

962L

Wheel Loader Aggregate Handler

2017



*The 962L Wheel Loader applies proven technologies systematically and strategically to meet your high expectations for reliability, productivity, fuel efficiency, and long service life. Aggregate Handler configurations are specialized offerings for specific loose aggregate rehandling applications, such as truck loading, hopper charging, stockpiling, and load and carry. Since rehandling loose aggregate is less stressful on the machine, payloads can be increased above other applications by installing larger buckets and counterweight.**

Reliability

- Cat® C7.1 ACERT™ engine offers a combination of proven electronic, fuel, and air systems.
- Utilizing rigorous component design and machine validation processes results in unmatched reliability, durability and high uptime.

Durability

- Tough powershift transmission and axles handle extreme applications effectively.
- Improved hydraulic hose routing reduces potential hose wear.
- Full flow hydraulic filtration system with additional loop filtration improves hydraulic system robustness and component life.

Productivity

- Cat C7.1 ACERT engine meets China Nonroad Stage III and India Bharat Stage III emission standards, equivalent to U.S. EPA Tier 3 and EU Stage IIIA.
- Lock-up clutch torque converter, combined with lock-to-lock shifting, delivers smooth shifts, fast acceleration and speed on grade.
- High capacity torque converter results in greater digging efficiency.
- Z-bar linkage provides high breakout force at ground level.
- Easy-to-load Performance Series Buckets feature a wider mouth and curved side plates that improve material retention (fill factor) and decrease cycle times.
- Optional fully automatic traction control system (differential locks) improves performance in the pile and poor underfoot conditions.

Fuel Efficiency

- Power dense ACERT engine burns less fuel by providing power and torque when needed.
- Performance Series Buckets feature a longer floor that easily digs through the pile resulting in lower fuel consumption.
- Load sensing hydraulics result in proportional flow for implement and steering on demand.
- Standard productive Economy Mode provides maximum fuel savings with minimal productivity impact.

Ease of Operation

- Best-in-class operator environment provides unmatched comfort, visibility, and efficiency.
- Intuitive, ergonomic controls keep operators focused on their work.
- Optional new ride control system with dual accumulators provides excellent ride quality and lowers cab vibrations.

Safety

- Excellent cab access with wide door and stair-like steps.
- Floor to ceiling windshield, large mirrors with integrated spot mirrors and rear vision camera provide industry leading all-around visibility.
- Robust grab bars provide safe access to machine platforms.

Serviceability

- One-piece tilting hood with side and rear doors; hydraulic and electrical service centers make access fast and easy.
- Safe ground level access to fuel fill, oil fill, filters and daily maintenance points means less servicing time required.
- Optional, fully integrated Cat Autolube system provides full lube system monitoring and diagnostic test visibility.

Cat Connect Technology

- Monitor, manage and enhance job site operations.
- Cat LINK Technologies: VisionLink® enables owners to access data wirelessly to monitor machine health, utilization and location.
- Cat DETECT Technologies: Integrated rear vision camera enhances visibility behind machine to help operators work safely. Optional Cat Rear Object Detection increases operator awareness of the working environment which enhances site safety.
- Cat PAYLOAD Technologies: Optional Cat Production Measurement 2.0 brings simple and accurate on-the-go payload scale allowing operators to deliver exact loads and work more efficiently. Advanced Productivity subscription provides comprehensive actionable information to help you manage and improve the productivity and profitability of your operations.

*The Cat aggregate handler configurations require conformance to Caterpillar payload policy. Misapplication of Aggregate Handlers may result in significant reliability and durability risk.



962L Wheel Loader Aggregate Handler Specifications

Engine

Engine Model	Cat C7.1 ACERT	
Maximum Gross Power (2,000 rpm)		
ISO 14396	195 kW	265 hp (metric)
Maximum Net Power (2,000 rpm)		
ISO 9249	185 kW	252 hp (metric)
Peak Gross Torque (1,400 rpm)		
ISO 14396	1050 N·m	
Maximum Net Torque (1,400 rpm)		
ISO 14396	984 N·m	
Bore	105 mm	
Stroke	135 mm	
Displacement	7.01 L	

- Cat engine with ACERT Technology – meets China Nonroad Stage III and India Bharat Stage III emission standards, equivalent to U.S. Tier 3 and EU Stage IIIA.
- The power ratings apply at the stated speed when tested under the reference conditions for the specified standards.
- The net power advertised is the power available at the flywheel when the engine is equipped with fan, alternator, air cleaner and aftertreatment.
- The gross power advertised is with the fan at maximum speed.

