

KOMATSU

WA380-6

Wheel loader



Photos may include optional equipment.

Horsepower

Gross: 143 kW (192 hp) @ 2,100 rpm
Net: 142 kW (191 hp) @ 2,100 rpm

Bucket capacity

2.7-4.0 m³ (3.5-5.2 yd³)

Walk-around

Net
engine
power
191 hp



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Walk-around

High productivity & low fuel consumption

- High performance SAA6D107E-1 engine.
- Low fuel consumption.
- Dual-mode engine power select system.
- Automatic transmission with shift timing select system.
- Variable displacement piston pump & CLSS.

See pages 4 and 5.

Increased reliability

- Reliable Komatsu designed and manufactured components.
- Sturdy main frame.
- Maintenance-free, fully hydraulic, wet disc service and parking brakes.
- Hydraulic hoses use flat face O-ring seals.
- Cathion electrodeposition process is used to apply primer paint.
- Powder coating process is used to apply on main structure.
- Sealed DT connectors for electrical connections.

See page 6.

Easy maintenance

- "EMMS" (Equipment management monitoring system).
- Easy access, gull-wing type engine side doors.
- Automatic reversible fan (Option).

See page 7.

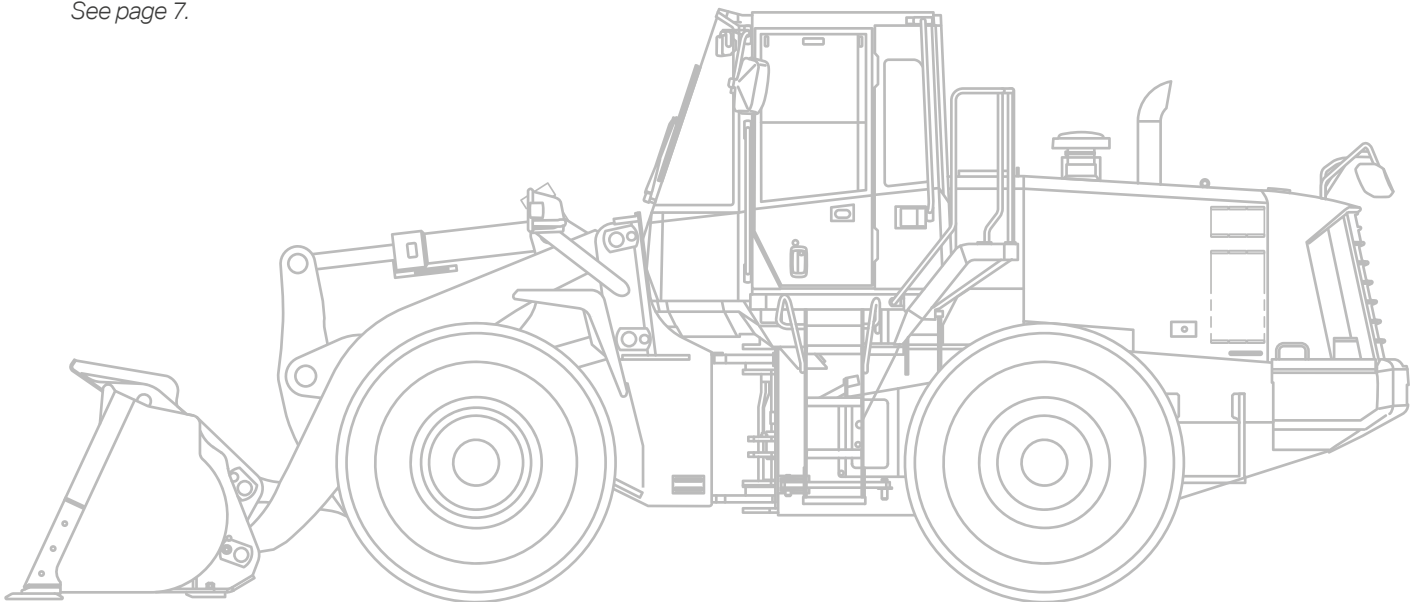
Excellent operator environment

- Automatic transmission with ECMV.
- Electrically controlled transmission lever.
- Variable transmission cut-off system.
- Telescopic/tilt steering column.
- Fingertip control levers.
- Low-noise designed cab.
- Pillar-less large ROPS/FOPS cab-integrated.
- Easy entry/exit, rear-hinged doors.

