WA380-3

KOMATSU® avance plus

BUCKET CAPACITIES

 $3.4 - 5.25 \text{ yd}^3$

2.6 - 4.0 m³





WA380-3

WHEEL LOADER



MAYTK-YJKONND

Komatsu-integrated design offers the best value, reliability, and versatility. Hydraulics, power train, 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.

Special rubber-mounted cab improves productivity. Special silicone-filled rubber cab mounts reduce vibration and noise that can fatigue the operator and reduce his efficiency. See page 4.



Ground level greasing reduces and simplifies maintenance. See page 8.



It all adds up to more value and better return for your investment. It's what you should expect when you select Komatsu.

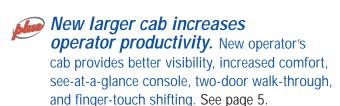




NET HORSEPOWER
189 HP 141 kW @ 2200 rpm

OPERATING WEIGHT 39,492 lb 17910 kg

3.4 - 5.25 yd³ 2.6 - 4.0 m³





Komatsu S6D114E-1 diesel power provides greater productivity and reliability. See page 6.



Easy access to engine for servicing.

Large gull-wing hood doors lock with cab key. Easy access to all engine and fuel filters.

New rear lights have been raised to reduce potential for damage.

Underhood mounted muffler provides operator with great rearward vision.

Rear-mounted fuel tanks allow for ground level fueling and large capacity.

Automatic transmission with kick-down switch is another valuable option. See page 7.

Low mount battery boxes for easy checking and servicing.

COMBAK.LMENI.L OBEKALOK.2

Ask the man who runs one—he will tell you the operator's cab sets the Komatsu Wheel Loader apart from the others. That's a productivity feature you can't ignore. No matter how a machine specs out, or how much is promised for productivity, unless the operator can work a full shift without becoming fatigued, you will never get the full measure of promised productivity.

The cab improvements on the WA380-3 go beyond providing a large cab with a comfortable seat. Improvements include these production-enhancing standard and optional features:

The WA380-3 has one of the largest cabs ever offered on a Komatsu wheel loader.

A **large glass windshield** provides the operator an unobstructed view of the working area and attachment.

Two-door walk-through cab.

Good for ventilation as well as easy entry and exit from either side of the cab.

Silicone-filled rubber mounts dampen noise and vibration, reducing fatigue caused by noise. Helps keep the operator productive, all day.

Low-effort brake pedals actuate fully hydraulic brakes. Both the service and parking brakes are wet disc type.

Steer with ease. Komatsu's fully hydraulic steering provides fast response with low effort, even at low engine rpm.

See the monitor through the steering wheel, not around it. A specially designed two-spoke steering wheel allows the operator to easily see the instrument panel.



Kick-down switch is conveniently located on the boom lever. A simple motion of the thumb actuates this valuable productivity feature.

Automatic transmission. Automatic shift control gives the operator maximum control with minimum effort. The transmission hold switch allows the operator to select either automatic or manual shifting. The unique combination of the hold and kick-down switches, located on the hydraulic boom lever, offers the operator optimum control in all conditions.

At-a-glance instrument monitor. Monitor is mounted in front of the operator and is tilted for easy view, allowing the operator to easily check gauges and warning lights.

The **EDIMOS II** instrument gauge cluster has a well-equipped diagnostic display and a functional display which is only a glance away on the side panel.

Cloth covered high-back bucket seat features:

 Low frequency mechanical suspension, with helical springs and double acting hydraulic dampers.

 An air suspension fabric seat is optional.



KOMATSU DESIGNED POWER LISTIN

Engine

The Komatsu S6D114E-1 delivers the power and efficiency to get the job done quickly and cost effectively while meeting off road emission requirements.

Komatsu S6D114E-1 is a water-cooled, four-stroke cycle, six-cylinder in-line, turbo-charged direct injection engine that produces high performance and excellent fuel economy.

The gear pump-driven force lubrication has full flow filtration while all fuel and oil filters are spin-on for easy maintenance.

