

930/938 Ag Handlers

AGRICULTURAL ARRANGEMENT



	930 Ag Handler Cat® C7.1*	938 Ag Handler Cat C7.1*
Engine Model	Cat® C7.1*	Cat C7.1*
Rated Engine Power:		
ISO 14396	125 kW (168 hp)	140 kW (188 hp)
ISO 14396 (Metric)	170 hp	190 hp
Bucket Capacity	3.1-5.0 m ³ (4.1-6.5 yd ³)	3.5-5.0 m ³ 4.6-6.5 yd ³
Full Turn Tip Load:		
Standard Lift	8076 kg (17,806 lb)	10 263 kg (22,627 lb)
High Lift	6287 kg (13,861 lb)	7735 kg (17,052 lb)
Operating Weight	14 526 kg (32,024 lb)	17 432 kg (38,431 lb)

*Engine meets U.S. EPA Tier 4 Final, EU Stage V emission standards.



CAT®

930/938

MAKING YOUR CHOICE EASY

EFFICIENTLY POWERFUL

Experience the difference with an intelligent hydrostatic powertrain and fuel savings through a lower maximum engine speed working in combination with **auto engine speed** mode. This provides efficiency as standard with a boost in power when you need it. Optimize traction and minimize wheel slip with **auto wheel torque** and **auto differential lock** system (938 only) tuned to provide peak performance while maximizing tire life and keeping operating costs low. Track your production and accurately hit your load targets with Cat Payload. **250 hours of Cat Payload demonstration** will be included as standard with an optional subscription for extended use.



ENJOY ALL DAY COMFORT

Have a seat in the Next Generation Cat Small Wheel Loader and enjoy enhanced 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 hydraulic cylinder damping and smooth predictable controls make this the most comfortable seat on your jobsite. An upgrade to **multi-view camera** and rear object detection gives you an extra eye on the jobsite while the optional **force-feedback joystick steering** keeps you feeling confident on those long shifts. The **operator not present** function helps to isolate the machine if you leave the environment; while seat belt notifications give you a gentle reminder to buckle up.

WORK MADE EASY

Move more with the Caterpillar patented quick loading performance series buckets and optimized Z-bar linkage. The parallel lift and high tilt forces throughout the working range allow you to confidently handle loads with precise control. Multi-function work has never been easier with **dedicated pumps** for each system and a flow sharing implement valve governed by an intelligent power management system. Simultaneously lift, steer, and drive without compromise. Upgrade to **autolube** and **tire pressure monitoring** to make service easy and get to work quicker. Light the way with auto lights that come on at nightfall. **Extended service intervals at 1,000 hours** to reduce fluid and filter use by up to 45% (compared to previous M Series models) while keeping operating cost low.



CUSTOMIZE YOUR EXPERIENCE

Meet your application requirements and individual preferences with Cat **Hystat™ operator modes** featuring four unique powertrain settings. Select classic torque converter mode for smooth rollout, conventional hystat mode for aggressive engine braking, an ice mode that maximizes your control on slippery underfoot, and **single pedal mode** for simplified use. Fine tune machine performance with adjustments at your fingertips through **programmable joysticks**, soft touch buttons, and a **jog dial** that works in combination with a standard **touch screen display**. Quickly recall attachment profiles that maintain key settings for versatility on the jobsite and optimal efficiency.

PURPOSE BUILT CONFIGURATION

MAXIMIZE PERFORMANCE AND PRODUCTIVITY
WHILE MINIMIZING OPERATING COSTS



WIDE TIRES

Enhance your stability with optional 750/65 MEGAXBIB flotation tires for rolling the silage clamp and working side walls. A high mounted fender and added tire clearance keeps your windows clean and you working.

BOOST YOUR PRODUCTION

The Next Generation 930 Ag Handler has 13% faster cycle times than the previous model giving you the speed and responsiveness to move material fast and get the job done. Increased hydraulic pressure gives you the flexibility to power a wide range of hydro-mechanical tools.

The Next Generation 938 Ag Handler features an 8% increase in tipping capacity compared to the previous model allowing you to move faster and feel more stable when using high-capacity buckets.

BREATHE CLEAN

Maximize engine life and extend filter cleaning intervals with a turbine ejector pre-cleaner. Keep cool with a reversing fan to purge the single plane, widely spaced core cooling package.

EFFICIENTLY POWERFUL

EXPERIENCE THE FUTURE OF EFFICIENCY



AUTOMATIC ENGINE SPEED CONTROL

- + Reduce fuel burn with a power on demand logic that monitors operator inputs and automatic boosted engine speed to meet operator demands. When full speed and power is not needed to meet the operator's commands, the machine will automatically reduce engine speed to save fuel.
- + Automatic idle logic will put the machine into a hibernate speed when not working and jump to life when work is being requested.

AUTOMATIC POWER ON DEMAND

- + Technology made easy with automatic features designed to minimize fuel burn and maximize tire life come standard.

AUTOMATIC WHEEL TORQUE CONTROL

- + Maximize tire life with an automatic wheel torque control design to optimize pushing power without spinning tires for peak performance and lower operating costs.





GET POWER TO THE GROUND

- + **Fully locking front differential axle** that can be engaged on the move at full torque.
- + **Automatic locking front differential axle** on 938 only.
- + **Limited slip differential** option on rear axle maximizes traction to keep you climbing.
- + Independent service brakes on front and rear axles provide robust stopping performance while a push button electronic park brake allows you to safely secure the machine with ease.

SIX CYLINDERS OF EFFICIENT POWER

The Cat C7.1 engine provides cleaner, quieter operation while delivering superior performance and durability through a high torque, low speed design, with a clean emissions module that is designed to manage itself so you can concentrate on your work.

- + **No downtime for regeneration** with a passive low temperature system that keeps you on the job.
- + **Fit for Life Diesel Particulate Filter (DPF)** that is designed to exceed the engine overhaul life.
- + **Extended fluid fill intervals** with minimal use of Diesel Exhaust Fluid (DEF) also referred to as AdBlue™ with an average of four fuel tank fills per DEF fill.
- + **Configurable auto idle shut down** based on time and ambient temperature to further reduce fuel burn.



CAT PAYLOAD

Cat Payload allows operator to accurately track payload while loading, and track productivity.

- + **250 hours of demo** are standard allowing operator to try before they buy.
- + A lifetime subscription is available.
- + Print your payload in real time with optional on-board printer.



SMOOTH AND PREDICTABLE MULTI-FUNCTION

Load-sensing, variable flow system senses work demand and adjusts flow and pressure to match the operator's request.

- + **Programmable in-cab kick-outs** are easy to set on the go for tilt, lower and lift. This feature is ideal for applications where the work cycle is repeatable, allowing you to quickly return to programmed set points.
- + **Fine tune hydro-mechanical performance** with fully adjustable 3rd and 4th function flow.
- + **Multi-Function without compromise** through dedicated hydraulic systems featuring one pump for the Intelligent Hydrostatic drive, a second pump for the implements, and a third pump for the steering system. Drive, lift and steer simultaneously with smooth predictable control.



ENJOY ALL DAY COMFORT

BEST SEAT ON THE FARM



HAVE A SEAT AND EXPERIENCE:

- + **Joystick steering** option with force feedback allowing control at full roading speeds.
- + **Seat-mounted controls** featuring a low effort joystick for lift and tilt functions, along with integrated Forward/Neutral/Reverse (FNR) switch and programmable buttons, optional third and fourth auxiliary functions along with jog dial for real time adjustments.
- + **Operator Not Present** logic that will help isolate the machine if the operator leaves the seat.
- + **All around visibility** with single piece front windshield, enhanced side views, increased wiper coverage and parabolic external mirrors.
- + **Automatic climate control** with push button defrost of heated rear glass and external mirrors.
- + **Fully adjustable controls** denoted with yellow accents including steering column, joystick and seat suspension.
- + **Information at a glance** with standard 203 mm (8 in) full color touch screen display.
- + **An extra eye on the job site** with standard rearview camera, optional multi-view camera system, optional* forward facing camera system and optional integrated rear object detection.
- + **A heated and cooled seat** option for added comfort in a wide range of climates.
- + **New seat fabric** and latest generation seat cushions provide all day comfort.
- + **Seatbelt beacon** option provides added safety as it lights up when seatbelt is connected to buckle.

**Forward facing camera system may be required for local EU requirements. Consult your local Cat Dealer for additional information.*

ENJOY COMING TO WORK WITH:

- + **A spacious, safe, quiet operator environment** featuring ergonomic controls, seatbelt notification and optional Bluetooth® radio with integrated microphone plus multiple USB charging ports and auxiliary (AUX) audio connectors.
- + **Easy access to vital machine parameters** with touch screen display that works in conjunction with the standard soft touch panel to allow real time adjustments to machine features in over 25 languages.
- + **Comfortable soft stops at the end of cylinder end stroke** with cylinder snubbing and preprogrammed kick-out points due to Caterpillar advanced electro hydraulics.
- + **An even smoother ride** with optional ride control when working unloaded and loaded with excellent material retention.
- + **Early starts and late finishes** are made easier with automatic lights that come on when it gets dark. Optional LED lighting package that includes engine and DEF compartment lighting to illuminate the way for checking oil and coolant level, along with re-fueling the machine in dark conditions.
- + **On board operator coaching** via machine help QR code on the touchscreen display.





WORK MADE EASY

GETTING THE JOB DONE

OPTIMIZED Z-BAR LINKAGE

The Caterpillar patented optimized Z-bar linkage combines the digging efficiency of a traditional Z-bar with integrated tool carrier capabilities for great performance and versatility.

PERFECT PARALLELISM

Perfect parallelism functionality available in fork mode gives truly predictable performance while high tilt forces throughout the working range help you safely and confidently handle loads with precise control.

HIGHER LIFT

Lift higher and reach further with optional high lift linkage. The 938 offers even greater lift height when configured with optional 23.5 tires.

**New lift arms only available on standard lift 930 and 938.*

VISIBILITY

Visibility has been maximized with the introduction of Gen III lift arms which bring a cast torque tube resulting in class leading front visibility when combined with the new cast couplers.*

ENHANCED COUPLER OPTIONS

ISO or Fusion™ cast couplers offer additional visibility when compared with previous plate style couplers.



FLEXIBLE POWERTRAIN

A smooth, electronically controlled hydrostatic transmission provides adjustable power to the ground with excellent ground speed control and customizable feel.

Select your Powertrain Mode:

- + **Torque converter (TC)** for smooth rollout.
- + **Hystat** for aggressive hydraulic braking.
- + **Single pedal** that allows right foot operation for ground speed control with a locked throttle for quick steering and implement control.
- + **Ice** to maximize control on snow and ice, regardless of tire type.

Fine-tune ground speed when using hydro-mechanical work tools such as brooms with creep control adjusted with a jog dial.

