KOMATSU

WB93R-8

EU Stage IV Engine

WB93R

RIGID BACKHOE LOADER

ENGINE POWER
75 kW / 101 HP @ 2.300 rpm

OPERATING WEIGHT
7.590 - 9.500 kg

BUCKET CAPACITY
1,0 m³ (4×1 bucket)

Walk-Around

WB93R-8

ENGINE POWER
75 kW / 101 HP @ 2.300 rpm

OPERATING WEIGHT
7.590 - 9.500 kg

BUCKET CAPACITY
1,0 m³ (4×1 bucket)

INCREASED EFFICIENCY AND ENVIRONMENTAL PERFORMANCE

Powerful and Environmentally Friendly

- EU Stage IV engine
- Up to 3% lower fuel consumption (vs. WB93R-5)
- Viscous fan clutch
- New monitoring system with Eco gauge
- Power and Eco mode improve fuel efficiency

Safety First

- Anti-burst valves for stabilizers, boom and arm (Standard)
- Emergency engine stop switch
- Seat belt caution indicator
- Unrivaled front visibility thanks to lateral exhaust pipe

First-Class Comfort

- Multi-function monitor with high resolution 7” LCD color display
- Air-suspended operator seat (Standard)
- New ergonomic switch layout for the operator console
- Dial type fuel control and electric accelerator pedal
- New styling, state-of-the-art Komatsu design
- Hammer piping (Standard)

Easy Maintenance

- Easy refilling from ground level for hydraulic oil, AdBlue® and fuel
- Maintenance information displayed on the monitor

KOMTRAX

- Komatsu Wireless Monitoring System
- 4G mobile communications

Powerful and Environmentally Friendly

Higher productivity

The Komatsu EU Stage IV compact engine featuring state-of-the-art technology delivers the highest efficiency in a small package. The aftertreatment system combines a Diesel Oxidation Catalyst (DOC) and Selective Catalytic Reduction (SCR). With ultra-low emissions, it provides a lower environmental impact and a superior performance to help reduce operating costs and lets the operator work in complete peace of mind.

Komatsu fuel-saving technology

The core of the Komatsu backhoe loader hydraulics is the Closed Load Sensing System (CLSS). Thanks to its variable flow, and together with the “Power” and “Economy” working modes, the integrated engine management, the viscous fan clutch and the eco gauge, the correct power is supplied to the machine when it is needed, and fuel consumption reduced by up to 3%.

Absolute control

The “Power Shuttle” transmission provides the machine with four forward and four reverse speeds, with synchronised mechanical shifting. The electro-hydraulic differential lock, together with the “Heavy-duty” axles, increases efficiency and the operator’s confidence under any working conditions.

First-Class Comfort

Operator's environment

PPC servo-control is standard for the front loader. The dial type fuel control simplifies operation and engine speed adjustment. Air-suspended operator seat is standard, and switch layout for the operator console has a new ergonomic design.

New multi-function monitor with more information

A high-definition 7" LCD monitor provides excellent visibility. The high-definition LCD panel is less affected by the viewing angle and surrounding brightness, ensuring excellent visibility. Various alerts and machine information are displayed in a simple format. Useful information such as operation records, machine setting and maintenance data are also provided. The operator can easily navigate through screen pages with intuitive side buttons.

Convenient, ergonomic and precise control

Ergonomically designed switches

New 7" multi-function monitor

Maximized Efficiency

Loader

The front loader design ensures optimal parallel lifting; in addition, the divergent shape of the arm greatly improves visibility and provides excellent loading performance. The design of the backhoe features a clean and functional layout, with hydraulic piping and hoses along the boom. PPC servo-control is standard for the front loader.

S-shape backhoe

The rounded shape of the backhoe enhances the loading ability of the machine and its capacity to overcome obstacles, while ensuring a high breakout force. The telescopic arm significantly increases the machine's versatility.

Custom made

Several different configurations make this machine suitable for a wide variety of customers. The many options offer a high level of customisation: hydraulic side shift for the backhoe, LSS (Load Stabilizer System), radial tyres and quick-couplers are just a few.

