

WA500-1

WHEEL LOADER



Model shown may include optional equipment.

**FLYWHEEL HORSEPOWER: 291HP @ 2100 RPM. BUCKET CAPACITIES: 4.0-4.5m³ (5.2-5.9yd³).
OPERATING WEIGHT: 26105kg (57,550 lb).**

- Komatsu-built components for superior reliability and availability
- Powerful, fuel-efficient 6 cylinder Komatsu S6D140 turbodiesel
- Z-bar loader linkage for superior performance of work-equipment
 - 40° articulation, 30° rear axle oscillation, and long wheel base provide stability and maneuverability on any terrain
- Wet multiple-disc brakes and sealed loader linkage pins provide high performance yet require little maintenance
- Electrically controlled fingertip transmission, pilot-operated work equipment control and a steering demand valve for comfort and control during operation
- Tiltible steering wheel, fully adjustable oil suspension seat and space-efficient, comfortable work area keep operator productivity high
- Electronic display/monitor panel and transmission safety system insure safe, trouble-free operation

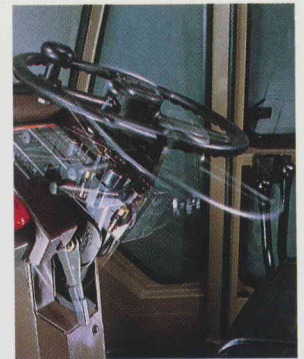
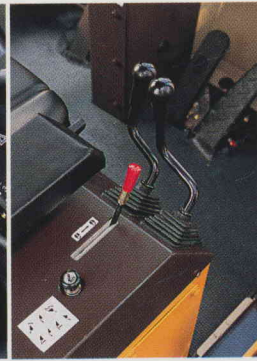
Efficient and Comfortable Operating Equipment



Spacious, comfortable operator's compartment — is rear-mounted to reduce operator swing and fatigue. The optional cab provides excellent visibility with a large area of tinted glass, and is rubber-pad mounted to minimize noise and vibration. All pedals, control levers and instruments are arranged for maximum operating efficiency.

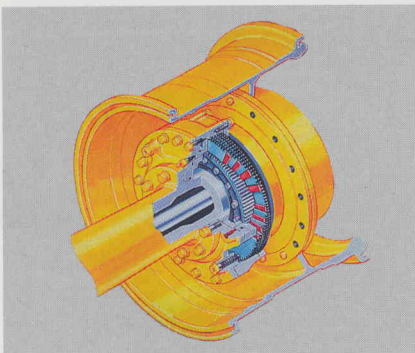


Electrically controlled transmission, pilot operated control valve — Komatsu's electrically controlled transmission allows quick and easy gear shifting by the operator. The shift lever sends an electronic signal to a solenoid on the hydraulic control valve, so the gear change is as smooth as the shift. A Pilot Operated Control valve has been placed between the hydraulic control valve and the lever so the valve is operated by pilot pressure, decreasing operating effort. By minimizing shift effort and stroke the operator can confidently control his machine with slight finger movements.

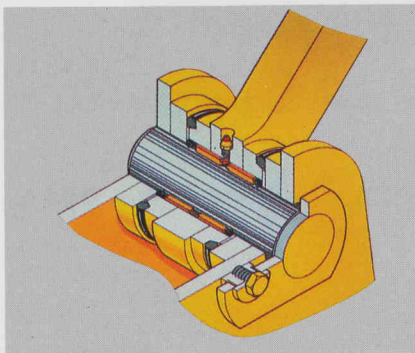


Tilt steering column and adjustable oil suspension seat — The tilt steering column can be adjusted along a wide range. Combined with the fully-adjustable oil suspension seat it allows the operator to obtain maximum comfort and efficiency during operation.

Minimum Maintenance Means Less Downtime



Wet disc brakes — are adjustment free and completely enclosed in the axle housing, sealing them off from dirt and other potential contaminants.



Sealed loader linkage pins — keep the grease in and contaminants out providing extended grease intervals. Also, the greasing points are conveniently located so that they are within easy reach.



The Electronic display panel — is a display/warning system which continuously monitors all operating systems. If a malfunction should occur the operator is immediately warned which system is experiencing trouble, saving time lost searching for the problem. Also, gauges constantly monitor coolant temperature, transmission oil temperature, fuel level, service hours and speed. Komatsu's transmission safety system insures the engine cannot be started unless the transmission is in neutral.

