KOMATSU® WA450-6

With Tier 3 Engine

HORSEPOWER

Gross: 204 kW 273 HP @ 2000 rpm

Net: 203 kW 272 HP @ 2000 rpm

OPERATING WEIGHT

22580-22715 kg **49,780-50,080 lb**

BUCKET CAPACITY

3.8-5.2 m³ 5.0-6.8 yd³

WA450

WHEEL LOADER



Photo may include optional equipment.

WALK-AROUND

Komatsu-integrated design offers the

best value, reliability, and versatility. Hydraulics, powertrain, frame, and all other major components are engineered by Komatsu. You get a machine whose components are designed to work together for higher production, greater reliability, and more versatility.

High Productivity & Low Fuel Consumption

- High performance SAA6D125E-5 engine
- Low fuel consumption
- Dual-mode engine power select system
- Automatic transmission with shift timing select system

Excellent Operator Environment

- Automatic transmission with Electronically Controlled Modulation Valve (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 level 2 integrated cab
- Easy entry/exit, rear-hinged doors



- Equipment Management Monitoring System (EMMS)
- Easy access, gull-wing type engine side doors
- Automatic reversible fan

KØMTRAX™

KOMTRAX equipped machines can send location, SMR and operation maps to a secure website utilizing wireless technology. Machines also relay error codes, cautions, maintenance items, fuel levels, and much more.

Increased Reliability

- Reliable Komatsu designed and manufactured components
- Sturdy main frame
- Adjustment-free, fully hydraulic, wet disc service and parking brakes
- Hydraulic hoses use flat face O-ring seals
- Sealed DT connectors for electrical connections

HORSEPOWER

Gross: 204 kW **273 HP** @ 2000 rpm Net: 203 kW **272 HP** @ 2000 rpm

OPERATING WEIGHT

22580-22715 kg 49,780-50,080 lb

BUCKET CAPACITY

3.8-5.2 m3 5.0-6.8 yd3



Photo may include optional equipment.

Environmentally Friendly

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

HIGH PRODUCTIVITY & LOW FUEL CONSUMPTION

Komatsu's new "ecot3" engines are designed to deliver optimum performance under the toughest of conditions,

while meeting the latest environmental regulations. This engine is EPA Tier 3, EU Stage 3A and Japan emissions certified; "ecot3" - ecology and economy combine with Komatsu technology to create a high performance engine without sacrificing power or productivity.

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: 203 kW 272 HP

Low Emission Engine

This engine is EPA Tier 3 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 inform the operator when the machine is maximizing fuel efficiency.



Automatic Transmission with Mode Select System

This operator controlled system allows the selection of manual shifting or two levels of automatic shifting modes



operator can match the machine's operating requirements with optimum performance efficiency. This system is controlled with a dial on the right control panel.

(low and high). The

Shift mode selection switch

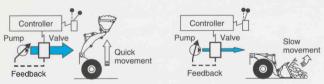
- · Manual: The transmission is fixed to the gear speed and selected with the gear lever.
- · Auto Low: Low mode provides smooth gear shifting at low engine speeds suitable for general excavating and loading while offering reduced fuel consumption.
- Auto High: High mode provides maximum rim pull and fast cycle times by shifting the transmission at high engine speeds. This mode is suitable for hill-climb and load and carry operations.



Variable Displacement Piston Pump and CLSS

New design variable displacement piston pump combined with the Closed-center Load Sensing System (CLSS) delivers hydraulic flow just as the job requires preventing wasted hydraulic flow. 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: 3185 mm **10'5" Dumping Reach:** 1235 mm **4'1"** (4.2 m³ **5.5 yd³** bucket with B.O.C.)

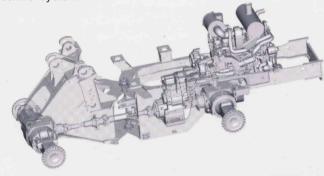
Lock-Up Torque Converter (option)

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. This optional feature allows the operator to activate the system on/off with a switch located on the right-side control panel.

INCREASED RELIABILITY

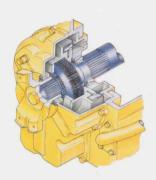
Komatsu Components

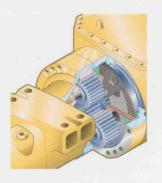
Komatsu manufactures the engine, torque converter, transmission and hydraulic units on this wheel loader. Komatsu loaders are manufactured with an integrated production system under a strict quality control system.