Safety first

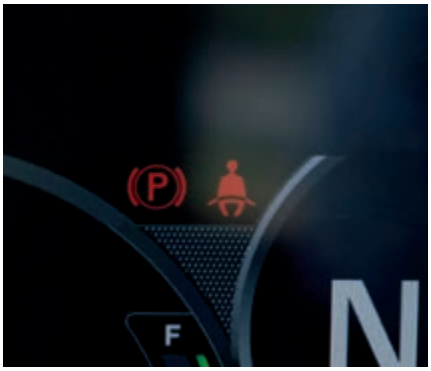
Unrivaled all round view

The wide round glass surface presents a highly increased visibility. The bonnet shape, the lateral exhaust pipe and the upper front window make it easy and safe to work with the front loader. When operating the backhoe excavator, the operator can easily open the single frame window and comfortably overlook the surrounding area.

Optimal jobsite safety

Safety features on the Komatsu WB93R-8 comply with the latest industry standards and work in synergy to minimise risks to people in and around the machine. Anti-burst valves are now included for backhoe operations and on stabilizers. A new “Engine shutdown” secondary switch, reachable from ground level, and a new optical seat belt alarm complete Komatsu’s traditionally safe operator environment.

Secondary engine shut down switch



Seat belt caution

Anti-burst valves for stabilizers, boom and arm (Standard)

Easy Maintenance

Excellent serviceability

Komatsu designed the WB93R-8 with an easy access to all service points. Routine maintenance and servicing are less likely to be skipped, which can mean a reduction of costly downtime later on. The radiator, aftercooler and oil cooler are made of aluminium to improve their efficiency and are mounted in parallel for quicker cleaning.

Flexible warranty

When you purchase Komatsu equipment, you gain access to a broad range of programmes and services that have been designed to help you get the most from your investment. For example, Komatsu's Flexible Warranty Programme provides a range of extended warranty options on the machine and its components. These can be chosen to meet your individual needs and activities. This programme is designed to help reduce total operating costs.

AdBlue®, fuel and hydraulic oil tank are easily accessible on the machine side and refilled by ground level, ensuring a fatigue less operation

Daily maintenance is enhanced thanks to the double position front opening and the check point position easily accessible on the left side

Maintenance information displayed on the monitor

KOMTRAX

The way to higher productivity

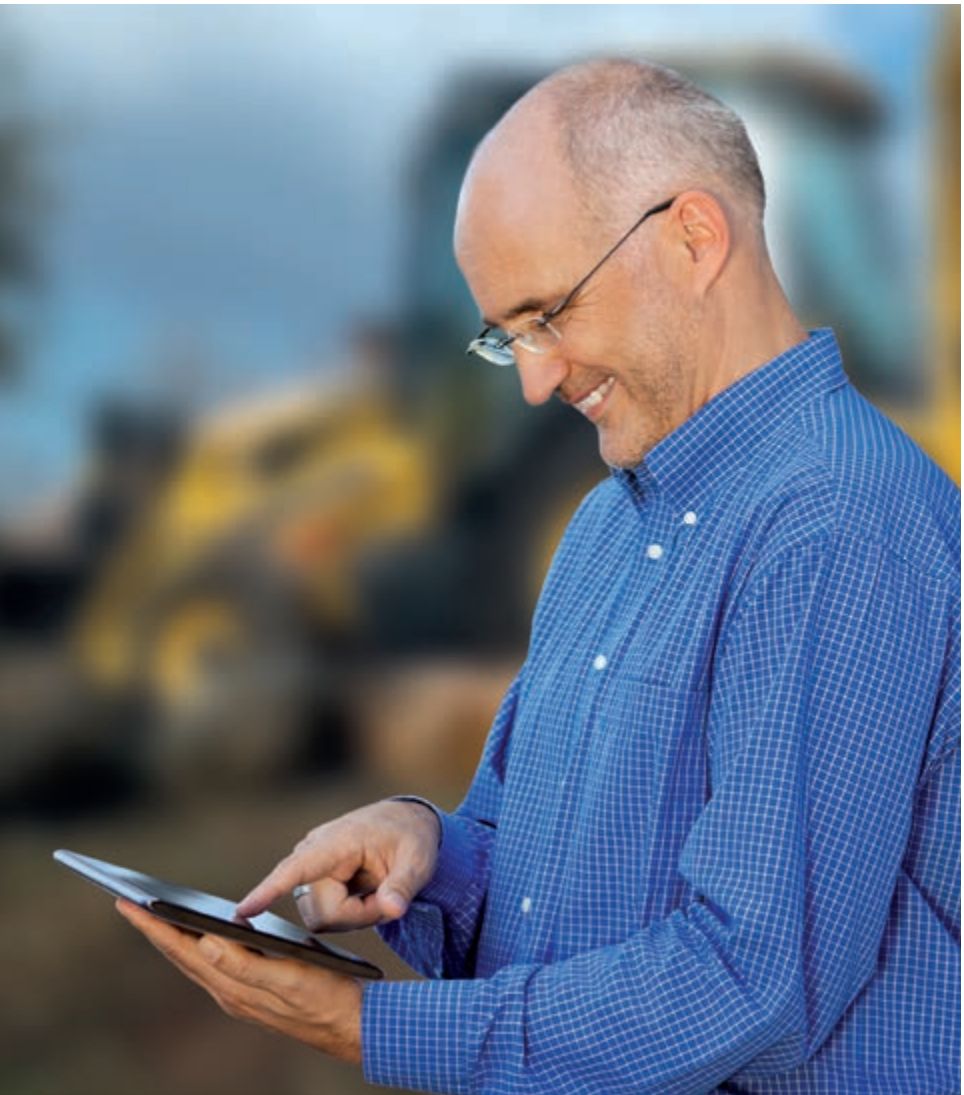
KOMTRAX uses the latest wireless monitoring technology. Compatible on PC, smartphone or tablet, it delivers insightful and cost saving information about your fleet and equipment, and offers a wealth of information to facilitate peak machine performance. By creating a tightly integrated web of support it allows proactive and preventive maintenance and helps to efficiently run a business.