Superior Productivity Through...



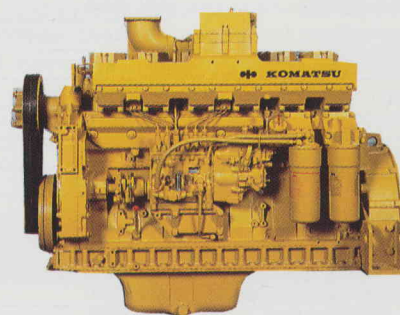
...Powerful work equipment

Outstanding bucket and loader performance — Z-bar loader linkage provides high breakout force and fast cycle times. Extended dumping reaches and a wide range of bucket capacities also contribute to maximized productivity.



The Komatsu S6D140 turbo-diesel engine — provides 291 HP and has a 928 in³ displacement. The six cylinder, water-cooled, overhead valve, direct injected diesel is also fuel efficient, decreasing fuel consumption per hour of production.

...Fuel efficient engine



...Versatile, stable operation

Stable operation over any terrain — A center-pin-supported rear axle with 30° oscillation angle, extra-long wheel base, wide tread and 40° articulation angle maintain operating productivity and provide stability over even the roughest surfaces.



Demand valve steering system — guarantees smooth, constant steering regardless of engine speed. This not only provides easy machine operation, but also decreases the chance of load spillage.



High Component Reliability — All components are designed and manufactured by Komatsu for maximum quality and reliability.

SPECIFICATIONS



ENGINE

The Komatsu S6D140 is a 4-stroke, water-cooled, overhead valve, direct-injection turbocharged diesel engine with 6 cylinders and a 140 mm (5.5") bore x 165 mm (6.5") stroke for a 15.2 ltr. (928 in³) piston displacement.

Flywheel horsepower:

291 HP (217 kW) at 2100 RPM (SAE J1349)

Direct-injection fuel system. All-speed mechanical governor. Gear-pump-driven force-lubrication with full-flow filters. All filters are spin-on type for easy maintenance. Dry-type air cleaner with automatic dust evacuator. 24 V/11 KW electric starting motor. 24 V/50 A alternator. 2 x 12V/170 Ah batteries.



TRANSMISSION

3-element, single-stage, single-phase torque converter. Full powershift, planetary-gear transmission. Modulating function assures shockless speed and directional changes without braking. Electrically controlled transmission allows fingertip control with speed and directional change levers. Neutral safety circuit allows starting only when the speed control lever is in neutral.

Travel speed

	Forward	Reverse
1st	0-7.3 km/h (4.5 MPH)	0-7.8 km/h (4.8 MPH)
2nd	0-12.6 km/h (7.8 MPH)	0-13.4 km/h (8.3 MPH)
3rd	0-21.1 km/h (13.1 MPH)	0-22.5 km/h (14.0 MPH)
4th	0-34.2 km/h (21.3 MPH)	0-36.4 km/h (22.6 MPH)



AXLE AND FINAL DRIVE

Four-wheel drive system. Full-floating front axle is fixed to the front frame. Center-pin-supported, full-floating rear axle provides total oscillation of $\pm 30^\circ$. Spiral bevel gear for reduction and a planetary gear for final reduction. Conventional type differentials.



BRAKES

Service brakes: Air-over-hydraulic, wet, multiple-disc, brakes actuate all four wheels. Two brake pedals are provided. The right for normal braking; the left offers normal braking and/or neutralizes the transmission when the transmission cut-off switch is activated.

Parking brake: Dry disc type, air-released, spring-applied on front axle pinion shaft.

Emergency brake: The parking brake is automatically actuated as an emergency brake when air pressure falls below rated value.



TIRES

Front and rear: 26.5x25-20PR (L-3)
Rims: 22.00 x 25



STEERING SYSTEM

Center-pivot frame articulation. Mechanical follow-up type, steering demand valve for full-hydraulic power assisted steering independent of engine RPMs. Articulation angle of 40° on each side for a minimum turning radius of 7195 mm (23'7") measured at the outside corner of the bucket.