- + **Set directional shift response**, soft and smooth for material handling applications or sharp for aggressive operation.

CUSTOMIZE YOUR EXPERIENCE

MAKE IT YOURS

ADJUSTABLE ELECTRO-HYDRAULIC CONTROLS

Easily customize hydraulic performance to meet your needs.

- + **Optimize hydraulic modulation** with fine mode control when working with forks, material handling arms, and large tools.
- + **Quicker hydraulic response** for fine grading at speed and agriculture applications through lift and tilt response settings.
- + **Fully adjustable ride control** activation speed along with third and fourth function auxiliary flows.

Operator Profiles and Coded Start

- + Next generation small wheel loaders will remember you and your personal settings including programmable buttons with unique operator codes to make this machine truly yours and keep it secure.



SERVICE

MAXIMIZE YOUR UP TIME

Get up and running quickly with ground level, daily service access and optional engine compartment lighting. Three large service doors can be opened and closed in any order to give full access to filters and service points.

- + **1,000 hour service interval** after initial break-in period.
Ground level service access to daily checks.
- + **Extended cleanouts** with single plane cooling system and wide spaced 6 fins per inch coolers.
- + **Maintenance reminders** through primary touch screen display at scheduled intervals.
- + **Full flow return filter** designed to keep hydraulic oil clean across multiple systems.
- + **Product Link™ PRO standard** with optional subscription to VisionLink®.
- + **Integrated autolube** (optional) with adjustable greasing frequency.



CUSTOMER SUPPORT

UNMATCHED SERVICE MAKES THE DIFFERENCE

RENOWNED CAT DEALER SUPPORT

Rely on your Cat dealer to help you every step of the way with new or used machine sales, rental or rebuild options to meet your business needs.

Maximize your machine uptime with unsurpassed worldwide parts availability, trained technicians and customer support agreements.

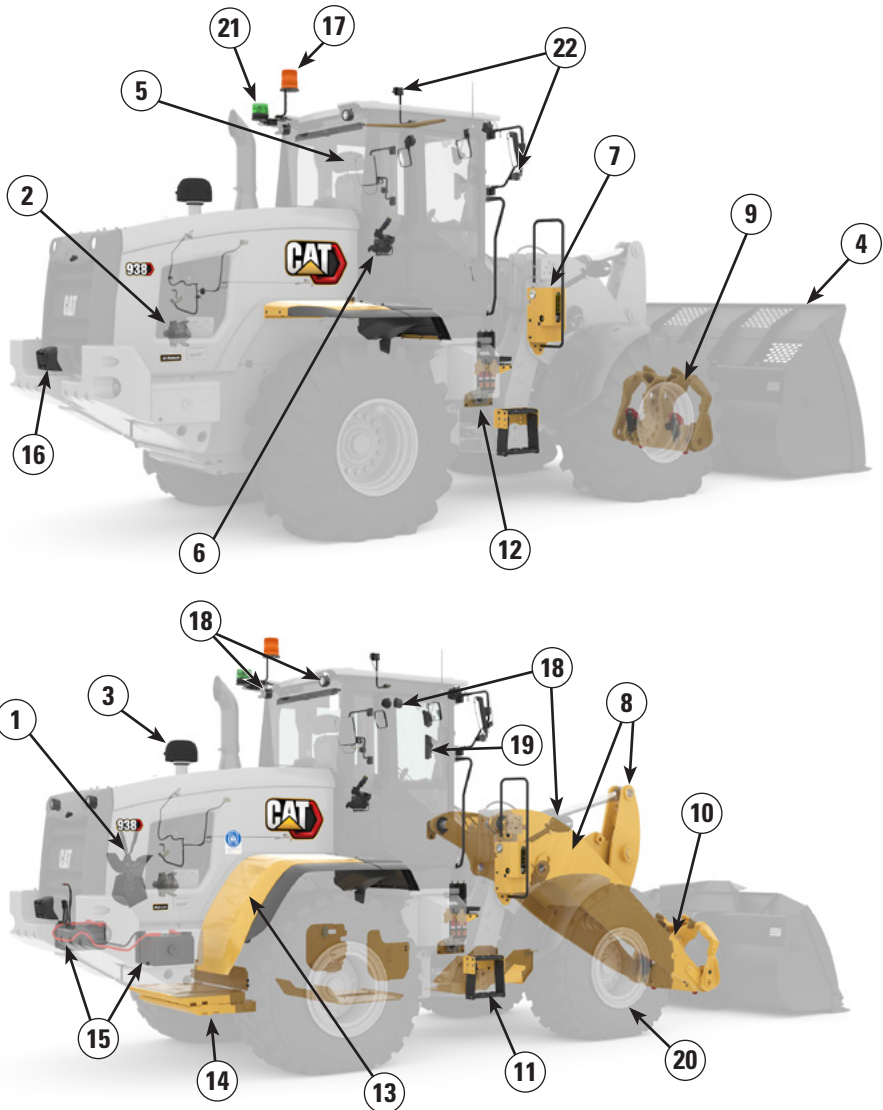
Let us earn your business. Experience the next generation small wheel loader.



CONFIGURED FOR SUCCESS

READY TO WORK

A complete range of optional equipment and work tools give you the versatility to configure a Cat small wheel loader to be successful in your business. Get with your Cat dealer to configure yours.



Debris Packages:

- 1) Reversing fan
- 2) Sealed alternator
- 3) Turbine pre-cleaner

Work Tools:

- 4) Full range of attachments

Operator Environment:

- 5) Seat, deluxe or premium
- 6) Joystick Steer

Other Options:

- 7) Autolube
- 8) High lift linkage
- 9) Coupler: Fusion and ISO 23727
- 10) Auxiliary hydraulics: 3rd and 4th
- 11) Window washing access
- 12) Ride control
- 13) Fenders: extended and full coverage
- 14) Counterweights
- 15) Cold start package
- 16) Rear object detection
- 17) Beacon
- 18) LED auxiliary lights
- 19) Cat Payload
- 20) TPM – Tire Pressure Monitoring
- 21) Seatbelt Beacon
- 22) Multi-view camera

Engine

	930				938			
	Cat C7.1**				Cat C7.1**			
	Power Range 1-4		Standard Range 1-3*		Power Range 1-4		Standard Range 1-3*	
	kW	hp	kW	hp	kW	hp	kW	hp
Rated Gross Power								
Engine Speed	1,800 rpm		1,600 rpm		1,800 rpm		1,600 rpm	
SAE J1995	127	170	121	162	143	192	132	177
SAE J1995 (DIN)	173 mhp (PS)		165 mhp (PS)		194 mhp (PS)		179 mhp (PS)	
Rated Engine Power								
ISO 14396	125	168	119	160	140	188	129	173
ISO 14396 (DIN)	170 mhp (PS)		162 mhp (PS)		190 mhp (PS)		175 mhp (PS)	
Rated Net Power								
SAE J1349 at Minimum Fan Speed	123	165	118	158	138	185	128	172
ISO 9249 at Minimum Fan Speed	123	165	118	158	138	185	128	172
ISO 9249 (metric) at Minimum Fan Speed	167 mhp (PS)		160 mhp (PS)		188 mhp (PS)		174 mhp (PS)	
	N-m	lbf-ft	N-m	lbf-ft	N-m	lbf-ft	N-m	lbf-ft
Maximum Gross Torque								
Engine Speed	1,400 rpm				1,400 rpm			
SAE J1995	824	608	804	593	912	673	882	651
ISO 14396	815	601	795	586	900	664	870	642
Maximum Net Torque								
SAE J1349	804	593	785	579	889	656	859	634
ISO 9249	807	595	787	580	892	658	862	636
Displacement	7.01 L		427 in ³		7.01 L		427 in ³	
Bore	105 mm		4.1 in		105 mm		4.1 in	
Stroke	135 mm		5.3 in		135 mm		5.3 in	

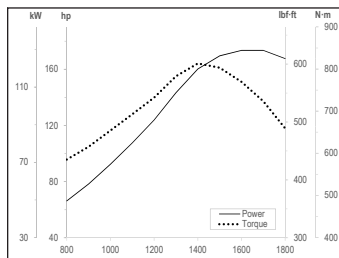
*Range 4 power and torque is equal to Power Mode with Caterpillar Power by Range technology.

**Meets U.S EPA Tier 4 Final, EU Stage V off-highway emission standards.

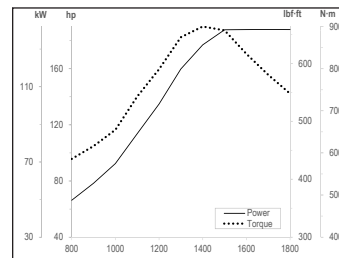
- Net power ratings are tested at the reference conditions for the specified standard and denote power available at the flywheel when the engine is equipped with alternator, air cleaner, emission components and fan at specified speed.
- No derating required up to 3000 m (10,000 ft) altitude. Auto derate protects hydraulic and transmission systems.

Engine Torque

930



938



Cab



- Rollover Protective Structure (ROPS): ISO 3471: 2008, Falling Object Protective Structure (FOPS): ISO 3449: 2005 LEVEL II
- Declared Sound Levels
 - Operator Sound Pressure Level (ISO 6396:2008): 68 dB(A)*
 - Exterior Sound Power Level (ISO 6395:2008): 101 dB(A)*
- The air conditioning system on this machine contains the fluorinated greenhouse gas refrigerant R134a (Global Warming Potential = 1430). The system contains 1.9 kg of refrigerant which has a CO₂ equivalent of 2.717 metric tonnes.
 - * Measurements were conducted with cab doors and windows closed and at 70% of maximum engine cooling fan speed. Sound level may vary at different engine cooling fan speeds.
- The Blue Angel environmental label is an optional attachment.

930/938 Ag Handler Specifications

Loader Hydraulic System



- Implement system uses a dedicated load sensing variable displacement pump with dual double acting lift cylinders and a single double acting tilt cylinder.
- Flow values listed are for a machine running in Performance Power Mode (1,800 rpm).
- *3rd and 4th function flow is fully adjustable from 20% to 100% of maximum flow through the secondary display when equipped.