Knowledge

You get quick answers to basic and critical questions about your machines – what they're doing, when they did it, where they're located, how they can be used more efficiently and when they need to be serviced. Performance data is relayed by wireless communication technology (satellite, GPRS or 4G depending on model) from the machine to a computer and to the local Komatsu distributor – who's readily available for expert analysis and feedback.

Power

The detailed information that KOMTRAX puts at your fingertips 24 hours a day, 7 days a week gives the power to make better daily and long-term strategic decisions – at no extra cost. Problems can be anticipated, maintenance schedules customised, downtime minimised and machines kept where they belong: working on the jobsite.



Convenience

KOMTRAX enables convenient fleet management on the web, wherever you are. Data is analysed and packaged specifically for effortless and intuitive viewing in maps, lists, graphs and charts. You can foresee eventual maintenance issues and required spare parts, and troubleshoot a problem before Komatsu technicians arrive on site.

Specifications

WB93R-8

ENGINE

Model	Komatsu SAA4D99E-1
Type	Common rail direct injection, water-cooled, emissionised, turbocharged, after-cooled diesel
Engine power	
at rated engine speed	2.300 rpm
ISO 14396	75 kW / 101 HP
ISO 9249 (net engine power)	68,6 kW / 92,0 HP
Max. torque/engine speed	430 Nm/1.400 rpm
No. of cylinders	4
Bore × stroke	99 × 110 mm
Displacement	3,4 l
Cooling fan	Viscous fan clutch
Air-filter type	Dry type air cleaner with clogging indicator

OPERATING WEIGHT

Standard machine operating weight*	8.130 kg
Change in data caused by:	
Standard bucket	-290 kg
Standard arm	-230 kg
Pallet fork	-310 kg
Fork for 4x1 bucket	+290 kg
Air conditioner	+20 kg
Mech. quick-coupler (loader)	+140 kg
Mech. quick-coupler (backhoe)	+55 kg

* Including 4x1 bucket , telescopic arm, 600 mm backhoe bucket.
Max. permitted total weight 10.000 kg

HYDRAULIC SYSTEM

System	SynchroSystem with Speed-up function for loader arm
Type	CLSS. Closed-centre system with load sensing and pressure compensation valves
No. of working modes	2 (Power / Economy)
Hydraulic pump	Variable displacement axial pistons
Maximum pump flow	165 l/min
Working pressure (max.)	250 bar
Main valve	LIFD “Load Independent Flow Divider” modular type