See pages 8 and 9.

Harmony with environment

- EPA Tier 3 and EU Stage 3A emissions certified.
- Low exterior noise.
- Low fuel consumption.



High productivity & low fuel consumption

High performance SAA6D107E-1 engine

Electronic heavy duty Common rail fuel injection system provides optimum combustion of fuel. This system also provides fast throttle response to match the machine's powerful tractive effort and fast hydraulic response.

Net:142 kW 191 hp



Low emission engine

This engine is EPA Tier 3 and EU Stage 3A emissions certified, without sacrificing power or machine productivity.

Low fuel consumption

The fuel consumption is reduced greatly because of the low-noise, high-torque engine and the large-capacity torque converter with maximum efficiency in the low-speed range.

Dual-mode engine power select system

This wheel loader offers two selectable operating modes E and P. The operator can adjust the machine's performance with the selection switch.

E mode: This mode provides maximum fuel efficiency for most of general loading.

P mode: This mode provides maximum power output for hard digging operation or hill climb.



Dual mode engine power selection switch



Eco indicator

The eco indicator will help an operator to promote energy saving.

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. Therefore Auto L mode keeps the engine run in a relatively low rpms



Shift mode selection switch

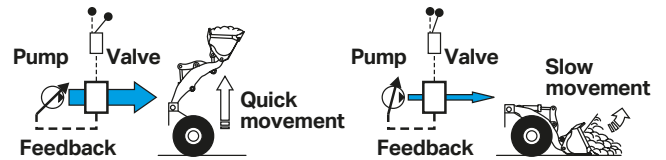
range for fuel conservation while yielding adequate tractive force by depressing the accelerator pedal.

Variable displacement piston pump & CLSS

New design variable displacement piston pump combined with the Closed-center Load Sensing System delivers hydraulic flow just as the job requires preventing wasting hydraulic pressure. Minimized waste loss contributes to better fuel economy.

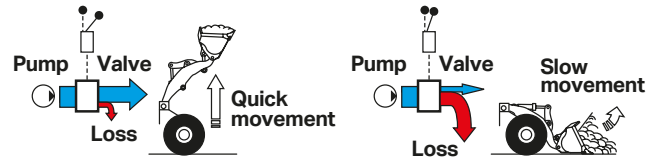
New variable displacement piston pump

The pump delivers only necessary amounts minimizing waste loss.



Fixed displacement piston pump

The pump delivers the maximum amount at any time and the unused flow is disposed.





*Photo may include optional equipment.

Maximum dumping clearance and reach

The long lift arms provide high dumping clearances and maximum dumping reach. The operator can even level loads on the body of a dump truck easily and efficiently.

Dumping clearance: 2,885 mm 9'6".

Dumping reach: 1,210 mm 4'0".

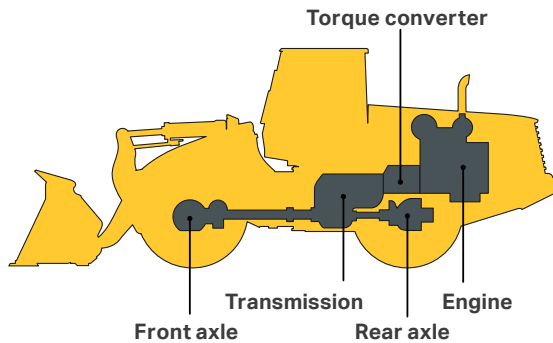
(3.3 m³ 4.3 yd³ bucket with B.O.C.).



Increased reliability

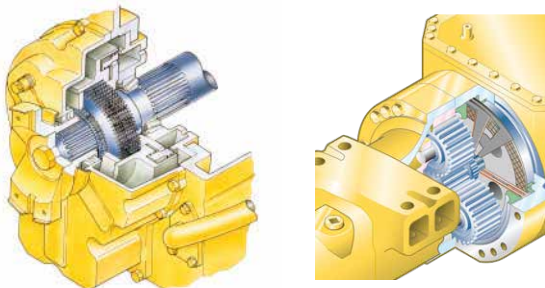
Komatsu components

Komatsu manufactures the engine, torque converter, transmission, hydraulic units, electric parts, and even each bolt on this wheel loader. Komatsu loaders are manufactured with an integrated production system under a strict quality control system.



