

930M/938M Ag Handlers

Agricultural Arrangement



	930M Ag Handler	938M Ag Handler
Engine Model*	Cat® C7.1	Cat C7.1
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	7959 kg (17,546 lb)	10 068 kg (22,195 lb)
High Lift	6193 kg (13,653 lb)	7577 kg (16,704 lb)
Operating Weight	14 571 kg (32,122 lb)	17 481 kg (38,538 lb)

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

Making Your Choice Easy

Purpose Built Configuration

Power when you need it with a unique Power Balance tuning giving you the boost you need for silage work. Available with wide set 750/65 MEGAXBIB tires keep you rolling with maximum stability, while a quick reverse speed improves your productivity. Breathe clean with high debris package.

Efficiently Powerful

Experience Hybrid like fuel efficiency with a high torque low speed engine working in perfect harmony with an intelligent hydrostatic power train and variable displacement hydraulic pumps. For your highest production work, a new Performance Mode will allow you to boost the power and hydraulic speed to get the job done even quicker.

Work Made Easy

Move more with Caterpillar's patented quick loading Performance Series buckets and optimized Z-bar linkage. Multi-function work has never been easier with dedicated pumps and a flow sharing implement valve. The Ag Handler will simply do what you ask it to.

Enjoy All Day Comfort

Have a seat and enjoy whisper quiet sound levels, work tool visibility and seat mounted joystick controls. The large spacious cab combined with Caterpillar's exclusive hydraulic cylinder dampening make this the most comfortable seat on the farm.

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Environmental and customer friendly –
Up to 95% recyclable content by weight



The Cat® Small Wheel Loader Ag Handler sets a new standard for productivity, fuel efficiency and comfort. A high torque, low speed C7.1 engine works in concert with an intelligent hystat power train to deliver fuel efficiency as standard. A unique Power Balance in Range 1 for silage work maximizes productivity. Extremely low sound levels, large spacious cab and intuitive controls keep you working comfortably all day and even all night! Experience the new industry benchmark.

Purpose Built Configuration

Maximize performance and productivity while minimizing operating costs.



Unique Power Balance

Hystat Power is maximized for silage work by a unique power distribution tuned to keep you moving and flicking silage while working the steepest slopes.

Wide Set 750 Tires

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

Fuel Efficient Quick Reverse

Roll the silage clamp efficiently with an adjustable forward rolling speed. Caterpillar's exclusive intelligent Hydrostatic Power Train allows you to interdependently adjust your forward speed in Range 1 from 1 km/h (0.6 mph) to 13 km/h (8 mph) while reverse speed stays fixed at a quick 13 km/h (8 mph).

Breathe Clean

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



Efficiently Powerful

Experience hybrid like fuel efficiency with more power when you need it.



Intelligent Power Management

The Caterpillar exclusive Intelligent Power Management system monitors operator input and power availability to keep the machine working at peak efficiency.

Power on Demand

A choice of Power Modes allows you to choose between maximum fuel efficiency or boosted power along with hydraulic speed to get your work done even quicker.



Standard Power Mode

- Saves up to 10% fuel while running at an efficient 1,600 rpm.
- Recommended for load and carry along with roading applications to maximize fuel efficiency.
- Reduces cab sound levels down to a whisper quiet 68 dB(A) typical.

Performance Power Mode

- Enabled at the push of a button (HP+).
- Boosts engine power by up to 10% in all speed ranges.
- Increases engine speed by over 12%.
- Maximize hydraulic cycle times and productivity.

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. The engine meets Tier 4 Final/Stage V emission requirements 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** 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 up to four fuel tank fills per DEF fill.
- **Configurable auto idle shut down** based on time and ambient temperature to further reduce fuel burn and keep operating costs low.



Power to the Ground

Lock up and go with fully locking front differential axle that can be engaged on the move at full torque with the pull of a trigger on the seat mounted joystick. Maximize your traction with optional Limited Slip Differential on the rear axle 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.



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** 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.
- **Visibility** to bucket corners and fork tips at ground level remain excellent while sight lines at maximum lift are improved with a Generation III lift arm design.
- **Lift higher and reach further** with optional High Lift linkage.

Quick Loading Performance Series Buckets

Performance Series Buckets deliver up to 10% higher fill factors and better material retention for significant productivity and fuel efficiency improvements. The buckets feature a longer floor to take a bigger bite of the pile, an open throat to heap higher and curved side bars to help with material retention. This optimized shape is echoed across the General Purpose, Light Material and High Dump bucket families.



Smooth and Predictable Multi-Function Performance

M Series machines feature an electro-hydraulic control system that is governed by the Intelligent Power Management system for peak efficiency. The load-sensing, variable flow system senses work demand and adjusts flow and pressure to match the operator's request.

- **Multi-Function without compromise** through dedicated hydraulic systems featuring one pump for the Intelligent Hydrostatic drive, a 2nd pump for the implements, and a 3rd pump for the steering system. Drive, Lift and Steer simultaneously with smooth predictable control. The M Series simply does what you ask it to.
- **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 such as ground and level.
- **Fine tune hydro-mechanical performance** with fully adjustable 3rd and 4th function flow through the secondary display (when equipped) for a perfect marriage between machine and attachments.





Enjoy All Day Comfort

Best seat on the farm.



Have a Seat and Experience:

- **Seat-mounted controls** featuring a low effort joystick for lift and tilt functions along with integrated Forward/Neutral/Reverse switch, differential lock trigger and optional third and fourth auxiliary functions.
- **Superior all around visibility** with single piece front windshield, new parabolic external mirrors, redesigned Generation III linkage and clean hydraulic lines routing.
- **Automatic climate control** with heated rear glass and external mirrors for a quick defrost.
- **Fully adjustable controls** including steering column, joystick and seat suspension.
- **Information at a glance** with large primary LCD display and full color secondary display.
- **An extra eye on the job site** with rear view camera and optional integrated object detection and optional forward facing camera system.
- **A heated and cooled seat** option for added comfort in a wide range of climates.



An Easy Day at Work with:

- **A spacious, safe, quiet operator environment** featuring ergonomic controls, seat belt notification and optional bluetooth radio with integrated microphone plus an MP3 port.
- **Easy access to vital machine parameters** with a secondary display that works in conjunction with the standard soft touch panel to allow real time adjustments to machine features and an integrated help button with over 25 languages.
- **Comfortable soft stops at cylinder end stroke** conditions and programmed kickout points with Caterpillar's exclusive electro-hydraulic cylinder dampening.
- **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 optional LED lighting package that includes engine compartment lighting to illuminate the way for checking oil, and coolant level along with re-fueling the machine in dark conditions.





Customize Your Experience

Make it yours.

Work as one with your machine by easily adjusting the power train and hydraulics to meet your personal preferences.