Komatsu S6D114E-1 features include:

- Environmentally friendly meets EPA and EV emission standards for NOX, CO, and HC.
- Large capacity double wrapped muffler mounted under the hood reduces noise

- Wet-type cylinder lines dissipate heat better and are replaceable for easier engine rebuild.
- Dry, two-stage cyclonic air cleaner with a centrifugal-type precleaner (optional).

Large gull-wing doors allow easy access to the engine and radiator for routine maintenance and cleaning.

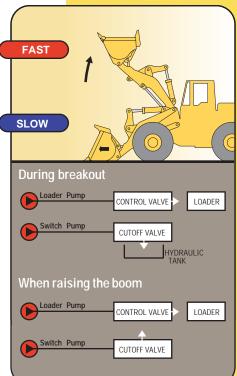
Spin-on filters and easily accessible lubrication points reduce maintenance time and the chance of missing maintenance items.



With a piston displace-

ment of 505 in³ 8.3 liter, the Komatsu S6D114E-1

APS—Automatic **Power Speed** Hydraulic System



APS—Automatic Power Speed Hydraulic System, is a dual-hydraulic speed system from Komatsu, which increases operational efficiency by matching the hydraulic demands to work conditions.

Oil from the switch pump is completely returned to the tank when digging and breaking out, therefore hydraulic flow to the loader is reduced and pressure is increased. This reduces horsepower demand from the engine and makes the operation more efficient. The result of this new Avance Dash-3 technology is greater productivity at the lowest operating cost.

Four-Speed Automatic Transmission

Provides maximum speed of 21.1 mph 34.0 km/h in forward and 21.7 mph 35.0 km/h in reverse. The transmission is a full power shift, countershaft transmission.

Other features include:

- Gear indicator conveniently located on the monitor panel allows the operator to easily check gearshifts during operations.
- Fingertip-shifting from forward to reverse or from one gear to another.
- Automatic gear selection with a hold switch on the boom control lever provides control with low effort.
- Four forward and four reverse gears help match cycle conditions, providing increased efficiency and fuel economy.

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.

Komatsu designed axles and final drives provide rugged reliability with low maintenance. Axle shafts are semi-floating. The front axle is fixed, while the rear axle is a center-pin support design that provides a total oscillation of up to 26 degrees.

The differential reduction gear is a heavy-duty spiral bevel gear for strength and reliable performance. Rugged, inboard planetary final drives carry the total gear reduction of the drive train to the wheel which is mounted to the axle hub.

Wet multi-disc brakes (front and rear) are fully sealed. Contaminants are kept out, reducing wear and maintenance. Brakes require no adjustments for wear, further reducing maintenance costs. There is no air system to bleed, which eliminates the condensation of water in the system that can lead to contamination

and corrosion. Braking system reliability is increased with the use of two independent hydraulic circuits, providing hydraulic back-up should one circuit fail.

The parking brake is also an adjustment-free, wet multi-disc with increased reliability and long life.



MAINITENANCE MAINITENANCE

Servicing With a Smile

It would be better if most of us approached routine maintenance and service as something that made us smile. That's why Komatsu designed the WA380-3 Wheel Loader to make servicing as easy as possible. We know by doing this, routine maintenance and servicing are less likely to be skipped, which can mean a reduction in costly downtime later on. Here are some of the many service features found on the WA380-3:

- Large gull-wing service doors provide easy access to the engine compartment.
- Ground Level Greasing—all grease points are easily reached from ground level and grease banks are provided in strategic areas to reduce maintenance time.
- Full hydraulic service and parking brakes eliminate air system maintenance.
- Batteries are located next to the counterweight for ground level access.
- Large platforms provide easy access to cab windows.
- Sealed Loader Linkage Pins designed to keep grease contained longer and prevent the entrance of dust, thereby lengthening greasing intervals.
- Easy to reach toolbox for grease gun and tool storage.
- Optional centrifugal type engine precleaner.