Wet multi-disc brakes and fully hydraulic braking

system result in lower maintenance costs and higher reliability. The wet disc service and parking brakes are fully sealed and adjustment-free to reduce contamination, wear and maintenance. Added reliability is designed into the braking system by the use of two independent hydraulic circuits providing hydraulic backup should one of the circuits fail. If the brake oil pressure drops, a warning lamp flashes and an alarm sounds intermittently. If the brake pressure continues to drop, the parking brake is automatically applied.





High-Rigidity Frames and Loader Linkage

The front and rear frames along with the loader linkage have high rigidity to withstand repeated twisting and bending loads to the loader body and linkage,

Both the upper and lower center pivot bearings use tapered roller bearings for increased durability.

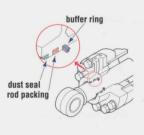
Flat Face-to-Face O-Ring Seals

Flat face-to-face O-ring seals are used to securely seal hydraulic hose connections and prevent oil leakage.



Cylinder Buffer Rings

Buffer rings are installed to the head-side of the allhydraulic cylinders to lower the load on the rod seals, prolong cylinder life by 30% and maximize overall reliability.



Sealed DT Connectors

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



EASY MAINTENANCE



Main Monitor–EMMS (Equipment Management Monitoring System)

Komatsu's new main monitor keeps the operator informed



of all machine functions at a glance. The monitor is located behind the steering wheel and

displays different machine functions including fluid/filter change intervals and troubleshooting memory display functions. The main gauges are analog type for easy viewing and other functions utilize lighted symbols or LCD readouts.

Maintenance Control and Troubleshooting Functions

- Action code display function: If an 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.

Full Side-Opening Gull-Wing Engine Doors

Ground level engine service and daily service checks are made easy with the gas spring assisted full sideopening gull-wing doors.

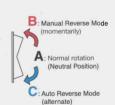


Ease of Radiator Cleaning

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

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





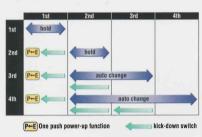
OPERATOR ENVIRONMENT

Easy Operation

Automatic Transmission with Electronically Controlled Modulation Valve (ECMV)

Automatic transmission with ECMV (Electronically Controlled Modulation Valve) automatically selects the proper gear speed based on travel speed, engine speed, and other travel conditions. The ECMV 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: If 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



The Komatsu two-lever electronic shift control levers provide easy gear selection and directional changes. The transmission levers can be operated without removing the operator's hand from the steering wheel, allowing improved

comfort and control. 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

The operator can select the transmission cut-off pressure desired for the left brake pedal using the switch located on the right-side control panel.

- Higher cut-off pressure allows the transmission to remain engaged at higher engine rpm/hydraulic pressure for increased performance in ramp loading and stockpiling operations.
- · Lower cut-off pressure disengages the transmission at lower rpm/hydraulic pressure for more fuel efficient operation on level surfaces.
 - 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 Arm Rest

New PPC control levers are used for the work equipment. The operator can easily operate the work equipment with fingertip controls, reducing operator fatigue and improving fine work equipment control and productivity. The PPC



control lever column can be slid forward or backward and the largesized 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 both 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.



Comfortable Operation

Low-Noise Design

Noise level at operator's ear: 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, and comfortable operating environment. Pressurization in the cab keeps dirt out, further enhancing the operator's comfort.



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. The front mounted air conditioner was introduced to increase seat reclining and backwards seat adjustment.

Rear-Hinged Full Open Cab Doors

Entry and exit into the new Komatsu cab starts with sloped staircase type steps and large diameter handrails. The large cab doors are rear-hinged to open fully offering easy entry/exit and will not hamper visibility when operating the machine with the doors latched open.



SPECIFICATIONS



ENGINE

Self-title and
Model Komatsu SAA6D125E-5
Type Water-cooled, 4-cycle
AspirationTurbocharged, aftercooled, cooled EGR
Number of cylinders
Bore x stroke
Piston displacement
Governor all-speed, electronic
Horsepower
SAE J1995 Gross 204 kW 273 HP
ISO 9249/SAE J1349 Net 203 kW 272 HP
Hydraulic fan at maximum speed Net 191 kW 256 HP
Rated rpm
Fan drive method for radiator cooling
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
EPA Tier 3 and EU stage 3A emissions certified.