Wet multiple-disc brakes and fully hydraulic braking system

Mean lower maintenance costs and higher reliability. Wet disc brakes are fully sealed. Contaminants are kept out, reducing wear and resulting maintenance. Brakes require no adjustments for wear, meaning even lower maintenance. The new parking brake is also an adjustment-free, wet multi-disc for high reliability and long life. Added reliability is designed into the braking system by the use of two independent hydraulic circuits. Provides hydraulic backup should one of the circuits fail. Fully hydraulic brakes mean no air system to bleed, or the condensation of water in the system that can lead to contamination, corrosion, and freezing.



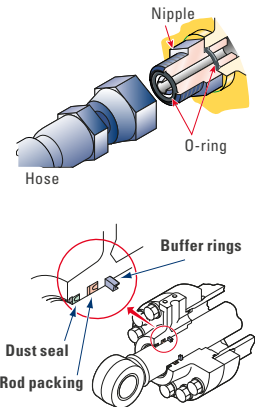
High-rigidity frames and loader linkage

The front and rear frames and the loader linkage have got more torsional rigidity to secure resistance against stresses increased due to the use of a larger bucket. Frame and loader linkage are designed to accommodate actual working loads, and simulated computer testing proves its strength.



Flat face-to-face O-ring seals

Flat face-to-face O-ring seals are used to securely seal hydraulic hose connections and to prevent oil leakage. In addition, buffer rings are installed to the head side of the all-hydraulic cylinders to lower the load on the rod seals and maximize the reliability.



Cathion electrodeposition primer paint/powder coating final paint

Cathion electrodeposition paint is applied as a primer paint and powder coating is applied as topcoat to the exterior metal sheet parts. This process results in a beautiful rust-free machine, even in the most severe environments. Some external parts are made of plastic providing long life and high impact resistance.

Sealed DT connectors

Main harnesses and controller connectors are equipped with sealed DT connectors providing high reliability, water resistance and dust resistance.



Easy maintenance



*Photo may include optional equipment.

EMMS (Equipment management monitoring system)

Monitor is mounted in front of the operator for easy view, allowing the operator to easily check gauges and warning lights. A specially designed two-spoke steering wheel allows the operator to easily see the instrument panel.



Maintenance control and troubleshooting functions

• Action code display function

If the loader has any troubles, the monitor displays action details on the character display at the center bottom of the monitor.

• Monitor function

Controller monitors engine oil level, pressure, coolant temperature, air cleaner clogging, etc. If controller finds abnormalities, all of these are displayed on LCD.

• Replacement time notice function

Monitor informs replacement time of oil and filters on LCD when it reaches replacement intervals.

• Trouble data memory function

Monitor stores abnormalities for effective trouble shooting.

Gull-wing type engine side doors open wide

The operator can open and close each gull-wing type engine side door easily with the assistance of a gas spring toper form daily service checks from the ground.



Ease of radiator cleaning

If the machine is operating in adverse conditions, the operator can reverse the hydraulic cooling fan from inside the cab by turning on a switch on the control panel.

Automatic reversible fan (Optional)

The engine fan is driven hydraulically. It can be operated in reverse automatically. When switch is automatic position, the fan revolves in reverse for 2 minutes every 2 hours intermittently. (Default setting)



B: Manual reverse mode.

A: Normal rotation mode.

C: Auto reverse mode.

Operator environment

Easy operation

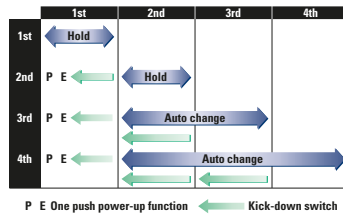
Automatic transmission with ECMV

Automatic transmission with ECMV automatically selects the proper gear speed based on travel speed, engine speed, and other travel conditions. The ECMV (Electronically controlled modulation valve) system engages the clutch smoothly to prevent lags and shocks when shifting. This system provides efficient machine operation and a comfortable ride.