Flexible Power Train

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

- **Select your Power Train Mode:**
 - Torque Converter (TC) for smooth rollout.
 - Hystat for aggressive engine braking.
 - Default mode which blends the best of Hystat and Torque Converter characteristic.
- **Reduce tire wear** using Rimpull Control which enables you to match available tractive power to underfoot conditions.
- **Set Directional Shift Response**, soft and smooth for material handling applications or sharp for aggressive operation.



Adjustable Electro Hydraulic Controls

Easily customize the hydraulic performance through secondary display to optimize your efficiency.

- **Optimize hydraulic modulation** with Fine Mode control when working with forks and long tools such as grain push arms.
- **Quicker hydraulic response** for a quick silage flick through Lift and Tilt response settings.
- **Fully adjustable ride control** activation speed along with 3rd and 4th function auxiliary flows.

Operator Profiles and Coded Start

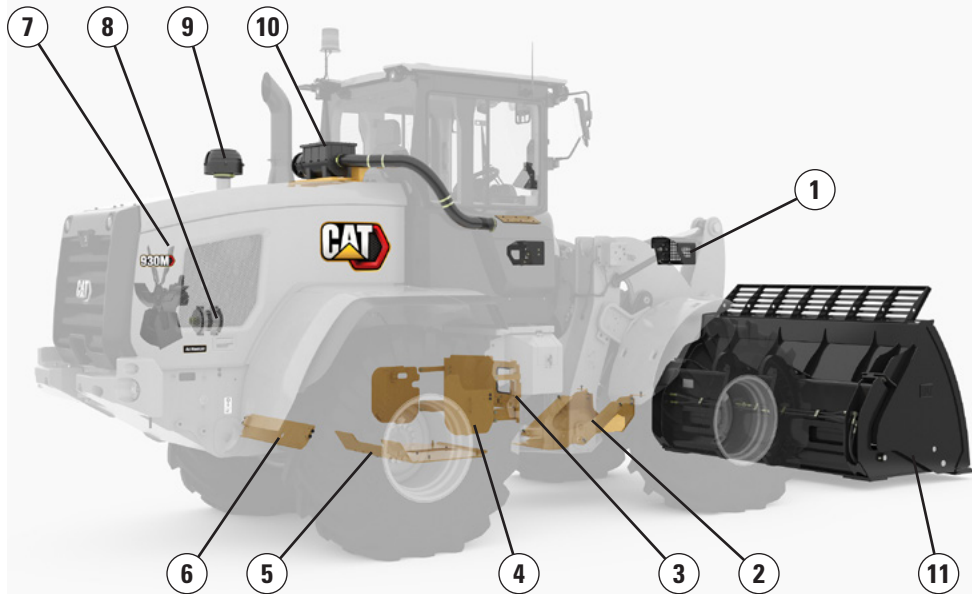
- The 930M Ag Handler will remember you and your personal settings with unique operator codes to make this machine truly yours and keep it secure when sitting away from home overnight.

Configured for Success

Ready to work for you.

The Way You Want It

A complete range of optional equipment and work tools give you the versatility to configure a 930M Ag Handler to be successful in your business. Get with your Cat dealer to configure yours.



Guards:

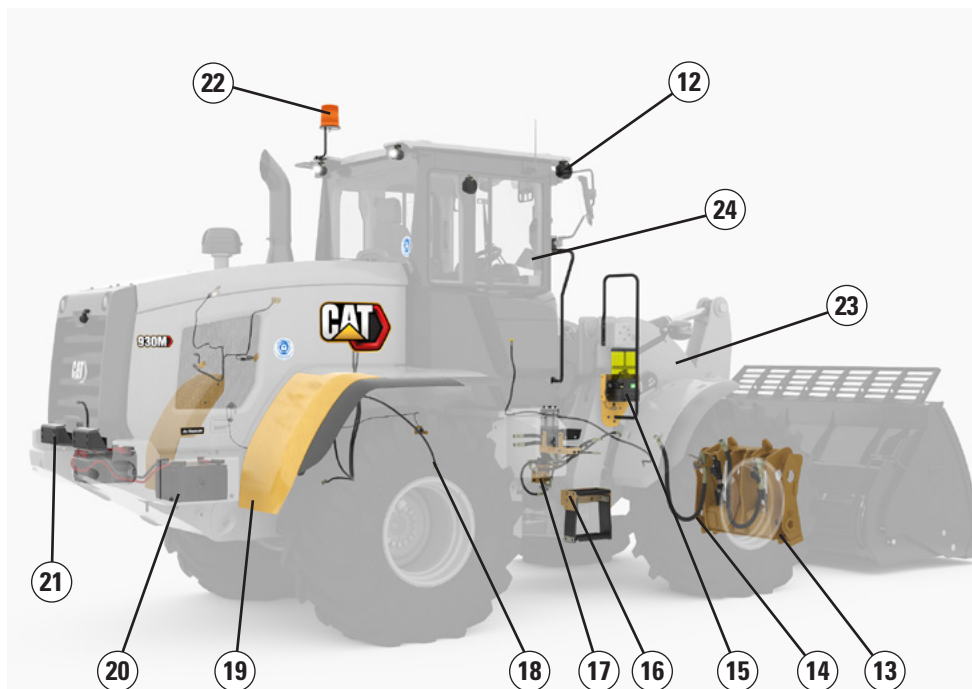
- 1) Lights
- 2) Drive shaft
- 3) Hitch
- 4) Side power train
- 5) Lower power train
- 6) Crank case

Debris Packages:

- 7) Reversing fan
- 8) Sealed alternator
- 9) Turbine precleaner
- 10) RESPA precleaner

Attachments:

- 11) Full range of tools



Other Options:

- 12) LED auxiliary lights
- 13) Coupler: Fusion™ and ISO
- 14) Auxiliary hydraulics: 3rd and 4th
- 15) Autolube
- 16) Windshield washing platform
- 17) Ride control
- 18) Elevated breathers: axles and gear box
- 19) Fenders: extended and full coverage
- 20) Cold start package
- 21) Rear object detection
- 22) Beacon
- 23) High Lift
- 24) CPM – Cat Production Measurement

Service

Schedule your downtime to 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. Extended service intervals on hydraulic and power train filters reduce service time and maximize uptime. Additional service features include:



- **Product Link™ PRO standard** with three year subscription to VisionLink®.
- **Maintenance reminders** through secondary display at scheduled intervals.
- **Fit for Life Diesel Particulate Filter** that is designed to exceed the engine overhaul life.
- **Quick fuel filter service** with Caterpillar's exclusive electric fuel priming pump.
- **Jump start studs** as standard equipment.
- **Extended cleanouts** with single plane cooling system and wide spaced six fins per inch coolers as standard.
- **Integrated Autolube** (optional) with adjustable greasing frequency.