Buckets

Bucket Capacities*	3.8-4.0 m ³
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* Aggregate Handler Configurations are NOT to be used with L5 tires, buckets with teeth, teeth and segments and Spade Nose Rock Bucket.

Weight

Operating Weight	19 853 kg
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- Weight based on a machine configuration with Michelin 23.5R25 XHA2 L3 radial tires, full fluids, operator, Aggregate Handler counterweight, cold start, roading fenders, Product Link™, open/open axles (front/rear), power train guard, secondary steering, sound suppression and a 3.8 m³ general purpose bucket with BOCE.

Operating Specifications

Static Tipping Load – Full 40° Turn	
With Tire Deflection	12 299 kg
No Tire Deflection	13 144 kg
Breakout Force	132 kN

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

Transmission

Forward 1	6.9 km/h
Forward 2	12 km/h
Forward 3	19.3 km/h
Forward 4	25.7 km/h
Forward 5	39.5 km/h
Reverse 1	6.9 km/h
Reverse 2	12 km/h
Reverse 3	25.7 km/h

- Maximum travel speed in standard vehicle with empty bucket and standard L3 tires with 787 mm roll radius.

962L Wheel Loader Aggregate Handler Specifications

Hydraulic System

Implement Pump Type	Variable axial piston
Implement System	
Maximum Pump Output (2,340 rpm) ($\eta_{vol} = 95\%$)	245 L/min
Maximum Operating Pressure	27 900 kPa
Optional 3rd/4th Function Maximum Flow	240 L/min
Optional 3rd/4th Function Maximum Pressure	21 780 kPa
Hydraulic Cycle Time with Rated Payload:	
Raise from Carry Position	5.3 Seconds
Dump, at Maximum Raise	1.4 Seconds
Lower, Empty, Float Down	2.8 Seconds
Total	9.5 Seconds

Brakes

Brakes	Brakes meet ISO 3450:2011 standards
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Axles

Front	Fixed
Rear	Oscillating ± 13 degrees
Maximum Single-Wheel Rise and Fall	481 mm

Cab

ROPS/FOPS	ROPS/FOPS meet ISO 3471:2008 and ISO 3449:2005 Level II standards
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Sound

The sound values indicated below are for specific operating conditions only. Machine and operator sound levels will vary at different engine and/or cooling fan speeds. Hearing protection may be needed when the machine is operated with a cabin that is not properly maintained, or when the doors and/or windows are open for extended periods or in a noisy environment.

With Cooling Fan Speed at Maximum Value:

Operator Sound Pressure Level (ISO 6396:2008)	72 dB(A)
Exterior Sound Power Level (ISO 6395:2008)	107 dB(A)
Exterior Sound Pressure Level (SAE J88:2013)	75 dB(A)*

With Cooling Fan Speed at 70% of Maximum Value:**

Operator Sound Pressure Level (ISO 6396:2008)	69 dB(A)
Exterior Sound Power Level (ISO 6395:2008)	104 L _{WA} ***

*Distance of 15 m, moving forward in second gear ratio.