ENVIRONMENT

Engine emissions	Fully complies with EU Stage IV exhaust emission regulations
Noise levels	Noise levels (external/internal) fully comply with 2000/14/EC Stage 2 and 98/37/EC
Vibration levels (EN 12096:1997)	
Hand/arm	≤ 2,5 m/s² (uncertainty K = 1,2 m/s²)
Body	≤ 0,5 m/s² (uncertainty K = 0,2 m/s²)

STEERING SYSTEM

System	Front steering. Hydrostatic “Load Sensing” system with steering priority valve
Turning radius (without using brakes)	
at bucket edge	5.625 mm
at corner of tyres	4.185 mm
Turning radius (using brakes)	
at bucket edge	4.930 mm
at corner of tyres	3.245 mm

TRANSMISSION

Switching between 4WD and 2WD is obtained through an electro-hydraulic system. The 4 speed mechanical shift is synchronised. The transmission is operated through a torque converter and a power shuttle reversing shift “Power Shuttle” type.

Max. travel speeds (forwards/backwards)	
1. gear	6 km/h
2. gear	10 km/h
3. gear	21 km/h
4. gear	40 km/h

BRAKES

Oil immersed disc brakes are actuated by individual braking on each rear wheel with 2 separate pedals. Total integral braking on the 4 wheels is activated by operating the two pedals at the same time.

Parking brake (safety brake)	Caliper brake operated through a hand lever

CHASSIS AND TYRES

Frame	Reinforced and closed box structure
Axles	Heavy-duty axles
Final drive	Planetary gear in oil bath
Front axle total oscillation angle	20°
100% differential lock in the rear axle	Electro-hydraulic, controlled from the cab
Max. front axle dynamic load rating	9.687 kg
Max. front axle static load rating	24.218 kg
Max. rear axle dynamic load rating	7.648 kg
Max. rear axle static load rating	19.120 kg
Front tyres (standard)	12.5/80-18-14 PR
Rear tyres (standard)	16.9-28-12 PR

SERVICE REFILL CAPACITIES

Engine oil	8 l
Cooling system	12 l
Fuel tank	135 l
Hydraulic oil tank	41,5 l
Hydraulic system	110 l
Axle front	11,8 l
Axle rear	11,8 l
Brake system	0,8 l
AdBlue® tank	13,5 l