SPECIFICATIONS



ENGINE

Model Komatsu S6D114E-1
Type Direct injection
Aspiration Turbocharged
Number of cylinders
Bore x stroke
Piston displacement
Governor All-speed mechanical
Horsepower rating @ 2200 rpm
Gross horsepower*
Net flywheel horsepower

^{*}Gross horsepower output for complete engine operating under SAE J1995 conditions.

Meets EPA emission regulations.

Gear pump-driven force-lubrication with full-flow filters. All filters are spin-on for easy maintenance. Dry, two-stage cyclonic air cleaner for longer element service intervals.

Electric starting motor
Alternator
Batteries



TRANSMISSION

Three-element, single-stage, single-phase torque converter. Full power shift, countershaft transmission. An auto-shift countershaft transmission is standard. A modulating function assures smooth speed and directional changes. An electrically-controlled transmission allows fingertip control with speed and directional change levers. A neutral safety circuit allows starting only when the directional control lever is in neutral. The transmission kickdown switch allows the operator to downshift from second to first gear without taking a hand off the work control levers. The combination of the kick-down switch and the auto-shift allows the best load and carry operations.

Travel Speed*	Forv	ward	Rev	erse
1st	4.8 mph	0-7.7 km/h	5.0 mph	0–8.0 km/h
2nd	7.6 mph	0-12.3 km/h	8.0 mph	0-12.8 km/h
3rd	13.3 mph	0-21.4 km/h	14.0 mph	0-22.6 km/h
4th	21.1 mph	0-34.0 km/h	21.7 mph	0-35.0 km/h

*with 23.5/25-16PR (L3)



AXLES AND FINAL DRIVES

Four-wheel drive system. Semi-floating front axle is fixed to the front frame. Center-pin supported, semi-floating rear axle has 26° oscillation. Spiral bevel gear for reduction and planetary gear for final reduction. Front and rear torque proportioning differentials minimize tire slippage on soft or wet terrain.



Service brakes: Hydraulically actuated, inboard-mounted, wet disc brakes actuate all four wheels. Two brake pedals are provided. Either can be used for normal braking; however, the left pedal can also be used for braking and transmission neutralizing simply by actuating a switch.

Parking brake: Spring applied, hydraulically released, wet disc, located inside the transmission case (adjustment-free).



STEERING SYSTEM

Center-pivot frame articulation. Full-hydraulic power assisted steering independent of engine rpms. A wide articulation angle of 40° on each side allows a minimum turning radius of **20'11"** 6370 mm at the outside corner of the bucket with bolt-on cutting edge.



BOOM AND BUCKET

Z-bar loader linkage is designed for maximum rigidity and offers powerful breakout. Rap-out loader linkage design enables shock dumping for removing sticky materials. Sealed loader linkage pins with dust seals extend greasing intervals. The bucket is made of high-tensile-strength steel.



BUCKET CONTROLS

The use of a PPC hydraulic control valve offers lighter operating effort for the work equipment control levers. The reduction in the lever force and travel makes it easy to operate the work equipment.

Control positions:

Boom	Raise, hold, lower, and float
Bucket	Roll-back, hold, and dump



HYDRAULIC SYSTEM

The dual hydraulic speed system makes it possible to reduce cycle times.

- Powerful rim pull is maintained when entering the pile, so the digging capacity is increased.
- Boom speed is increased while raising the boom to minimize cycle time.

Capacity (discharge flow) @ engine 2200 rpm:

Loader pump	224 ltr/min
Steering pump	81 ltr/min
Switch pump	112 ltr/min
Pilot pump	57 ltr/min
(Gear pumps)	

Relief valve setting:

Control valves

A two-spool control valve and a steering valve with a demand valve provides the optimum flow.