	930		938	
Maximum Flow – Implement Pump	190 L/min	50 gal/min	190 L/min	50 gal/min
3rd Function Maximum Flow*	190 L/min	50 gal/min	190 L/min	50 gal/min
4th Function Maximum Flow*	160 L/min	42 gal/min	160 L/min	42 gal/min
Maximum Working Pressure – Implement Pump	28 000 kPa	4,061 psi	28 000 kPa	4,061 psi
Relief Pressure – Tilt Cylinder	30 000 kPa	4,351 psi	30 000 kPa	4,351 psi
3rd and 4th Function Maximum Working Pressure	28 000 kPa	4,061 psi	28 000 kPa	4,061 psi
3rd and 4th Function Relief Pressure	30 000 kPa	4,351 psi	30 000 kPa	4,351 psi
Lift Cylinder – Standard Lift Linkage:				
Bore Diameter	110 mm	4.3 in	120 mm	4.7 in
Rod Diameter	60 mm	2.4 in	65 mm	2.6 in
Stroke	728 mm	28.7 in	789 mm	31.1 in
Tilt Cylinder – Standard Lift Linkage:				
Bore Diameter	130 mm	5.1 in	150 mm	5.9 in
Rod Diameter	70 mm	2.8 in	90 mm	3.5 in
Stroke	555 mm	21.9 in	555 mm	21.9 in
Cycle Times: Performance (HP+) at 1,800 rpm/ Standard Power Mode at 1,600 rpm				
Raise (Ground Level to Maximum Lift)	4.3/4.9 seconds		5.5/6.2 seconds	
Dump (at Maximum Lift Height)	1.2/1.4 seconds		1.5/1.7 seconds	
Float Down (Maximum Lift to Ground Level)	2.6/2.6 seconds		2.7/2.7 seconds	
Total Cycle Time	8.1/8.9 seconds		9.7/10.6 seconds	

Steering



- Steering system uses a dedicated load sensing variable displacement pump with dual double acting cylinders.
- Flow values listed are for a machine running in Performance Power Mode (1,800 rpm).

	930		938	
Steering Cylinder				
Bore Diameter	70 mm	2.8 in	80 mm	3.1 in
Rod Diameter	40 mm	1.6 in	50 mm	2.0 in
Stroke	438 mm	17.2 in	399 mm	15.7 in
Maximum Flow – Steering Pump	130 L/min	34 gal/min	130 L/min	34 gal/min
Maximum Working Pressure – Steering Pump	24 130 kPa	3,500 psi	24 130 kPa	3,500 psi
Steering Cycle Times (Full Left to Full Right)				
Minimum RPM: Pump Flow Limited	2.8 seconds		3.1 seconds	
Maximum RPM: 90 rpm Steering Wheel Speed	2.4 seconds		2.3 seconds	
Number of Steering Wheel Turns				
Full Left to Full Right or Full Right to Full Left	3.5		3.5	

Powertrain



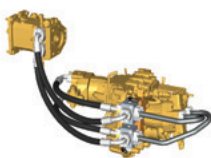
- Powertrain is governed by the Caterpillar exclusive Intelligent Power Management system to deliver peak performance and efficiency.
- * Differential front locking axle can be engaged on the go at full torque to 10 km/h (6.2 mph) on the 930 and up to 20 km/h (12.4 mph) on the 938.

	930	938
Front Axle	Fixed	Fixed
Traction Aid*	Locking Differential	Locking Differential
Rear Axle	Oscillating	Oscillating
Oscillation Angle by Tire Size		
20.5 R25	± 10.5 degrees	± 10.5 degrees
23.5 R25	—	± 7 degrees
750/65, 620/75	± 7 degrees	± 7 degrees
Traction Aid (optional)	Limited slip differential	Limited slip differential
Brakes		
Service	Inboard wet disc	Inboard wet disc
Park	Spring applied hydraulically released	Spring applied hydraulically released

Service Refill Capacities

	930		938	
Fuel Tank	195 L	51.5 gal	195 L	51.5 gal
Diesel Exhaust Fluid (DEF) Tank	19 L	5.0 gal	19 L	5.0 gal
Cooling System	30 L	7.9 gal	32 L	8.5 gal
Engine Crankcase	20 L	5.3 gal	20 L	5.3 gal
Transmission (Gear Box)	8.5 L	2.2 gal	11 L	2.9 gal
Front Axle	26 L	6.9 gal	35 L	9.2 gal
Rear Axle	25 L	6.6 gal	35 L	9.2 gal
Hydraulic System (Including Tank)	165 L	43.6 gal	170 L	44.9 gal
Hydraulic Tank	90 L	23.8 gal	90 L	23.8 gal

Transmission



- * 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. Factory default is 7 km/h (4.4 mph).

	930		938	
Forward and Reverse				
Range 1*	1-13 km/h	0.6-8 mph	1-13 km/h	0.6-8 mph
Range 2	13 km/h	8 mph	13 km/h	8 mph
Range 3	27 km/h	17 mph	27 km/h	17 mph
Range 4	40 km/h	25 mph	40 km/h	25 mph

Tires

**Base specification tire (930)

***Base specification tire (938)

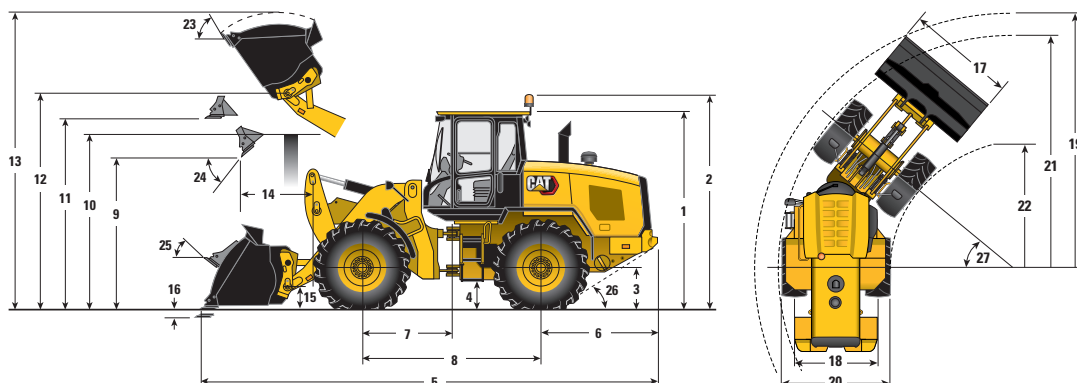
Other tire choices available, contact your Cat dealer for details.

	930	938
20.5 R25 Radial (L-2)	Yes	Yes
20.5 R25 Radial (L-3)**	Yes	Yes
23.5 R25 Radial (L-3)***	—	Yes
620/75 R26 MegaX	Yes	Yes
750/65 R26 MegaX	Yes	Yes

930/938 Ag Handler Specifications

930 Dimensions with Bucket

All dimensions are approximate. Dimensions will vary with bucket and tire choice. Refer to Operating Specifications with Buckets.



*Vary with bucket.

**Vary with tire.

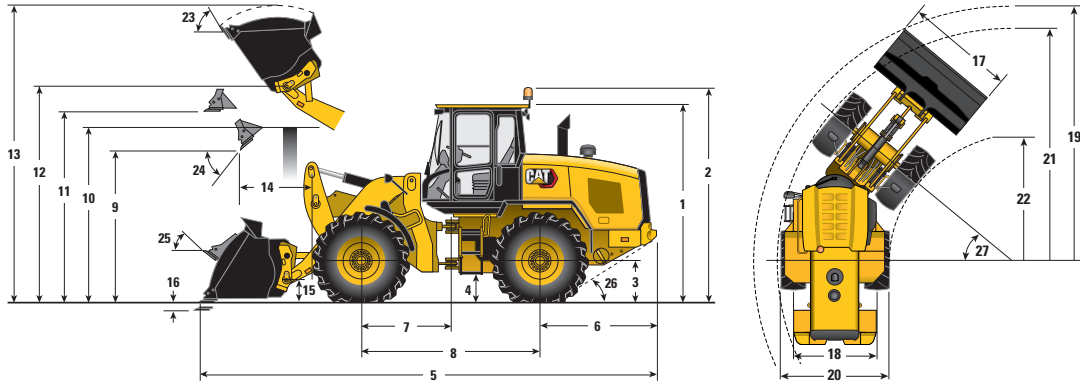
	Standard Lift		High Lift	
** 1 Height: Ground to Cab	3340 mm	10'11"	3340 mm	10'11"
** 2 Height: Ground to Beacon	3707 mm	12'2"	3707 mm	12'2"
** 3 Height: Ground to Axle Center	685 mm	2'3"	685 mm	2'3"
** 4 Height: Ground Clearance	397 mm	1'4"	397 mm	1'4"
* 5 Length: Overall	7953 mm	26'1"	8595 mm	28'2"
6 Length: Rear Axle to Bumper	1993 mm	6'6"	1993 mm	6'6"
7 Length: Hitch to Front Axle	1500 mm	4'11"	1500 mm	4'11"
8 Length: Wheel Base	3000 mm	9'10"	3000 mm	9'10"
* 9 Clearance: Bucket at 45°	2480 mm	8'2"	2988 mm	9'10"
** 10 Clearance: Load over Height	3331 mm	10'11"	3550 mm	11'8"
** 11 Clearance: Level Bucket	3580 mm	11'9"	4073 mm	13'4"
** 12 Height: Bucket Pin	3907 mm	12'10"	4400 mm	14'5"
** 13 Height: Overall	5471 mm	17'11"	5964 mm	19'7"
* 14 Reach: Bucket at 45°	1287 mm	4'3"	1546 mm	5'1"
15 Carry Height: Bucket Pin	390 mm	1'3"	582 mm	1'11"
** 16 Dig Depth	100 mm	0'4"	135 mm	0'5"
17 Width: Bucket	2750 mm	9'0"	2750 mm	9'0"
18 Width: Tread Center	1930 mm	6'4"	1930 mm	6'4"
19 Turning Radius: Over Bucket	6156 mm	20'2"	6485 mm	21'3"
20 Width: Over Tires	2540 mm	8'4"	2540 mm	8'4"
21 Turning Radius: Outside of Tires	5402 mm	17'9"	5402 mm	17'9"
22 Turning Radius: Inside of Tires	2851 mm	9'4"	2851 mm	9'4"
23 Rack Angle at Full Lift		54°		51°
24 Dump Angle at Full Lift		45°		44°
25 Rack Angle at Carry		43°		47°
26 Departure Angle		33°		33°
27 Articulation Angle		40°		40°
Operating Weight	14 526 kg	32,025 lb	14 627 kg	32,246 lb

Dimensions listed are for a 930 Ag Handler configured with light material 4.2 m³ (5.5 yd³) Fusion bucket, bolt-on cutting edges, heavy counterweights, 80 kg (176 lb) operator, and Michelin 20.5 R25 XHA2 tires at a pressure of 2.76 bar (40 psi) in the front tires and 2.06 bar (30 psi) in the rear tires.

930/938 Ag Handler Specifications

938 Dimensions with Bucket

All dimensions are approximate. Dimensions will vary with bucket and tire choice. Refer to Operating Specifications with Buckets.



*Vary with bucket.

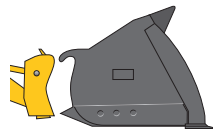
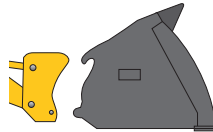
**Vary with tire.