**For machines in countries that adopt the "EU Directives."

***European Union Directives "2000/14/EC" as amended by "2005/88/EC."

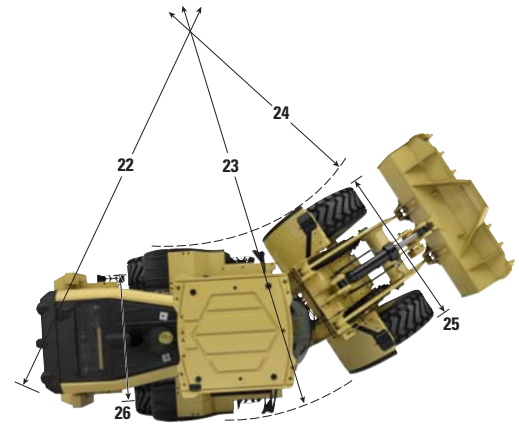
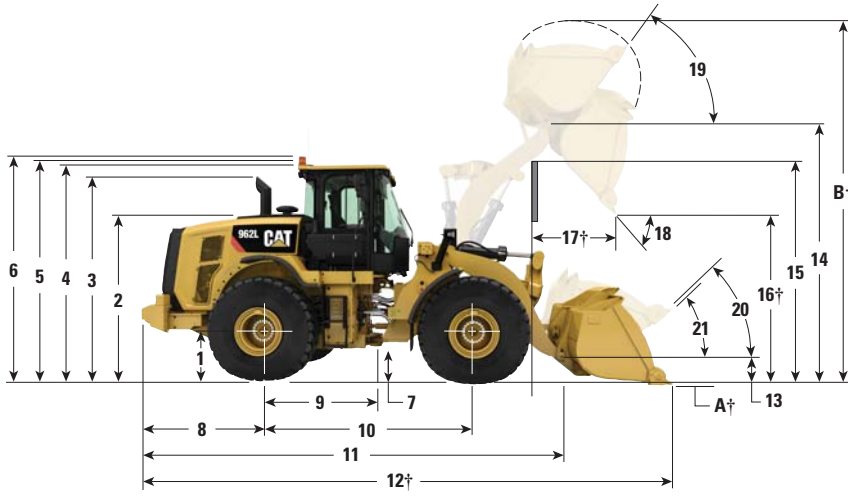
Service Refill Capacities

Fuel Tank	275 L
Cooling System	58 L
Engine Crankcase	22 L
Transmission	43 L
Differentials and Final Drives – Front	43 L
Differentials and Final Drives – Rear	43 L
Hydraulic Tank	125 L

962L Wheel Loader Aggregate Handler Specifications

Aggregate Handler Dimensions

All dimensions are approximate.



Aggregate Handler – Standard Lift

1	Height to Axle Centerline	744 mm
2	Height to Top of Hood	2694 mm
3	Height to Top of Exhaust Pipe	3412 mm
4	Height to Top of ROPS	3443 mm
5	Height to Top of Product Link Antenna	3474 mm
6	Height to Top of Warning Beacon	3744 mm
7	Ground Clearance	365 mm
8	Center Line of Rear Axle to Edge of Counterweight	2159 mm
9	Center Line of Rear Axle to Hitch	1675 mm
10	Wheelbase	3350 mm
11	Overall Length (without bucket)	7141 mm
12	Shipping Length (with bucket level on ground)*†	8636 mm
13	Hinge Pin Height at Carry Height	642 mm
14	Hinge Pin Height at Maximum Lift	4182 mm
15	Lift Arm Clearance at Maximum Lift	3624 mm
16	Dump Clearance at Maximum Lift and 45° Discharge*†	2816 mm
17	Reach at Maximum Lift and 45° Discharge*†	1372 mm
18	Dump Angle at Maximum Lift and Dump (on stops)*	51 degrees
19	Rack Back at Maximum Lift*	60 degrees
20	Rack Back at Carry Height*	49 degrees
21	Rack Back at Ground*	40 degrees
22	Turning Radius to Counterweight	6024 mm
23	Turning Radius to Outside of Tires	5984 mm
24	Turning Radius to Inside of Tires	3218 mm
25	Width Over Tires (unloaded)	2821 mm
	Width Over Tires (loaded)	2824 mm
26	Tread Width	2140 mm

*With 3.8 m³ general purpose pin on bucket with BOCE (see Operating Specifications for other Buckets).

†Dimensions are listed in Operating Specifications charts.

All height and tire related dimensions are with Michelin 23.5R25 XHA2 L3 radial tires. "Width Over Tires" dimensions are over the bulge and include growth.

962L Wheel Loader Aggregate Handler Specifications

962L Aggregate Handler Tire Options

Tire Brand	Michelin	Bridgestone	Bridgestone	Bridgestone	Michelin	Bridgestone	Goodyear	Triangle	Titan
Tire Size	23.5R25	23.5R25	23.5-25	23.5R25	750/65R25	23.5-25	23.5R25	23.5R25	725/70-25
Tread Type	L-3	L-3	L-3	L-3	L-3	L-3	L-3	L-3	L-4
Tread Pattern	XHA2	VMT	SRG LD	VJT	XLD	VL2	RT-3B	TB516	LS150
Width over Tires – Maximum (unloaded)*	2821 mm	2810 mm	2768 mm	2809 mm	2954 mm	2771 mm	2840 mm	2768 mm	2921 mm
Width over Tires – Maximum (loaded)*	2824 mm	2835 mm	2797 mm	2832 mm	2967 mm	2784 mm	2847 mm	2828 mm	2855 mm
Change in Vertical Dimensions (average of front and rear)	0 mm	-2 mm	1 mm	-6 mm	-6 mm	16 mm	1 mm	15 mm	32 mm
Change in Horizontal Reach	0 mm	6 mm	-16 mm	6 mm	11 mm	3 mm	3.4 mm	-3 mm	-30.0 mm
Change in Turning Radius to Outside of Tires	0 mm	6 mm	-13.5 mm	4.5 mm	71.5 mm	-20 mm	11.6 mm	2.15 mm	15.4 mm
Change in Turning Radius to Inside of Tires	0 mm	-6 mm	13.5 mm	-4.5 mm	-71.5 mm	20 mm	11.5 mm	-2 mm	-15.5 mm
Change in Operating Weight (without Ballast)	0 kg	188 kg	-248 kg	168 kg	801 kg	-100 kg	127 kg	-251 kg	339 kg

