



# Cat<sup>®</sup> 938K

## SUGARCANE HANDLER

### K SERIES – MAKING YOUR CHOICE EASY:

- **Work Made Easy** – Move more with Caterpillar’s ultra-capacity bagasse bucket, dedicated to stockpiling material at the mill or a patented quick loading Performance Series bucket for digging terraces in the field.

The 938K Sugarcane Handler is built to handle a high temperature and high debris environment, with a cyclonic pre-filter and on-demand hydraulically driven reversing fan as standard.

- **Enjoy All Day Comfort** – Have a seat in the 938K Sugarcane Handler and enjoy excellent all around visibility and low-effort joystick controls that move with you on a fully adjustable seat suspension. A large spacious operator environment combined with Caterpillar’s exclusive hydraulic cylinder damping and smooth predictable controls make this the most comfortable seat on your job site.

- **Efficiently Powerful** – For tough and demanding sugarcane applications the purpose-built power train of the 938K Sugarcane Handler includes a high torque axle paired with high flotation agricultural tires. Combined with an intelligent hydrostatic transmission and maximum engine speed of 1,800 rpm, allows you to move more material while enjoying industry leading fuel savings.

- **Customize Your Experience** – Meet your application requirements and individual preferences with Caterpillar’s industry first Hystat Operator Modes featuring unique power train settings. Select classic Torque Converter for smooth roll-out, or conventional Hystat for aggressive engine braking. Fine tune machine performance by adjusting wheel torque when working in muddy fields or maximize torque when climbing a mountain of bagasse.

## Specifications

### Engine

Engine Model	Cat <sup>®</sup> C7.1 ACERT <sup>™</sup>			
Power Mode	Standard Mode		Performance Mode	
Speed Range	Range 1-3*		Range 1-4	
Maximum Gross Power				
Maximum Engine Speed	1,600 rpm		1,800 rpm	
ISO 14396	129 kW	173 hp	140 kW	188 hp
ISO 14396 (DIN)	129 kW	175 hp	140 kW	190 hp
Rated Net Power	1,600 rpm		1,800 rpm	
SAE J1349	126 kW	169 hp	136 kW	182 hp
ISO 9249 (DIN)	127 kW	173 hp	138 kW	188 hp
Maximum Gross Torque				
ISO 14396	896 N-m	660 lbf-ft	912 N-m	672 lbf-ft
Maximum Net Torque				
SAE J1349	860 N-m	634 lbf-ft	876 N-m	646 lbf-ft
ISO 9249 (1977)/EEC 80/1269	870 N-m	641 lbf-ft	886 N-m	653 lbf-ft
Displacement	7.01 L	427 in <sup>3</sup>	7.01 L	427 in <sup>3</sup>

- Engine meets Brazil MAR-1 emission standards, equivalent to U.S. EPA Tier 3/Stage IIIA.
- Net power shown is the power available at the flywheel when the engine is equipped with alternator and air cleaner.

\*Range 4 power is boosted to be the same as Performance Mode.

### Buckets

Bucket Capacities – General Purpose	2.5-3.2 m <sup>3</sup>	3.2-4.2 yd <sup>3</sup>
Bucket Capacities – Light Material	3.1-5.5 m <sup>3</sup>	4.0-7.5 yd <sup>3</sup>

### Steering

Steering Articulation Angle (each direction)	40°	
Maximum Flow – Steering Pump	130 L/min	34 gal/min
Maximum Working Pressure – Steering Pump	24 130 kPa	3,500 psi
Maximum Steering Torque:		
0 degrees (straight machine)	57 630 N-m	42,506 lbf-ft
40 degrees (full turn)	42 570 N-m	31,398 lbf-ft
Steering Cycle Times (full left to full right):		
At 1,800 rpm: 90 rpm steering wheel speed	2.2 seconds	
Number of Steering Wheel Turns – full left to full right or full right to full left	3.1 turns	