Customer Support

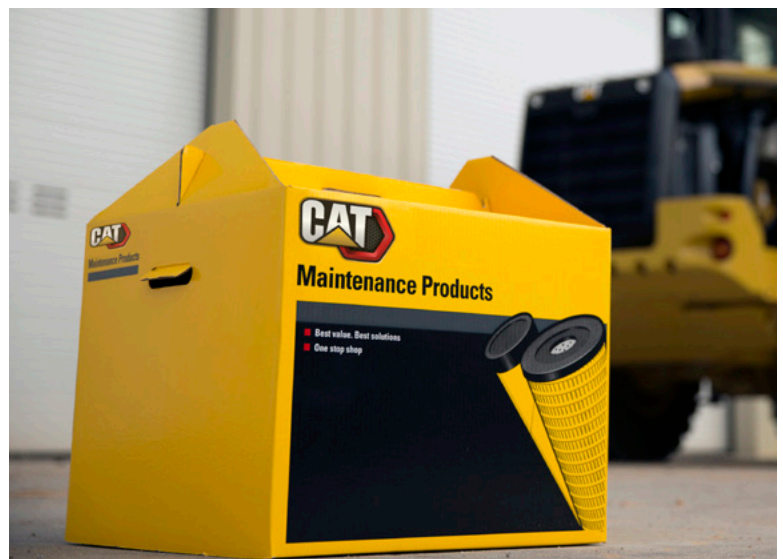
Unmatched service makes the difference.

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 an M Series Small Wheel Loader and join the Caterpillar family.



930M/938M Ag Handler Specifications

Engine

Cat® C7.1*	930M				938M			
	Performance (HP+)		Standard		Performance (HP+)		Standard	
	Range 1-4		Range 1-3**		Range 1-4		Range 1-3**	
Maximum Gross Power								
Maximum Engine Speed	1,800 rpm		1,600 rpm		1,800 rpm		1,600 rpm	
ISO 14396	125 kW	168 hp	119 kW	160 hp	140 kW	188 hp	129 kW	173 hp
ISO 14396 (metric)	170 hp		162 hp		190 hp		176 hp	
Net Power	1,800 rpm		1,600 rpm		1,800 rpm		1,600 rpm	
SAE J1349 at Minimum Fan Speed	122 kW	163 hp	116 kW	156 hp	137 kW	183 hp	125 kW	170 hp
ISO 9249 at Minimum Fan Speed	122 kW	164 hp	116 kW	156 hp	137 kW	184 hp	126 kW	170 hp
ISO 9249 (metric) at Minimum Fan Speed	166 hp		158 hp		186 hp		172 hp	
Maximum Gross Torque								
ISO 14396	815 N·m	601 lbf·ft	795 N·m	586 lbf·ft	900 N·m	664 lbf·ft	870 N·m	642 lbf·ft
Maximum Net Torque								
SAE J1349	797 N·m	588 lbf·ft	777 N·m	573 lbf·ft	880 N·m	649 lbf·ft	850 N·m	627 lbf·ft
ISO 9249	796 N·m	587 lbf·ft	776 N·m	572 lbf·ft	882 N·m	650 lbf·ft	852 N·m	628 lbf·ft
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)			

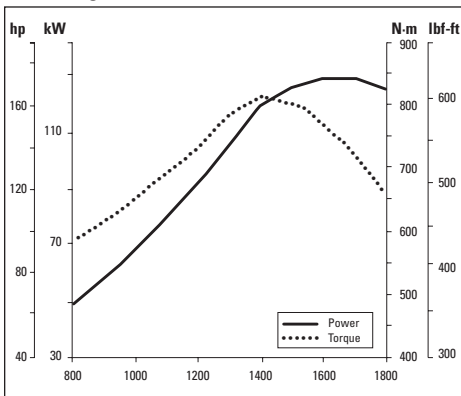
*The Cat C7.1 engine meets U.S. EPA Tier 4 Final/EU Stage V emission standards.

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

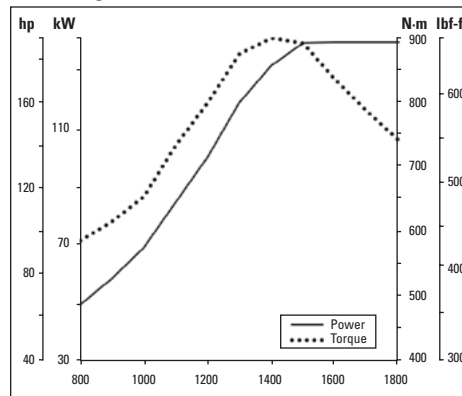
- Net power ratings are tested at the reference conditions for the specified standard and denote power available at the flywheel when the engine is equipped with alternator, air cleaner, emission components and fan at specified speed.
- No derating required up to 3000 m (10,000 ft) altitude. Auto derate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

Engine Torque

930M Ag Handler



938M Ag Handler



930M/938M Ag Handler Specifications

Cab



- ROPS: ISO 3471:2008, 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 measurements were conducted at 70% of the maximum engine cooling fan speed. The sound level may vary at different engine cooling fan speeds. The cab was properly installed and maintained. The measurements were conducted with the cab doors and the cab windows closed.

Air Conditioning System

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.

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.

	930M		938M	
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 (1,800 rpm) – Performance (HP+)				
Raise (Ground Level to Maximum Lift)	5.1 seconds		5.5 seconds	
Dump (at Maximum Lift Height)	1.5 seconds		1.5 seconds	
Float Down (Maximum Lift to Ground Level)	2.7 seconds		2.7 seconds	
Total Cycle Time	9.3 seconds		9.7 seconds	
Cycle Times (1,600 rpm) – Standard				
Raise (Ground Level to Maximum Lift)	5.7 seconds		6.2 seconds	
Dump (at Maximum Lift Height)	1.7 seconds		1.7 seconds	
Float Down (Maximum Lift to Ground Level)	2.7 seconds		2.7 seconds	
Total Cycle Time	10.1 seconds		10.6 seconds	

930M/938M Ag Handler Specifications

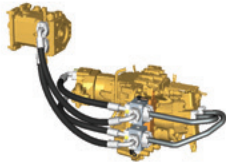
Steering



- 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).

	930M		938M	
Steering Cylinder: Double Acting				
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	

Transmission

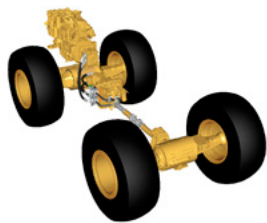


- * Creeper control allows maximum speed range adjustability from 1 km/h (0.6 mph) to 13 km/h (8 mph) in Range 1 through the secondary display when equipped. Factory default is 7 km/h (4.4 mph). Maximum reverse speed will be maintained at 13 km/h (8 mph) in Range 1 for a quick reverse.

	930M		938M	
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

930M/938M Ag Handler Specifications

Power Train



- Power train 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 930M and up to 20 km/h (12.4 mph) on the 938M.

	930M	938M
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, 620/65	± 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

Tires

*Base specification tire (930M).