	Standard Lift		High Lift	
** 1 Height: Ground to Cab	3405 mm	11'2"	3405 mm	11'2"
** 2 Height: Ground to Beacon	3772 mm	12'5"	3772 mm	12'5"
** 3 Height: Ground to Axle Center	750 mm	2'6"	750 mm	2'6"
** 4 Height: Ground Clearance	451 mm	1'6"	451 mm	1'6"
* 5 Length: Overall	7962 mm	26'1"	8716 mm	28'7"
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°	2599 mm	8'6"	3198 mm	10'6"
** 10 Clearance: Load over Height	3419 mm	11'3"	3626 mm	11'11"
** 11 Clearance: Level Bucket	3706 mm	12'2"	4287 mm	14'1"
** 12 Height: Bucket Pin	4034 mm	13'3"	4615 mm	15'2"
** 13 Height: Overall	5885 mm	19'4"	6466 mm	21'3"
* 14 Reach: Bucket at 45°	1268 mm	4'2"	1562 mm	5'1"
15 Carry Height: Bucket Pin	378 mm	1'3"	603 mm	2'0"
** 16 Dig Depth	36 mm	1.4"	70 mm	2.8"
17 Width: Bucket	2750 mm	9'0"	2750 mm	9'0"
18 Width: Tread Center	2023 mm	6'8"	2023 mm	6'8"
19 Turning Radius: Over Bucket	6220 mm	20'5"	6603 mm	21'8"
20 Width: Over Tires	2773 mm	9'1"	2773 mm	9'1"
21 Turning Radius: Outside of Tires	5560 mm	18'3"	5560 mm	18'3"
22 Turning Radius: Inside of Tires	2803 mm	9'2"	2803 mm	9'2"
23 Rack Angle at Full Lift		54°		53°
24 Dump Angle at Full Lift		46°		44°
25 Rack Angle at Carry		41°		47°
26 Departure Angle		33°		33°
27 Articulation Angle		40°		40°
Operating Weight	17 509 kg	38,601 lb	17 818 kg	39,283 lb

Dimensions listed are for a 938 Ag Handler configured with light material 5.0 m³ (6.5 yd³) Fusion bucket, bolt-on cutting edges, aggregate counterweights, 80 kg (176 lb) operator, and Michelin 23.5 R25 XHA2 tires at a pressure of 2.76 bar (40 psi) in the front tires and 2.06 bar (30 psi) in the rear tires.

930/938 Ag Handler Specifications

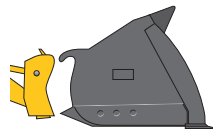
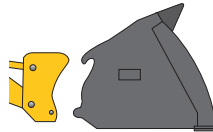
930 Operating Specifications with Light Material Buckets

	Fusion				ISO 23727				
									
	Standard Lift		High Lift		Standard Lift		High Lift		
Rated Capacity	m ³	4.2	5.0	3.5	4.2	4.2	5.0	3.5	4.2
	yd ³	5.5	6.5	4.6	5.5	5.5	6.5	4.6	5.5
Capacity – Rated at 110% Fill Factor	m ³	4.6	5.5	3.9	4.6	4.6	5.5	3.9	4.6
	yd ³	6.0	7.2	5.1	6.0	6.0	7.2	5.1	6.0
17 Width: Bucket	mm	2750	2750	2750	2750	2750	2750	2750	2750
	ft/in	9'0"	9'0"	9'0"	9'0"	9'0"	9'0"	9'0"	9'0"
Nominal Material Density, 110% Fill Factor	kg/m ³	914	761	840	688	874	729	814	662
	lb/yd ³	1,541	1,283	1,416	1,160	1,473	1,229	1,372	1,116
9 Clearance: Full Lift, 45° Dump	mm	2480	2480	3107	2988	2364	2364	3042	2874
	ft/in	8'2"	8'2"	10'2"	9'10"	7'9"	7'9"	10'0"	9'5"
14 Reach: Full Lift, 45° Dump	mm	1287	1287	1424	1546	1320	1370	1457	1580
	ft/in	4'3"	4'3"	4'8"	5'1"	4'4"	4'6"	4'9"	5'2"
Reach: 2130 mm (84 in) Clearance, 45° Dump	mm	1588	1588	2150	2207	1569	1580	2147	2200
	ft/in	5'3"	5'3"	7'1"	7'3"	5'2"	5'2"	7'1"	7'3"
Reach: Level Arm, Level Bucket	mm	2815	2815	3168	3338	2884	2956	3237	3407
	ft/in	9'3"	9'3"	10'5"	10'11"	9'6"	9'8"	10'7"	11'2"
16 Dig Depth	mm	100	100	135	135	125	125	160	160
	in	3.9"	3.9"	5.3"	5.3"	4.9"	4.9"	6.3"	6.3"
5 Length: Overall	mm	7953	7953	8425	8595	8042	8114	8509	8679
	ft/in	26'1"	26'1"	27'8"	28'2"	26'5"	26'7"	27'11"	28'6"
13 Height: Overall	mm	5471	5752	5802	5964	5546	5834	5872	6039
	ft/in	17'11"	18'10"	19'0"	19'7"	18'2"	19'2"	19'3"	19'10"
19 Turning Radius Bucket at Carry	mm	6370	6370	6596	6659	6401	6425	6631	6695
	ft/in	20'11"	20'11"	21'8"	21'10"	21'0"	21'1"	21'9"	22'0"
Tipping Load – Straight, ISO 14397-1*	kg	9501	9464	7451	7220	9092	9070	7219	6962
	lb	20,946	20,865	16,426	15,917	20,044	19,995	15,915	15,348
Tipping Load – Full Turn, ISO 14397-1*	kg	8076	8037	6287	6072	7722	7696	6092	5850
	lb	17,806	17,719	13,861	13,386	17,025	16,967	13,431	12,898
Breakout Force	kg	7235	7181	7818	6856	6527	6482	7360	6185
	lb	15,950	15,831	17,236	15,115	14,390	14,290	16,226	13,636
Operating Weight	kg	14 526	14 604	14 497	14 627	14 484	14 543	14 421	14 584
	lb	32,024	32,196	31,960	32,247	31,932	32,062	31,793	32,152

*Full compliance to ISO 14397-1:2007 Sections 1 thru 6, which requires 2% verification between calculation and testing.

Dimensions listed are for a 930 Ag Handler configured with heavy counterweights, 80 kg (176 lb) operator, and Michelin 20.5 R25 XHA2 tires at a pressure of 2.76 bar (40 psi) in the front tires and 2.06 bar (30 psi) in the rear tires.

938 Operating Specifications with Light Material Buckets

	Fusion				ISO 23727				
									
	Standard Lift		High Lift		Standard Lift		High Lift		
Rated Capacity	m ³	4.2	5.0	3.5	4.2	4.2	5.0	3.5	4.2
	yd ³	5.5	6.5	4.6	5.5	5.5	6.5	4.6	5.5
Capacity – Rated at 110% Fill Factor	m ³	4.6	5.5	3.9	4.6	4.6	5.5	3.9	4.6
	yd ³	6.0	7.2	5.1	6.0	6.0	7.2	5.1	6.0
17 Width: Bucket	mm	2750	2750	2750	2750	2750	2750	2750	2750
	ft/in	9'0"	9'0"	9'0"	9'0"	9'0"	9'0"	9'0"	9'0"
Nominal Material Density, 110% Fill Factor	kg/m ³	1162	969	1033	850	1121	936	1010	828
	lb/yd ³	1,959	1,633	1,741	1,433	1,890	1,578	1,702	1,396
9 Clearance: Full Lift, 45° Dump	mm	2599	2599	3316	3198	2489	2489	3259	3091
	ft/in	8'6"	8'6"	10'11"	10'6"	8'2"	8'2"	10'8"	10'2"
14 Reach: Full Lift, 45° Dump	mm	1268	1268	1439	1562	1292	1343	1465	1588
	ft/in	4'2"	4'2"	4'9"	5'1"	4'3"	4'5"	4'10"	5'3"
Reach: 2130 mm (84 in) Clearance, 45° Dump	mm	1646	1646	2277	2341	1632	1647	2274	2336
	ft/in	5'5"	5'5"	7'6"	7'8"	5'4"	5'5"	7'6"	7'8"
Reach: Level Arm, Level Bucket	mm	2801	2801	3239	3409	2860	2932	3297	3467
	ft/in	9'2"	9'2"	10'8"	11'2"	9'5"	9'7"	10'10"	11'4"
16 Dig Depth	mm	36	36	70	70	60	60	95	95
	in	1.4"	1.4"	2.8"	2.8"	2.4"	2.4"	3.7"	3.7"
5 Length: Overall	mm	7962	7962	8546	8716	8041	8113	8621	8791
	ft/in	26'1"	26'1"	28'0"	28'7"	26'5"	26'7"	28'3"	28'10"
13 Height: Overall	mm	5604	5885	6022	6185	5672	5960	6086	6253
	ft/in	18'5"	19'4"	19'9"	20'4"	18'7"	19'7"	20'0"	20'6"
19 Turning Radius Bucket at Carry	mm	6448	6448	6715	6777	6476	6500	6746	6809
	ft/in	21'2"	21'2"	22'0"	22'3"	21'3"	21'4"	22'2"	22'4"
Tipping Load – Straight, ISO 14397-1*	kg	12 050	12 021	9160	8919	11 626	11 613	8951	8683
	lb	26,566	26,502	20,194	19,663	25,632	25,602	19,734	19,144
Tipping Load – Full Turn, ISO 14397-1*	kg	10 263	10 232	7735	7511	9901	9884	7567	7315
	lb	22,627	22,557	17,052	16,559	21,829	21,791	16,682	16,127
Breakout Force	kg	9883	9829	10 753	9486	9041	8995	10 252	8673
	lb	21,788	21,669	23,706	20,913	19,932	19,831	22,602	19,121
Operating Weight	kg	17 432	17 509	17 611	17 741	17 344	17 404	17 490	17 653
	lb	38,431	38,601	38,826	39,112	38,237	38,369	38,559	38,918

*Full compliance to ISO 14397-1:2007 Sections 1 thru 6, which requires 2% verification between calculation and testing.

Dimensions listed are for a 938 Ag Handler configured with aggregate counterweights, 80 kg (176 lb) operator, and Michelin 23.5 R25 XHA2 tires at a pressure of 2.76 bar (40 psi) in the front tires and 2.06 bar (30 psi) in the rear tires.