*Width over tire bulge and includes tire growth. Low profile tires, 750/65R25 tires are preferred to enhance machine performance with Aggregate Handler configuration. Aggregate Handler configurations are NOT to be used with L5 tires.

Changes Specific to the 962L Aggregate Handler

Tire Brand	Michelin	Bridgestone	Bridgestone	Bridgestone	Michelin	Bridgestone	Goodyear	Triangle	Titan
Tire Size	23.5R25	23.5R25	23.5-25	23.5R25	750/65R25	23.5-25	23.5R25	23.5R25	725/70-25
Tread Type	L-3	L-3	L-3	L-3	L-3	L-3	L-3	L-3	L-4
Tread Pattern	XHA2	VMT	SRG LD	VJT	XLD	VL2	RT-3B	TB516	LS150
Change in Static Tipping Load – Straight	0 kg	119 kg	-157 kg	106 kg	507 kg	-63 kg	81 kg	-159 kg	215 kg
Change in Static Tipping Load – Articulated	0 kg	104 kg	-137 kg	93 kg	442 kg	-55 kg	70 kg	-138 kg	187 kg

962L Wheel Loader Aggregate Handler Specifications

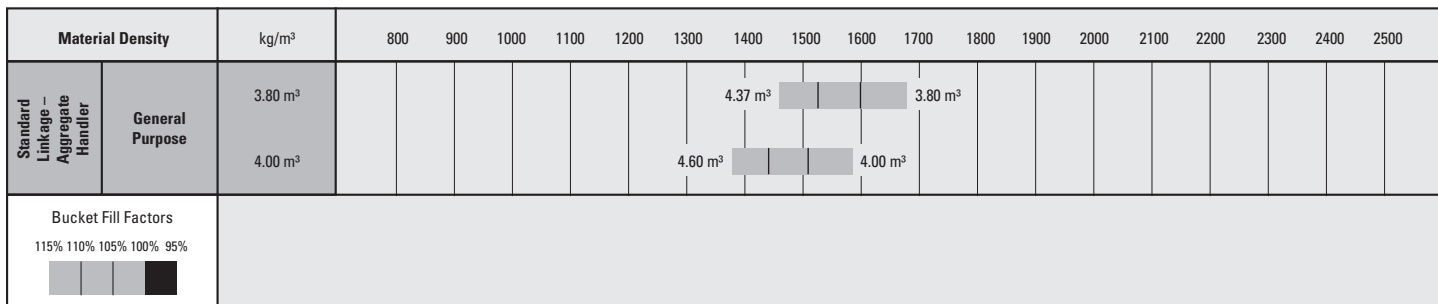
962L Aggregate Handler Bucket Fill Factors and Selection Chart

The bucket size must be chosen based on the density of the material and on the expected fill factor. The Cat Performance Series Buckets with longer floor, larger bucket opening, increased repository angle, rounded side boards and integrated spill guard, demonstrate fill factors significantly higher than previous generation or non Cat buckets. The actual volume handled by the machine is thus often larger than the rated capacity.

Loose Material	Material Density	Fill Factor (%)*
Earth/Clay	1500-1700 kg/m ³	115
Sand and Gravel	1500-1700 kg/m ³	115
Aggregate: 25-76 mm	1600-1700 kg/m ³	110

*As a % of ISO rated capacity.

Note: Fill Factors achieved will also depend on whether the product is washed or not washed.



Note: All buckets are showing Bolt-on Edges.

