

WA380-8EPA Tier 4 Final Engine

Australia & New Zealand Specifications

WHEEL LOADER



NET HORSEPOWER

143 kW / 191 HP @ 2100 rpm

OPERATING WEIGHT

18,385 - 19,020 kg

BUCKET CAPACITY

 $2.7 - 3.6 \text{ m}^3$

WALK-AROUND



Photos may include optional equipment.

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PERFORMANCE, DURABILITY AND FUEL ECONOMY

Large capacity torque converter with lock-up:

- Quick acceleration
- Lock-up in 2nd, 3rd and 4th gear

Komatsu SmartLoader Logic helps reduce fuel consumption with no decrease in production.



143 kW 191 HP with up to 15% improved fuel consumption. This engine is EPA Tier 4 emissions certified.

A powerful Komatsu SAA6D107E-3 engine provides a net output of

Variable Geometry Turbocharger (VGT) is hydraulically actuated to provide optimum air flow under all speed and load conditions.

Komatsu Diesel Particulate Filter (KDPF) and Selective Catalytic Reduction (SCR) systems reduce particulate matter and NOx while providing automatic regeneration that does not interfere with daily operation.

Fluid neutral or better

Combined fuel and DEF consumption is less than the WA380-6 fuel consumption.

Hydraulically driven cooling fan

Auto-reversing fan is programmable and swings out for easy access to the wider core coolers.

Remote boom and bucket positioners allow the operator to set upper and lower boom kick-outs, as well as the bucket level from inside the cab.

Variable displacement piston pumps with Closed-centre Load Sensing System (CLSS) provide quick hydraulic response and smooth operation to maximise productivity.

Rearview monitoring system (standard) Enhanced working environment:

- High capacity air suspension seat, heated
- Seat mounted Electronic Pilot Controls (EPC) controls with F-N-R switch
- (2) 12V power outlets

New-style plastic front fenders add durability.

Rear full fenders (standard) are made of durable plastic and swing open for easy access to maintenance points.

7" LCD colour monitor panel

Easy-to-read monitor with "ecology guidance" enables fuel efficient operation. Monitor panel onboard diagnostics remove the need for laptops during service.

Komatsu auto idle shutdown helps reduce idle time and operating costs.

Engine air filter

Externally mounted on the rear LH fender for easier access and maintenance.

KOMTRAX® equipped machines send location, SMR and operation maps to a secure website or smart phone via wireless technology. Machines also relay error codes, cautions, maintenance items, fuel & Diesel Exhaust Fluid (DEF) levels, and much more.

Operator identification system tracks machine operation for up to 100 operators.

PERFORMANCE FEATURES

KOMATSU NEW ENGINE TECHNOLOGIES

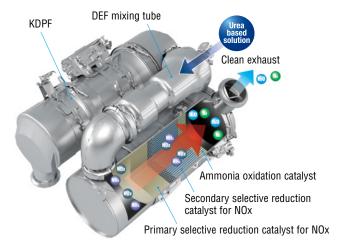
New Tier 4 Final Engine

The Komatsu SAA6D107E-3 engine is EPA Tier 4 Final emissions certified, reduces fuel consumption, and provides exceptional performance. Based on Komatsu proprietary technologies developed over many years, this new diesel engine reduces nitrogen oxides (NOx) by more than 80% compared to Tier 4 interim levels.



Heavy-duty after treatment system

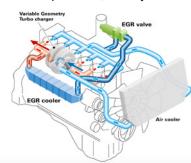
This new system combines a Komatsu Diesel Particulate Filter (KDPF) and Selective Catalytic Reduction (SCR). The SCR NOx reduction system injects the precise amount of Diesel Exhaust Fluid (DEF) to break down NOx into non-toxic water vapour (H₂O) and nitrogen gas (N₂).

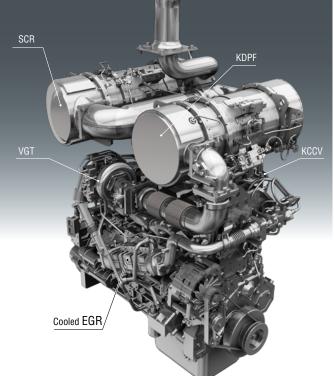


Heavy-duty cooled Exhaust Gas Recirculation (EGR) system

The system recirculates a portion of exhaust gas into the air intake and lowers combustion temperatures, thereby

reducing NOx emissions. EGR gas flow is lower for Tier 4 Final with the addition of SCR technology. The system dramatically reduces NOx, while helping cut fuel consumption below Tier 4 Interim levels.