930/938 Ag Handler Specifications

930 Light Material Bucket Selection – Standard Lift

930 Ag Handler	Material Type		Counter-weight	kg/m ³ lb/yd ³	Fill Factor %													Tip Load Full Turn*				
					110%	100%	100%	100%	100%	100%	110%	100%	105%	115%	110%	105%	110%	105%	110%	110%	kg	(lb)
					Flour, Wheat Barley, Bulk Buckwheat, Bulk Canola (Rapeseed)	Corn Shelled, Bulk Soy Beans, Bulk Wet Muck	Bulk Grain Sugar Beet Silage, Packed	Peat, Moist Sugar, Raw Cane	Lime, Pulverized Quick Fertilizer, Mixed	Gypsum, Pulverized Peat, Wet												
	m ³	yd ³			600 (1,011)	660 (1,112)	720 (1,214)	780 (1,315)	840 (1,416)	900 (1,517)	960 (1,618)	1020 (1,719)	1080 (1,820)	1140 (1,922)	1200 (2,023)							
Fusion	3.5 (4.6)	Heavy															115%	110%	105%	100%	8338	(18,382)
	4.2 (5.5)	Heavy							115%	110%	105%	100%									8076	(17,805)
	5.0 (6.5)	Heavy				115%	110%	105%	100%												8037	(17,719)
ISO	3.5 (4.6)	Heavy															115%	110%	105%	100%	8006	(17,650)
	4.2 (5.5)	Heavy							115%	110%	105%	100%									7722	(17,024)
	5.0 (6.5)	Heavy				115%	110%	105%	100%												7697	(16,968)

930 Light Material Bucket Selection – High Lift

930 Ag Handler	Material Type		Counter-weight	kg/m ³ lb/yd ³	Fill Factor %													Tip Load Full Turn*				
					115%	110%	100%	100%	100%	100%	110%	100%	105%	115%	110%	105%	110%	105%	kg	(lb)		
					115%	110%	100%	100%	100%	100%	110%	100%	105%	115%	110%	105%	110%	105%				
	m ³	yd ³			500 (843)	560 (944)	620 (1,045)	680 (1,146)	740 (1,247)	800 (1,348)	860 (1,450)	920 (1,551)	980 (1,652)	1040 (1,753)	1100 (1,854)							
Fusion	3.1 (4.1)	Heavy															115%	110%	105%	100%	6445	(14,209)
	3.5 (4.6)	Heavy								115%	110%	105%	100%								6287	(13,860)
	4.2 (5.5)	Heavy							115%	110%	105%	100%									6072	(13,387)
ISO	3.5 (4.6)	Heavy								115%	110%	105%	100%								6092	(13,432)
	4.2 (5.5)	Heavy							115%	110%	105%	100%									5850	(12,897)
	5.0 (6.5)	Heavy							115%	110%	105%	100%									5812	(12,813)

Material density, fill factor, and counterweight options are key variables when choosing the appropriate size of the bucket. The long floor and open throat design of the performance series buckets along with the aggressive rack angles of the optimized linkage will demonstrate fill factors greater than 100% ISO rated. Refer to the expected fill factor % per material type at the top of the table and find a matching counterweight and fill factor along the side for proper bucket sizing.

*Full compliance to ISO 14397-1:2007 Section 1 thru 6, which requires 2% verification between calculation and testing.

938 Light Material Bucket Selection – Standard Lift

Material Type																Tip Load Full Turn*			
Fill Factor %		110%		105%		110%		105%		110%		105%		105%		105%			
		Peat, Moist		Sugar, Raw Cane		Lime, Pulverized Quick Fertilizer, Mixed				Gypsum, Pulverized Peat, Wet		Earth, Loam, Dry Salt, Fine		Lime, Granules		Sand, Dry and Loose Clay and Gravel, Dry			
		m ³	Counter-weight	kg/m ³	860	920	980	1040	1100	1160	1220	1280	1340	1400	1460	kg	(lb)		
		yd ³		lb/yd ³	(1,450)	(1,551)	(1,652)	(1,753)	(1,854)	(1,955)	(2,056)	(2,158)	(2,259)	(2,360)	(2,461)				
938 Ag Handler	Fusion	3.5 (4.6)	Aggregate									115%	110%	105%	100%	10 552	(23,362)		
		4.2 (5.5)	Aggregate					115%	110%	105%	100%					10 264	(22,628)		
		5.0 (6.5)	Aggregate		115%	110%	105%	100%								10 231	(22,557)		
938 Ag Handler	ISO	3.5 (4.6)	Aggregate								115%	110%	105%	100%	10 211	(22,511)			
		4.2 (5.5)	Aggregate					115%	110%	105%	100%				9902	(21,830)			
		5.0 (6.5)	Aggregate		115%	110%	105%	100%							9884	(21,790)			

938 Light Material Bucket Selection – High Lift

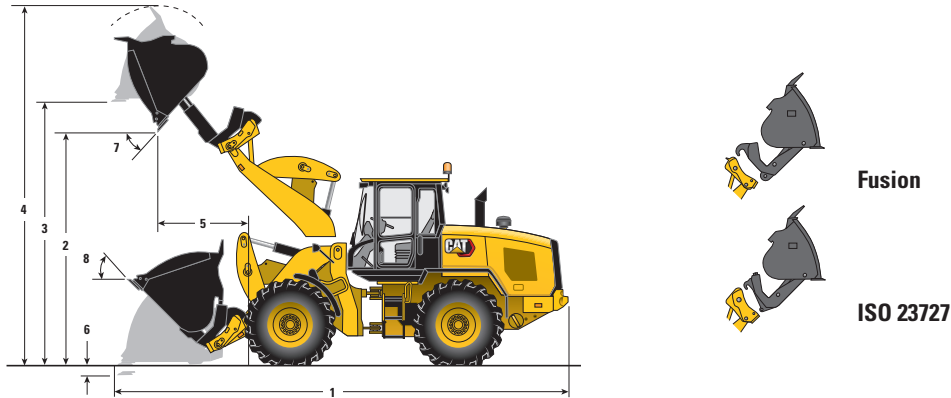
Material Type																Tip Load Full Turn*				
Fill Factor %		110%		100%		100%		100%		100%		100%		100%		100%				
		Flour, Wheat Barley, Bulk		Buckwheat, Bulk Canola (Rapeseed)		Corn Shelled, Bulk Soy Beans, Bulk		Bulk Grain Sugar Beet		Silage, Packed Manure/Muck, Wet		Peat, Moist Sugar, Raw Cane		Lime, Pulverized Quick Fertilizer, Mixed						
		m ³	Counter-weight	kg/m ³	600	645	690	735	780	825	870	915	960	1005	1050	kg	(lb)			
		yd ³		lb/yd ³	(1,011)	(1,087)	(1,163)	(1,239)	(1,315)	(1,391)	(1,466)	(1,542)	(1,618)	(1,694)	(1,770)					
938 Ag Handler	Fusion	3.5 (4.6)	Aggregate										115%	110%	105%	100%	7735	(17,052)		
		4.2 (5.5)	Aggregate					115%	110%	105%	100%					7511	(16,559)			
		5.0 (6.5)	Aggregate		115%	110%	105%	100%								7464	(16,456)			
938 Ag Handler	ISO	3.5 (4.6)	Aggregate									115%	110%	105%	100%	7566	(16,681)			
		4.2 (5.5)	Aggregate					115%	110%	105%	100%				7315	(16,127)				
		5.0 (6.5)	Aggregate		115%	110%	105%	100%							7283	(16,057)				

Material density, fill factor, and counterweight options are key variables when choosing the appropriate size of the bucket. The long floor and open throat design of the performance series buckets along with the aggressive rack angles of the optimized linkage will demonstrate fill factors greater than 100% ISO rated. Refer to the expected fill factor % per material type at the top of the table and find a matching counterweight and fill factor along the side for proper bucket sizing.

*Full compliance to ISO 14397-1:2007 Section 1 thru 6, which requires 2% verification between calculation and testing.