Kick-down switch

Consider this valuable feature for added productivity. With the touch of a finger, the kick-down switch automatically direction control lever is placed in

reverse. This results in downshifts from second to first when beginning the digging cycle. It automatically upshifts from first to second when the direction control lever is placed in reverse. This results in increased rim pull for better bucket penetration and reduced cycle times for higher productivity.



One push power-up function

The kick-down switch also functions as a power-up switch in first gear. The first time the kick-down switch is depressed it functions as a kick-down switch and gear speed is reduced. When the machine is in E operation mode and first gear, pressing the kick-down switch a second time changes the operation mode to P allowing increased power for heavy digging operation. The operation mode returns to E when machine gear speed changes or direction changes to reverse.

Hold switch

Auto shift is selected and if the operator turns on this switch when the lever is at the 3rd or 4th gear speed position, the transmission is fixed to that gear speed.

Electronically controlled transmission lever

Easy shifting and directional changes

With Komatsu two-lever electronic shifting. Change direction or shift gears with a touch of the fingers without removing the shifting hand from the steering wheel. Solid state electronics sand conveniently located direction and gear shift controls make this possible.



Automatic shifts in ranges two through four keep production high and manual shifting at a minimum.

Variable transmission cut-off system

The operator can continuously adjust the transmission cut-off pressure desired for the left brake pedal using switch located on the right-side control panel. The operator can improve the working performance by setting the cut-off pressure properly depending on working condition.

- High cut-off pressure for digging operations.
- Low cut-off pressure for truck-loading operations.



- 1: Cut-off ON/OFF switch.
- 2: Cut off adjustment switch.
- 3: Fan reverse ON/OFF switch.
- 4: Boom control.
- 5: Bucket control.



Photo may include optional equipment.

Fingertip work equipment control levers with large size arm rest

New PPC control levers are used for the work equipment. The operator can easily operate the work equipment with fingertip control reducing operator fatigue and increasing controllability. The PPC control lever column can be slid forward or rearward and the large size arm rest can be adjusted up or down to provide the operator with a variety of comfortable operating positions.



Pillar-less large cab

A wide pillar-less flat glass provides excellent front visibility. The wiper arm covers a large area to provide great visibility even on rainy days. The cab area is the largest in its class providing maximum space for the operator.



Increased seat reclining and slide adjustment to backward by introducing front mounted air conditioner unit.

Telescopic/tilt steering column

The operator can tilt and telescope the steering column to provide a comfortable working position.

Rear-hinged full open cab doors

The cab door hinges are installed to the rear side of the cab providing a large opening angle for the operator to enter and exit. The steps are designed like a staircase, so that the operator can get on and off the cab easily.



Easy operation

Low-noise design

- Noise at operator's ear noise level: 72 dB(A).
- Dynamic noise level (O outside): 108 dB(A).

The large cab is mounted with Komatsu's unique ROPS/FOPS 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 with pressurizing, and comfortable operating environment. Also, exterior noise is lowest in this class.



Specifications

Engine

Model	Komatsu SAA6D107E-1.		
Type	Water-cooled, 4-cycle.		
Aspiration	Turbocharged, aftercooled.		
Number of cylinders	6.		
Bore x stroke	107 mm x 124 mm 4.21" x 4.88".		
Piston displacement	6.69 ltr 408 in ³ .		
Governor	All-speed, electronic.		
Horsepower:			
SAE J1995	Gross 143 kW 192 hp.		
ISO 9249/SAE J1349*	Net 142 kW 191 hp.		
Rated rpm	2,100 rpm.		
Fan drive method for radiator cooling	Hydraulic.		
Fuel system	Direct injection.		
Lubrication system:			
Method	Gear pump, force-lubrication.		
Filter	Full-flow type.		
Air cleaner	Dry type with double elements and dust evacuator, plus dust indicator.		

U.S. EPA Tier 3 and EU Stage 3A emissions certified (equivalent).

Transmission

Torque converter			
Type:	3-element, single-stage, single-phase.		
Transmission			
Type:	Automatic full-powershift, countershaft type.		
Travel speed:	km/h mph.		

