

WA320-3

KOMATSU

BUCKET CAPACITIES

3.0 - 4.2 yd³

2.3 - 3.2 m³



WA320-3

WHEEL LOADER
320

Specifications



ENGINE

- Model Komatsu S6D114E-1
- Type Direct-Injection
- Aspiration Turbocharged
- No. of cylinders 6
- Bore x Stroke 4.5" 114 mm x 5.3" 135 mm
- Piston displacement 505 in³ 8.27 ltr.
- Governor All-speed mechanical

Horsepower Rating @ 2380 RPM

	HP	kW
Gross power	173	129
Net Power	162	121

SAE J1349

Meets 1997 EPA emission regulations.

Gear pump-driven force-lubrication with full-flow filters. All filters are spin-on type for easy maintenance. Dry, 2-stage Cyclopac[®] air cleaner for longer element service intervals. 24V/7.5 kW electric starting motor; 24 V/50 A alternator, 2 x 12 V/150 AH batteries.



TRANSMISSION

3-element, single-stage, single-phase torque converter. Full powershift, countershaft type transmission. 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.

Travel

Speed*	Forward	Reverse
1st	4.7 MPH 0-7.5 km/h	4.8 MPH 0- 7.8 km/h
2nd	7.5 MPH 0-12 km/h	7.8 MPH 0-12.5 km/h
3rd	13.0 MPH 0-21 km/h	13.7 MPH 0-22 km/h
4th	21.1 MPH 0-34 km/h	21.7 MPH 0-35 km/h

* with 20.5-25-12PR (L2)



AXLES & FINAL DRIVES

Four-wheel drive system. Semi-floating front axle is fixed to the front frame. Center-pin supported, semi-floating rear axle has 30° of oscillation. Spiral bevel gear for reduction and planetary gear for final reduction. Front and rear torque proportioning axles minimize tire slippage on soft or wet terrain.



BRAKES

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 type 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 19'8" 6005 mm at the outside corner of the bucket with bolt-on cutting edge.



BOOM & 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 make 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 2380 RPM

Loader Pump	43.6 gal/min	165 ltr./min
Steering Pump	20.3 gal/min	77 ltr./min
Switch Pump	20.3 gal/min	77 ltr./min
Pilot Pump	12.9 gal/min	49 ltr./min

(Gear Type Pumps)

Relief valve setting:

Loader	3000 PSI 210 kg/cm ²
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Control valves:

A 2-spool type control valve and a steering valve with a demand valve provides optimum flow.

Hydraulic cylinders	Number of cylinders	Bore	Stroke
Boom	2	5.5" 140mm	2'3" 703 mm
Bucket	1	6.3" 160mm	1'7" 489 mm
Steering	2	2.8" 70 mm	1'6" 460 mm

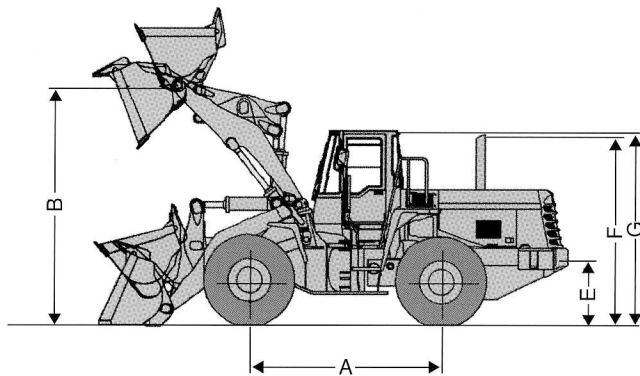
Hydraulic cycle time (rated load in bucket): Total 10.3 sec.
Raise ... 5.8 sec./Dump 1.2 sec./Lower (empty) 3.3 sec.



SERVICE REFILL CAPACITIES

Cooling system	7.9 gal	30 ltr.
Fuel tank	58.4 gal	221 ltr.
Engine	5.1 gal	19 ltr.
Hydraulic system	30.6 gal	116 ltr.
Axle (each front & rear)	6.6 gal	25 ltr.
Torque converter and transmission	10.5 gal	40 ltr.