962L Aggregate Handler Operating Specifications with Buckets

Linkage	Bucket Type	Edge Type	Standard Linkage – Aggregate Handler	
			General Purpose	
			Bolt-On Cutting Edges	Bolt-On Cutting Edges
Capacity – Rated		m ³	3.80	4.00
Capacity – 110%		m ³	4.18	4.40
Width		mm	2994	2994
16 † Dump Clearance at Maximum Lift and 45° Discharge		mm	2907	2877
17 † Reach at Maximum Lift and 45° Discharge		mm	1372	1398
Reach at Level Lift Arm and Bucket Level		mm	2903	2943
A † Digging Depth		mm	95	95
12 † Overall Length		mm	8636	8676
B † Overall Height with Bucket at Maximum Lift		mm	5803	5843
Loader Turning Radius with Bucket at Carry Position		mm	6823	6835
Static Tipping Load, Straight (With Tire Deflection)*		kg	14 398	14 315
Static Tipping Load, Straight (No Tire Deflection)*		kg	15 233	15 152
Static Tipping Load, Articulated (With Tire Deflection)*		kg	12 299	12 221
Static Tipping Load, Articulated (No Tire Deflection)*		kg	13 144	13 067
Breakout Force		kN	132	128
Operating Weight		kg	19 853	19 893

†Illustration shown with Dimension charts.

*Static tipping loads and operating weights shown are based on a global machine configuration with Michelin 23.5R25 XHA2 L3 radial tires, full fluids, operator, aggregate handler counterweight, cold start, roading fenders, Product Link, open/open axles (front/rear), power train guard, secondary steering, sound suppression. (With Tire Deflection) Full compliance to ISO 14397-1:2007 Sections 1 thru 6, which requires 2% verification between calculations and testing.

(No Tire Deflection) Compliance to ISO 14397-1:2007 Sections 1 thru 5.

Other buckets are available and offerings vary by region. Consult your local Cat dealer for further details.

962L Wheel Loader Aggregate Handler Standard Equipment

Standard Equipment

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

OPERATOR ENVIRONMENT

- Cab, pressurized and sound suppressed (ROPS/FOPS)
- Viscous mounts
- Rear vision camera within multi-function 18 cm color LCD touch-screen display (*capability for displaying machine status, setting and health parameters*)
- EH controls, SAL (single axis lever) lift and tilt function
- Steering wheel
- Radio ready (entertainment) includes antenna, speakers and converter (12V, 10-amp)
- Air conditioner, heater, and defroster
- EH parking brake
- Beverage holders (2) with storage compartment for cell phone/MP3 player
- Bucket/work tool function lockout
- Coat hook
- Cab air filter
- Ergonomic cab access ladders and handrails
- Horn, electric
- Light, two dome (cab)
- Mirrors, rearview external with integrated spot mirrors
- Post mounted membrane 16 switch keypad
- Two receptacles, 12V
- Seat, Cat Comfort (cloth) air suspension
- Seat belt, 51 mm retractable
- Sun visor, front
- Wet-arm wipers/washers front and rear, intermittent front wiper
- Window, sliding (left and right sides)

COMPUTERIZED MONITORING SYSTEM

- With following gauges:
 - Speedometer/tachometer
 - Digital gear range indicator
 - Temperature: engine coolant, hydraulic oil, transmission oil
 - Fuel level

- With following warning indicators:
 - Temperature: axle oil, engine intake manifold
 - Pressure: engine oil, fuel pressure hi/low, primary steering oil, service brake oil
 - Battery voltage hi/low
 - Engine air filter restriction
 - Hydraulic oil filter restriction
 - Hydraulic oil low
 - Parking brake
 - Transmission filter bypass

ELECTRICAL AND LIGHTING

- Batteries (2), maintenance free 1,400 CCA
- Ignition key; start/stop switch
- Starter, electric, heavy duty
- Starting and charging system (24V)
- Lighting system:
 - Four halogen work lights (cab mounted)
 - Two LED stop, turn, tail lights
 - Two halogen roading lights (with signals)
 - Two halogen rear vision lights (hood mounted)
- Alarm, back-up
- Alternator, 145-amp brushed
- Main disconnect switch
- Receptacle start (cables not included)