TRANSMISSION

THAITOMIOOIC	
Torque converter:	
Type	. 3-element, single-stage, single-phase
Transmission:	
Type	Full-powershift, countershaft type
Travel speed: km/h mph	
Measured with 26.5-25 tires	

	1st	2nd	3rd	4th	
Forward	6.3 3.9	12.1 7.5	21.7 13.5	34.9 21.7	
Reverse	6.7 4.2	12.8 8.0	23.0 14.3	36.0 22.4	



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



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, full-hydraulic power steering
Steering angle	40° each direction
Minimum turning radius at	
the center of outside tire	



HYDRAULIC SYSTEM

Steering system: Hydraulic pump
Type Double-acting, piston type
Number of cylinders
Loader control:
Hydraulic pump Piston pump
Capacity 242 ltr/min 63.9 U.S. gal/min at rated rpm
Relief valve setting
Hydraulic cylinders: Type
Number of cylinders—bore x stroke:
Boom cylinder 2- 140 mm x 764 mm 5.5" x 30.0 "
Bucket cylinder 1- 160 mm x 575 mm 6.3" x 22.6"
Control valve
Control positions:
Boom
Bucket
Raise
Dump
Lower (Empty)

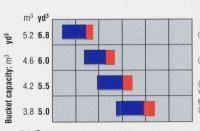


SERVICE REFILL CAPACITIES

Cooling system 61 ltr	16.1 U.S. gal
Fuel tank	
Engine	10.0 U.S. gal
Hydraulic system	45.7 U.S. gal
Axle Front 60 ltr	15.9 U.S. gal
Rear	14.8 U.S. gal
Torque converter and transmission 54 ltr	14.3 U.S. gal



BUCKET SELECTION GUIDE



115 100 95%
Light Material Bucket with BOC (Scooping and loading of light material)

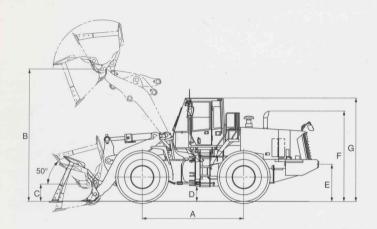
Loose Material Bucket with BOC (Loading of crushed stone and dry sand)

Stock Pile Bucket with BOC (Loading and excavating of soil, sand and variety of other commonly handled material)
Excavating Bucket with BOC (Loading and excavating of crushed or blasted rock)

lb/yd³ 1686 2023 2360 2698 3035 3372 3709 kg/m³ 1000 1200 1400 1600 1800 2000 2200

Material density: kg/m3 lb/yd3





	Tread	2300 mm	7'7"	
	Width over tires		3010 mm	9'11"
Α	Wheelbase		3450 mm	11'4"
В	Hinge pin height Standard Boom		4360 mm	14'4"
	at Max. height: High Lift Boom		4870 mm	15'12"
С	Hinge pin height	Standard Boom	585 mm	1'11"
	at carry position: High Lift Boo		715 mm	2'4"
D	Ground clearance		525 mm	1'9"
Е	Hitch height		1240 mm	4'1"
F	Overall height, top of stack		3080 mm	10'1"
G	Overall height ROPS cab		3500 mm	11'6"