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## Loader Hydraulic System

Maximum Flow – Implement Pump	190 L/min	50 gal/min
3rd Function Maximum Flow*	190 L/min	50 gal/min
4th Function Maximum Flow*	150 L/min	40 gal/min
Maximum Working Pressure – Implement Pump	28 000 kPa	4,061 psi
Relief Pressure – Tilt Cylinder	30 000 kPa	4,351 psi
3rd Function Maximum Working Pressure	28 000 kPa	4,061 psi
4th Function Maximum Working Pressure	28 000 kPa	4,061 psi

Hydraulic Cycle Times:	Standard Mode	Performance Mode
	At 1,600 rpm	At 1,800 rpm
Raise (ground level to maximum lift)	6.3 seconds	5.6 seconds
Dump (at maximum lift height)	1.5 seconds	1.3 seconds
Float Down (maximum lift to ground level)	2.7 seconds	2.7 seconds
Total Cycle Time	10.5 seconds	9.6 seconds

\*Adjustable from 20% to 100% of maximum flow through the secondary display, when equipped.

## Service Refill Capacities

Fuel Tank	195 L	51.5 gal
Cooling System	32 L	8.5 gal
Engine Crankcase	19.5 L	5.2 gal
Transmission (gearbox)	11 L	2.9 gal
Axles:		
Front	35 L	9.2 gal
Rear	35 L	9.2 gal
Hydraulic System (including tank)	170 L	44.9 gal
Hydraulic Tank	90 L	23.8 gal

## Transmission

Forward and Reverse:		
Range 1*	1-13 km/h	0.6-8 mph
Range 2	13 km/h	8 mph
Range 3	27 km/h	17 mph
Range 4	40 km/h	25 mph

\*Creeper control allows maximum speed range adjustability from 1 km/h (0.6 mph) to 13 km/h (8 mph) in Range 1 through the secondary display, when equipped. Factory default is 7 km/h (4.4 mph).

## Tires

Standard Size	620/75R26, Radial, Agricultural
Other Choices Vary by Region:	750/65R26, Radial, Agricultural

## Cab

ROPS	ISO 3471:2008
FOPS	ISO 3449:2005 Level II

- Cab and Rollover Protective Structures (ROPS) are standard.

## Sound

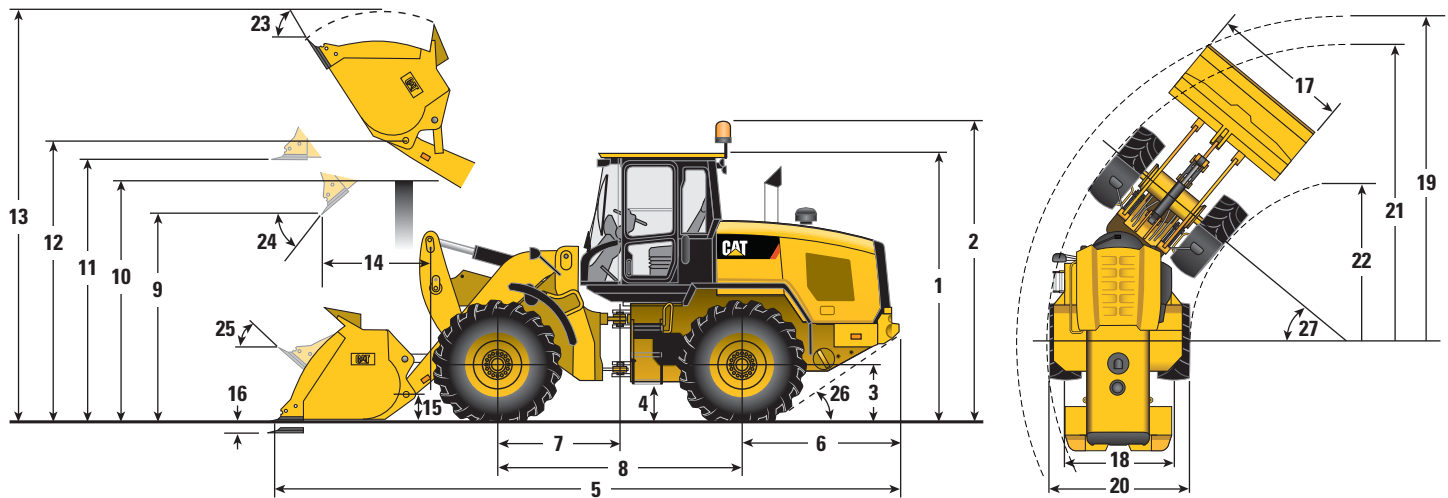
- The declared dynamic operator sound pressure level is 72 dB(A) when "ISO 6396:2008" is used to measure the value for an enclosed cab.
- The measurement was conducted at 70% of the maximum engine cooling fan speed, with the cab doors and cab windows closed. The cab was properly installed and maintained. The sound level may vary at different engine cooling fan speeds.
- The declared exterior sound power level is 104 dB(A) when the value is measured according to the dynamic test procedures and the conditions that are specified in "ISO 6395:2008."