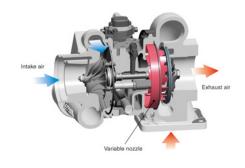


Advanced Electronic Control System

An improved electronic control system more effectively manages engine parameters such as airflow rate, EGR gas flow rate, fuel injection parameters, and after treatment function. The control system also provides enhanced diagnostics through the monitor panel. Additionally, managing information via KOMTRAX helps customers track required maintenance.

Variable Geometry Turbocharger (VGT) system

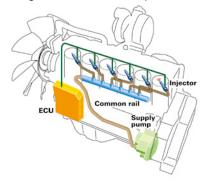
The VGT features proven Komatsu-designed hydraulic technology for robust and accurate control under all speed and load conditions for optimal engine performance. The VGT also provides precise exhaust temperature control for efficient KDPF regeneration.



Heavy-duty High-Pressure Common Rail (HPCR) fuel injection system

The system is specifically designed to achieve the optimal

injection of fuel for nearcomplete combustion, which helps reduce PM emissions.



Komatsu SmartLoader Logic

The WA380-8 features Komatsu SmartLoader Logic, which controls engine torque to match machine demands. For example, engine torque needs are higher for digging in V-shape loading, but lower when driving with an empty bucket. This system optimises the engine torque for all applications to minimise fuel consumption. Komatsu SmartLoader Logic functions automatically and doesn't interfere with operation, saving fuel without decreasing production.

Large-capacity Torque Converter

The Komatsu-designed power train features a large capacity torque converter for optimum efficiency. The WA380-8 has greater productivity in V-shape loading applications because the increased tractive effort does not require full throttle. The large capacity torque converter allows the loader to up-shift gears faster for improved acceleration and hill climbing ability. The WA380-8 achieves high gear ranges and maintains high travel speed when working in load-and-carry applications. In most applications, production is increased and fuel consumption is reduced, resulting in improved fuel efficiency.

Enhanced Lock-up

The Komatsu designed torque converter with lock-up is standard on the WA380-8. The lock-up function activates in 2nd, 3rd and 4th gears. The lock-up torque converter is effective for both load and carry applications and V-shape loading in lower gears. Komatsu SmartLoader Logic reduces the clutch engagement shock of lock-up by controlling engine torque. The lock-up torque converter, combined with Komatsu SmartLoader Logic results in low fuel consumption and high travel speeds in load and carry, and even some V-cycle loading applications.

Dual-mode Engine Power Select System

This wheel loader offers two selectable operating modes

- Economy (E) and Power (P).
- E Mode: This mode provides maximum fuel efficiency for general loading.
- P Mode: This mode provides maximum power output for hard- digging operation or hill climbing.



- 1 Dual mode engine power selection switch
- Transmission shift mode selector switch
- 3 Torque converter lock-up switch

Automatic Transmission with Mode Select System

This operator-controlled system allows the operator to select manual shifting or two levels of automatic shifting (low, and high). Auto L mode is for fuel-saving operation with the gear-shift timing set at lower speeds than Auto H mode.

CLSS Variable Displacement Piston Pump

The Closed-Centre Load Sensing System (CLSS), with variable displacement piston pump, delivers precise hydraulic flow just as the operator demands. This prevents wasted hydraulic flow, which minimises loss and contributes to better fuel efficiency.

Komatsu Auto Idle Shutdown

In order to reduce unwanted idle time, Komatsu offers Komatsu auto idle shutdown. This function will shut the engine off and apply the parking brake and hydraulic lock after a preset idle time limit.



OPERATOR ENVIRONMENT



New Operator Seat with Electronic Pilot Control (EPC) Levers

A new standard, heated, air-suspension seat provides

enhanced support on rough roads and dampens machine vibrations, providing a more comfortable ride for the operator. An EPC-lever console is built into and moves with the seat. The angle of the armrest is fully adjustable for optimum operator comfort. A secondary F-N-R switch is incorporated in to work equipment lever configurations.



Tiltable / Telescopic Steering Wheel

The operator can tilt and telescope the steering wheel to allow maximum comfort and control. The two-spoke steering wheel allows maximum visibility of the monitor panel and the forward work environment.



Low Noise Design

Operator's ear noise level : 72 dB(A) Dynamic noise level (outside): 108 dB(A)

The large ROPS/FOPS cab is mounted with Komatsu's unique viscous mounts.

