

KOMATSU®

WA480-6

HORSEPOWER

Gross: 224 kW 300 HP @ 2000 rpm

Net: 223 kW 299 HP @ 2000 rpm

BUCKET CAPACITY

3.8-6.1 m³ 5.0-8.0 yd³

ecot3

**WA
480**

WHEEL LOADER



Photo may include optional equipment.

WALK-AROUND

High Productivity & Low Fuel Consumption

- High performance SAA6D125E-5 engine
- Low fuel consumption
- Dual-mode engine power select system
- Large-capacity torque converter
- Automatic transmission with shift timing select system
- Lock-up Torque Converter (option)
- Variable displacement piston pump & CLSS

See pages 4 and 5.

Excellent Operator Environment

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

See pages 8 and 9.



Harmony with Environment

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

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 main structure paint
- Sealed DT connectors for electrical connections

See page 6.

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Easy Maintenance

- “EMMS” (Equipment Management Monitoring System)
- Easy access, gull-wing type engine side doors
- Automatic Reversible Fan (option)

See page 7.

HIGH PRODUCTIVITY AND LOW FUEL CONSUMPTION



High Performance SAA6D125E-5 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: 223 kW 299 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 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.

Large-capacity Torque Converter

Newly designed drive train has a large-capacity torque converter for optimal efficiency. The WA480-6 has plenty of acceleration without the need for full throttle and it can achieve high travel speeds, even on grades or steep ramps leading to feed hoppers. This significantly assists productivity and also delivers great value for load-and-carry operations.

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.



Shift mode selection switch

Therefore Auto L mode keeps the engine in a relatively low rpm range for fuel conservation while yielding adequate tractive force by depressing the accelerator pedal.

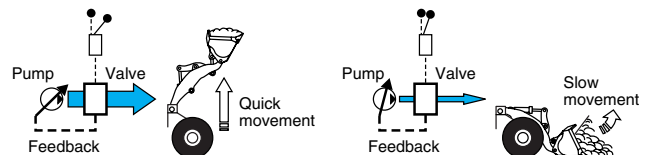
Lock-up Torque Converter (optional)

The Komatsu designed lock-up torque converter provides increased production efficiency, reduced cycle times and optimum fuel savings in load & carry or hill-climb operations. The operator can engage the system from 2nd to 4th gear. This optional feature allows the operator to activate the system on/off with a switch located on the right-side control panel.

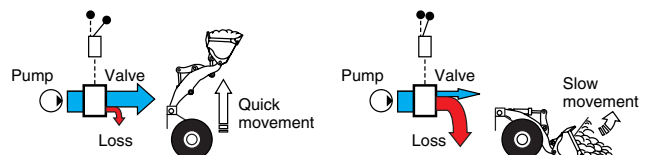
Variable Displacement Piston Pump & CLSS

New design variable displacement piston pump combined with the Closed-center Load Sensing System delivers hydraulic flow just as the job requires preventing wasted 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.





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: 3205 mm 10'6"

Dumping Reach: 1410 mm 4'8"

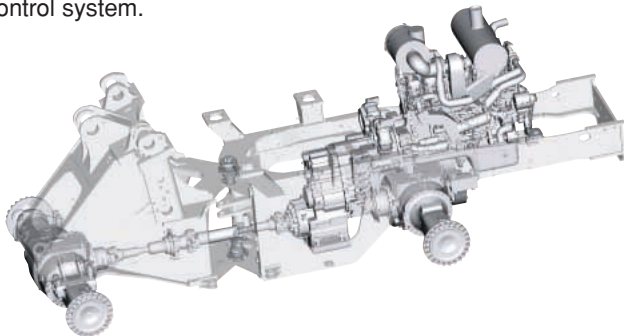
(4.6 m³ 6.0 yd³ bucket with B.O.C.)