BOOM & BUCKET

Z-bar loader linkage is manufactured of high-tensile-strength steel to provide maximum rigidity, fast cycle times and superior breakout force. Rap-out loader linkage design enables shock dumping to remove stubborn materials. Sealed loader linkage pins with dust seals and cord rings and sealed-oil lubricated bucket hinge pins extend greasing intervals. The bucket is also made of high-tensile-strength steel. Bucket corner teeth minimize bucket wear and increase penetrating force.

Boom and Bucket Cycle Times

Raise	7.3 sec.
Lower	3.5 sec.
Dump	1.7 sec.
Total	12.5 sec.



BUCKET CONTROLS

Both operating effort and stroke of the work equipment levers have been minimized. The hydraulic control valve is operated by a pilot control valve. This system assures light-touch work equipment control. In addition, the standard bucket positioner and the boom kickout device facilitate repeated digging/loading operations.

Control positions:

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



HYDRAULIC SYSTEM

Two gear pumps for loader control.

Capacity (discharge flow) at engine 2100 RPM:

Loader pump	217 ltr. (57.3 U.S. gal)/min.
Switch pump	217 ltr. (57.3 U.S. gal)/min.
Steering pump	171 ltr. (45.2 U.S. gal)/min.
Relief valve setting	210 kg/cm ² (2990 psi)

Control valves:

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

Hydraulic cylinders	Number of cylinders	Bore	Stroke
Boom	2	200 mm (7.9")	825 mm (32.5")
Bucket	1	225 mm (8.9")	565 mm (22.2")
Steering	2	110 mm (4.3")	485 mm (19.1")



SERVICE REFILL CAPACITIES

Cooling system	80 ltr. (21.1 U.S. gal)
Fuel tank	435 ltr. (114.9 U.S. gal)
Engine	32 ltr. (8.5 U.S. gal)
Brake oil	3 ltr. (0.8 U.S. gal)
Hydraulic system	150 ltr. (39.6 U.S. gal)
Axle (each)	75 ltr. (19.8 U.S. gal)
Torque converter and transmission	62 ltr. (16.4 U.S. gal)



OPERATING WEIGHT

Operating weight, including rated capacity of lubricant, coolant, full fuel tank, 26.5x25-20PR (L-3) tires, 4.0 m³ (5.2 yd³) capacity bucket, ROPS cab, operator and other standard equipment: 26105 kg (57,550 lb)



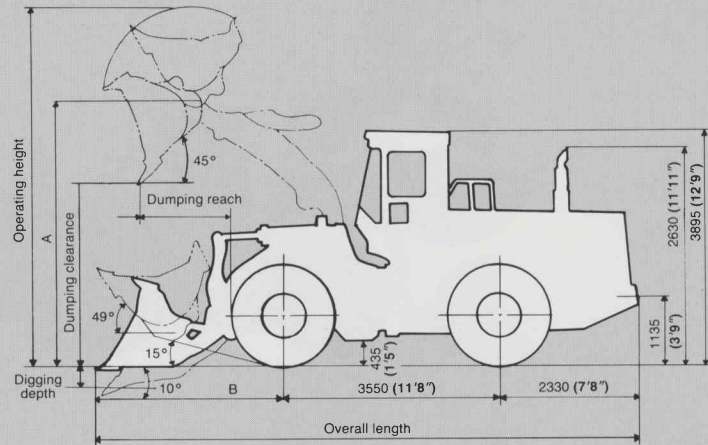
DIMENSIONS (measured with 26.5x25-20PR(L-3) tires and 4.0 m³ (5.2 yd³) bucket for Standard boom and 29.5x25-22PR(L-3) tires, 3.8 m³ (5.0 yd³) bucket and high lift counterweight for high lift boom.

Unit: mm (ft., in.)

Work Equipment Dimensions

	Standard Boom	High Lift Boom
A	4095 mm (14'5")	4895 mm (16'1")
B	2865 mm (9'5")	3410 mm (11'2")

Tires	Tread	Width over tires
26.5x25-20PR (L-3)	2400 mm (7'10")	3090 mm (10'2")
26.5x25-20PR (L-4)	2400 mm (7'10")	3110 mm (10'2")
29.5x25-22PR (L-3)	2400 mm (7'10")	3190 mm (10'6")