**Base specification tire (938M)

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

	930M	938M
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

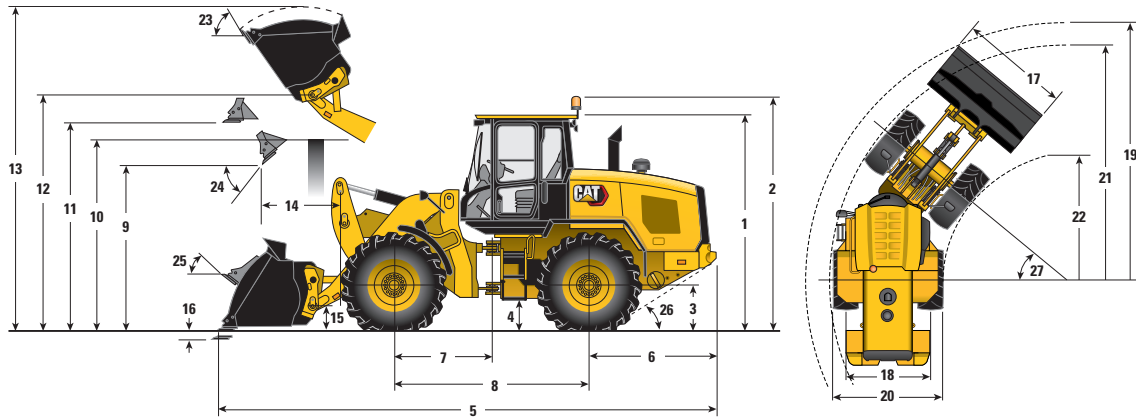
Service Refill Capacities

	930M		938M	
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
Axles				
Front	26 L	6.9 gal	35 L	9.2 gal
Rear	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

930M/938M Ag Handler Bucket Specifications

930M 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.

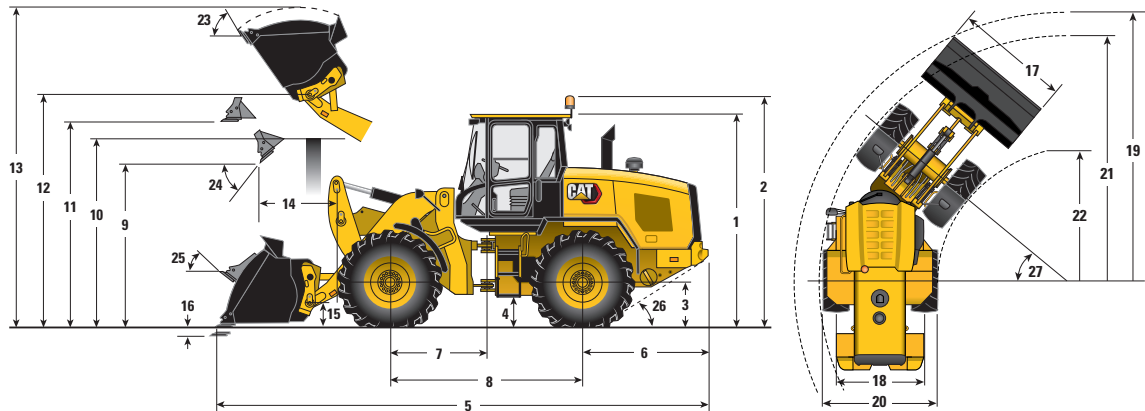
	Standard Lift		High Lift	
** 1 Height: Ground to Cab	3340 mm	10'11"	3340 mm	10'11"
** 2 Height: Ground to Beacon	3707 mm	12'2"	3707 mm	12'2"
** 3 Height: Ground to Axle Center	685 mm	2'3"	685 mm	2'3"
** 4 Height: Ground Clearance	397 mm	1'4"	397 mm	1'4"
* 5 Length: Overall	7953 mm	26'1"	8595 mm	28'2"
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	3.9"	135 mm	5.3"
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	14 571 kg	32,123 lb	14 715 kg	32,439 lb

Dimensions listed are for a 930M 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.

930M/938M Ag Handler Bucket Specifications

938M 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	17 559 kg	38,709 lb	17 886 kg	39,430 lb

Dimensions listed are for a 938M 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.

930M/938M Ag Handler Bucket Specifications

930M 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	865	720	794	650	827	690	769	626
	lb/yd ³	1,458	1,214	1,338	1,096	1,394	1,163	1,296	1,055
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 (7'0") 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	9426	9390	7388	7159	9020	8998	7158	6903
	lb	20,780	20,701	16,287	15,782	19,885	19,837	15,780	15,218
Tipping Load – Full Turn, ISO 14397-1*	kg	7959	7921	6193	5982	7610	7585	6001	5763
	lb	17,546	17,462	13,653	13,188	16,777	16,722	13,230	12,705
Breakout Force	kg	7235	7180	7818	6857	6527	6482	7360	6185
	lb	15,950	15,829	17,235	15,117	14,389	14,290	16,225	13,635
Operating Weight	kg	14 571	14 649	14 585	14 715	14 529	14 588	14 509	14 672
	lb	32,122	32,294	32,153	32,440	32,030	32,160	31,986	32,345

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

Dimensions listed are for a 930M 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.

930M/938M Ag Handler Bucket Specifications

938M 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	1094	912	971	800	1056	881	950	779
	lb/yd ³	1,844	1,537	1,637	1,348	1,780	1,485	1,601	1,313
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 (7'0") 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	11 915	11 886	9045	8807	11 495	11 482	8840	8575
	lb	26,267	26,203	19,940	19,415	25,341	25,313	19,488	18,904
Tipping Load – Full Turn, ISO 14397-1*	kg	10 068	10 037	7577	7359	9713	9696	7413	7167
	lb	22,195	22,127	16,704	16,223	21,413	21,375	16,342	15,800
Breakout Force	kg	9883	9829	10 756	9488	9041	8995	10 255	8676
	lb	21,788	21,669	23,712	20,917	19,931	19,830	22,608	19,127
Operating Weight	kg	17 481	17 559	17 679	17 808	17 394	17 454	17 557	17 721
	lb	38,538	38,710	38,974	39,259	38,346	38,478	38,705	39,067

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

Dimensions listed are for a 938M Ag Handler configured with aggregate 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.

