centers	2462	96.9
4 Width – Inside of Bowl	3404	134
5 Width – Outside Rear Tires	3636	143.2
6 Height – Overall Shipping	4145	163.2
7 Height – Top of Cab	3733	147
8 Ground Clearance – Tractor	664	26.1

	mm	in
9 Front of Tractor to Front Axle	3612	142.2
10 Axle to Vertical Hitch Pin	509	20
11 Height – Scraper Blade Maximum	510	20
12 Wheelbase	8808	346.8
13 Length – Overall Machine (Standard)	15 164	597
14 Rear Axle to Rear of Machine	2292	90.2
15 Length – Maximum (Push-Pull)	16 640	655.1
16 Extended Push Block (Push-Pull)	2744	108

STANDARD EQUIPMENT

POWER TRAIN – TRACTOR

- Cat C18 ACERT engine with MEUI™
- Compression engine brake
- Electric start, 24V
- Air cleaner, dry type with precleaner
- Fan, hydraulic
- Ground level engine shutdown
- Radiator, aluminum unit core, 9 fins per inch
- Guard, crankcase
- Starting aid, ether
- Braking system:
  - Primary and secondary, wet disc, hydraulic actuated
  - Parking, hydraulic-released, spring-applied
- Throttle lock
- Transmission:
  - 8-speed planetary power shift
  - ECPC control
  - APECS software
  - Programmable top gear selection
  - Transmission hold
  - Differential lock
  - Guard, power train
  - Standard tire spin reduction
  - Ground speed control
  - Machine speed limit
  - Differential lock protection

POWER TRAIN – SCRAPER

- Cat C9.3 ACERT engine:
  - High pressure common rail fuel
  - Constant lift engine brake
- Electric start, 24V
- Air cleaner, dry type with precleaner
- Fan, mechanical driven
- Ground level engine shutdown
- Radiator, aluminum unit core, 9 fins per inch
- Starting aid, either
- Braking system:
  - Primary and secondary, dry caliper, hydraulic actuated
- Transmission:
  - 4-speed (torque converter drive)
  - Planetary power shift

ELECTRICAL – TRACTOR

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

ELECTRICAL – SCRAPER

- Alarm, backup
- Batteries (4) 12V, 1,000 CCA, maintenance free, high output
- Alternator, 65 Amp
- Electrical system, 24V
- 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
- Lunchbox 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
- ROPS/FOPS cab, pressurized

(continued on next page)

STANDARD EQUIPMENT *(continued)*

OPERATOR ENVIRONMENT – TRACTOR *(continued)*

- Keypad switches:
  - Throttle lock
  - Wipers/washers
  - Hazard lights
  - Retarding level select
  - Work lights on, off
  - Information mode on Messenger Display
- Safety tab rocker switches
- Seat belt, static two-piece
- Seat, Cat Advanced Ride Management (ARM), Cat Comfort Series 3, rotates 30 degrees
- Steering wheel, tilt, telescoping, padded
- 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 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
  - DEF fill levels

FLUIDS

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

OTHER STANDARD EQUIPMENT – TRACTOR

- Advanced cushion hitch
- Accumulators (cushion hitch) with Canadian Registration Number (CRN)
- Fast oil change
- Fenders, non-metallic
- Heater, engine coolant 120V
- Rims (2)
- Tow hooks, front
- Vandalism locks
- Heater, engine coolant 120V
- Steering locks

OTHER STANDARD EQUIPMENT – SCRAPER

- Bowl:
  - 18.3 m^3 (24 yd^3), struck
  - 26 m^3 (34 yd^3), heaped
- Vandalism locks
- Scraper fenders
- Overflow guard
- Fast oil change
- Rims (2)
- Hydraulic position sensing cylinders (bowl lift and apron)

OPTIONAL ATTACHMENTS

STEERING ARRANGEMENTS

- Secondary Steering Arrangement

INTEGRATED TECHNOLOGIES

- Sequence Assist Arrangement with Payload Estimator
- Load Assist
- Cat Grade Control with Load Assist
- Advanced Tire Spin Reduction

OTHER ATTACHMENTS

- Camera arrangement – Work Area Vision System (WAVS)
- Cab beacon
- Air horn
- Air horn and beacon
- Wiring group
- Push Pull

SERVICE INSTRUCTIONS

- Film arrangement – U.S. (ANSI)
- Film arrangement – International (ISO)