INCREASED RELIABILITY

Komatsu Components

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

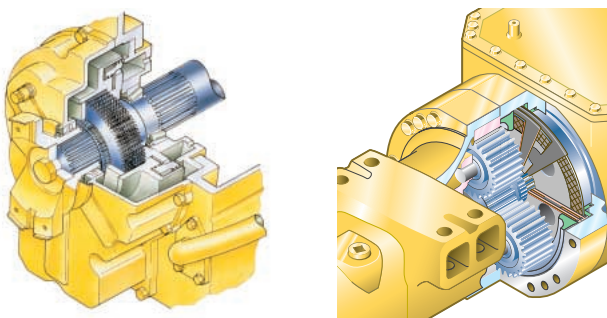


Wet Multi-disc Brakes and Fully Hydraulic Braking System

mean lower maintenance costs and higher reliability. Wet disc brakes are fully sealed. Contaminants are kept out, reducing wear and 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.

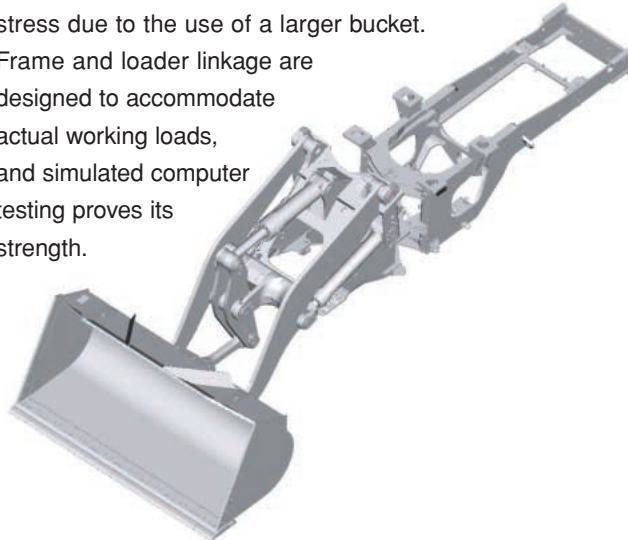
Added reliability is designed into the braking system by the use of two independent hydraulic circuits. Provides hydraulic backup should one of the circuits fail.

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.



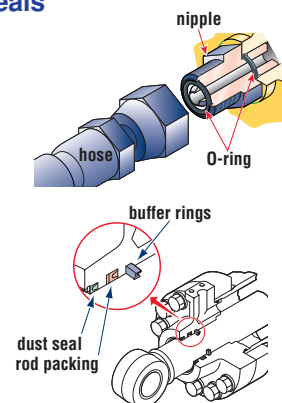
High-rigidity Frames and Loader Linkage

The front and rear frames and the loader linkage have more torsional rigidity to secure resistance against increased stress 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 sheet metal 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 viewing, 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 abnormality occurs, the monitor displays action details on the character display at the bottom center of the monitor.
- **Monitor function:** Controller monitors engine oil level, pressure, coolant temperature, air cleaner clogging, etc. If controller finds abnormalities, the error is displayed on LCD.
- **Replacement time notice function:** Monitor informs replacement time of oil and filters on LCD when replacement intervals are reached.
- **Trouble data memory function:** Monitor stores abnormalities for effective troubleshooting.

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 to perform 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 2minutes every 2 hours intermittently. (Default setting)



- B:** Manual Reverse Mode
- A:** Normal rotation Mode
- C:** Auto Reverse Mode

OPERATOR ENVIRONMENT

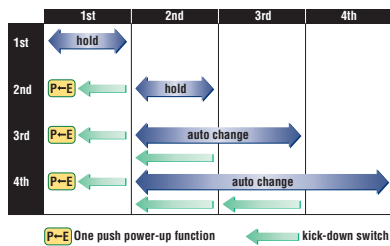
Easy Operation

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 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 and 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



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.

Telescopic/Tilt Steering Column

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

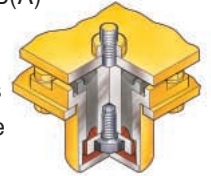


Comfortable Operation

Low-noise Design

Noise at operator's ear noise level : 72 dB(A)

Dynamic noise level (outside): 112 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.



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 slide adjustment to backward by introducing front mounted air conditioner unit.

Rear-hinged Full Open Cab Door

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.