930M/938M Ag Handler Bucket Selection Tables

938M Light Material Bucket Selection – Standard Lift

Material Type		Fill Factor %														Tip Load Full Turn*	
		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					
938M Ag Handler	Fusion	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)	(2,157)	(2,259)	(2,360)	(2,461)		
		3.5 (4.6)	Aggregate									115%	110%	105%	100%	10 350	(22,818)
		4.2 (5.5)	Aggregate					115%	110%	105%	100%					10 068	(22,196)
		5.0 (6.5)	Aggregate	115%	110%	105%	100%									10 037	(22,126)
		3.5 (4.6)	Aggregate									115%	110%	105%	100%	10 016	(22,081)
		4.2 (5.5)	Aggregate					115%	110%	105%	100%					9 713	(21,413)
		5.0 (6.5)	Aggregate	115%	110%	105%	100%									9 696	(21,375)

938M Light Material Bucket Selection – High Lift

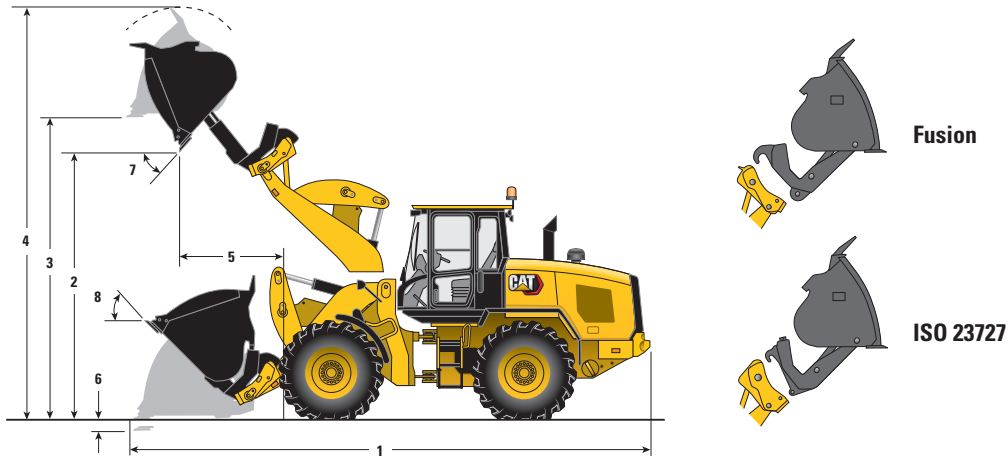
Material Type		Fill Factor %														Tip Load Full Turn*		
		Flour, Wheat Barley, Bulk	Buckwheat, Bulk Canola (Rapeseed)	Corn Shelled, Bulk Soy Beans, Bulk			Bulk Grain Sugar, Beet	Silage, Packed Manure/Muck, Wet	Peat, Moist Sugar, Raw Cane	Lime, Pulverized Quick Fertilizer, Mixed								
938M Ag Handler	Fusion	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)			
		3.5 (4.6)	Aggregate										115%	110%	105%	100%	7 577	(16,705)
		4.2 (5.5)	Aggregate					115%	110%	105%	100%					7 359	(16,223)	
		5.0 (6.5)	Aggregate	115%	110%	105%	100%									7 313	(16,122)	
		3.5 (4.6)	Aggregate									115%	110%	105%	100%	7 413	(16,342)	
		4.2 (5.5)	Aggregate					115%	110%	105%	100%					7 167	(15,799)	
		5.0 (6.5)	Aggregate	115%	110%	105%	100%									7 135	(15,731)	

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

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.

930M/938M Ag Handler Specifications

930M Operating Specifications with High Dump Buckets



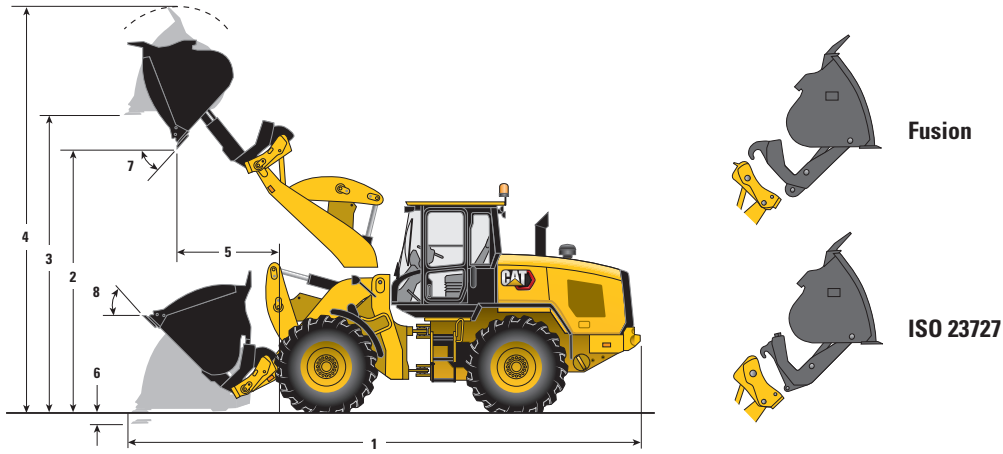
		Standard Lift						High Lift					
		Fusion			ISO 23727			Fusion			ISO 23727		
Rated Capacity	m ³	3.5	4.1	5.0	3.5	4.1	5.0	3.5	4.1	5.0	3.5	4.1	5.0
	yd ³	4.6	5.4	6.5	4.6	5.4	6.5	4.6	5.4	6.5	4.6	5.4	6.5
Capacity – Rated at 110% Fill Factor	m ³	3.9	4.5	5.5	3.9	4.5	5.5	3.9	4.5	5.5	3.9	4.5	5.5
	yd ³	5.1	5.9	7.2	5.1	5.9	7.2	5.1	5.9	7.2	5.1	5.9	7.2
Bucket Width	mm	2728	3032	3032	2728	3032	3032	2728	3032	3032	2728	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 110% Fill Factor	kg/m ³	934	763	611	890	726	581	697	562	447	669	537	428
	lb/yd ³	1,574	1,286	1,030	1,500	1,224	979	1,175	947	753	1,128	905	721
1 Length: Overall	mm	7986	8063	8183	8173	8250	8370	8627	8702	8822	8816	8890	9010
	ft/in	26'2"	26'5"	26'10"	26'10"	27'1"	27'6"	28'4"	28'7"	28'11"	28'11"	29'2"	29'7"
2 Dump Clearance: Full Lift Rolled Out	mm	4332	4274	4183	4516	4458	4369	4771	4711	4616	4949	4890	4797
	ft/in	14'3"	14'0"	13'9"	14'10"	14'8"	14'4"	15'8"	15'5"	15'2"	16'3"	16'1"	15'9"
3 Clearance: Level Bucket	mm	4609	4647	4647	4841	4826	4826	5060	5097	5097	5286	5271	5271
	ft/in	15'1"	15'3"	15'3"	15'11"	15'10"	15'10"	16'7"	16'9"	16'9"	17'4"	17'4"	17'4"
4 Height: Overall	mm	6315	6368	6510	6547	6527	6689	6766	6817	6960	6992	6972	7134
	ft/in	20'9"	20'11"	21'4"	21'6"	21'5"	21'11"	22'2"	22'4"	22'10"	22'11"	22'10"	23'5"
5 Reach: Full Lift Rolled Out	mm	1458	1490	1568	1555	1588	1668	1714	1743	1816	1819	1849	1925
	ft/in	4'9"	4'11"	5'2"	5'1"	5'3"	5'6"	5'7"	5'9"	5'11"	6'0"	6'1"	6'4"
6 Dig Depth	mm	100	115	115	93	108	108	135	150	150	128	143	143
	in	3.9"	4.5"	4.5"	3.7"	4.3"	4.3"	5.3"	5.9"	5.9"	5.0"	5.6"	5.6"
Turning Radius Bucket at Carry	mm	6157	6319	6359	6208	6369	6410	6487	6645	6688	6541	6698	6742
	ft/in	20'2"	20'9"	20'10"	20'4"	20'11"	21'0"	21'3"	21'10"	21'11"	21'6"	22'0"	22'1"
7 Maximum Dump Angle	degree	49	49	49	48	48	48	52	52	52	51	51	51
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	8685	8251	8091	8282	7857	7709	6569	6170	6027	6307	5913	5777
	lb	19,147	18,190	17,837	18,258	17,321	16,995	14,482	13,602	13,287	13,904	13,036	12,736
Tipping Load – Full Turn ISO 14397-1*	kg	7285	6869	6719	6939	6532	6392	5439	5054	4919	5215	4835	4707
	lb	16,060	15,143	14,812	15,297	14,400	14,091	11,991	11,142	10,844	11,497	10,659	10,377
Breakout Force	kg	6898	6405	5860	5987	5541	5091	6527	6051	5530	5667	5234	4803
	lb	15,207	14,120	12,919	13,199	12,215	11,223	14,389	13,340	12,191	12,493	11,539	10,588
Operating Weight	kg	14 910	15 240	15 340	14 873	15 203	15 302	15 053	15 384	15 483	15 016	15 346	15 445
	lb	32,870	33,597	33,818	32,788	33,516	33,734	33,185	33,915	34,133	33,104	33,831	34,049