930/938 Ag Handler Specifications

930 Operating Specifications with High Dump Buckets

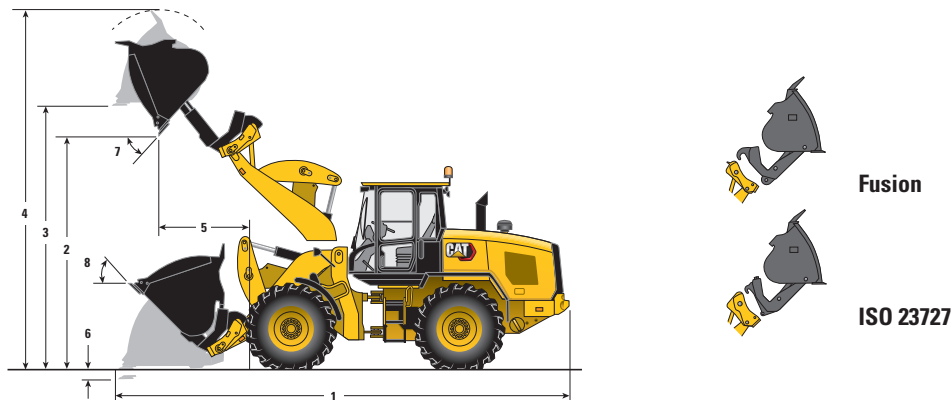


		Standard Lift						High Lift					
		Fusion			ISO 23727			Fusion			ISO 23727		
Rated Capacity	m ³	3.5	4.1	5.0	3.5	4.1	5.0	3.5	4.1	5.0	3.5	4.1	5.0
	yd ³	4.6	5.4	6.5	4.6	5.4	6.5	4.6	5.4	6.5	4.6	5.4	6.5
Capacity – Rated at 110%	m ³	3.9	4.5	5.5	3.9	4.5	5.5	3.9	4.5	5.5	3.9	4.5	5.5
Fill Factor	yd ³	5.1	5.9	7.2	5.1	5.9	7.2	5.1	5.9	7.2	5.1	5.9	7.2
Bucket Width	mm	2723	3032	3032	2723	3032	3032	2723	3032	3032	2723	3032	3032
	ft/in	8'11"	9'11"	9'11"	8'11"	9'11"	9'11"	8'11"	9'11"	9'11"	8'11"	9'11"	9'11"
Nominal Material Density	kg/m ³	878	714	576	834	678	543	654	523	420	625	499	398
110% Fill Factor	lb/yd ³	1,480	1,203	971	1,406	1,143	915	1,102	882	708	1,053	841	671
1 Length: Overall	mm	8096	8177	8286	8283	8364	8474	8737	8815	8924	8926	9003	9112
	ft/in	26'7"	26'10"	27'2"	27'2"	27'5"	27'10"	28'8"	28'11"	29'3"	29'3"	29'6"	29'11"
2 Dump Clearance: Full Lift Rolled Out	mm	4338	4289	4377	4526	4478	4567	4764	4714	4799	4948	4898	4984
	ft/in	14'3"	14'1"	14'4"	14'10"	14'8"	15'0"	15'8"	15'6"	15'9"	16'3"	16'1"	16'4"
3 Clearance: Level Bucket	mm	4629	4609	4697	4807	4787	4876	5079	5059	5144	5253	5233	5319
	ft/in	15'2"	15'1"	15'5"	15'9"	15'8"	16'0"	16'8"	16'7"	16'11"	17'3"	17'2"	17'5"
4 Height: Overall	mm	6344	6344	6576	6522	6522	6756	6795	6795	7023	6969	6969	7199
	ft/in	20'10"	20'10"	21'7"	21'5"	21'5"	22'2"	22'4"	22'4"	23'0"	22'10"	22'10"	23'7"
5 Reach: Full Lift Rolled Out	mm	1699	1747	1811	1796	1844	1907	1955	2000	2069	2060	2107	2173
	ft/in	5'7"	5'9"	5'11"	5'11"	6'1"	6'3"	6'5"	6'7"	6'9"	6'9"	6'11"	7'2"
6 Dig Depth	mm	100	120	120	93	113	113	135	155	155	128	148	148
	ft/in	3.9"	4.7"	4.7"	3.7"	4.4"	4.4"	5.3"	6.1"	6.1"	5.0"	5.8"	5.8"
Turning Radius Bucket at Carry	mm	6192	6357	6394	6244	6408	6446	6525	6687	6727	6579	6741	6781
	ft/in	20'4"	20'10"	21'0"	20'6"	21'0"	21'2"	21'5"	21'11"	22'1"	21'7"	22'1"	22'3"
7 Maximum Dump Angle	degree	28	28	28	27	27	27	31	31	31	30	30	30
8 Rack Angle at Carry	degree	43	43	43	44	44	44	47	47	47	48	48	48
Tipping Load – Straight ISO 14397-1*	kg	8315	7872	7770	7916	7486	7357	6287	5877	5778	6017	5617	5493
	lb	18,331	17,354	17,129	17,452	16,505	16,220	13,860	12,957	12,739	13,265	12,384	12,110
Tipping Load – Full Turn ISO 14397-1*	kg	6995	6565	6468	6647	6230	6105	5211	4812	4716	4976	4587	4466
	lb	15,420	14,474	14,261	14,654	13,736	13,458	11,488	10,608	10,398	10,969	10,112	9,846
Breakout Force	kg	6617	6143	5651	5732	5298	4887	6255	5795	5325	5417	4997	4602
	lb	14,588	13,543	12,458	12,637	11,680	10,774	13,790	12,776	11,740	11,942	11,016	10,146
Operating Weight	kg	15 023	15 357	15 452	15 012	15 340	15 441	15 124	15 457	15 553	15 112	15 440	15 541
	lb	33,120	33,856	34,066	33,096	33,819	34,042	33,343	34,077	34,288	33,316	34,039	34,262

*Full compliance to ISO 14397-1:2007 Sections 1 thru 6, which requires 2% verification between calculation and testing.

Dimensions listed are for a 930 Ag Handler configured with buckets, bolt-on cutting edges, heavy counterweights, 80 kg (176 lb) operator, and Michelin 20.5 R25 XHA2 tires at a pressure of 2.76 bar (40 psi) in the front tires and 2.06 bar (30 psi) in the rear tires.

938 Operating Specifications with High Dump Buckets



		Standard Lift						High Lift					
		Fusion			ISO 23727			Fusion			ISO 23727		
Rated Capacity	m ³	3.5	4.1	5.0	3.5	4.1	5.0	3.5	4.1	5.0	3.5	4.1	5.0
	yd ³	4.6	5.4	6.5	4.6	5.4	6.5	4.6	5.4	6.5	4.6	5.4	6.5
Capacity – Rated at 110%	m ³	3.9	4.5	5.5	3.9	4.5	5.5	3.9	4.5	5.5	3.9	4.5	5.5
Fill Factor	yd ³	5.1	5.9	7.2	5.1	5.9	7.2	5.1	5.9	7.2	5.1	5.9	7.2
Bucket Width	mm	2723	3032	3032	2723	3032	3032	2723	3032	3032	2723	3032	3032
	ft/in	8'11"	9'11"	9'11"	8'11"	9'11"	9'11"	8'11"	9'11"	9'11"	8'11"	9'11"	9'11"
Nominal Material Density	kg/m ³	1135	936	757	1091	899	724	827	673	542	801	651	522
110% Fill Factor	lb/yd ³	1,913	1,578	1,276	1,839	1,515	1,220	1,394	1,134	914	1,350	1,097	880
1 Length: Overall	mm	8104	8187	8296	8281	8363	8472	8859	8937	9046	9037	9115	9224
	ft/in	26'7"	26'10"	27'3"	27'2"	27'5"	27'10"	29'1"	29'4"	29'8"	29'8"	29'11"	30'3"
2 Dump Clearance: Full Lift Rolled Out	mm	4484	4436	4525	4665	4618	4708	5023	4973	5060	5201	5152	5241
	ft/in	14'9"	14'7"	14'10"	15'4"	15'2"	15'5"	16'6"	16'4"	16'7"	17'1"	16'11"	17'2"
3 Clearance: Level Bucket	mm	4771	4751	4839	4942	4922	5012	5325	5305	5392	5493	5473	5561
	ft/in	15'8"	15'7"	15'11"	16'3"	16'2"	16'5"	17'6"	17'5"	17'8"	18'0"	17'11"	18'3"
4 Height: Overall	mm	6486	6486	6719	6657	6657	6891	7040	7040	7271	7209	7209	7441
	ft/in	21'3"	21'3"	22'1"	21'10"	21'10"	22'7"	23'1"	23'1"	23'10"	23'8"	23'8"	24'5"
5 Reach: Full Lift Rolled Out	mm	1677	1725	1788	1765	1814	1876	1956	2003	2069	2050	2098	2162
	ft/in	5'6"	5'8"	5'10"	5'9"	5'11"	6'2"	6'5"	6'7"	6'9"	6'9"	6'11"	7'1"
6 Dig Depth	mm	36	56	56	29	49	49	70	90	90	63	83	83
	ft/in	1.4"	2.2"	2.2"	1.1"	1.9"	1.9"	2.8"	3.5"	3.5"	2.5"	3.3"	3.3"
Turning Radius Bucket at Carry	mm	6257	6423	6461	6308	6474	6512	6644	6806	6847	6696	6857	6898
	ft/in	20'6"	21'1"	21'2"	20'8"	21'3"	21'4"	21'10"	22'4"	22'6"	22'0"	22'6"	22'8"
7 Maximum Dump Angle	degree	28	28	28	27	27	27	30	30	30	29	29	29
8 Rack Angle at Carry	degree	41	41	41	42	42	42	47	47	47	48	48	48
Tipping Load – Straight ISO 14397-1*	kg	10 703	10 245	10 139	10 291	9846	9716	7913	7497	7400	7667	7260	7139
	lb	23,596	22,587	22,354	22,687	21,708	21,419	17,446	16,528	16,314	16,903	16,007	15,739
Tipping Load – Full Turn ISO 14397-1*	kg	9044	8602	8502	8690	8260	8133	6588	6184	6090	6379	5985	5866
	lb	19,939	18,963	18,743	19,158	18,210	17,930	14,525	13,634	13,427	14,064	13,194	12,931
Breakout Force	kg	9155	8608	7972	8083	7589	7054	8774	8239	7625	7747	7262	6745
	lb	20,183	18,977	17,575	17,820	16,731	15,551	19,343	18,164	16,810	17,079	16,010	14,870
Operating Weight	kg	17 929	18 262	18 358	17 873	18 200	18 301	18 238	18 571	18 667	18 182	18 510	18 611
	lb	39,527	40,261	40,472	39,403	40,124	40,347	40,208	40,942	41,154	40,084	40,808	41,030

*Full compliance to ISO 14397-1:2007 Sections 1 thru 6, which requires 2% verification between calculation and testing.

Dimensions listed are for a 938 Ag Handler configured with buckets, bolt-on cutting edges, aggregate counterweights, 80 kg (176 lb) operator, and Michelin 23.5 R25 XHA2 tires at a pressure of 2.76 bar (40 psi) in the front tires and 2.06 bar (30 psi) in the rear tires.

930/938 Ag Handler Specifications

930 High Dump Bucket Selection – Standard Lift

Material Type		Fill Factor %		Material Type											Tip Load Full Turn*		
				Mulch, Wet	Flour, Wheat Barley, Bulk	Buckwheat, Bulk Canola (Rapeseed)	Corn Shelled, Bulk Soy Beans, Bulk Wet Muck	Wheat, Bulk Bulk Grain Sugar Beet	Silage, Packed Manure/Muck, Wet	Peat, Moist Corn, Ear Sugar, Raw Cane	Lime, Pulverized Quick Fertilizer, Mixed						
930 Ag Handler	Counter-weight		kg/m ³ lb/yd ³	560 (944)	605 (1,020)	650 (1,096)	695 (1,171)	740 (1,247)	785 (1,323)	830 (1,399)	875 (1,475)	920 (1,551)	965 (1,627)	1010 (1,702)	kg	(lb)	
	Fusion	3.5 (4.6)	Heavy									115%	110%	105%	100%	6994	(15,420)
		4.1 (5.4)	Heavy				115%	110%	105%	100%						6565	(14,473)
		5.0 (6.5)	Heavy	115%	110%	105%	100%									6468	(14,261)
	ISO	3.5 (4.6)	Heavy								115%	110%	105%	100%		6647	(14,655)
		4.1 (5.4)	Heavy			115%	110%	105%	100%							6230	(13,736)
		5.0 (6.5)	Heavy	110%	105%	100%										6105	(13,458)

930 High Dump Bucket Selection – High Lift

Material Type		Fill Factor %		Material Type											Tip Load Full Turn*		
				Beet Pulp Alfalfa Meal	Paper, Semi Compacted Yard Waste	Food Scraps	Brewers Grain	Woodchips, Dry	Mulch, Wet	Flour, Wheat Barley, Bulk	Buckwheat, Bulk Canola, Rapeseed	Corn Shelled, Bulk Soy Beans, Bulk					
930 Ag Handler	Counter-weight		kg/m ³ lb/yd ³	300 (506)	345 (582)	390 (657)	435 (733)	480 (809)	525 (885)	570 (961)	615 (1,037)	660 (1,112)	705 (1,188)	750 (1,264)	kg	(lb)	
	Fusion	3.5 (4.6)	Heavy									115%	110%	105%	100%	5210	(11,487)
		4.1 (5.4)	Heavy						115%	110%	105%	100%				4812	(10,608)
		5.0 (6.5)	Heavy			115%	110%	105%	100%							4717	(10,399)
	ISO	3.5 (4.6)	Heavy								115%	110%	105%	100%		4976	(10,970)
		4.1 (5.4)	Heavy					115%	110%	105%	100%					4587	(10,112)
		5.0 (6.5)	Heavy		115%	110%	105%	100%								4466	(9,846)

Material density, fill factor, and counterweight options are key variables when choosing the appropriate size of the bucket. The long floor and open throat design of the performance series buckets along with the aggressive rack angles of the optimized linkage will demonstrate fill factors greater than 100% ISO rated. Refer to the expected fill factor % per material type at the top of the table and find a matching counterweight and fill factor along the side for proper bucket sizing.

