

4-WHEEL STEERING BACKHOE LOADERS WB97S-2

KOMATSU



KOMATSU
Utility

The Komatsu rigid backhoe loaders.

The only machine that combines style,
prestige and power.

More than 30 years of experience, and know-how,
the world's finest design tradition and state-of-the-
art Japanese technology have gone into the design
and manufacture of the new Komatsu "Utility"
range backhoe loaders.

4-WHEEL STEERING
BACKHOE LOADERS

AVANCE
WB97S-2

NET
HORSEPOWER: 73 kW - 97,8 HP (SAE J 1349)

OPERATING WEIGHT: from 8000 to 8900 kg

Machines built for operators with the environment in mind.



Environmentally friendly. Respect for the environment was one of the main objectives that Komatsu designers set themselves in creating the new backhoe loaders. The noise level of the new backhoe loaders and their exhaust emissions are among the lowest possible today, thanks to the use of new generation Komatsu engines.

AVANCE

Comfortable and simple to operate.

With a Komatsu backhoe loader, work is easy and above all, enjoyable.

The performance and productivity of a machine also depend on the operator. The person who works many hours each day at the controls of a machine is well aware of this, and so is Komatsu.

This is why the new backhoe loaders have been designed for operators, in the interests of businessmen and with total respect for the environment in which the machine operates. Anyone who's not already a skilled operator

will very soon become one with the new generation of Komatsu backhoe loaders. The ergonomically designed controls offer ease of operation, using a hydraulic system that responds smoothly and precisely. The cab allows all-round visibility and it is very quiet.

The ergonomically designed seat is comfortable and fully adjustable. Meanwhile, the machine works quickly and powerfully, reducing operator fatigue and improving productivity.



SPECIFICATIONS



ENGINE

A new generation engine developed to comply with stricter emissions controls.

Model Komatsu S4D106-1FA
 Type vertical, 4-cycle water-cooled diesel engine
 Displacement 4412 cm³
 Cyl. bore x stroke 106x125 mm
 N° of cylinders 4
 Compression ratio 17,5:1
 Combustion direct injection (DI)
 Aspiration turbo
 Max power 84,2 kW
 Rated power:
 (SAE J 1349) 73 kW / 97,8 HP - 2200 rpm
 (80/1269/EC) 72 kW / 96,5 HP - 2200 rpm
 Max torque 375 Nm - 1500 rpm

Cooling system radiator
 Air filter dry filter with safety element
 Starting system electric motor with pre-heating air system for cold climate



HYDRAULIC SYSTEM

SyncroSystem hydraulics allows the operator very precise and simultaneous backhoe movements. This system is energy efficient and incorporates two different working modes: maximum power and constant power.
 The advanced hydraulic system includes also the function "speed up" to increase the working speed of the front loader.

System SyncroSystem
 Type Close Load Sensing System CLSS with working/power selector switch
 Pumps type Variable displacement axial pistons type
 Pumps control system Load Sensing set to adjust the hydraulic power
 Distributor LIFD "load independent flow divider" modular type
 Max delivery 165 l/min
 Work pressure 200 bar



FRAME

The re-designed frame is modular and has been developed for computer based welding processes; every main element is bolted directly to the frame to improve maintenance and to reduce down time.



TRANSMISSION

Electronically-controlled, four-wheel drive, full power shift transmission. EGM (Electronic Gear Management) gear controls for changing driving direction and gears, in automatic or manual mode (using two buttons), at full power without disengaging the drive.

Other functions incorporated: system self-diagnosis, automatic connection/disconnection of the four wheel drive, and activation of the anti-theft alarm using a PIN code.

Travel speed:		
SPEED	FORWARD	REVERSE
1 st	6,5	6,5
2 nd	12	12
3 rd	23	23
4 th	40	-



STEERING

The front and rear steering wheels are controlled by a load-sensing hydrostatic power steering system with a priority valve and by an electronic device for the selection of the 3 steering modes.

Steering radius, with 4 steering wheels and inner wheel not braked:
 loader outer angle 4700 mm
 outer wheel 4460 mm

The values are valid either with 24" and with 28" tyres.



BRAKES

Oil-immersed disc brakes are actuated by individual braking on each rear wheel. Total integral braking on the 4 wheels is activated by operating the two pedals at the same time.

Disc diameter 270 mm
 Total friction area 2310 cm²

The parking or safety brake acts on the service brakes through a hand operated lever.



AXLES

Heavy-duty axles with planetary reduction gears in the wheel hubs. Front axle total oscillation angle 16°. Limited slip differential on both axles.