The low-noise engine, hydraulically-driven fan, and hydraulic pumps are mounted with rubber cushions, and the cab sealing is improved to provide a quiet, low-vibration, dustproof and comfortable operating environment.



Rear View Monitoring System (standard)

The dedicated full-colour monitor on the right side of the cab provides the operator with a rear view from the machine. This monitor can be always on or only on when the loader shifts into reverse. Guidelines provide the operator with visual cues for the width of the loader.





Auxiliary Input (MP3 Jack) 12 V Outlets

An Aux input for audio devices is standard as well as two 12 volt outlets. These are all located on the front of the right-hand console.



Engine Shutdown Secondary Switch

The engine stop switch enables machine shutdown when accessing the key switch is not possible.





Emergency Stop

The cabin E-Stop provides the operator with immediate access from the operator's seat and is located on the RHS forward cabin pillar.



OPERATOR ENVIRONMENT



Easy Entry and Exit

The WA380-8 has an inclined ladder with wide steps and hand holds to ease entry and exit from the cab.

Remote Bucket & Boom Positioner

The operator can set the bucket angle and remote boom positioner from the cab. Both upper and lower boom kick-outs are adjustable in the cab with the push of a button. The bucket positioner can store three horizontal settings, allowing the operator to easily change attachments without resetting the bucket level.



Automatic Kick-down

The WA380-8 has the ability to automatically downshift to F1, eliminating the need for the operator to manually downshift when entering the pile. This can be activated through the monitor.





Electronically Controlled Suspension System

The electronically controlled suspension system, or ride control system, uses an accumulator to minimise boom arm shock, giving the operator a much smoother ride. This reduces operator fatigue and material spillage during load and carry operations. The electronically controlled suspension system is speed sensitive, meaning the boom won't move during low speed digging. This feature is standard on the WA380-8.

Mono Lever With Integrated 3rd Spool Control (optional)

The mono lever option has been designed for improved ergonomics and comfort. When equipped with the optional 3rd spool valve, it allows the operator to control the 3rd spool with the thumb. The 3rd spool valve can be operated in either continuous or proportional flow modes. The mono lever also includes a F-N-R switch.



High Resolution 7-inch Colour LCD Monitor

The 7-inch colour TFT-LCD monitor can display maintenance information, operational records, ecology-guidance records and other machine data. The switch panel is used to select screens and adjust air conditioner and environmental controls.

11 Fuel gauge

13 Pilot lamps

12 Message pilot lamp

14 DEF level gauge

8 Engine coolant temperature gauge

10 Torque converter oil temperature gauge

9 Hydraulic oil temperature gauge

Machine monitor

- 1 LCD unit
- 2 LED unit
- **5** 222 a...
- 3 Engine tachometer
- 4 Speedometer
- 5 Ecology gauge
- 6 Air conditioner display
- O 2011 10 11 11
- Shift indicator

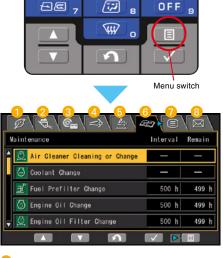
Switch panel

1 Air conditioner switches / Numeral key pad

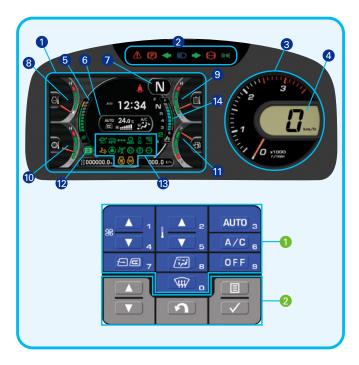
2 Function switches

Visual user menu

Pressing the menu button on the switch panel accesses the user-menu screen. The menus are grouped by function, with easy-to-understand, intuitive icons for easier machine operation.



- 1 Energy saving guidance
- 2 Load-meter setting (optional)
- 3 Machine settings
- 4 Aftertreatment devices regeneration
- 5 SCR information
- 6 Maintenance
- Monitor setting
- 8 Mail check



Operator identification function

An operator identification (ID) code can be set for each operator, and used to manage operation information of individual machines through KOMTRAX. Data sent from

KOMTRAX can be used to analyse operation status by operator job, as well as by machine.



Monitor Panel with troubleshooting function minimises downtime

Various meters, gauges and warning functions are centrally arranged on the monitor panel. The monitor simplifies start-up inspection and warns the operator with a lamp and buzzer if any abnormalities occur. Warnings are indicated in four levels, which the operator must acknowledge and clear. Replacement

times for oil and filters are also indicated.