## Axles

Front	Fixed
	Locking differential (standard)
Rear	Oscillating $\pm 7$ degrees
	Open differential (standard)
	Limited slip differential (optional in some regions)

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## Dimensions and Operating Specifications (All dimensions are approximate.)



Bucket Size	5.5 m <sup>3</sup> (7.5 yd <sup>3</sup> )		2.7 m <sup>3</sup> (3.5 yd <sup>3</sup> )	
1 Height: Ground to Cab	3363 mm	11'0"	3363 mm	11'0"
2 Height: Ground to Beacon	3730 mm	12'2"	3730 mm	12'2"
3 Height: Ground Axle Center	708 mm	2'3"	708 mm	2'3"
4 Height: Ground Clearance	409 mm	1'4"	409 mm	1'4"
5 Length: Overall	8104 mm	26'7"	7647 mm	25'1"
6 Length: Rear Axle to Bumper	1968 mm	6'5"	1968 mm	6'5"
7 Length: Hitch to Front Axle	1525 mm	5'0"	1525 mm	5'0"
8 Length: Wheel Base	3050 mm	10'0"	3050 mm	10'0"
9 Clearance: Bucket at 45 degrees	2486 mm	8'1"	2845 mm	9'4"
10 Clearance: Load Over Height	3377 mm	11'0"	3377 mm	11'0"
11 Clearance: Level Bucket	3671 mm	12'0"	3665 mm	12'0"
12 Height: Bucket Pin	3992 mm	13'1"	3992 mm	13'1"
13 Height: Overall	5759 mm	18'10"	5324 mm	17'5"
14 Reach: Bucket at 45 degrees	1353 mm	4'5"	1089 mm	3'6"
15 Carry Height: Bucket Pin	434 mm	1'5"	434 mm	1'5"
16 Dig Depth	71 mm	2.8"	77 mm	3"
17 Width: Bucket	3062 mm	10'0"	2750 mm	9'0"
18 Width: Tread Center	2120 mm	6'11"	2120 mm	6'11"
19 Turning Radius: Over Bucket	6408 mm	21'0"	6126 mm	20'1"
20 Width: Over Tires	2730 mm	8'11"	2730 mm	8'11"
21 Turning Radius: Outside of Tires	5564 mm	18'3"	5564 mm	18'3"
22 Turning Radius: Inside of Tires	2825 mm	9'3"	2825 mm	9'3"
23 Rack Angle at Full Lift	54 degrees		54 degrees	
24 Dump Angle at Full Lift	46 degrees		49 degrees	
25 Rack Angle at Carry	44 degrees		44 degrees	
26 Departure Angle	33 degrees		33 degrees	
27 Articulation Angle	40 degrees		40 degrees	
Tipping Load – Straight (ISO 14397-1)	11 075 kg	24,409 lb	11 807 kg	26,022 lb
Tipping Load – Full (ISO 14397-1)	9354 kg	20,616 lb	10 050 kg	22,150 lb
Nominal Material Density 110% Fill Factor	773 kg/m <sup>3</sup>	1,305 lb/yd <sup>3</sup>	1692 kg/m <sup>3</sup>	2,840 lb/yd <sup>3</sup>
Breakout	6668 kg	14,697 lb	9665 kg	21,301 lb
Operating Weight	16 075 kg	35,428 lb	15 548 kg	34,268 lb

Dimensions listed are for a standard lift machine configured with heavy counterweights, 80 kg (176 lb) operator and Titan 620/75R26 agricultural tires.