*Full compliance to ISO 14397-1:2007 Section 1 thru 6, which requires 2% verification between calculation and testing.

930/938 Ag Handler Specifications

938 High Dump Bucket Selection – Standard Lift

Material Type																Tip Load Full Turn*					
Fill Factor %																					
938 Ag Handler	Fusion	3.5 (4.6)	Aggregate																9044	(19,939)	
		4.1 (5.4)	Aggregate						115%	110%	105%	100%							8602	(18,964)	
		5.0 (6.5)	Aggregate	115%	110%	105%	100%											8502	(18,744)		
		ISO	3.5 (4.6)	Aggregate																8690	(19,158)
			4.1 (5.4)	Aggregate						115%	110%	105%	100%							8260	(18,211)
			5.0 (6.5)	Aggregate	115%	110%	105%	100%											8133	(17,930)	
	Counter-weight																kg (lb)				
	kg/m ³ lb/yd ³																				
	700 (1,180)																				
	760 (1,281)																				
	820 (1,382)																				
	880 (1,483)																				
940 (1,584)																					
1000 (1,686)																					
1060 (1,787)																					
1120 (1,888)																					
1180 (1,989)																					
1240 (2,090)																					
1300 (2,191)																					

938 High Dump Bucket Selection – High Lift

Material Type																Tip Load Full Turn*					
Fill Factor %																					
938 Ag Handler	Fusion	3.5 (4.6)	Aggregate																6588	(14,524)	
		4.1 (5.4)	Aggregate						115%	110%	105%	100%							6184	(13,634)	
		5.0 (6.5)	Aggregate	115%	110%	105%	100%											6090	(13,427)		
		ISO	3.5 (4.6)	Aggregate																6379	(14,064)
			4.1 (5.4)	Aggregate						115%	110%	105%	100%							5984	(13,193)
			5.0 (6.5)	Aggregate	115%	110%	105%	100%											5866	(12,931)	
	Counter-weight																kg (lb)				
	kg/m ³ lb/yd ³																				
	525 (885)																				
	570 (961)																				
	615 (1,037)																				
	660 (1,112)																				
705 (1,188)																					
750 (1,264)																					
795 (1,340)																					
840 (1,416)																					
885 (1,492)																					
930 (1,568)																					
975 (1,643)																					

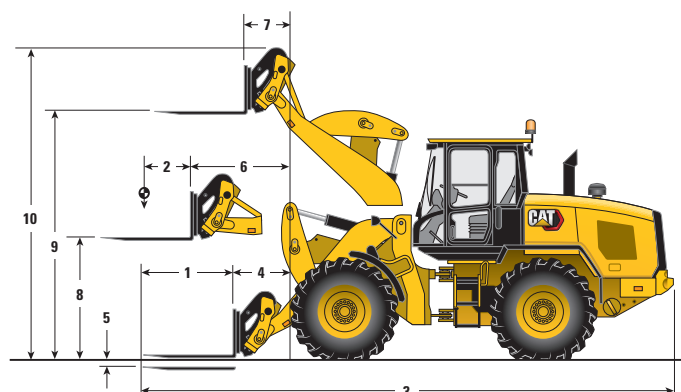
Material density, fill factor, and counterweight options are key variables when choosing the appropriate size of the bucket. The long floor and open throat design of the performance series buckets along with the aggressive rack angles of the optimized linkage will demonstrate fill factors greater than 100% ISO rated. Refer to the expected fill factor % per material type at the top of the table and find a matching counterweight and fill factor along the side for proper bucket sizing.

*Full compliance to ISO 14397-1:2007 Section 1 thru 6, which requires 2% verification between calculation and testing.

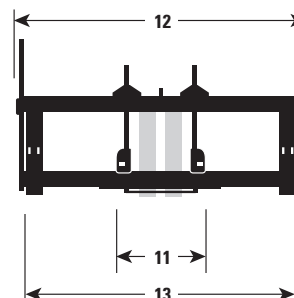
930/938 Ag Handler Specifications

Operating Specifications with Construction Forks

All dimensions are approximate. Dimensions will vary with bucket and tire choice. Refer to Operating Specifications with Buckets.



Construction Fork



	930				938			
	Standard Lift		High Lift		Standard Lift		High Lift	
	mm	(ft/in)	mm	(ft/in)	mm	(ft/in)	mm	(ft/in)
1 Fork tine length	1524	(5'0")	1524	(5'0")	1524	(5'0")	1524	(5'0")
2 Load center	762	(2'6")	762	(2'6")	762	(2'6")	762	(2'6")
3 Length: overall	8311	(27'3")	8947	(29'4")	8319	(27'4")	9068	(29'9")
4 Reach: ground	1050	(3'5")	1687	(5'6")	971	(3'2")	1720	(5'8")
5 Height (bottom of tine)***: minimum	126	(5.0")	161	(6.3")	60	(2.3")	94	(3.7")
6 Reach: level arm	1628	(5'4")	2151	(7'1")	1614	(5'4")	2221	(7'3")
7 Reach: full lift	826	(2'9")	1063	(3'6")	811	(2'8")	1077	(3'6")
8 Height (top of tine): level arm	1724	(5'8")	1724	(5'8")	1825	(6'0")	1825	(6'0")
9 Height (top of tine): full lift	3625	(11'11")	4118	(13'6")	3753	(12'4")	4334	(14'3")
10 Height: overall	4935	(16'2")	5428	(17'10")	5064	(16'7")	5645	(18'6")
11 Minimum fork spacing	300	(1'0")	300	(1'0")	300	(1'0")	300	(1'0")
12 Carriage width	1566	(5'2")	1566	(5'2")	2498	(8'2")	2498	(8'2")
13 Maximum fork spacing	1550	(5'1")	1550	(5'1")	2375	(7'10")	2375	(7'10")
	kg	(lb)	kg	(lb)	kg	(lb)	kg	(lb)
Tipping load – straight, ISO 14397-1*	7190	(15,852)	5876	(12,954)	9053	(19,958)	7200	(15,874)
Tipping load – full turn, ISO 14397-1*	6151	(13,561)	4988	(10,998)	7749	(17,084)	6110	(13,469)
Operating weight	14 045	(30,964)	14146	(31,186)	16 951	(37,370)	17 260	(38,052)
Rated load % of full turn tip:								
50% of tip: SAE J1197**	3076	(6,781)	2494	(5,499)	3874	(8,542)	3055	(6,735)
60% of tip: rough terrain EN474-3**	3691	(8,137)	2993	(6,599)	4649	(10,250)	3666	(8,082)
80% of tip: firm and level EN474-3**	4921	(10,849)	3991	(8,798)	6199	(13,667)	4888	(10,776)
Counterweight Selection	Heavy Counterweight				Aggregate Counterweight			
Tire Selection	20.5 R25 XHA2				23.5 R25 XHA2			

*Full compliance to ISO 14397-1:2007 Sections 1 thru 6, which requires 2% verification between calculation and testing.

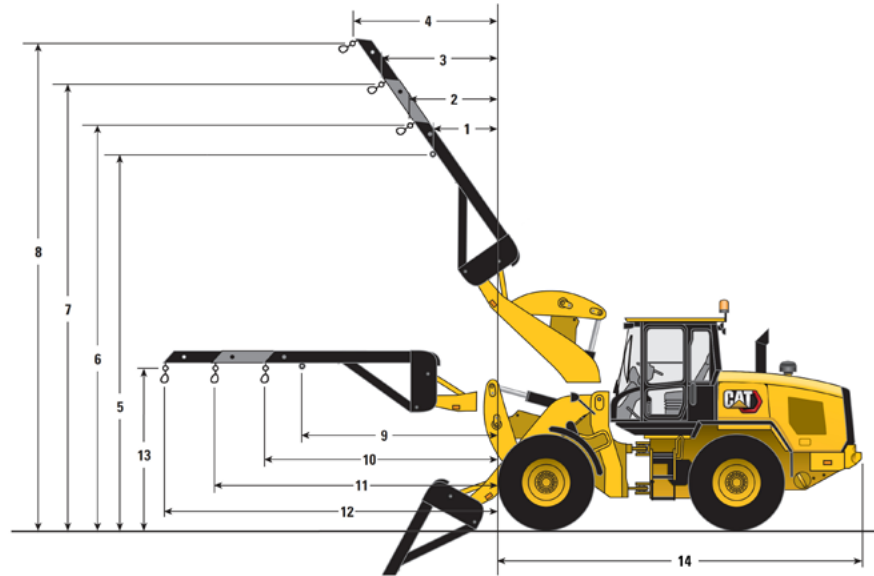
**Compliance to EN474-3 and SAE J1197.

***Negative value indicates above ground.

Dimensions listed are for a machine with an 80 kg (176 lb) operator.

Operating Specifications with Material Handling Arm

All dimensions are approximate. Dimensions will vary with bucket and tire choice. Refer to Operating Specifications with Buckets.



	930				938			
	Standard Lift		High Lift		Standard Lift		High Lift	
	mm	(ft/in)	mm	(ft/in)	mm	(ft/in)	mm	(ft/in)
1 Reach: Full raise at fixed tab	1451	(4'9")	1765	(5'9")	1418	(4'8")	1734	(5'8")
2 Reach: Full raise at minimum length	1676	(5'6")	2005	(6'7")	1640	(5'5")	1966	(6'5")
3 Reach: Full raise at mid position	2156	(7'1")	2505	(8'3")	2116	(6'11")	2456	(8'1")
4 Reach: Full raise at maximum length	2636	(8'8")	3006	(9'10")	2592	(8'6")	2945	(9'8")
5 Clearance: Full raise at fixed tab	5544	(18'2")	5981	(19'7")	5688	(18'8")	6234	(20'5")
6 Clearance: Full raise at minimum length	5859	(19'3")	6285	(20'7")	6005	(19'8")	6544	(21'6")
7 Clearance: Full raise at mid position	6304	(20'8")	6707	(22'0")	6455	(21'2")	6979	(22'11")
8 Clearance: Full raise at maximum length	6750	(22'2")	7130	(23'5")	6905	(22'8")	7415	(24'4")
9 Reach: Level position at fixed tab	3065	(10'1")	3588	(11'9")	3051	(10'0")	3658	(12'0")
10 Reach: Level position at minimum length	3444	(11'4")	3967	(13'0")	3430	(11'3")	4037	(13'3")
11 Reach: Level position at mid position	4099	(13'5")	4622	(15'2")	4085	(13'5")	4692	(15'5")
12 Reach: Level position at maximum length	4754	(15'7")	5277	(17'4")	4740	(15'7")	5347	(17'7")
13 Clearance: Level position	2514	(8'3")	2514	(8'3")	2615	(8'7")	2615	(8'7")
14 Length: Front of tire to back of machine	5737	(18'10")	5737	(18'10")	5824	(19'1")	5824	(19'1")
	kg	(lb)	kg	(lb)	kg	(lb)	kg	(lb)
Operating Weight	13 616	(30,018)	13 716	(30,239)	16 521	(36,423)	16 830	(37,104)
Rated load* (50% of full turn tip** SAE J1197)								
Fixed tab (9)	2634	(5,807)	2221	(4,896)	3301	(7,277)	2711	(5,977)
Minimum extension (10)	2382	(5,251)	2046	(4,511)	3010	(6,636)	2503	(5,518)
Middle extension (11)	1779	(3,922)	1757	(3,874)	2456	(5,415)	2198	(4,846)
Maximum extension (12)	1411	(3,111)	1393	(3,071)	1957	(4,314)	1959	(4,319)

*Full compliance to ISO 14397-1:2007 Sections 1 thru 6, which requires 2% verification between calculation and testing.