Hydraulic cylinders	Number of cylinders	Bore		Str	oke
Boom	2	6.3" 160 m	n	28.1"	713 mm
Bucket	1	7.1 " 180 m	n	19.8"	503 mm
Steering	2	3.1" 80 m	n	17.4"	442 mm

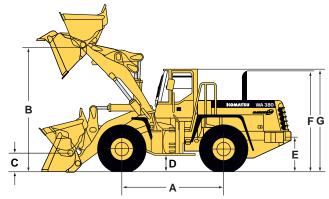
Hydraulic cycle time (rated load in bucket): Total **10.6 sec** Raise...**5.9 sec**/Dump...**1.4 sec**/Lower (empty)...**3.3 sec**



SERVICE REFILL CAPACITIES

Cooling system	53 ltr
Fuel tank	287 ltr
Engine	22.4 ltr
Hydraulic system	138 ltr
Axle (each front and rear) 9.8 gal	37 ltr
Torque converter and transmission	42 ltr





	Tires	23.5/25-	16PR (L3)
	Tread	7'1"	2160 mm
	Width over tires	9'1"	2780 mm
Α	Wheelbase	10'6"	3200 mm
В	Hinge pin height, maximum height	13'5"	4095 mm
С	Hinge pin height, carry position	1'8"	505 mm
D	Ground clearance	1'6"	455 mm
Ε	Hitch height	3'9"	1150 mm
F	Overall height, top of stack	11'0"	3345 mm
G	Overall height, ROPS cab	11'1"	3380 mm

Bucket	General Purpose with Bolt-on Cutting Edge			ating Cutting Edge	Excavating with Teeth		
Bucket capacity	SAE rated	4.25 yd ³	3.2 m ³	3.7 yd ³	2.8 m ³	3.4 yd ³	2.6 m ³
	Struck	3.5 yd ³	2.7 m ³	3.1 yd ³	2.3 m ³	2.9 yd ³	2.2 m ³
Bucket width		9'6"	2905 mm	9'6"	2905 mm	9'7"	2920 mm
Bucket weight		3,594 lb	1630 kg	3,771 lb	1710 kg	3,616 lb	1640 kg
Static tipping loads	Straight	31,487 lb	14280 kg	31,465 lb	14270 kg	31,642 lb	14350 kg
	Full turn (40°)	27,342 lb	12400 kg	27,320 lb	12390 kg	27,518 lb	12480 kg
Dump clearance, maximum height and 45° dump angle		9'9"	2990 mm	10'1"	3070 mm	9'8"	2945 mm
Reach at 7' 2130 mm and 45° dump angle		5'8"	1715 mm	5'6"	1675 mm	5'7"	1710 mm
Reach at maximum height and 45° dump angle		3'8"	1110 mm	3'5"	1030 mm	3'8"	1130 mm
Reach with boom horizonta and bucket level		8'4"	2530 mm	7'11"	2420 mm	8'5"	2575 mm
Operating height	Fully raised	18'1"	5520 mm	17'8"	5375 mm	17'8"	5375 mm
Overall length	Bucket ground	26'5"	8050 mm	26'1"	7940 mm	26'7"	8095 mm
	Bucket at carry	26'3"	7995 mm	26'0"	7925 mm	26'5"	8040 mm
Turning radius*		21'0"	6410 mm	20'11"	6380 mm	21'1"	6420 mm
Digging depth	0°	2.6"	65 mm	2.6"	65 mm	3.2"	80 mm
	10°	11"	280 mm	10.2"	260 mm	12"	305 mm
Breakout force		33,296 lb	15100 kg	36,603 lb	16600 kg	39,911 lb	18100 kg
Operating weight	<u> </u>	39,315 lb	17830 kg	39,492 lb	17910 kg	39,337 lb	17840 kg

[•] Static tipping load and operating weight shown include lubricants, coolant, full fuel tank, ROPS cab, front fenders, optional counterweight, 23.5/25-16PR (L3) tubeless tires, and operator. Machine stability and operating weight are affected by counterweight, tire size, and other attachments. **Do not use tire ballast with optional counterweight.** Add the following weight changes to operating weight and static tipping load.