Measured with 26.5 - R25 (L3) tires

	-	High Lift Boom				
E	General Purpose Buckets Loose Material			Light	General	
	Stockpile Excavating		Bucket	Material Bucket	Purpose Bucket	
	Bolt-on	Bolt-on	Bolt-on	Bolt-on	Bolt-on	
	Cutting	Cutting	Cutting	Cutting	Cutting	
	Edges	Edges	Edges	Edges	Edges	
Bucket capacity: heaped	4.2 m³	3.8 m³	4.6 m³	5.2 m³	3.8 m³	
	5.5 yd³	5.0 yd ³	6.0 yd³	6.8 yd³	5.0 yd³	
struck	3.5 m³	3.2 m³	3.9 m³	4.5 m³	3.2 m ³	
	4.6 yd ³	4.2 yd ³	5.1 yd ³	5.9 yd³	4.2 yd ³	
Bucket width	3170 mm	3170 mm	3170 mm	3170 mm	3170 mm	
	10'5 "	10'5 "	10'5 "	10'5 "	10'5"	
Bucket weight	2050 kg	2150 kg	2110 kg	2185 kg	2150 kg	
	4,519 lb	4,740 lb	4,652 lb	4,817 lb	4,740 lb	
Dumping clearance, max. height and 45° dump angle*	3185 mm	3235 mm	3055 mm	3035 mm	3750 mm	
	10'5 "	10'7"	10'0 "	9'11 "	12'4 "	
Reach at max. height	1235 mm	1185 mm	1365 mm	1385 mm	1330 mm	
and 45° dump angle*	4'1"	3'11"	4'6"	4'7"	4'4"	
Reach at 2130 mm (7') clearance and 45° dump angle	1980 mm	1950 mm	2050 mm	2060 mm	2410 mm	
	6'6"	6'5"	6'9"	6'9 "	7'11"	
Reach with arm horizontal and bucket level	2750 mm	2680 mm	2935 mm	2960 mm	2960 mm	
	9'0 "	8'10"	9'8 "	9'9 "	9'9"	
Operating height (fully raised)	5960 mm	5875 mm	5960 mm	6185 mm	6415 mm	
	19'7"	19'3"	19'7"	20'4 "	21'1 "	
Overall length	9000 mm	8930 mm	9185 mm	9210 mm	9560 mm	
	29'6"	29'4"	30'2"	30'3 "	31'4"	
Loader clearance circle (bucket at carry, outside corner of bucket)	15290 mm	15260 mm	15390 mm	15400 mm	15780 mm	
	50'2 "	50'1 "	50'6 "	50'6"	51'9 "	
Digging depth: 0°	80 mm	80 mm	80 mm	80 mm	215 mm	
	3.2 "	3.2"	3.2 "	3.2 "	8.5 "	
10°	315 mm	305 mm	345 mm	350 mm	440 mm	
	1'0 "	1'0"	1'2"	1'2 "	1'5 "	
Static tipping load: straight	18080 kg	17870 kg	17910 kg	17835 kg	15030 kg	
	39,860 lb	39,397 lb	39,485 lb	39,319 lb	33,130 lb	
40° full turn	15730 kg	15550 kg	15580 kg	15515 kg	13070 kg	
	34,679 lb	34,282 lb	34,348 lb	34,205 lb	28,820 lb	
Breakout force	192 kN	203 kN	168 kN	165 kN	186 kN	
	19600 kgf	20710 kgf	17140 kgf	16840 kgf	19018 kgf	
	43,160 lb	45,660 lb	37,790 lb	37,130 lb	41,927 lb	
Operating weight	22580 kg	22680 kg	22640 kg	22715 kg	23780 kg	
	49,780 lb	50,000 lb	49,915 lb	50,080 lb	52,430 lb	

^{*} At the end of 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, additional counterweight, and operator. Machine stability and operating weight affected by counterweight, tire size, and other attachments.



Attachments	Operating weight		Tipping load straight		Tipping load full turn	
	kg	lb	kg	lb	kg	lb
Remove additional counterweight	-400	-880	-1070	-2,358	-930	-2,050



STANDARD EQUIPMENT

- 2-spool valve for boom and bucket controls
- 12V converter
- Air conditioner
- Alternator, 50 A
- Auto shift transmission with mode select system
- Back-up alarm
- Back-up lamp
- Batteries, 150 Ah/12 V x 2
- Counterweight, standard and additional
- Directional signal
- Electronically Controlled Suspension System (ECSS)
- Engine, Komatsu SAA6D125E-5 diesel

- Engine shut-off system, electric
- Fan, auto reversing, hydraulic driven
- Floor mat
- Hard water area arrangement (corrosion resister)
- KOMTRAX™
- Lift cylinders and bucket cylinder
- Main monitor panel with EMMS (Equipment Management Monitoring System)
- PPC fingertip control, two levers
- · Radiator mask, lattice type
- Rearview mirrors for cab
- Rear window washer and wiper
- ROPS/FOPS level 2 cab

- Seat belt
- Seat, air suspension with automatic weight adjustment
- Service brakes, wet disc type
- Starting motor, 7.5 kW/24 V
- Steering wheel, tiltable, telescopic
- Sun visor
- Rims for 26.5-25 tires
- Transmission, 4 forward and 4 reverse
- Vandalism protection kit



- AM/FM stereo radio cassette
- Cutting edge (bolt-on type)
- Emergency steering (SAE)
- Engine pre-cleaner with extension
- High-lift boom
- Lock-up clutch torque converter
- Limited slip differential (F&R)
- Mono lever loader control with transmission F/R switch
- Rear full fenders

AESS713-02

©2007 Komatsu America Corp. Printed in USA

K04(5M) C

04/07 (EV-1)