Measured with 20.5-25 tires.

	1st	2nd	3rd	4th
Forward	6.0 3.7	10.6 6.7	18.6 11.6	31.1 19.3
Reverse	6.5 4.0	11.3 7.0	19.9 12.4	33.0 20.5

Measured with 23.5-25 tires.

	1st	2nd	3rd	4th
Forward	6.6 4.1	11.5 7.1	20.2 12.6	34.0 21.1
Reverse	7.1 4.4	12.3 7.6	21.5 13.4	35.5 22.1

Axles and final drives

Drive system	Four-wheel drive.		
Front	Fixed, semi-floating.		
Rear	Center-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

Type	Articulated type, full-hydraulic power steering.	
Steering angle	35° each direction (40° end stop).	
Minimum turning radius at the center of outside tire	6,320 mm 20'9".	

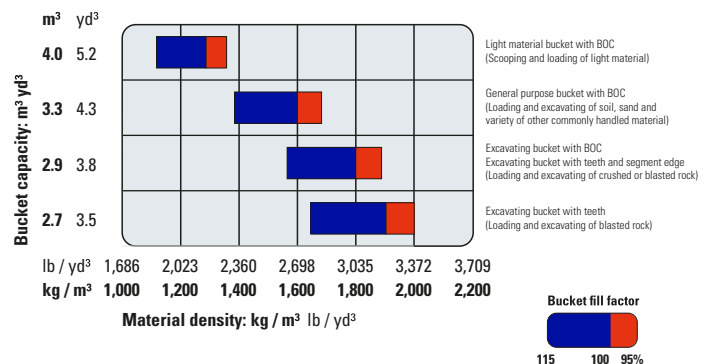
Hydraulic system

Steering system:		
Hydraulic pump	Piston pump.	
Capacity	138 L/min 36.5 U.S. gal/min at rated rpm.	
Relief valve setting	24.5 MPa 250 kgf/cm ² 3,555 psi.	
Hydraulic cylinders:		
Type	Double-acting, piston type.	
Number of cylinders	2.	
Bore x stroke	75 mm x 442 mm 3.0" x 17.4".	
Loader control:		
Hydraulic pump	Piston pump.	
Capacity	205.5 L/min 54.3 U.S. gal/min.	
Relief valve setting	31.4 MPa 320 kgf/cm ² 4,550 psi.	
Hydraulic cylinders:		
Type	Double-acting, piston type.	
Number of cylinders-bore x stroke		
Lift cylinder	2 - 130 mm x 713 mm 5.1" x 28.1".	
Bucket cylinder	1 - 150 mm x 535 mm 5.9" x 21.1".	
Control valve	2-spool type.	
Control positions:		
Boom	Raise, hold, lower and float.	
Bucket	Tilt-back, hold and dump.	
Hydraulic cycle time (rated load in bucket):		
Raise	5.9 sec.	
Dump	1.8 sec.	
Lower (empty)	3.3 sec.	