Dimensions



Tires	20.5-25-12PR(L2)
Tread	6'9" 2050 mm
Width over tires	8'6" 2585 mm
A Wheelbase	9'11" 3030 mm
B Hinge pin height, max. height	12'6" 3815 mm
C Hinge pin height, carry position	1'6" 450 mm
D Ground Clearance	1'4" 400 mm
E Hitch Height	3'11" 1190 mm
F Overall Height, top of stack	10'5" 3220 mm
G Overall Height, ROPS Cab	10'10" 3315 mm

Bucket Type		General Purpose w/Bolt-on Cutting Edge		Excavating w/Bolt-on Cutting Edge		Light Material w/Bolt-on Cutting Edge	
Bucket Capacity	SAE Rated	3.3 yd³	2.5 m ³	3.0 yd³	2.3 m ³	4.2 yd³	3.2 m ³
	Struck	2.8 yd³	2.1 m ³	2.6 yd³	2.0 m ³	3.7 yd³	2.8 m ³
Bucket Width		9'0"	2740 mm	9'0"	2740 mm	9'0"	2740 mm
Bucket Weight		2,723 lb	1235 kg	2,910 lb	1320 kg	3,153 lb	1430 kg
Static Tipping Loads	Straight	25,441 lb	11540 kg	25,254 lb	11455 kg	24,394 lb	11065 kg
	Full Turn (40°)	22,046 lb	10000 kg	21,859 lb	9915 kg	21,087 lb	9565 kg
Dump Clearance, max. height and 45° dump angle		9'4"	2840 mm	9'5"	2865 mm	8'7"	2625 mm
Reach at 7' 2130 mm 45° dump angle		4'11"	1490 mm	4'10"	1475 mm	5'2"	1585 mm
Reach at max. height and 45° dump angle		3'4"	1005 mm	3'1"	950 mm	3'11"	1190 mm
Reach with arm horizontal and bucket level		7'6"	2275 mm	7'4"	2225 mm	8'5"	2560 mm
Operating Height Fully raised		16'10"	5120 mm	16'6"	5020 mm	17'4"	5295 mm
Overall Length	Bucket ground	23' 8"	7215 mm	23'7"	7195 mm	24'8"	7530 mm
	Bucket at carry	23' 8"	7210 mm	23'7"	7195 mm	24'3"	7400 mm
Turning Radius*		19'10"	6040 mm	19' 9"	6040 mm	20'0"	6110 mm
Digging Depth	0°	3.5"	90 mm	3.5"	90 mm	3.5"	90 mm
	10°	11"	285 mm	11"	275 mm	1'1"	335 mm
Breakout Force		28,770 lb	13050 kg	30,887 lb	14010 kg	23,080 lb	10450 kg
Operating Weight		29,443 lb	13355 kg	29,630 lb	13440 kg	29,873 lb	13550 kg

- Static tipping load and operating weight shown include lubricants, coolant, full fuel tank, ROPS cab, front fenders, optional counterweight, 20.5-25-12PR (L2) 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

Tire & Options	Change in Operating Weight				Change in Static Tipping Load							
					Straight				Full Turn (40°)			
	No Ballast		Ballast		No Ballast		Ballast		No Ballast		Ballast	
	lb	kg	lb	kg	lb	kg	lb	kg	lb	kg	lb	kg
17.5-25-12PR(L2)	-364	-165	+66	+30	-287	-130	-309	-140	-254	-115	-187	-85
17.5-25-12PR(L3)	-121	-55	+309	+140	-99	-45	-121	-55	-88	-40	-22	-10
20.5-25-12PR(L2)	0	0	+772	+350	0	0	+496	+225	0	0	+518	+235
20.5-25-12PR(L3)	+408	+185	+1,179	+535	+320	+145	+816	+370	+287	+130	+805	+365
Opt. Cwt. Removed	-717 lb		-325 kg		-1,830 lb		-830 kg		-1,521 lb		-690 kg	
ROPS Canopy (instead of cab)	-375 lb		-170 kg		-342 lb		-155 kg		-265 lb		-120 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.