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

Dimensions listed are for a 930M 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.

930M/938M Ag Handler Specifications

938M 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% Fill Factor	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
	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	2728	3032	3032	2728	3032	3032	2728	3032	3032	2728	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 110% Fill Factor	kg/m ³	1194	987	794	1149	949	763	869	710	569	844	689	552
	lb/yd ³	2,012	1,664	1,338	1,937	1,600	1,286	1,465	1,197	959	1,423	1,161	930
1 Length: Overall	mm	7994	8072	8192	8171	8249	8369	8749	8824	8944	8927	9002	9122
	ft/in	26'3"	26'6"	26'11"	26'10"	27'1"	27'5"	28'8"	28'11"	29'4"	29'3"	29'6"	29'11"
2 Dump Clearance: Full Lift Rolled Out	mm	4477	4419	4329	4653	4596	4507	5023	4964	4871	5196	5138	5047
	ft/in	14'8"	14'6"	14'2"	15'3"	15'1"	14'9"	16'6"	16'3"	16'0"	17'1"	16'10"	16'7"
3 Clearance: Level Bucket	mm	4751	4790	4790	4976	4961	4961	5305	5343	5343	5527	5512	5512
	ft/in	15'7"	15'9"	15'9"	16'4"	16'3"	16'3"	17'5"	17'6"	17'6"	18'2"	18'1"	18'1"
4 Height: Overall	mm	6457	6511	6653	6682	6662	6824	7011	7064	7206	7233	7213	7375
	ft/in	21'2"	21'4"	21'10"	21'11"	21'10"	22'5"	23'0"	23'2"	23'8"	23'9"	23'8"	24'2"
5 Reach: Full Lift Rolled Out	mm	1435	1468	1547	1524	1558	1638	1715	1745	1822	1809	1841	1919
	ft/in	4'8"	4'10"	5'1"	5'0"	5'1"	5'4"	5'8"	5'9"	6'0"	5'11"	6'0"	6'4"
6 Dig Depth	mm	36	51	51	29	44	44	70	85	85	63	78	78
	in	1.4"	2.0"	2.0"	1.1"	1.7"	1.7"	2.8"	3.3"	3.3"	2.5"	3.1"	3.1"
Turning Radius Bucket at Carry	mm	6221	6384	6425	6272	6434	6475	6605	6763	6808	6657	6814	6858
	ft/in	20'5"	20'11"	21'1"	20'7"	21'1"	21'3"	21'8"	22'2"	22'4"	21'10"	22'4"	22'6"
7 Maximum Dump Angle	degree	49	49	49	48	48	48	51	51	51	49	49	49
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	11 080	10 631	10 462	10 661	10 223	10 067	8175	7770	7626	7937	7537	7402
	lb	24,426	23,437	23,064	23,503	22,537	22,193	18,022	17,129	16,812	17,498	16,616	16,318
Tipping Load – Full Turn ISO 14397-1*	kg	9315	8887	8730	8961	8542	8396	6781	6391	6256	6584	6198	6070
	lb	20,535	19,592	19,246	19,755	18,831	18,509	14,949	14,089	13,792	14,515	13,664	13,382
Breakout Force	kg	9494	8908	8201	8389	7864	7275	9107	8535	7853	8047	7535	6965
	lb	20,930	19,638	18,080	18,494	17,337	16,038	20,077	18,816	17,312	17,740	16,611	15,355
Operating Weight	kg	17 820	18 151	18 250	17 738	18 068	18 167	18 147	18 478	18 577	18 065	18 395	18 494
	lb	39,285	40,015	40,233	39,104	39,832	40,050	40,006	40,736	40,954	39,825	40,553	40,771

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

Dimensions listed are for a 938M Ag Handler configured with aggregate 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.

930M/938M Ag Handler Bucket Selection Tables

930M High Dump Bucket Selection – Standard Lift

Material Type		Fill Factor %														Tip Load Full Turn*	
		115%	110%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%		
930M Ag Handler	Fusion	m ³	Counter-weight	kg/m ³	560	605	650	695	740	785	830	875	920	965	1010	kg	lb
		3.5	yd ³	Heavy	115%	110%	105%	100%	115%	110%	105%	100%	115%	110%	105%	100%	7285
	4.1	Heavy	115%	110%	105%	100%	115%	110%	105%	100%	115%	110%	105%	100%	6869	(15,144)	
	5.0	Heavy	115%	110%	105%	100%	115%	110%	105%	100%	115%	110%	105%	100%	6719	(14,813)	
	ISO	3.5	Heavy	115%	110%	105%	100%	115%	110%	105%	100%	115%	110%	105%	100%	6939	(15,297)
		4.1	Heavy	115%	110%	105%	100%	115%	110%	105%	100%	115%	110%	105%	100%	6532	(14,399)
		5.0	Heavy	115%	110%	105%	100%	115%	110%	105%	100%	115%	110%	105%	100%	6392	(14,091)

930M High Dump Bucket Selection – High Lift

Material Type		Fill Factor %														Tip Load Full Turn*		
		110%	100%	115%	115%	115%	105%	110%	115%	110%	100%	100%	100%	100%	100%			100%
930M Ag Handler	Fusion	m ³	Counter-weight	kg/m ³	300	345	390	435	480	525	570	615	660	705	750	kg	lb	
		3.5	yd ³	Heavy	110%	100%	115%	115%	115%	105%	110%	115%	110%	100%	100%	100%	100%	5439
	4.1	Heavy	110%	100%	115%	115%	115%	105%	110%	115%	110%	100%	100%	100%	100%	5054	(11,142)	
	5.0	Heavy	110%	100%	115%	115%	115%	105%	110%	115%	110%	100%	100%	100%	100%	4919	(10,845)	
	ISO	3.5	Heavy	110%	100%	115%	115%	115%	105%	110%	115%	110%	100%	100%	100%	100%	5215	(11,498)
		4.1	Heavy	110%	100%	115%	115%	115%	105%	110%	115%	110%	100%	100%	100%	100%	4835	(10,660)
		5.0	Heavy	110%	100%	115%	115%	115%	105%	110%	115%	110%	100%	100%	100%	100%	4707	(10,376)

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

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.