LOADER

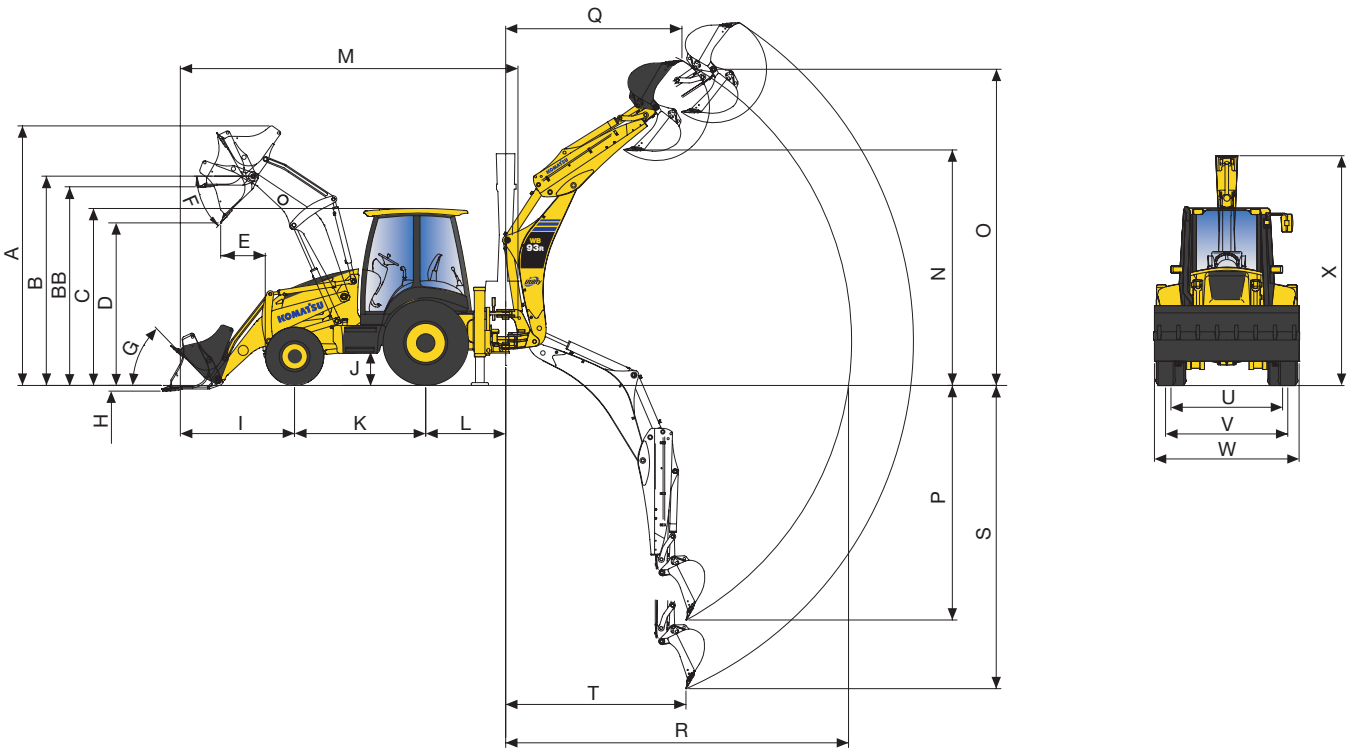
System	Loader arm with parallel movement
Standard bucket width	2.320 mm
Standard bucket capacity	1,03 m³ (ISO 7546)
Standard bucket weight	430 kg
Lifting capacity	
at maximum height	3.825 daN (3.900 kg)
at ground level (ISO 14397)	5.200 daN (5.300 kg)
Breakout force (ISO 14397)	6.375 daN (6.500 kg)
4×1 bucket width	2.340 mm
4×1 bucket capacity	1,0 m³ (ISO 7546)

BACKHOE

System	Reinforced structure, casted swing support and arm ends
Boom swing angle	180°
Bucket digging force (ISO 6015)	5.985 daN (6.100 kg)
Arm crowd force (ISO 6015)	3.925 daN (4.000 kg)
Outriggers	Vertical outriggers with adjustable wear device

CABIN

Two-door cab in conformity with ISO 3471 with ROPS (roll over protective structure) in conformity with SAE J1040c and FOPS (falling object protective structure) in conformity with ISO 3449



A	Max. height	4.335 mm
B	Pin height	3.430 mm
BB	Forks loading max height	3.180 mm
C	Cab height	2.900 mm
D	Max. dumping height	2.580 mm
E	Max. dumping reach (45°)	725 mm
F	Dumping angle	45°
G	Rollback angle	45°
H	Digging depth (only for 18" front tyres)	180 mm
I	Bucket reach (in transport)	2.190 mm
J	Ground clearance	385 mm
K	Wheel base	2.175 mm
L	Backhoe swing centre distance	1.320 mm
M	Transport length	5.990 mm
N	Dumping height SAE	3.720 mm
	Max. dumping height	4.170 mm
	- with extended telescopic SAE	4.550 mm
	- with extended telescopic max	4.890 mm

O	Max. digging height	5.790 mm
	- with extended telescopic	6.415 mm
P	Digging depth SAE	4.260 mm
	- with extended telescopic	5.370 mm
Q	Reach at max height	2.795 mm
	- with extended telescopic	3.815 mm
R	Max. reach from swing centre	5.755 mm
	- with extended telescopic	6.770 mm
S	Max. digging depth	4.980 mm
	- with telescopic	6.020 mm
T	Digging reach	1.970 mm
	- with telescopic	1.840 mm
U	Rear tread	1.800 mm
V	Front tread	1.910 mm
W	Overall width (with bucket)	2.340 mm
X	Transport hoe height	3.750 mm
	- with telescopic	3.820 mm

When used in object handling operations, the backhoe portion must be equipped with hose burst valves (boom, arm and overload warning device) in compliance with EN474-4 and must operate in accordance with the related local regulations.