Bucket type		EXCAVATION Straight Edge	EXCAVATION Spade Nose	LIGHT MATERIALS Straight Edge	EXCAVATION* Straight Edge
Bucket capacity	SAE rated	4.0 m ³ (5.2 yd ³)	4.0 m ³ (5.2 yd ³)	4.4 m ³ (5.8 yd ³)	3.8 m ³ (5.0 yd ³)
	Struck	3.3 m ³ (4.3 yd ³)	3.3 m ³ (4.3 yd ³)	3.8 m ³ (5.0 yd ³)	3.2 m ³ (4.2 yd ³)
Bucket width		3400 mm (11'2")	3400 mm (11'2")	3400 mm (11'2")	3460 mm (11'4")
Static tipping load	Straight w/o teeth	19010 kg (41,910 lb)	18540 kg (40,875 lb)	18710 kg (41,250 lb)	18,500 kg (40,780 lb)
	Full turn w/o teeth	16510 kg (36,400 lb)	15990 kg (35,250 lb)	16210 kg (35,735 lb)	16380 kg (36,110 lb)
Dumping clearance, max. height and 45° dump angle	w/o teeth	3275 mm (10'9")	3110 mm (10'2")	3215 mm (10'7")	3805 mm (12'6")
	with teeth	3020 mm (9'11")	2855 mm (9'4")	2960 mm (9'9")	3565 mm (11'8")
Reach at 2130 mm (7') cut edge clearance and 45° dump angle	w/o teeth	2115 mm (6'11")	2305 mm (7'7")	2030 mm (6'8")	2402 mm (7'11")
	with teeth	2315 mm (7'7")	2505 mm (8'3")	2230 mm (7'4")	2557 mm (8'5")
Reach at maximum height and 45° dump angle	w/o teeth	1320 mm (4'4")	1465 mm (4'10")	1375 mm (4'6")	1415 mm (4'8")
	with teeth	1520 mm (5'0")	1665 mm (5'6")	1575 mm (5'2")	1570 mm (5'2")
Reach with arm horizontal and bucket level	w/o teeth	2730 mm (8'11")	2950 mm (9'8")	2810 mm (9'2")	3086 mm (10'2")
	with teeth	2930 mm (9'7")	3150 mm (10'4")	3010 mm (9'10")	3366 mm (11')
Operating height (fully raised)		5945 mm (19'6")	6215 mm (20'5")	6025 mm (19'9")	6530 mm (21'5")
Overall length	Bucket on ground w/o teeth	8805 mm (28'11")	9035 mm (29'8")	8885 mm (29'2")	9290 mm (30'6")
	Bucket at carry w/o teeth	8745 mm (28'8")	8890 mm (29'2")	8795 mm (28'10")	9230 mm (30'4")
	Bucket on ground with teeth	9055 mm (29'6")	9285 mm (30'0")	9135 mm (29'6")	9570 mm (31'5")
	Bucket at carry with teeth	8995 mm (29'5")	9140 mm (29'11")	9045 mm (29'7")	9460 mm (31')
Turning radius (bucket at carry, outside corner of bucket)	w/o teeth	7175 mm (23'6")	7175 mm (23'6")	7195 mm (23'7")	7410 mm (24'4")
	with teeth	7425 mm (24'4")	7425 mm (24'4")	7445 mm (24'5")	7565 mm (24'10")
Digging depth	0° w/o teeth	115 mm (5")	125 mm (5")	175 mm (7")	0 mm (0")
	10° w/o teeth	340 mm (1'1")	385 mm (1'3")	460 mm (1'6")	330 mm (1'1")
	0° with teeth	—	—	—	52 mm (2.1")
	10° with teeth	—	—	—	440 mm (1'5")
Breakout force (bucket cylinder)		27000 kg (59,520 lb)	22700 kg (50,045 lb)	25200 kg (55,555 lb)	25530 kg (56,166 lb)
Operating weight w/o teeth		26105 kg (57,550 lb)	26520 kg (58,465 lb)	26230 kg (57,825 lb)	28754 kg (63,390 lb)

*Denotes bucket used with high lift boom only.

- High lift boom specifications are highlighted in tan and include Hi-Lift counterweight, and 29.5-25-22PR (L-3) tires, enclosed cab, ROPS canopy, lubricants, coolant, full fuel tank and operator.
- All dimensions, weights and performance values based on SAE J-732c and J-742b standards.
- Static tipping load and operating weight shown include 26.5x25-20PR (L-3) tires (without rear ballast), enclosed cab, ROPS canopy, lubricants, coolant, full fuel tank and operator. Machine stability and operating weight are affected by counterweight, tire size and other attachments. Use either tire ballast or counterweight, not both. Add the following weight changes to operating weight and static tipping load.