**Full compliance to EN474-3 and SAE J1197.

930/938 Ag Handler Specifications

Optional Equipment

	930 Ag Handler				938 Ag Handler			
	Operating Weight		Tipping Load – Full Turn		Operating Weight		Tipping Load – Full Turn	
Change with options removed:	kg	lb	kg	lb	kg	lb	kg	lb
Heavy counterweight	-324	-715	-523	-1153	-324	-715	-518	-1141
Aggregate counterweight	N/A	N/A	N/A	N/A	-299	-659	-416	-918
Autolube system	-47	-105	-14	-30	-47	-105	-14	-30
Ride control	-31	-69	-10	-22	-31	-69	-10	-23
Secondary steering	-32	-71	-27	-59	-33	-73	-27	-61
Roading fenders	-16	-35	-22	-49	-15	-33	-21	-47
Windshield access steps	-25	-54	-11	-25	-25	-54	-11	-25
3rd function implement valve	-18	-40	-4	-9	-18	-40	-4	-9
Change with options added:	kg	lb	kg	lb	kg	lb	kg	lb
Aggregate counterweight	+299	+659	+420	+926	N/A	N/A	N/A	N/A
Guard, driveshaft	+43	+96	+12	+26	+45	+99	+12	+26
Guard, powertrain lower	+67	+148	+61	+136	+67	+148	+61	+135
Guard, rear radiator	+258	+568	+467	+1030	+279	+615	+500	+1102
Joystick steering (requires secondary)	+79	+175	+73	+161	+78	+172	+72	+158
Cold start package	+64	+140	+87	+193	+66	+145	+89	+197
Guard, front window	+51	+113	+28	+63	+51	+113	+28	+63
4th function implement valve	+17	+37	+2	+5	+17	+37	+3	+6
Guard, crankcase	+10	+23	+14	+30	+10	+23	+14	+30
Guard, hitch	+21	+47	+14	+32	+21	+47	+14	+32
Toolbox	+18	+40	+18	+39	+18	+40	+18	+39

Tire Options



930 Ag Handler

938 Ag Handler

Change with tire option as compared to 20.5R25 XHA2 (930) or 23.5R25 XHA2 (938) Tire	20.5-25 20PR LM L-3		620/75 R26 MegaX		750/65 R26 MegaX		750/65 R26 MegaX	
	mm	in	mm	in	mm	in	mm	in
Vertical heights	+4	+0.1"	+23	+0.9"	+75	+3.0"	+10	+0.4"
Reach: Bucket at 45°	-10	-0.4"	-57	-2.3"	-67	-2.6"	-4	-0.2"
Width: Over tires	-22	-0.9"	+145	+5.7"	+270	+10.6"	+30	+1.2"
	kg	lb	kg	lb	kg	lb	kg	lb
Tipping load – straight	-177	-391	-142	-313	+21	+46	-450	-993
Tipping load – full turn	-157	-345	-125	-276	+18	+40	-398	-877
Operating weight	-260	-573	-208	-459	+30	+67	-665	-1,466

STANDARD & OPTIONAL EQUIPMENT

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

POWERTRAIN	930	938
1,000 hour service intervals (after initial 500)	●	●
Air cleaner, dry type	●	●
Auto engine RPM	●	●
Auto idle shut down feature	●	●
Auto rimpull control, adjust wheel torque	●	●
Axle seal guards	●	●
Axle, rear, limited slip	⓪	⓪
Brake, parking, electric	●	●
Breathers, elevated, axle and powertrain	⓪	⓪
Cat C7.1 engine	●	●
Coolant protection to -34° C (-93.2° F)	●	●
Cooling package, single plane, wide 6 fins per inch	●	●
Crankcase, filtered, breather	●	●
Creep control, adjust ground speed	●	●
Demand cooling fan, hydraulically driven	●	●
Diesel particulate filter (DPF)	●	●
Differential lock, auto, in front axle	○	●
Differential lock, manual, in front axle	●	●
Directional shift aggressiveness (fast, medium, slow)	●	●
Driveshafts, lubed for life	●	●
Enclosed wet disc full hydraulic brakes	●	●
Engine pre-cleaner, Sy-Klone	⓪	⓪
Fuel priming pump, automatic	●	●
Fuel water separator	●	●
Operator modes (TC, Hystat, Single Pedal, Ice)	●	●
Power modes (standard and performance)	●	●
Selective catalyst reduction	●	●
Scheduled Oil Sampling (S-O-S SM) port, engine, coolant, transmission oil	●	●
Transmission, hydrostatic with electronic control	●	●
Turbocharged and aftercooled	●	●
750/65R26 Tire Groups	⓪	⓪
620/75R26 Tire Groups	⓪	⓪
23.5R25 Tire Groups	○	⓪
20.5R25 L3 Tire Groups	⓪	⓪
20.5R25 Snow Tire Groups	⓪	⓪
20.5-25 L3 Bias Tire Groups	⓪	⓪
● – standard ⓪ – optional ○ – not available		

OPERATOR ENVIRONMENT	930	938
Air pre-cleaner, cab powered	⓪	⓪
Automatic temperature control	●	●
Beacon, seatbelt, green	⓪	⓪
Beacon, warning, amber	⓪	⓪
Cab door release, ground level	●	●
Cab, enclosed ROPS/FOPS pressurized, sound suppressed	●	●
Camera, rearview	●	●
– Camera, front view or multi-view	⓪	⓪
– Rear Object Detection	⓪	⓪
Cell phone holder	⓪	⓪
Column mounted multifunction control lights, wipers, turn signal	●	●
Cup holders	●	●
Decals, high visibility, steps, handrails	⓪	⓪
Display, 8-inch touch screen, with digital gauges	●	●
Glass, front, tinted	●	●
Glass, rear window, defrost, electric	●	●
Glass, sliding on side window	●	●
Hydraulic control lockout	●	●
Implement controls, seat mounted, adjustable	●	●
– Implement controls, joystick	⓪	⓪
– Implement controls, single axis lever	⓪	⓪
Jog dial with screen control	●	●
Joystick, programmable	●	●
Lighting, cab interior, door	●	●
Lunch box storage	●	●
Mirrors, external with lower parabolic (2)	●	●
– Mirrors, heated, electrically adjust (2)	⓪	⓪
– Mirrors, internal (2)	⓪	⓪
Mounting provision	●	●
Operator Not Present warning and control logic	●	●
Push to start	●	●
Reverse strobes, warning, white	⓪	⓪
Seat, suspension, fabric	●	●
– Seat, premium or deluxe	⓪	⓪
Seatbelt, 75 mm (3 in) retractable	●	●
Security, Bluetooth key fob	⓪	⓪
Speakers, radio ready	●	●
– Radio packages	⓪	⓪
Steering, wheel, tilt	●	●
– Steering, column, tilt and telescoping	⓪	⓪
– Steering, joystick, force-feedback	⓪	⓪
Tire Pressure Monitoring (TPM)	⓪	⓪
Wiper washer, wet arm, rear and intermittent front	●	●
Visor, rear	⓪	⓪
● – standard ⓪ – optional ○ – not available		

930/938 Ag Handler Specifications

STANDARD & OPTIONAL EQUIPMENT *(continued)*

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

HYDRAULICS	930	938
Attachment modes, adjustable in-cab	●	●
Automatic lift and bucket kickouts, adjustable in-cab	●	●
Auxiliary flow (3rd and 4th)	○	○
Cat Payload, 250 hours of demo	●	●
– Cat Payload enabled	○	○
– Cat Payload printer	○	○
Cylinder damping at kickout and mechanical end stops	●	●
Fine mode control (fast, medium, slow)	●	●
Hydraulic diagnostic connectors and S-O-S ports	●	●
Hydraulic response setting (fast, medium, slow)	●	●
Load check valves	○	○
Load sensing hydraulics and steering	●	●
Oil, biodegradable	○	○
Reversing fan	○	○
Ride control	○	○
Seat mounted hydraulic joystick controls	●	●
Site gauge, visible	●	●
LINKAGE	930	938
Autolube	○	○
Counterweight, Aggregate	○	○
Counterweight, Heavy	○	○
Couplers: Fusion and ISO	○	○
High Lift	○	○
Lubrication points, remote mounted	●	●
Parallel lift loader linkage	●	●
OTHER	930	938
Enclosure doors, large-access (3)	●	●
Lockable compartments	●	●
Recovery hitch with pin	●	●
Toolbox	○	○
Windshield washing steps	○	○

● – standard ○ – optional ○ – not available

GUARDS	930	938
Cab	○	○
Crankcase	○	○
Driveshaft	○	○
Lighting, front and rear	○	○
Powertrain, lower and sides	○	○
ELECTRICAL	930	938
Alarm, back up	●	●
Alternator, 115-amp, heavy duty	●	●
– Alternator, brushless, 150 amp	○	○
Batteries, 1,000 CCA (2) 24V system, disconnect switch	●	●
Cold start package with block heater	○	○
Emergency shutdown switch	●	●
Gear reduction starter, heavy duty	●	●
Lights, roading, front and rear	●	●
Lights, LED, rear stop and turn	●	●
– Lights, LED auxiliary	○	○
– Lights, LED roading	○	○
– Lights, LED, engine and DEF compartment	○	○
Power supply, 12V in cab (2)	●	●
– USB charging ports (2)	○	○
Product Link™ Elite	●	●
– Product Link – Cellular and Satellite	○	○
Remote jump start post	●	●
Resettable main and critical function breakers	●	●
Secondary steering	○	○

● – standard ○ – optional ○ – not available

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