Max front strength (Dynamic) 8000 daN
 Max rear strength (Dynamic) 10000 daN



TYRES

Standard:
 front and rear 16,9 x 24 - 12 PR
 Option:
 front and rear 16,9 x 28 - 12 PR



CAB

New ROPS (ISO 9249, SAE J1040) FOPS (ISO 3449, SAE J 231) cab designed in order to offer the best visibility, ergonomics, low noise and comfort.
 Two doors, full opening windows with front and rear windscreen wipers.
 Internal lay out includes full adjustable seat, fresh filtered air intake ventilation and easy to read front and side dash board.



CAPACITIES

Engine oil	8,6 ℓ
Cooling system	18 ℓ
Diesel tank	130 ℓ
Hydraulic oil tank	92 ℓ
Front axle oil	8,2 ℓ
Rear axle oil	18,5 ℓ
Gearbox oil	16 ℓ



WEIGHT

Operating standard machine weight	8000 kg
Total machine weight	8900 kg

OPERATING WEIGHT INCREASE

4 IN BUCKET	250 kg
OFFSET BOOM	150 kg
TELESCOPIC ARM	260 kg
PALLETS FORKS	200 kg



NOISE LEVEL

Dynamic test:
 Sound power level LwA 101 dB(A) (cab)
 Sound pressure level LpA 78 dB(A) (cab)

The values are given according to the directive EC 89/514 and EC 95/27.



LOADER

The new design of the front loader allows a better tensile strength distribution and the upkeep of movement parallelism when lifting and lowering the bucket. Furthermore, thanks to the linkage geometry the greasing points have been dramatically reduced.

Standard bucket width	2420 mm
Capacity (ISO 7546)	1,1 m ³
STD bucket weight	450 kg
Lifting capacity at maximum height:	3847 daN (3925 kgf)
Lifting capacity	
at ground level (ISO 8313):	5195 daN (5300 kgf)
Breakout force (ISO 8313):	6383 daN (6500 kgf)



BACKHOE

The new boom has a rounded profile and a reinforced structure built with cast ends, allows 180° rotations, always maintaining high rotation torque. Vertical outriggers with adjustable wear device.

Standard bucket width	600 mm
Capacity (SAE)	0,19 m ³
STD bucket weight	156 kg
Bucket breakout force (ISO 6015):	5780 daN (5900 kgf)
Dipper digging force (ISO 6015):	3780 daN (3850 kgf)



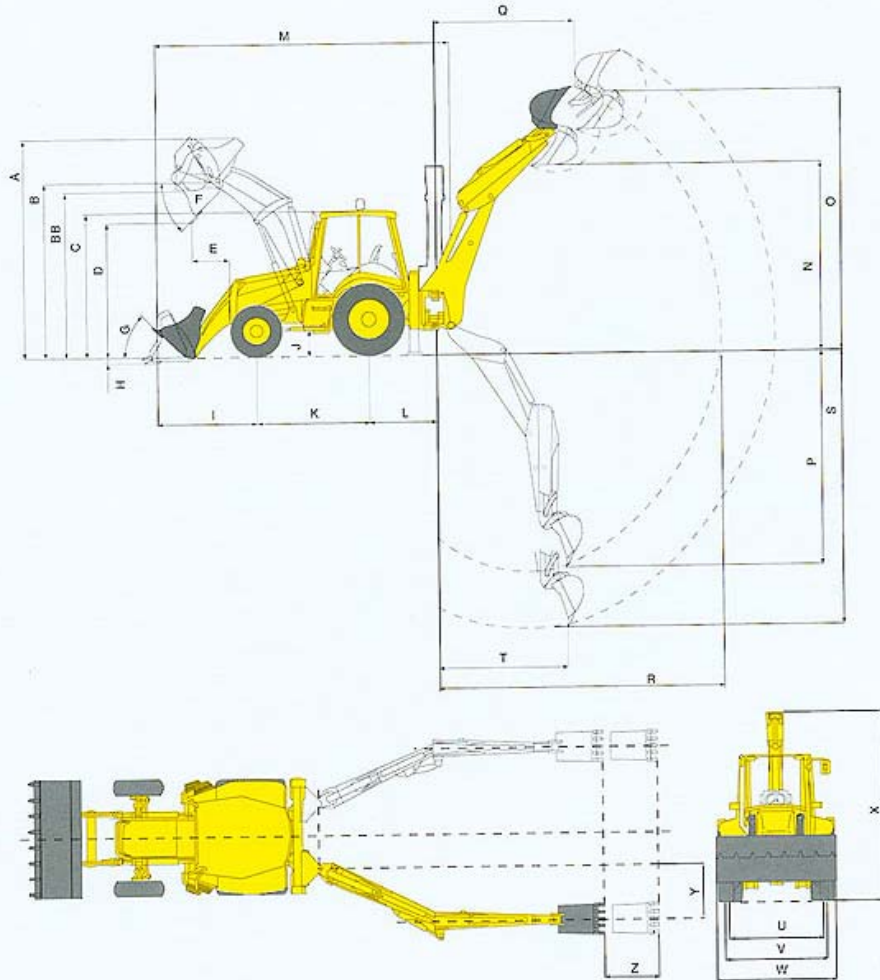
ELECTRIC SYSTEM

Electric circuit with protected connections in all exposed areas.