SPECIFICATIONS



ENGINE

ModelKomatsu SAA6D125E-5
 TypeWater-cooled, 4-cycle
 AspirationTurbocharged, aftercooled, cooled EGR
 Number of cylinders6
 Bore x stroke125 mm x 150 mm 4.9" x 5.9"
 Piston displacement11.04 ltr 674 in³
 Governorall-speed, electronic
 Horsepower
 SAE J1995Gross **224 kW** 300 HP
 ISO 9249/SAE J1349*Net **223 kW** 299 HP
 Rated rpm2000 rpm
 Fan drive method for radiator coolingHydraulic
 Fuel systemDirect injection
 Lubrication system:
 MethodGear pump, force-lubrication
 FilterFull-flow type
 Air cleanerDry type with double elements and dust evacuator, plus dust indicator

*Net horsepower at the maximum speed of radiator cooling fan is 211 kW 283 HP.

EPA Tier 3 and EU Stage 3A emissions certified.



TRANSMISSION

Torque converter:
 Type3-element, single-stage, single-phase
 Transmission:
 TypeFull-powershift, countershaft type
 Travel speed: **km/h** mph
 Measured with 26.5-25 tires

	1st		2nd		3rd		4th	
Forward	7.7	4.8	13.1	8.1	22.9	14.2	36.3	22.6
Reverse	7.9	4.9	13.5	8.4	23.6	14.7	37.4	23.2



AXLES AND FINAL DRIVES

Drive systemFour-wheel drive
 FrontFixed, semi-floating
 RearCenter-pin support, semi-floating, 26° total oscillation
 Reduction gearSpiral bevel gear
 Differential gearConventional type
 Final reduction gearPlanetary gear, single reduction



BRAKES

Service brakesHydraulically actuated, wet disc brakes actuate on four wheels
 Parking brakeWet disc brake
 Emergency brakeParking brake is commonly used



STEERING SYSTEM

TypeArticulated type, full-hydraulic power steering
 Steering angle35° each direction (40° end stop)
 Minimum turning radius at the center of outside tire6630 mm 21'9"



HYDRAULIC SYSTEM

Steering system:
 Hydraulic pumpPiston pump
 Capacity195 ltr/min 51.5 U.S. gal/min at rated rpm
 Relief valve setting24.5 MPa 250 kgf/cm² 3,555 psi
 Hydraulic cylinders:
 TypeDouble-acting, piston type
 Number of cylinders2
 Bore x stroke90 mm x 441 mm 3.5" x 17.3"

Loader control:
 Hydraulic pumpPiston pump
 Capacity260 ltr/min 68.7 U.S. gal/min at rated rpm
 Relief valve setting34.3 MPa 350 kgf/cm² 4,980 psi
 Hydraulic cylinders:
 TypeDouble-acting, piston type
 Number of cylinders—bore x stroke:
 Lift cylinder2- 140 mm x 881 mm 5.5" x 34.7"
 Bucket cylinder1- 180 mm x 572 mm 7.1" x 22.5"
 Control valve2-spool type
 Control positions:
 BoomRaise, hold, lower, and float
 BucketTilt-back, hold, and dump
 Hydraulic cycle time (rated load in bucket)
 Raise6.1 sec
 Dump1.9 sec
 Lower (Empty)3.8 sec

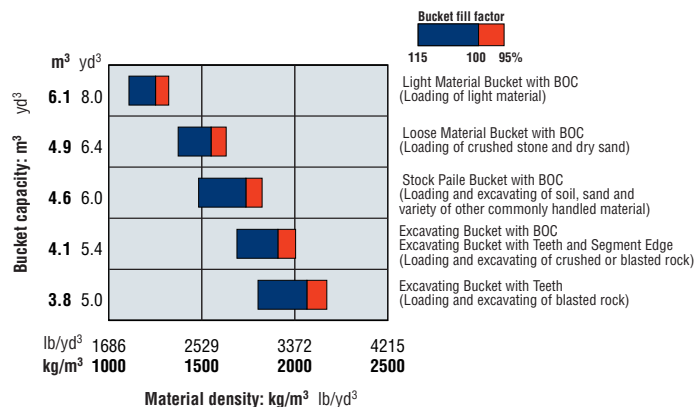


SERVICE REFILL CAPACITIES

Cooling system61 ltr 16.1 U.S. gal
 Fuel tank413 ltr 109.1 U.S. gal
 Engine38 ltr 10.0 U.S. gal
 Hydraulic system173 ltr 45.7 U.S. gal
 Axle front59 ltr 15.6 U.S. gal
 rear59 ltr 15.6 U.S. gal
 Torque converter and transmission65 ltr 17.2 U.S. gal