MAINTENANCE FEATURES



Side-opening Gull-wing Engine Doors

The large, gull-wing-type engine doors require minimal effort to open and close, thanks to gas assisted struts. The doors make access and daily maintenance easy. Large steps on

each side of the frame also enhance accessibility.

6 kg reservoir.



Auto Reversing Fan

The engine cooling fan is hydraulically driven. It can be set to reverse automatically during operation. Fan reverse mode and timing can be controlled through the monitor.



Swing-Out Type Cooling Fan and Wide Core Radiator

The cooling fan swings out for easier cleaning. The coolers feature wide-spaced cooling fins to reduce clogging.



DEF Tank

The DEF tank is easily accessed behind the RH side ladder. An external sight gauge helps prevent overflow and spillage while refilling.



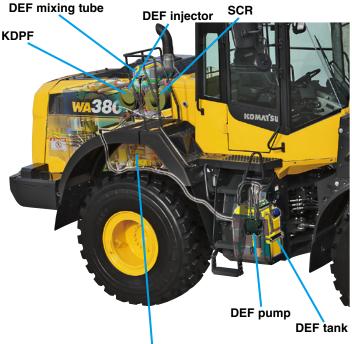
Battery Isolation Switch

The battery isolation switch is located on the right side of the machine. This can be used to disconnect power when performing service work on the machine.



Engine Compartment

The WA380-8 engine compartment is designed for easy serviceability. Placement of maintenance items, such as filters, dipsticks, and oil-fill locations are laid out for easy-to-reach ground level access.





Rear Full Fenders (Standard)

Engine oil dipstick

Fuel filter

Full rear fenders are standard on the WA380-8. The plastic rear fenders open outward, keeping the force required to open them low, even when covered with mud or snow. The

Engine oil fill

fenders swing out of the way to give technicians easy access to the engine compartment. Mud flaps are also included on the fenders for additional machine protection.



Cab Air Filter

The inside and outside air filters can be replaced easily without the need for tools. The outside filter is located behind

a lockable door for security.





Inside air filter

Outside air filter

LED Taillights & E-Stops

LED brake lights and reverse lights provide long bulb life and excellent visibility. External E-Stops are standard and provide ground level access to shut down the machine.



Engine Air Cleaner & Pre-Cleaner

The air cleaner is located on the left-side platform. A Turbo II centrifugal type pre-cleaner for extended filter life and engine protection is standard.



Maintenance Information

"Maintenance time caution lamp" display

When the time before required maintenance dips below 30 hours*, the maintenance-time monitor appears. Pressing the menu switch displays the maintenance screen.

*: The setting can be changed within the range between 10 and 200 hours.



Waintenance	Interval	Remain		
Air Cleaner Cleaning or Change	_			
Coolant Change	500 h	498 h		
Fuel Prefilter Change	500 h	499 h		
Engine Oil Change	500 h	10 h		
Engine Dil Filter Change	500 h	499 h		

Maintenance screen

Supports DEF level and refill timing

The DEF level gauge is displayed continuously on the monitor panel. In addition, when the refill timing is reached, the DEF-low-level icon appears to alert the operator.





DEF low level guidance

KOMTRAX EQUIPMENT MONITORING



- KOMTRAX is Komatsu's remote equipment monitoring and management system
- KOMTRAX continuously monitors and records machine health and operational data
- Information such as fuel consumption, utilisation, and a detailed history lowering owning and operating cost



- Know when your machines are running or idling and make decisions that will improve your fleet utilisation
- Detailed movement records ensure you
 - know when and where your equipment is moved
- Up to date records allow you to know when maintenance is due and help you plan for future maintenance needs





- KOMTRAX data can be accessed virtually anywhere through your computer, the web or your smart phone
- Automatic alerts keep fleet managers up to date on the latest machine notifications



- Knowledge is power make informed decisions to manage your fleet better
- Knowing your idle time and fuel consumption will help maximise your machine efficiency
- Take control of your equipment - any time, anywhere









For construction and compact equipment.

For production and mining class machines.