Voltage	12 V
Battery	120 Ah
Alternator	80 A
Electric starting	3 kW

SPECIFICATIONS

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DIMENSIONS

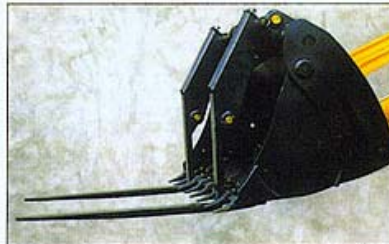
A. max. height	4220 mm	P. digging depth SAE	4500 mm
B. pin height	3400 mm	- with telescopic	5650 mm
BB. forks loading height	3200 mm	Q. reach at max height	2500 mm
C. cab height	2750 mm	- with telescopic	3500 mm
D. dumping height	2750 mm	- with off-set	2510 mm
E. dumping reach (45°)	750 mm	R. max reach from swing centre	5550 mm
F. dumping angle	45°	- with telescopic	6550 mm
G. rollback angle	45°	S. max digging depth	4950 mm
H. digging depth	110 mm	- with telescopic	6100 mm
I. bucket reach (in transport)	1930 mm	T. digging reach	2750 mm
J. ground clearance	430 mm	U. rear tread	1950 mm
K. wheel base	2175 mm	V. front tread	1950 mm
L. backhoe swing centre distance	1320 mm	W. overall width (with bucket)	2420 mm
M. transport length	5895 mm	X. transport hoe height	3660 mm
N. dumping height SAE	3700 mm	- with telescopic	3700 mm
max dumping height	3950 mm	- with off-set	3760 mm
- with telescopic SAE	4830 mm	Y. off-set	1080 mm
- with telescopic max	5050 mm	Z. telescopic stroke	1150 mm
O. max digging height	5510 mm		
- with telescopic	6510 mm		

STANDARD EQUIPMENT

- Foot pedal and hand control accelerator
- Key start/stop system with auxiliary position
- Front and rear electric horn
- Maintenance-free battery 120 Ah
- General purpose front bucket 1,1 m³
- Electro-hydraulic backhoe shifting lock
- Swing transport lock
- Limited slip differential
- ROPS/FOPS cab with heater and fan
- Seat belt
- Tilttable bonnet
- Electro hydraulic slide frame release lock
- Front and rear working lights
- Air cleaner, dry type, radial seal with clogging indicator
- Clothes hook
- Load sensing, variable displacement axial pump
- Front mudguards
- Electronic display showing the following indications in sequence: partial service hours, engine filter, oil motor, fuel filter, air cleaner, transmission filter, brake oil, coolant, hydraulic oil, types of oil, maintenance operations to be performed every 500, 1000 and 2000 hours, language selection (Italian, English, German, French, Spanish, Portuguese), speed (km/h, Mp/h), tyre pressure
- Maintenance and operation alarms
- Other Indicators: fuel level, converter oil pressure/temperature, brake applied, rev. counter, hydraulic oil level and coolant level visual gauges
- Transmission neutral switch
- Revolving light
- Antifreeze -26°C
- Lights for road travel
- Glass-holder
- Prearrangement for the installation of a radio set
- 12V external electric plug
- Adjustable seat
- Internal and external mirror
- Lifting cylinder safety bracket
- Front counterweight
- Front and rear windshield wipers
- Full power shift transmission with electronic control (EGM)
- Lockable internal storage compartment

OPTIONS

- Air conditioning
- LSS (Load Stabilizer System)
- Audible reversing alarm
- Front loader Attachments:
 - 4 in 1 bucket
 - Flip-over forks on 4 in 1 bucket
 - Hydraulic and mechanic rapid coupling
 - Cutting edge fixed under the front bucket teeth
 - Forks (for use with quick hitch)
 - Front blade
- Additional front counterweight
- De-luxe seat with 3" safety belt
- Bolt-on cutting edge
- Prop shaft guard
- BH control patterns
- Auxiliary hydraulic circuits, loader:
 - auxiliary 3rd spool valve with floating function for front attachment
 - front auxiliary hydraulic pipework
- Auxiliary hydraulic lines backhoe
- Hammer pipework
- Hose burst check valves: loader/backhoe
- Telescopic dipper
- Offset boom
- Offset boom with telescopic dipper
- RETURN-TO-DIG (front bucket)
- Attachments backhoe:
 - Quick coupling: Mechanical
 - Range of buckets
 - Hydraulic hammer
- 160Ah, battery
- Radio set - reproducer



This specification sheet may contain attachments and optional equipment that are not available in your area. Please consult your local Komatsu distributor for those items you may require. Materials and specifications are subjected to change without notice.



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