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## STANDARD EQUIPMENT

### POWER TRAIN

- Auto idle shut down feature
- Axles – high torque
  - Differential lock, front
  - Open, rear
- Cat C7.1 ACERT engine
  - Engine meets Brazil MAR-1 emission standards, equivalent to Tier 3/Stage IIIA
  - Power modes (Standard and Performance)
  - Power by range (High Power in Range 4)
  - Turbocharged and aftercooled
  - Filtered crankcase breather
- Coded start (requires secondary display)
- Enclosed wet disc full hydraulic brakes
- Fuel priming pump, automatic
- Hydrostatic transmission with electronic control
  - Operator modes (Default, TC, Hystat, and Ice)
  - Directional Shift Aggressiveness (fast, medium, slow)
  - Rimpull control, adjust wheel torque
  - Creeper control, adjust ground speed
- Parking brake, electric
- Single plane cooling package wide six fins per inch density
- Throttle lock and max speed limiter
- High flotation 620/75R26 agriculture tires

### HYDRAULICS

- Automatic lift and bucket kickouts, adjustable in-cab
- Bucket and fork modes, adjustable in-cab
- Cylinder damping at kickout and mechanical end stops
- Fine mode control (fast, medium, slow) in fork mode
- Hydraulic response setting (fast, medium, slow)
- Hydraulic diagnostic connectors and S-O-S<sup>SM</sup> ports
- Load sensing hydraulics and steering

### ELECTRICAL

- Alternator, 115 amp, heavy duty
- 12V power supply in cab (2)
- Batteries, 1,000 CCA (2) 24V system, disconnect switch
- Back-up alarm
- Emergency shutdown switch
- Halogen work and roading lights, LED rear tail lights
- Remote jump start post
- Resettable main and critical function breakers

### OPERATOR ENVIRONMENT

- 75 mm (3 in) retractable seat belt, with audible alarm and indicator
- Automatic temperature control
- External mirrors with lower parabolic
- Hydraulic control lockout
- Interior cab lighting, door and dome
- Interior rearview mirrors (2)
- Lunch box storage
- Radio ready speakers
- Rear window defrost, electric
- Seat-mounted electronic implement controls, adjustable
- Column mounted multi function control – lights, wipers, turn signal
- Tilt and telescopic steering wheel
- Tinted front glass
- Wet arm wiper/washer, 2-speed and intermittent, front

### OTHER STANDARD EQUIPMENT

- Debris package (medium)
  - Reversing fan, hydraulically driven on-demand
  - Cyclonic engine air precleaner
- Large-access enclosure doors with adjustable close/open force
- Parallel lift loader linkage

## OPTIONAL EQUIPMENT

- Auto lube, integrated in secondary display
- Auxiliary flow, third and fourth function, adjustable through secondary display
- Beacon light, strobe
- Cab
  - Secondary display to enable features and adjust parameters
  - Sunscreen, front and rear
- Camera, rearview
- Cat Production Measurement (CPM) – fully integrated scale system, with optional printer
- Cold start package
- Corrosion protection package
- Counterweight, (heavy and logger)
- Guarding, machine
- Lights, auxiliary, halogen or LED with engine compartment lights
- Cat DETECT with Object Detection
- Product Link™ PRO and ELITE with capabilities for software push, data logging, histogram and trend mapping
- Radio packages
- Ride Control System, adjustable through secondary display
- Seats
  - Deluxe seat – fully adjustable fabric air suspension seat with mid backrest and mechanical lumbar support
  - Premium seat – fully adjustable leather and fabric air suspension with high backrest and air lumbar support. Seat is heated and ventilated on bottom cushion and backrest.
- Steering
  - Dual mode and secondary

NOTE: Not all features are available in all regions.



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