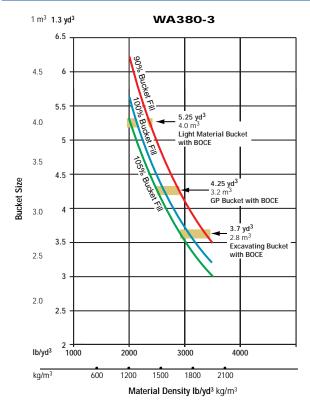
Weight Changes

	Ch	ango in On	erating Wei	a la t			Chai	nge in Stati	ic Tipping Load			
	Cha	ange in Ope	eraung wei	gnı		Stra	night		Full Turn (40°)			
Tire and Options	No Ba	allast	Ball	last	No Ba	allast	Ball	last	No Ballast		Ballast	
	lb	kg	lb	kg	lb	kg	lb	kg	lb	kg	lb	kg
20.5/25-16PR (L2)	-2,555	-1160	-1,735	-815	-1,960	-890	-1,710	-775	-1,700	-710	-1,390	-630
20.5/25-16PR (L3)	-2,125	-985	-1,385	-620	-1,630	-740	-1,355	-615	-1,410	-640	-1,080	-490
23.5/25-12PR (L2)	-915	-415	+585	+310	-705	-320	+905	+410	-620	-280	+905	+410
23.5/25-12PR (L3)	-240	-110	+1,355	+615	-175	-80	+1,430	+650	-155	-70	+1,365	+620
23.5/25-16PR (L2)	-825	-375	+770	+350	-640	-290	+970	+440	-550	-250	+970	+440
23.5/25-16PR (L3)	0	0	+1,600	+725	0	0	+1,630	+740	0	0	+1,545	+700
23.5/25-20PR (L2)	-685	-310	+915	+415	-530	-240	+1,080	+490	-460	-210	+1,080	+480
23.5/25-20PR (L3)	0	0	+1,600	+725	0	0	+1,630	+740	0	0	+1,545	+700
Opt. Cwt. Removed		-715 lb	-325 kg		−1,810 lb −820 kg		-1,565 lb -710 kg					
ROPS Canopy (instead of cab)		-1,565 lb	–710 kg			-1,520 lb	–690 kg			-1,465 lb	-665 kg	

All dimensions, weights, and performance values based on SAE J-732C and J-742B standards.
 * Turning radius measured with bucket at carry position, outside corner of bucket.



BUCKET SELECTION GUIDE



*	This guide, representing bucket sizes not necessarily manufactured by
	Komatsu, will help you select the proper bucket size for material density,
	loader configuration, and operating conditions. Optimum bucket size is
	determined after adding or subtracting all tipping load changes due to
	optional equipment. Bucket fill factors represent the approximate amount
	of material as a percent of rated bucket capacity. Fill factors are primarily
	affected by material, ground conditions, breakout force, bucket profile,
	and the cutting edge of the bucket used.

Material (loose weight)	lb/yd³	kg/m³
Clay and gravel, dry	2,400	1420
Clay and gravel, wet	2,600	1540
Coal, anthracite, broken	1,850	1100
Coal, bituminous, broken	1,400	830
Earth, dry, packed	2,550	1510
Earth, loam	2,100	1250
Earth, wet, excavated	2,700	1600
Granite, broken or large crushed	2,800	1660
Gravel, dry	2,550	1510
Gravel, dry 1/2" to 2" 13 to 50 mm	2,850	1690
Gravel, pit run (graveled sand)	3,250	1930
Gravel, wet 1/2" to 2" 13 to 50 mm	3,400	2020
Limestone, broken or crushed	2,600	1540
Phosphate rock	2,160	1280
Sand and gravel, dry	2,900	1720
Sand and gravel, wet	3,400	2020
Sand, dry	2,400	1420
Sand, wet	3,100	1840
Stone, crushed	2,700	1600
Topsoil	1,600	950

ENGINE AND ITS RELATED ITEMS:

- Air cleaner, dry-type, two-stage
- Air conditioner drive pulley
- · Cooling fan, blower
- Electrical shut off with key
- Engine, KOMATSU S6D114E-1, 6 cylinder, turbocharged, diesel, shut down key-type Gross horsepower: 205 HP 153 kW @ 2200 rpm

Net horsepower:

189 HP 141 kW @ 2200 rpm

- Ether starting aid
- Exhaust pipe, curved

ELECTRICAL SYSTEM:

- Alternator, 50 ampere
- Back-up alarm
- · Back-up light, rear
- Batteries, 2 x 12 volt 170 Ah
- Horn, electric
- Lights:
 - -Stop and tail
 - -Turn signal, (2 front, 2 rear) with hazard switch
 - -Working lights, halogen (2 front, high low beam with indicator, 2 rear) (outside)
- -Working lights in cab, halogen (2 front) inside top windshield mount
- Starting motor, 24V, 7.5 kW direct electric

POWER TRAIN AND CONTROLS:

- Differentials, torque proportioning
- Parking brake, wet disc

- Service brakes, wet multiple-disc, axle by axle (inboard)
- Transmission control, electric with kick-down switch
- Transmission, full power shift, automatic, F4-R4 softshift, countershaft

OPERATOR ENVIRONMENT:

- Adjustable wrist rest
- Cigarette lighter/ashtray
- Dome light
- Electrically heated rear window
- Floormat
- Front and rear wiper/washer
- Main monitor—electronic display:
- -Central warning lamp for check items
- —Central warning lamp for caution items
- —Head lamp high beam pilot
- -Service meter
- -Speedometer mph
- -Transmission shift indicator
- -Turn signal pilot
- Maintenance monitor—electronic display:
 - —Air cleaner check
 - -Battery charge
 - -Brake oil pressure
 - -Engine oil level
 - -Engine oil pressure
 - -Engine water level
 - -Engine water temperature
 - -Fuel gauge
 - —Parking brake warning light
 - —Torque converter temperature
- Rearview mirrors, inside cab mount
- ROPS cab (shipped loose) Seat belt-retractable, 3" wide

- Seat, suspension, reclining, with armrests (fabric), and a document holder
- Steering, full hydraulic power, steering wheel tiltable
- Sun visor

HYDRAULICS AND CONTROLS:

- Automatic power speed hydraulic system
- Hydraulic oil cooler
- Two-spool valve for boom and bucket controls with PPC
- Two-stage hydraulic system

SPECIAL ARRANGEMENTS:

Engine water conditioner

OTHER STANDARD EQUIPMENT:

- Boom kick-out, automatic
- Bucket leveler, automatic
- Counterweight, standard
- Fenders, full front and partial rear with steps
- · Hand rails, front, LH and RH
- Lifting eyes
- Tires, 23.5/25-16PR (L3), tubeless and rims (4 each)
- Toolbox
- Vandalism protection
 - -Caplock and cover for fuel tank
 - -Padlocks:

Battery boxes

Brake oil tank

Engine hood side panel

Radiator cap cover

Radiator tank

Transmission oil filler cover



- Air conditioner with cool box
- Air ride seat
- Auxiliary steering Bucket teeth
- Centrifugal-type engine precleaner
- Counterweight, additional options
- ECSS (Electronically Controlled Suspension System)
- · Excavating bucket with teeth, 3.4 yd3 2.6 m3
- Excavating bucket with BOCE* 3.7 yd3 2.8 m3
- General purpose bucket with BOCE, 4.25 yd3 3.2 m3
- Light material bucket with BOCE,* 5.25 yd3 4.0 m3

- · Fenders, full front and rear
- Heater and defroster
- Hydraulic adapter kit, three-spool with piping
- JRB coupler system
- Limited-slip differential, front and rear
- · Lubrication system, automatic
- Mono-lever, loader control for two-spool valve
- Mono-lever, loader control, plus one lever for three-spool valve
- Radiator protective screen
- Radio with cassette stereo, auto tuning
- Rearview mirror (outside cab mount)
- ROPS/FOPS canopy
- Three-spool valve (add-on)

Tires:

Bias Ply

- -20.5/25-16PR (L2)
- -20.5/25-16PR (L3)
- -23.5/25-12PR (L2)
- -23.5/25-12PR (L3)
- -23.5/25-16PR (L2)
- -23.5/25-20PR (L3)

Radial Ply

- -23.5/R25 XHAT 1-Star (L3)
- -23.5/R25 XRDIAT 1-Star (L4)
- Tool kit

*Bolt-On Cutting Edge

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