Service refill capacities

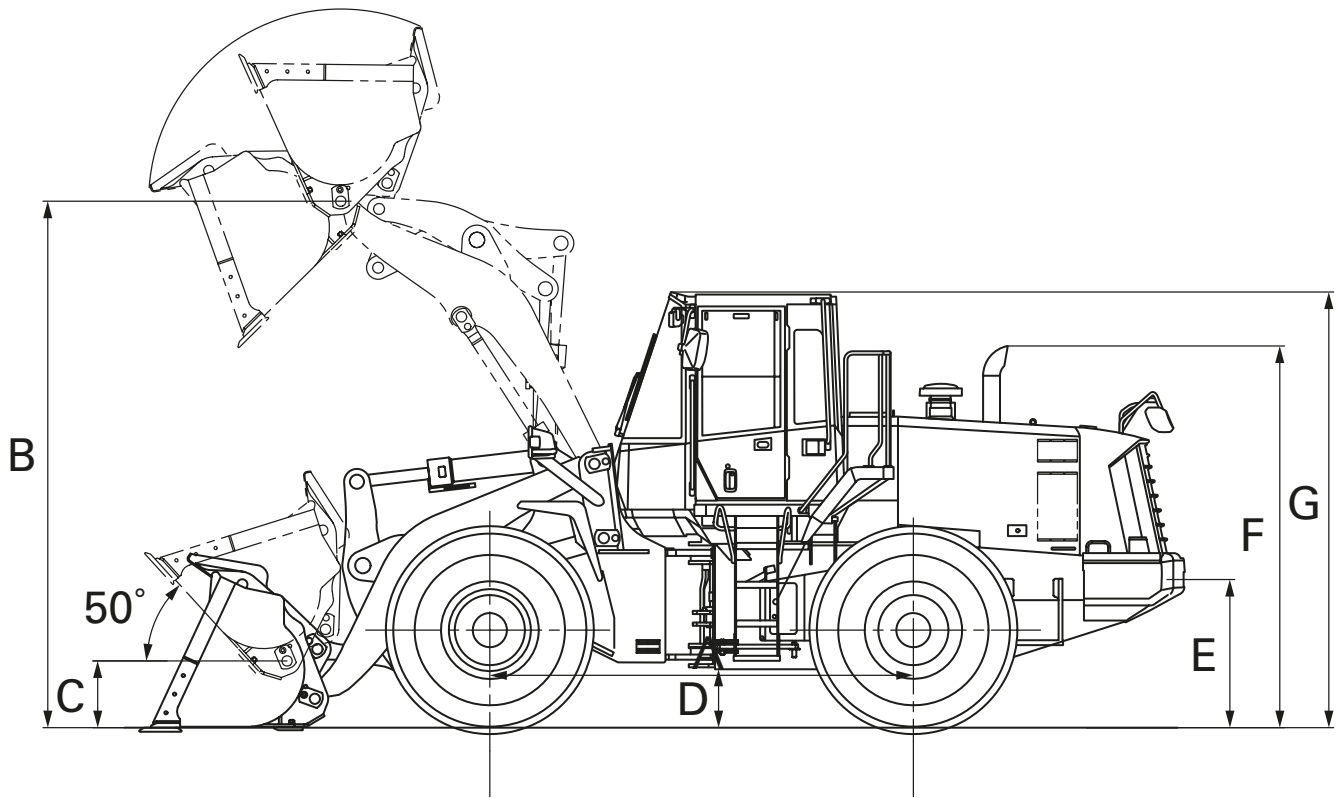
Cooling system	30.5 L 8.1 U.S. gal	
Fuel tank	300 L 79.3 U.S. gal	
Engine	23 L 6.1 U.S. gal	
Hydraulic system	139 L 36.6 U.S. gal	
Axle (each front and rear)	40 L 10.6 U.S. gal	
Torque converter and transmission	38 L 10.0 U.S. gal	

Bucket selection guide



Dimensions

Tread	2,160 mm	7'1"
Width over tires	2,695 mm	8'10"
A Wheelbase	3,300 mm	10'10"
B Hinge pin height, max. height	4,030 mm	13'3"
C Hinge pin height, carry position	520 mm	1'8"
D Ground clearance	390 mm	1'3"
E Hitch height	1,085 mm	3'7"
F Overall height, top of the stack	2,910 mm	9'7"
G Overall height, ROPS cab	3,325 mm	10'11"