Standard and Optional Equipment

WB93R-8

ENGINE

Komatsu SAA4D99E-1 water-cooled, 4-cycle direct injection diesel engine	●
EU Stage IV compliant	●
Dry type air cleaner with clogging indicator	●
Fuel control dial	●
Alternator 12 V / 120 A	●
Starter motor 12 V / 4,2 kW	●
Battery 12 V / 110 Ah	●
Air pre-cleaner, cyclone type	○

HYDRAULIC SYSTEM

2-working mode selection system; power mode, economy mode and Speed-up function for loader	●
PPC control lever for loader arm and bucket, with switches for Speed-up, front attachment control, transmission declutch control, differential locking	●
Hydraulic line for hammer till the arm end	●

SERVICE AND MAINTENANCE

Multi-function video compatible colour monitor with Equipment Management and Monitoring System (EMMS) and efficiency guidance	●
Battery main switch	●
KOMTRAX – Komatsu wireless monitoring system (4G)	●

CHASSIS AND TYRES

Front tyres 12.5/80-18-14 PR	●
Rear tyres 16.9-28-12 PR	●
Front tyres 365/70-R18	○
Front tyres 340/80-R18	○
Front tyres 400/70-20	○
Rear tyres 480/80-26	○
Rear tyres 440/80-R28	○
Front mudguards	○

LIGHTING SYSTEM

Working lights on cab (2 front/2 rear)	●
LED working lights on cab (2 front/2 rear)	○

CABIN

ROPS (ISO 3471:2008, SAEJ/ISO3471) and FOPS (ISO 3449), two doors, fully opening rear window, front and rear window wipers, cup holder, sun visor	●
Adjustable suspension seat with seat belt	●
Monitor panel 7" colour display	●
12 Volt power supply	●
Beverage holder and magazine rack	●
Internal storage compartments (one lockable)	●
Adjustable steering column	●
Air conditioning	○
Radio	○

SAFETY EQUIPMENT

Travel acoustic alarm	●
Electric horn	●
Rear-view mirrors (left and right side, right rear)	●
Hose burst valves on boom/arm cylinders, and stabilizers	●
Overload warning device	●
Emergency engine stop switch	●
Seat belt caution indicator	●
Rotating beacon	●
Hose burst valves on loader arm cylinders	○

TRANSMISSION

Power Shuttle transmission with 4 synchronised gears	●
Electro-hydraulic 100% differential lock	●
Drive shaft guard	○

OTHER EQUIPMENT

Standard colour scheme and decals	●
Parts book and operator manual	●
Hydraulic hand hammer circuit	○
Additional front counterweights (170 kg, 370 kg)	○
Rubber pads for stabilisers	○
Biodegradable hydraulic oil	○
TÜV + TBG version (20 km/h or 40 km/h)	○
Special waxing	○

BACKHOE EQUIPMENT

Mechanical control levers	●
Electro-hydraulic backhoe boom lock	●
Backhoe swing transport lock	●
Electro-hydraulic backhoe slide frame release lock	●
PPC servo-controls for stabilisers	●
Hydraulic cushions	●
PPC servo-controls (Backhoe equipment)	○
Hydraulic backhoe side shift	○
Telescopic arm	○

LOADER EQUIPMENT

PPC servo-controls	●
Speed-up function	●
Heavy-duty safety bar	●
Self-levelling	●
LSS (Load Stabiliser System)	○
Safety valve deactivation switch	○

BACKHOE ATTACHMENTS

Bucket range (300 - 800 mm)	○
Ditch cleaning bucket (1.400 mm)	○
Bucket linkage with lifting hook	○

LOADER ATTACHMENTS

General purpose bucket w. teeth (1,03 m³)	○
4×1 bucket with pre-setting for flip-over forks and angle opening indicator (1,00 m³)	○
Heavy-duty 4×1 bucket (1,00 m³)	○
Bolt-on cutting edge	○
Cutting edge on teeth	○
Flip-over forks on 4×1 bucket	○
Forks (for quick-coupler)	○
Mechanical quick-coupler	○
Angle dozer blade (for quick-coupler)	○

The WB93R-8 is equipped in accordance with the safety regulations of the machinery guidelines 89/392 EWG ff and EN474.

● standard equipment
○ optional equipment

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