930M/938M Ag Handler Bucket Selection Tables

938M High Dump Bucket Selection – Standard Lift

Material Type		Fill Factor %														Tip Load Full Turn*							
		100%	100%	110%	100%	105%	115%	110%	105%	110%	105%	1000	1060	110%	110%			110%	105%	105%			
938M Ag Handler	Fusion	m ³	Counter-weight	kg/m ³	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	Earth, Loam, Dry	Salt, Fine	Lime, Granules	kg	lb	
		yd ³	lb/yd ³	lb/yd ³	700	760	820	880	940	1000	1060	110%	110%	105%	100%	110%	1120	1180	1240	1300			
		(4.6)	(4.6)	(4.6)	(1,180)	(1,281)	(1,382)	(1,483)	(1,584)	(1,686)	(1,787)	(1,888)	(1,989)	(2,090)	(2,191)								
		3.5	Aggregate													115%	110%	105%	100%			9315	(20,536)
		4.1	Aggregate								115%	110%	105%	100%								8887	(19,592)
		5.0	Aggregate																			8730	(19,245)
		3.5	Aggregate													115%	110%	105%	100%			8961	(19,755)
		4.1	Aggregate								115%	110%	105%	100%								8542	(18,830)
		5.0	Aggregate																			8396	(18,509)

938M High Dump Bucket Selection – High Lift

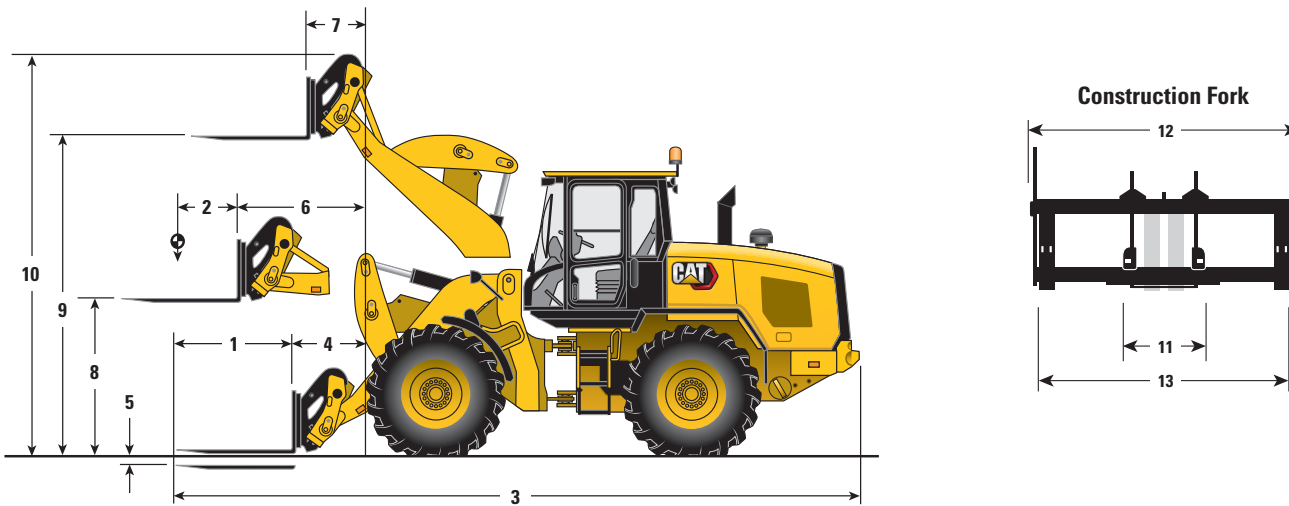
Material Type		Fill Factor %														Tip Load Full Turn*							
		115%	110%	100%	100%	100%	100%	100%	100%	100%	100%	100%	105%	115%	110%			110%	105%	100%			
938M Ag Handler	Fusion	m ³	Counter-weight	kg/m ³	Mulch, Wet	Flour, Wheat	Barley, Bulk	Buckwheat, Bulk	Canola (Rapeseed)	Corn Shelled, Bulk	Soy Beans, Bulk	Bulk Grain	Silage, Packed	Manure/Muck, Wet	Peat, Moist	Sugar, Raw Cane	Lime, Pulverized Quick	kg	lb				
		yd ³	lb/yd ³	lb/yd ³	525	570	615	660	705	750	795	840	885	930	975								
		(4.6)	(4.6)	(4.6)	(885)	(961)	(1,037)	(1,112)	(1,188)	(1,264)	(1,340)	(1,416)	(1,492)	(1,568)	(1,643)								
		3.5	Aggregate													115%	110%	105%	100%			6781	(14,949)
		4.1	Aggregate								115%	110%	105%	100%								6391	(14,089)
		5.0	Aggregate													115%	110%	105%	100%			6256	(13,792)
		3.5	Aggregate													115%	110%	105%	100%			6584	(14,514)
		4.1	Aggregate								115%	110%	105%	100%								6198	(13,664)
		5.0	Aggregate													115%	110%	105%	100%			6070	(13,382)

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

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.

930M/938M Ag Handler Operating Specifications

Operating Specifications with Construction Forks



	930M				938M			
	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: Minimum (bottom of tine)***	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: Level Arm (top of tine)	1724	5'8"	1724	5'8"	1825	6'0"	1825	6'0"
9 Height Full Lift: (top of tine)	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*	7133	15,724	5825	12,842	8951	19,734	7110	15,675
Tipping Load – Full Turn, ISO 14397-1*	6060	13,359	4912	10,828	7601	16,757	5985	13,194
Operating Weight	14 090	31,063	14 217	31,343	17 001	37,479	17 327	38,199
Rated Load % of Full Turn Tip:								
50% of Tip: SAE J1197**	3030	6,679	2456	5,414	3800	8,378	2992	6,597
60% of Tip: Rough Terrain EN474-3**	3636	8,015	2947	6,497	4561	10,054	3591	7,916
80% of Tip: Firm and Level EN474-3**	4848	10,687	3929	8,662	6081	13,405	4788	10,555
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.