Measured with 20.5-25-16PR (L3) tires, ROPS/FOPS cab

	General purpose bucket		Excavating bucket			Light material bucket	
	Bolt-on cutting edges	Teeth	Bolt-on cutting edges	Teeth and segments	Teeth	Bolt-on cutting edges	
Bucket capacity:	Heaped	3.3 m³ 4.3 yd ³	3.1 m³ 4.1 yd ³	2.9 m³ 3.8 yd ³	2.9 m³ 3.8 yd ³	2.7 m³ 3.5 yd ³	4.0 m³ 5.2 yd ³
	Struck	2.9 m³ 3.8 yd ³	2.7 m³ 3.5 yd ³	2.4 m³ 3.1 yd ³	2.4 m³ 3.1 yd ³	2.3 m³ 3.0 yd ³	3.4 m³ 4.4 yd ³
Bucket width	2,905 mm 9'6"	2,925 mm 9'7"	2,925 mm 9'6"	2,925 mm 9'7"	2,925 mm 9'7"	2,905 mm 9'6"	
Bucket weight	1,620 kg 3,570 lb	1,570 kg 3,395 lb	1,720 kg 3,790 lb	1,765 kg 3,890 lb	1,645 kg 3,625 lb	1,835 kg 4,045 lb	
Dumping clearance, max. height and 45° dump angle*	2,885 mm 9'6"	2,775 mm 9'0"	2,960 mm 9'9"	2,840 mm 9'4"	2,840 mm 9'4"	2,790 mm 9'2"	
Reach at max. height and 45° dump angle*	1,210 mm 4'0"	1,305 mm 4'3"	1,125 mm 3'8"	1,225 mm 4'0"	1,225 mm 4'0"	1,295 mm 4'3"	
Reach at 2,130 mm (7') clearance and 45° dump angle	1,760 mm 5'9"	1,790 mm 5'10"	1,720 mm 5'8"	1,755 mm 5'9"	1,755 mm 5'9"	1,800 mm 5'11"	
Reach with arm horizontal and bucket level	2,650 mm 8'8"	2,810 mm 9'3"	2,510 mm 8'3"	2,680 mm 8'10"	2,680 mm 8'10"	2,775 mm 9'1"	
Operating height (Fully raised)	5,535 mm 18'2"	5,535 mm 18'2"	5,420 mm 17'9"	5,420 mm 17'9"	5,420 mm 17'9"	5,670 mm 18'7"	
Overall length	8,195 mm 26'11"	8,365 mm 27'5"	8,055 mm 26'5"	8,225 mm 27'0"	8,225 mm 27'0"	8,320 mm 27'4"	
Loader clearance circle (Bucket at carry, outside corner of bucket)	14,440 mm 47'5"	14,550 mm 47'9"	14,370 mm 47'2"	14,448 mm 47'6"	14,480 mm 47'6"	14,500 mm 47'7"	
Digging depth:	0°	125 mm 4.9"	140 mm 5.5"	125 mm 4.9"	140 mm 5.5"	140 mm 5.5"	125 mm 4.9"
	10°	360 mm 1'2"	400 mm 1'4"	335 mm 1'1"	380 mm 1'3"	380 mm 1'3"	380 mm 1'3"
Static tipping load:	Straight	13,880 kg 30,600 lb	13,970 kg 30,800 lb	13,780 kg 30,380 lb	13,710 kg 30,230 lb	13,870 kg 30,580 lb	13,640 kg 30,070 lb
	40° full turn	12,000 kg 26,460 lb	12,100 kg 26,680 lb	11,900 kg 26,230 lb	11,840 kg 26,100 lb	12,000 kg 26,460 lb	11,770 kg 25,950 lb
Breakout force	158 kN 16,100 kgf 35,495 lb	170 kN 17,300 kgf 38,140 lb	176 kN 18,000 kgf 39,680 lb	183 kN 18,700 kgf 41,225 lb	191 kN 19,500 kgf 42,990 lb	144 kN 14,700 kgf 32,405 lb	
Operating weight	16,610 kg 36,620 lb	16,540 kg 36,460 lb	16,720 kg 36,860 lb	16,760 kg 36,950 lb	16,650 kg 36,710 lb	16,850 kg 37,150 lb	

*At the end of tooth or B.O.C.

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, tire size, and other attachments.

Apply the following weight changes to operating weight and static tipping load.

Weight changes

Tires or attachments	Change in operating weight		Change in tipping load				Width over tire		Ground clearance		Change in vertical dimensions	
			Straight		Full turn							
20.5-25-16PR(L-3)	0	0	0	0	0	0	2,695 mm	8'10"	390 mm	1'3"	0 mm	0"
23.5-25-16PR(L-3)	+970 kg	+2,140 lb	+770 kg	+1,700 lb	+680 kg	+1,500 lb	2,780 mm	9'1"	455 mm	1'6"	+65 mm	+3"
Install additional counterweight	+340 kg	+750 lb	+900 kg	+1,985 lb	+755 kg	+1,665 lb						



Photo may include optional equipment.