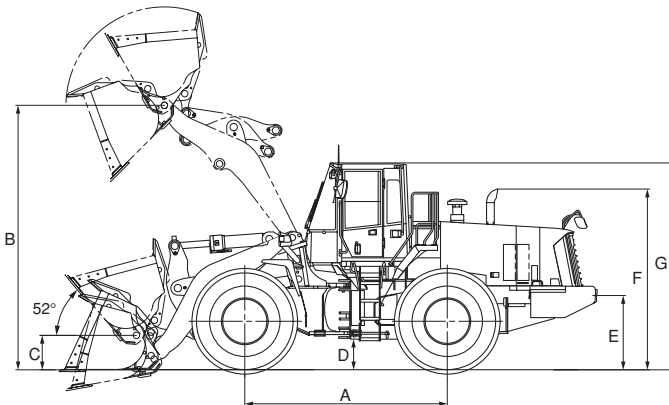
BUCKET SELECTION GUIDE





DIMENSIONS

Measured with 26.5-25-20PR (L3) tires



Tread	2300 mm	7'7"
Width over tires	3010 mm	9'11"
A Wheelbase	3450 mm	11'4"
B Hinge pin height, max. height	4505 mm	14'9"
C Hinge pin height, carry position	585 mm	1'11"
D Ground clearance	525 mm	1'9"
E Hitch height	1240 mm	4'1"
F Overall height, top of the stack	3080 mm	10'1"
G Overall height, ROPS cab	3500 mm	11'6"

	General Purpose Buckets					Loose Material Bucket	Light Material Bucket
	Stockpile		Excavating				
	Bolt-on Cutting edges	Teeth	Bolt-on Cutting edges	Teeth and Segments	Teeth		
Bucket capacity: heaped	4.6 m ³ 6.0 yd ³	4.3 m ³ 5.6 yd ³	4.1 m ³ 5.4 yd ³	4.1 m ³ 5.4 yd ³	3.8 m ³ 5.0 yd ³	4.9 m ³ 6.4 yd ³	6.1 m ³ 8.0 yd ³
struck	4.0 m ³ 5.2 yd ³	3.8 m ³ 5.0 yd ³	3.5 m ³ 4.6 yd ³	3.5 m ³ 4.6 yd ³	3.2 m ³ 4.2 yd ³	4.2 m ³ 5.5 yd ³	5.2 m ³ 6.8 yd ³
Bucket width	3170 mm 10'5"	3190 mm 10'6"	3170 mm 10'5"	3190 mm 10'6"	3190 mm 10'6"	3170 mm 10'5"	3170 mm 10'5"
Bucket weight	2260 kg 4,982 lb	2165 kg 4,773 lb	2220 kg 4,894 lb	2255 kg 4,971 lb	2125 kg 4,685 lb	2340 kg 5,159 lb	2410 kg 5,313 lb
Dumping clearance, max. height and 45° dump angle*	3205 mm 10'6"	3080 mm 10'1"	3320 mm 10'11"	3195 mm 10'6"	3195 mm 10'6"	3150 mm 10'4"	3080 mm 10'1"
Reach at max. height and 45° dump angle*	1410 mm 4'8"	1510 mm 5'0"	1295 mm 4'3"	1395 mm 4'7"	1395 mm 4'7"	1465 mm 4'10"	1535 mm 5'0"
Reach at 2130 mm (7') clearance and 45° dump angle	2135 mm 7'0"	2180 mm 7'2"	2060 mm 6'9"	2110 mm 6'11"	2110 mm 6'11"	2165 mm 7'1"	2205 mm 7'3"
Reach with arm horizontal and bucket level	3020 mm 9'11"	3175 mm 10'5"	2855 mm 9'4"	3010 mm 9'11"	3010 mm 9'11"	3100 mm 10'2"	3195 mm 10'6"
Operating height (fully raised)	6175 mm 20'3"	6175 mm 20'3"	6025 mm 19'9"	6025 mm 19'9"	6025 mm 19'9"	6175 mm 20'3"	6450 mm 21'2"
Overall length	9170 mm 30'1"	9325 mm 30'7"	9005 mm 29'7"	9160 mm 30'1"	9160 mm 30'1"	9250 mm 30'4"	9345 mm 30'8"
Loader clearance circle (35°) (bucket at carry, outside corner of bucket)	15400 mm 50'6"	15500 mm 50'10"	15310 mm 50'3"	15420 mm 50'7"	15420 mm 50'7"	15440 mm 50'8"	15490 mm 50'10"
Digging depth: 0°	90 mm 3.5"	110 mm 4.3"	90 mm 3.5"	110 mm 4.3"	110 mm 4.3"	90 mm 3.5"	90 mm 3.5"
10°	355 mm 1'2"	400 mm 1'4"	335 mm 1'1"	380 mm 1'3"	380 mm 1'3"	375 mm 1'3"	385 mm 1'3"
Static tipping load: straight	20030 kg 44,160 lb	20110 kg 44,330 lb	20060 kg 44,220 lb	20030 kg 44,160 lb	20145 kg 44,410 lb	19960 kg 44,000 lb	19900 kg 43,870 lb
40° full turn	17125 kg 37,750 lb	17205 kg 37,930 lb	17160 kg 37,830 lb	17130 kg 37,760 lb	17240 kg 38,010 lb	17055 kg 37,600 lb	16995 kg 37,470 lb
Breakout force	212 kN 21600 kgf 47,660 lb	226 kN 23100 kgf 50,810 lb	231 kN 23600 kgf 51,930 lb	237 kN 24200 kgf 53,280 lb	249 kN 25400 kgf 55,980 lb	196 kN 20000 kgf 44,060 lb	189 kN 19300 kgf 42,490 lb
Operating weight	25005 kg 55,130 lb	24910 kg 54,920 lb	24965 kg 55,040 lb	25000 kg 55,110 lb	24870 kg 54,830 lb	25085 kg 55,300 lb	25155 kg 55,460 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	Operating weight		Tipping load straight		Tipping load full turn		Width over tires		Ground clearance		Change in vertical dimensions	
	kg	lb	kg	lb	kg	lb	mm	ft in	mm	ft in	mm	ft in
26.5-25-20PR(L-3)	0	0	0	0	0	0	3010	9'11"	525	1'9"	0	0
26.5-25-20PR(L-4)	+360	+794	+250	+551	+220	+485	3010	9'11"	525	1'9"	0	0
Install additional counterweight	+400	+880	+980	+2,160	+850	+1,873						