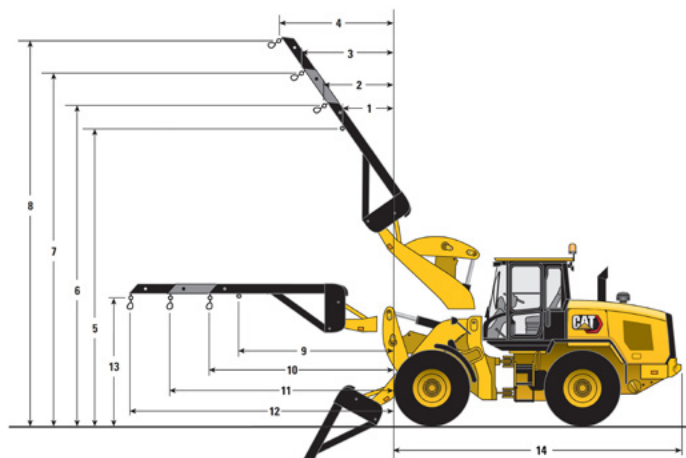
**Compliance to EN474-3 and SAE J1197.

***Negative value indicates above ground.

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

930M/938M Ag Handler Operating Specifications

Operating Specifications with Material Handling Arm



	930M				938M			
	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	13 660	30,115	13 804	30,431	16 571	36,531	16 898	37,252
Rated Load* (50% of full turn tip** SAE J1197)								
Fixed Tab (9)	2594	5,718	2187	4,821	3237	7,137	2656	5,855
Minimum Extension (10)	2363	5,210	2015	4,441	2952	6,508	2452	5,405
Middle Extension (11)	2037	4,490	1762	3,885	2550	5,621	2153	4,747
Maximum Extension (12)	1788	3,941	1565	3,450	2242	4,943	1919	4,229

*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.

930M/938M Ag Handler Supplemental Specifications

Optional Equipment

	930M Ag Handler				938M 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
Ride Control	-49	-108	-25	-55	-49	-108	-26	-57
Change with Options Added	kg	lb	kg	lb	kg	lb	kg	lb
Guard, Power Train Side	+11	+24	+9	+20	+10	+22	+8	+18
Cold Start Package	+54	+119	+72	+159	+54	+119	+72	+159
Guard, Crankcase	+19	+42	+23	+51	+11	+24	+14	+31
Guard, Power Train Lower	+77	+170	+67	+148	+70	+154	+60	+132
Guard, Driveshaft	+44	+97	+11	+24	+45	+99	+12	+26
Autolube	+64	+141	+21	+46	+64	+141	+22	+49

Tires



Change with Tire Option as Compared to 20.5R25 XHA2 (930M) or 23.5R25 XHA2 (938M) Tire	930M Ag Handler				938M Ag Handler			
	20.5-R25, Radial (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"	-58	-2.3"	-67	-2.6"	-5	-0.2"
Width: Over Tires	-22	-0.9"	+145	+5.7"	+270	+10.6"	+30	+1.2"
Turning Radius: Outside of Tires	+10	+0.4"	+52	+2.1"	+155	+6.1"	+62	+2.4"
Turning Radius: Inside of Tires	+11	+0.4"	-72	-2.9"	-135	-5.3"	-15	-0.6"
	kg	lb	kg	lb	kg	lb	kg	lb
Tipping Load – Straight	-170	-374	-137	-301	+13	+28	-422	-931
Tipping Load – Full Turn	-147	-323	-118	-261	+11	+24	-365	-805
Operating Weight	-268	-591	-216	-477	+20	+44	-667	-1,470

930M/938M Ag Handler Standard and Optional Equipment

Standard Equipment

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

POWER TRAIN

- Axle Duo-Cone™ seal guards
- Auto idle shut down feature
- Cat C7.1 engine
 - Power modes (Standard and Performance)
 - Power by range (High Power in Range 4)
 - Turbocharged and aftercooled
 - Diesel particulate filter (Fit for Life)
- Coded start (requires secondary display)
- Differential lock in front axle
- Enclosed wet disc full hydraulic brakes
- Hydraulically driven demand cooling fan
- 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
- Oil sampling ports
- Throttle lock and max speed limiter

HYDRAULICS

- Automatic lift lower and tilt 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)
- Hydraulic response setting (fast, medium, slow)
- Load sensing hydraulics and steering
- Seat-mounted hydraulic joystick controls

ELECTRICAL

- Alternator, 115 amp, heavy duty
- Batteries, 1,000 CCA (2) 24V system, disconnect switch
- Back-up alarm
- Emergency shutdown switch
- Halogen work and roading lights, LED rear tail lights
- Product Link PRO with three year subscription
- Remote jump start post
- Resettable main and critical function breakers

OPERATOR ENVIRONMENT

- 75 mm (3 in) High-Vis retractable seat belt, with audible alarm and indicator
- Automatic temperature control
- Cab, pressurized
- Camera, rear view
- External heated mirrors with lower parabolic
- Ground level cab door release
- Hydraulic control lockout
- Mirror, single
- Lunch box storage
- Radio ready speakers
- Rear window defrost, electric
- 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, lights, wipers, turn signal
- Suspension seat, fabric

OTHER STANDARD EQUIPMENT

- Large-access enclosure doors with adjustable close/open force
- Cat optimized Z-bar linkage with parallel lift
- Recovery hitch, with pin
- Remote mounted lubrication points
- Lockable compartments and enclosures

Optional Equipment

Optional equipment may vary. Consult your Cat dealer for details.

- Autolube, integrated in secondary display
- Auxiliary flow, third and fourth function
- Differential, limited slip, rear
- Beacon light, strobe
- Cab, deluxe (standard in Europe)
 - Camera, rear view integrated into advanced display
 - Electrically adjustable external heated mirrors (2)
 - Secondary display to enable features and adjust parameters
 - LED interior lighting
 - Sunscreen, front and rear
 - Touchscreen secondary display
 - Ride control adjustable speed activation
 - Preventative maintenance reminders
 - Integrated help function (26 languages)
- Camera, roof mounted, front view with separate display
- Cold start package
 - Ether starting aid, block heater and additional batteries, 1,000 CCA (4 total)
- Counterweight, additional options
- Coupler, (Fusion and ISO 23727)
- Debris packages (low, medium, high)
- Fenders (extended cover and full coverage)
- Guarding packages
- Linkage, high lift
- Lights, auxiliary, halogen or LED with engine and DEF compartment lights
- Payload Technology
 - Cat Production Measurement (CPM)
 - CPM Printer
- Product Link ELITE with capabilities for software push, data logging, histogram and trend mapping
- Radio packages
- Rear Object Detection
- Ride Control System, adjustable through secondary display
- Seats
 - Deluxe seat – fully adjustable fabric air suspension seat with mid seat backrest
 - 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
- Tire Pressure Monitoring (TPM)

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Replaces AEHQ8366
(N Am)