Standard equipment

- 2-spool valve for boom and bucket controls.
- Alternator, 60 A.
- Auto shift transmission with mode select system.
- Back-up alarm.
- Back-up lamp.
- Batteries, 136 Ah/2 x 12 V.
- Boom kick-out.
- Bucket positioner.
- Counterweight.
- Directional signal.
- Engine, Komatsu SAA6D107E-1 diesel.
- Engine shut-off system, electric.
- Front fender.
- Fuel prefilter with water separator.
- Hydraulic-driven fan with reverse rotation.
- Lift cylinders and bucket cylinder.
- Loader linkage with standard lift boom.
- Main monitor panel with EMMS (Equipment management monitoring system).
- PPC fingertip control, two levers.
- Radiator mask, lattice type.
- Rear defroster (Electric).
- Rear view mirror.
- Rear window washer and wiper.
- ROPS/FOPS cab.
- Seat, suspension type with reclining.
- Seat belt.
- Service brakes, wet disc type.
- Starting motor, 5.5 kW/24 V.
- Steering wheel, tiltable, telescopic.
- Sun visor.
- Tires (20.5-25-16PR, L3 tubeless) and rims.
- Transmission, 4 forward and 4 reverse.

Optional equipment

- 3-spool valve.
- Additional counterweight.
- Air conditioner.
- AM/FM radio.
- AM/FM stereo radio cassette.
- Auto air conditioner.
- Batteries, 140 Ah/2 x 12V.
- Bucket teeth (Bolt-on type).
- Bucket teeth (Tip type).
- Counterweight for log.
- Cutting edge (Bolt-on type).
- Deluxe suspension seat.
- ECSS (Electronically controlled suspension system).
- Emergency steering (SAE).
- Engine pre-cleaner with extension.
- Floor mat.
- High lift boom.
- Joystick steering.
- Limited slip differential (F&R).
- Lock-up clutch torque converter.
- Log grapple.
- Ordinary spare parts.
- Power train guard.
- Rear fender.
- Tool kit.
- Vandalism protection kit.

Optional equipment may not be available in your country. Please contact your Distributor for further information.



Satellite monitoring system

KOMTRAX is a revolutionary tracking system designed to save time and money. Nowadays, the equipment can be tracked anytime and anywhere. This valuable data, received via the KOMTRAX website, can be used to optimize planning of the movements and performance of the equipment.

Features

Location

KOMTRAX uses a satellite positioning network to inform the location of the equipment.

Geofence

In partnership with their Komatsu Distributor, owners can create virtual fences (Geo) to receive alerts when the equipment enter or leave the designated range for operations.

Service meter reading

Daily report of the equipment's working hours, which allows planning maintenance and replacement of components.

Komtrax operation maps

In the operation maps you can check the times of the day when the equipment is in operation and if the workers are performing their duties in the stipulated times.

Fuel consumption

On new Komatsu equipment, you can get the actual status of the fuel gallons consumed, besides an average of the fuel spent per hour during the period of operation.

Fuel measurement level

Shows the amount of fuel at the end of the working day.

Water temperature daily record

Constant record of the increase of engine water temperature with a daily report at the end of the day.

Cautions

If a light turns on in the cab of the equipment it indicates that a problem occurs. From the website of the application you can review the reason for the problem, the time it occurred and a record number will be generated.

Abnormality codes

Abnormality codes are transmitted to the Komatsu Distributor for troubleshooting before technicians arrive at the workplace. An email notification is also sent with the code of what happened.

Monthly and annual data reports

KOMTRAX generates summaries of all critical system data to help with analysis of fleet utilization, equipment scheduling, future equipment purchases, labor costs, etc.

Notice of maintenance replacement

The system generates alerts to inform that the equipment requires change of elements like filters and oil.

Equipment key hours

Detailed information on key equipment hours such as excavation, moving, digging, alleviating and elevation. This can help to monitor and compare equipment performance, in addition to working hours and idle times.

Loading frequency

Information on the load factor of the equipment to know if it is performing in a light, medium or heavy work.

Anti-theft engine lock

KOMTRAX has a system to lock and unlock the motor of the equipment, which will allow the operation only on preset days, hours and areas.

Check with your Komatsu dealer for the information available for your model and service availability in your country.



www.komatsulatioamerica.com



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