Weight changes (Standard Lift boom)

Tires and options	Change in operating weight	Change in tipping load	
		Straight	Full turn
26.5x25-20PR (L-3) tubeless tires	0/+ 1390 kg (3,065 lb)*	0/+ 2045 kg (4,510 lb)*	0/+ 1810 kg (3,990 lb)*
26.5x25-20PR (L-4) tubeless tires	+ 360 kg (795 lb) * + 1750 kg (3,860 lb)	+ 265 kg (585 lb) * + 2310 kg (5,095 lb)	+ 235 kg (520 lb) * + 2040 kg (4,500 lb)
29.5x25-22PR (L-3) tubeless tires	+ 540 kg (1,190 lb) * + 2440 kg (5,380 lb)	+ 400 kg (880 lb) * + 3200 kg (7,055 lb)	+ 350 kg (770 lb) * + 2820 kg (6,220 lb)
ROPS Canopy (less cab)	— 310 kg (685 lb)	— 260 kg (575 lb)	— 255 kg (560 lb)
Cutting edge (bolt on)	+ 375 kg (825 lb)	— 495 kg (1,090 lb)	— 495 kg (1,090 lb)
Bucket teeth (one piece)	+ 315 kg (695 lb)	— 410 kg (905 lb)	— 410 kg (905 lb)
Additional counterweight	+ 700 kg (1,545 lb)	+ 1600 kg (3,525 lb)	+ 1400 kg (3,085 lb)

* 75% CaCl₂ filled for rear tires only.

STANDARD EQUIPMENT

- Engine and cooling system: 11 kW starter, alternator (50A)
- Working light set: Front and rear, tail light, stoplight, turn signals, back-up light
- Electronic display/monitoring/warning system with air pressure, coolant temperature, torque converter oil temperature, fuel level, speedometer and service meter gauges.
- Tilt steering wheel
- Electronic transmission control
- Four wheel drive system
- Full-hydraulic power steering
- 4-forward, 4-reverse powershift transmission
- Wet-type disc brakes
- Automatic bucket positioner
- Automatic lift kickout
- Hitch
- ROPS bracket
- Oil suspension seat with seat belt
- Vandalism protection locks
- Back-up alarm
- Rear view mirrors
- Sight gauges: hydraulic reservoir level, brake oil level
- Boom and bucket control valve
- Front fenders
- Rear fenders with steps
- Ladders (LH & RH)
- Handrail, rear (LH & RH)

OPTIONS

- ROPS canopy
 - Enclosed cab: includes front & rear windshield washer and wiper, floor mat, inside mirror, two cab-mounted working lights, front and hand rails
 - Air conditioner
 - Heater and defroster
 - Additional counterweight 720 kg (1,600 lb) (should not use with ballasted tires)
 - Emergency steering
 - Instrument panel lockable cover (cannot be used with enclosed cab)
 - Air dryer
 - Tool kit
 - Logging bucket cylinder
- ADDITIONAL HYDRAULIC CONTROLS**
- Hydraulic adapter kit, includes: 3 spool hydraulic valve, valve control lever, hoses and boom tubing
- WORK EQUIPMENT**
- 4.0 m³ (5.2 yd³) General purpose bucket
 - 4.5 m³ (5.9 yd³) General purpose bucket
 - 4.0 m³ (5.2 yd³) Spade nose bucket with weld on teeth
 - 3.8 m³ (5.0 yd³) general purpose (for high lift boom arrangement)
 - Bolt-on bucket teeth
 - Bolt-on cutting edge (cannot be used with bucket teeth)
- High lift boom, includes bucket cylinder, additional 1650 kg (3640 lb) counterweight, boom and bucket positioners
 - Log clamp requires hydraulic adapter kit, log clamp counterweight and large bucket cylinder
 - Log clamp counterweight 2,360 kg (5,200 lb)
- TIRES/RIMS**
- 26.5x25-20PR (L-3) Rock type
 - 26.5x25-20PR (L-4) Deep Rock type
 - 29.5x25-22PR (L-3) Rock type
 - 29.5x25-22PR (L-4) Deep Rock type
 - 22.00-25 RIMS
 - 25.00-25 RIMS

AESS205-03

Materials and specifications are subject to change without notice.

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