STANDARD EQUIPMENT

- 2-spool valve for boom and bucket controls
- Alternator, 50 A
- Auto shift transmission with mode select system
- Back-up alarm
- Back-up lamp
- Batteries, **136 Ah/12 V** x 2
- Counterweight
- Directional signal
- Engine, Komatsu SAA6D125E-5 diesel
- Engine shut-off system, electric
- Hard water area arrangement (corrosion resister)
- Hydraulic-driven fan with reverse rotation
- Lift cylinders and bucket cylinder
- Main monitor panel with EMMS (Equipment Management Monitoring System)
- PPC fingertip control, two levers
- Radiator mask, lattice type
- Rearview mirror for cab
- Rear window washer and wiper
- ROPS/FOPS cab
- Seat belt
- Seat, suspension type with reclining
- Service brakes, wet disc type
- Starting motor, **7.5 kW/24 V**
- Steering wheel, tiltable, telescopic
- Sun visor
- Tires (26.5-25-20PR tubeless) and rims
- Transmission, 4 forward and 4 reverse



OPTIONAL EQUIPMENT

- 12V converter
- 3-spool valve
- Additional counterweight
- Air conditioner
- AM/FM radio
- AM/FM stereo radio cassette
- Batteries, **140 Ah/12V** x 2
- Bucket teeth (bolt-on type)
- Bucket teeth (tip type)
- Cutting edge (bolt-on type)
- ECSS (Electronically Controlled Suspension System)
- Emergency steering (SAE)
- Engine pre-cleaner with extension
- Fire extinguisher
- Floor mat
- Front fender
- Joystick steering
- Load meter, new type
- Lock-up clutch torque converter
- Ordinary spare parts
- Power train guard
- Seat, air suspension with automatic weight adjustment
- Segment edges
- Tool kit
- Vandalism protection kit
- Limited slip differential (F&R)

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