CAT CONNECT TECHNOLOGIES

- Link technologies: Product Link
- Detect technologies: rear vision camera

POWER TRAIN

- Engine, Cat C7.1 ACERT – meets China Nonroad Stage III and India Bharat Stage III emission standards, equivalent to U.S. EPA Tier 3 and EU Stage IIIA
- Fuel priming pump (electric)
- Fuel/water separator
- Rain caps, engine air intake
- Economy Mode (selectable)
- Transmission, automatic countershaft power shift (5F/3R)
- Torque converter, locking clutch with free wheel stator
- Switch, transmission neutralizer lockout
- Axles, open differential front and rear axles
- Brakes, full hydraulic enclosed wet-disc with Integrated Braking System (IBS)
- Brake wear indicators
- Parking brake, disc and caliper
- Fan, radiator, electronically controlled, hydraulically driven, temperature sensing, on demand

LINKAGE

- Linkage, Z-bar, cast crosstube/tilt lever
- Kickout, lift and tilt, automatic (adjustable in cab)

HYDRAULICS

- Hydraulic system, load sensing
- Steering, load sensing
- 2V
- Remote diagnostic pressure taps
- Hoses, Cat XT™
- Couplings, Cat O-ring face seal
- Hydraulic oil cooler (swing out)
- Oil sampling valves

FLUIDS

- Premixed extended life coolant with freeze protection to –34° C

OTHER STANDARD EQUIPMENT

- Hood, non-metallic power tilting
- Service centers (electrical and hydraulic)
- Auto idle shutdown
- Fenders
- Ecology drains for engine, transmission, and hydraulics
- Grill, airborne debris
- Filters: fuel, engine air, engine oil, hydraulic oil, transmission
- Grease zerks
- Hitch, drawbar with pin
- Precleaner rain cap
- Sight gauges: engine coolant, hydraulic oil, and transmission oil level
- Toolbox
- Vandalism protection caplocks

962L Wheel Loader Aggregate Handler

Optional Equipment

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

OPERATOR ENVIRONMENT

- Cab tie-off
- Cover, HVAC metallic
- EH controls, SAL 3rd function
- EH controls, joystick lift and tilt
 - Additional integrated roller switches for 3rd function
- Filter, carbon fresh air
- Mirrors, heated rearview external with integrated spot mirrors
- Precleaner, HVAC
- Radio, AM/FM/USB/MP3 Bluetooth™
- Radio, AM/FM/CD/USB/MP3 Bluetooth
- Radio, CB ready
- Seat, heated air suspension
- Seat belt, 76 mm retractable
- Roof, metallic
- Steering, secondary
- Sun visor, rear
- Windows, rubber mounted
- Windows, with front guard
- Windows, with full guards front, rear and sides

ELECTRICAL AND LIGHTING

- Four additional auxiliary halogen cab mounted work lights or
- Two additional auxiliary front HI LED and two additional auxiliary rear LED cab mounted work lights with two LED work lights in the radiator grill and LED front turn signals also includes replacement of the standard four halogen cab mounted work lights with four LED work lights (the standard offering and only roading light available is the halogen roading light)
- Warning amber strobe beacon
- Reversing strobes

STARTERS, BATTERIES, AND ALTERNATORS

- Cold start – 120V
- Cold start – 240V

CAT CONNECT TECHNOLOGIES

- Link technologies: VIMS™
- Payload technologies:
 - Cat Production Measurement 2.0 (Cat payload system)
 - Printer, Cat Production Measurement
 - Aggregate Autodig
- Productivity
 - Cat Advanced Productivity (optional VisionLink subscription add-on for Cat Production Measurement 2.0)
- Detect technologies:
 - Cat Rear Object Detection
- Machine Security System

POWER TRAIN

- Axles
 - Automatic front/rear differential locks
 - Axle oil cooler
 - Ecology drains
 - Extreme temperature seals
 - Seal guards
- Fan, VPF (variable pitch fan), automatic and manual control
- Radiator, high debris with wider fin spacing

LINKAGE

- Quick coupler ready

WORK TOOLS

- Performance Series buckets
- Fusion quick coupler

HYDRAULICS

- Ride control
- 3rd function with Ride Control
 - Standard linkage

FLUIDS

- Premixed extended life coolant with freeze protection to –50° C

OTHER OPTIONAL EQUIPMENT

- Cat Autolube System
- Fenders, roading
- Guard, power train
- Precleaner, turbine
- Precleaner, trash
- Platform, window washing
- Cold weather package
 - Transmission filter bypass
 - Fan pump bypass
 - Jacket water or engine block heater
 - Ether aid ready

For more complete information on Cat products, dealer services, and industry solutions, visit us on the web at www.cat.com

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