SPECIFICATIONS



ENGINE

Model	Water-cooled, 4-cycle
Number of cylinders	
Bore	107 mm
Stroke	
Piston displacement	6.69 ltr
Governor	All-speed, electronic
Horsepower:	
	Gross 143 kW 192 HP
ISO 9249 / SAE J1349	Net 143 kW 191 HP
Rated rpm	2100 rpm
Fan drive method for radiator c	oolingHydraulic
Fuel system	Direct injection
Lubrication system:	
	Gear pump, force-lubrication
	Full-flow type
Air cleanerDry	
dus	t evacuator, plus dust indicator

*EPA Tier 4 Final emissions certified



TRANSMISSION

Torque converter......3-elements, 1-stage, 2-phase Transmission Automatic, full-powershift, counter-shaft type

Travel speed	Forward*	Reverse*
1st	6.6 km/h	7.1 km/h
2nd	11.7 km/h (12.4 km/h)	12.4 km/h (13.3 km/h)
3rd	20.9 km/h (22.4 km/h)	22.3 km/h (24.1 km/h)
4th	36.1 km/h (37.5 km/h)	38.6 km/h (37.5 km/h)

*P-mode Measured with 23.5-25 tyres (): Lock-up clutch ON



AXLES AND FINAL DRIVES

Drive system	Four-wheel drive
Front	Fixed, semi-floating
Rear	Centre-pin support, semi-floating,
	26° total oscillation
Reduction gear	Spiral bevel gear
Differential gear	Conventional type
Final reduction gear	Planetary gear, single reduction



BRAKES

Service brakes	Hydraulically actuated,
	wet disc brakes actuate on four wheels
Parking brake	Wet disc brake
Emergency brake	Parking brake is commonly used



STEERING SYSTEM

TypeArticulated type,	fully-hydraulic power steering
Steering angle	35° (40° to max end stop)
Minimum turning radius at	
the centre of outside tyre	6320 mm



HYDRAULIC SYSTEM

Steering system: Hydraulic pump	rpm /cm ² type 2
Loader control: Hydraulic pump	r/min
Type Double-acting, piston	type
Number of cylinders—bore x stroke: Boom cylinder	mm
Boom Raise, hold, lower, and Bucket	
Hydraulic cycle time (rated load in bucket) Raise Dump Lower (Empty)	1.8 s

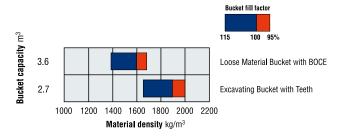


SERVICE REFILL CAPACITIES

Cooling system	60.6 ltr
Fuel tank	300 ltr
Engine	23 ltr
Hydraulic system	
Axle (each front and rear)	40 ltr
Torque converter and transmission	54 ltr
DEF tank	36 ltr

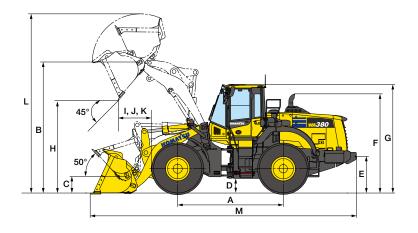


BUCKET SELECTION GUIDE



SPECIFICATIONS

DIMENSIONS



	Tread			2160 mm
	Width over tyres			2780 mm
	A Wheelbase			3300 mm
	B Hinge pin height,		Standard Boom	4095 mm
	max. height		High Lift Boom	4625 mm
	C Hinge pin height,		Standard Boom	520 mm
	carry position		High Lift Boom	680 mm
	D Ground clearance			455 mm
	E Hitch height			1150 mm
	F Overall height, top	of the stack		3100 mm
	G Overall height, RO	PS cab		3390 mm

Measured with 23.5R25 (L3) tyres, ROPS/FOPS cab

	Standard Boom			High Lift Boom
	Loose Material Bucket Pin On	General Purpose Bucket Pin On	Excavating Bucket Pin On	General Purpose Bucket Pin On
	Bolt-on Cutting Edge	Teeth	Teeth	Bolt-on Cutting Edge
Bucket capacity: heaped	3.6 m ³	3.1 m ³	2.7 m ³	2.9 m ³
struck	2.9 m ³	2.7 m ³	2.3 m ³	2.4 m ³
Bucket width	2905 mm	2920 mm	2920 mm	2905 mm
Bucket weight	1610 kg	1540 kg	1650 kg	1720 kg
H Dumping clearance, max. height and 45° dump angle*	2950 mm	2815 mm	2910 mm	3575 mm
Reach at max. height and 45° dump angle*	1150 mm	1265 mm	1160 mm	1185 mm
L Operating height (fully raised)	5600 mm	5600 mm	5450 mm	5985 mm
M Overall length (bucket on ground)	8310 mm	8490 mm	8350 mm	8810 mm
Loader clearance circle (bucket at carry, outside corner of bucket)	14440 mm	14540 mm	14470 mm	14850 mm
Digging depth: 0°	60 mm	75 mm	75 mm	110 mm
10°	290 mm	335 mm	310 mm	320 mm
Static tipping load: straight	15440 kg	15545 kg	15435 kg	12055 kg
40° full turn	13440 kg	13540 kg	13430 kg	10407 kg
Breakout force	158 kN	170 kN	190 kN	183 kN
	16100 kgf	17300 kgf	19335 kgf	18661 kgf
Operating weight	18455 kg	18385 kg	18495 kg	19020 kg

^{*}At the end of tooth or B.O.C.E. (Bolt on cutting edge)

All dimensions, weights, and performance values based on SAE J732c and J742b standards.

Static tipping load and operating weight shown include lubricant, coolant, full fuel tank, ROPS cab, and operator.

Machine stability and operating weight affected by counterweight, tyre size, and other attachments.



ENGINE:

- Automatic hydraulic-driven fan with automatic reverse rotation
- Engine, Komatsu SAA6D107E-3 diesel
- Fuel pre-filter with separator
- Komatsu SmartLoader Logic
- Radiator mask, swing out
- Radiator, wider core
- Turbo II engine pre-cleaner with extension

ELECTRICAL SYSTEM:

- Alternator, 90 A, 24 V
- Batteries, 140 Ah/12V (2), 930 CCA
- Komatsu Auto Idle Shutdown
- Lights
 - Back-up light, LED
 - Flashing beacon, LED with guard
 - Stop and tail light, LED
 - Turn signal, 2 front and 2 rear with hazard switch
 - Working lights, halogen, 2 front cab mount
- Working lights, halogen, 2 front fender mount
- Working lights halogen, 2 rear grill mount
- Starting motor, 5.5 kW

CAB:

- 2 x DC12V electrical outlets
- Auto air conditioner
- Colour LCD/TFT multi-monitor
- Door LH and RH egress
- Electronically Controlled Suspension System (ECSS)

- Equipment Management Monitoring System (EMMS)
 - Lights (central warning, brake oil pressure, engine oil pressure, parking brake, cooling fan reverse, KDPF restriction, seat belt caution, Komtrax message)
 - Gauges (engine water temperature, ecology, fuel level, DEF level, hydraulic oil temperature, speedometer/tachometer)
- Floor mat
- Operator seat, reclining, air suspensions type, heated
- Radio, AM/FM with AUX input jack
- Rear defroster, electric
- ROPS/FOPS Cab Level 2
- Seatbelt, 2-point retractable, 76mm width
- Steering wheel, tilt and telescopic
- Sun visor, front window
- Windshield washer and wiper, front with intermittent
- Windshield washer and wiper, rear

SAFETY EQUIPMENT:

- Back-up alarm
- Battery isolation switch
- Colour rear view camera and monitor
- Emergency stop switches (3)
- Horn, electric
- Parking brake, electric
- Rear view mirrors, outside (2) inside (2)
- Service brakes, wet disk type
- Wheel chocks, steel type

TYRES:

23.5R25 L3 tyres

OTHER:

- 3-spool valve for Boom, Bucket and Attachment control
- Auto shift transmission with mode select system
- Automatic greasing system
- Auxiliary steering (SAE)
- Boom kick-out, in-cab adjustable
- Brake cooling system
- Bucket positioner, in-cab adjustable, 3 positions
- Counterweight, standard and additional
- EPC fingertip controls with F-N-R switch, three levers
- Front fenders
- KOMTRAX® Level 5
- Lift cylinders and bucket cylinder
- Loader linkage with standard lift arm
- Lock-up torque converter
- Rear full fenders
- Transmission, 4 forward and 4 reverse
- Vandalism protection kit, padlocks for battery box (2)

* OPTIONAL EQUIPMENT

- Additional LED lighting
- Bluetooth media system
- Clean air cab pressurisation systems
- Fire extinguishers
- Fire suppression systems
- Hi vis decals
- High lift boom
- Limited slip differential (F&R)
- Mono-lever loader control with transmission F-N-R switch
- Reverse sensor

- SMART Alarm Broadband reverse alarm
- UHF/CB Radio
- Various bucket options
- Various scale systems
- Window tinting



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Form No: ZESS004800_AUGUST2018