



EPA Tier 4 Final Engine

Australia & New Zealand Specifications

HYDRAULIC EXCAVATOR

KOMATSU

HORSEPOWER

Gross: 50.7 kW 68.0 HP / 1950 min-1 Net: 48.8 kW 65.5 HP / 1950 min-1

OPERATING WEIGHT

7,960 kg

HOMATSU

BUCKET CAPACITY 0.095 - 0.28 m³



WALK-AROUND

Introducing the environmentally friendly next generation compact hydraulic excavator.

Compliant with EPA Tier 4 Final emissions regulations.

ECOLOGY & ECONOMY

- EPA Tier 4 Final emission regulations compliant engine
- 5% reduction in fuel consumption (compared to Komatsu's previous models)
- Selectable 6 working modes
 NEW
- Low Noise Design

SAFETY

- Suitable for Narrow working conditions with a Short Swing
- Cab protection design compliant with (ISO 3471) and OPG 2 top guard (ISO 10262) standards
- Lock lever and lock lever auto lock function

WORKABILITY

- · Increased precision and efficiency with the offset boom
- Increase of 3% for efficiency through work mode
- Max Drawbar Pull increased by 2%

INFORMATION & COMMUNICATION TECHNOLOGY (ICT)

- Multi function monitor for displaying information
- High resolution 3.5" Liquid Crystal Display (LCD) colour monitor
- KOMTRAX Level 5

0B-000829d



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ECOLOGY & ECONOMY

ENVIRONMENT-FRIENDLY ENGINE

The Komatsu SAA4D95LE-6 engine is EPA Tier 4 Final and EU Stage 3B emissions certified and provides exceptional performance while reducing fuel consumption. Based on Komatsu proprietary technologies developed over many years, this new diesel engine reduces exhaust gas particulate matter (PM) by more than 90% and nitrogen oxides (NOx) by more than 15% when compared to Tier 4 Interim levels. Through the in-house development and production of engines, electronics, and hydraulic components, Komatsu has achieved great advancements in technology, providing high levels of performance and efficiency in virtually all applications.



The PC78UU-10 uses a Closed-centre Load Sensing System (CLSS) that improves fuel efficiency and provides quick response to the operator's demands.

The PC78UU-10 also introduces new technology to enhance the engine and hydraulic pump control. This total control system matches the engine and hydraulics at the most efficient point under any load condition. There have also been improvements in the main valve and hydraulic circuit to reduce hydraulic loss, resulting in higher efficiency and lower fuel consumption.



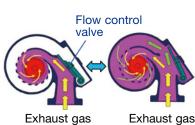
vs PC88MR-8

Based on typical work pattern collected via KOMTRAX. The fuel consumption reduction may be less than the above value during actual work, depending on the contents of the work.

Komatsu's New Engine Technology Includes Variable Flow Turbocharger (VFT)

A newly designed variable flow turbocharger features simple and reliable technology that varies the intake airflow. Exhaust turbine wheel speed is controlled by flow control valve and it enables to deliver optimum air quantity to the engine combustion chamber under all

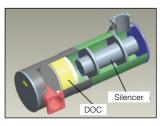
speed and load conditions. The result is cleaner exhaust gas while maintaining power and performance.



Komatsu Diesel Oxidation Catalyst (KDOC)

Komatsu has designed and developed a simple and high efficiency diesel oxidation catalyst. This system enables to eliminate the need of the PM regeneration and to

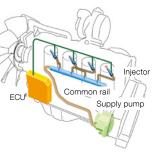
simplify the engine control system. High performance exhaust noise silencer is also integrated and it contributes the engine noise reduction.



Heavy Duty High Pressure Common Rail (HPCR) Fuel Injection System

Computer controlled heavy duty HPCR system delivers a precise quantity of pressurised fuel into the engine combustion chamber using multiple injections to achieve complete fuel burn and reduce exhaust emissions. Fuel

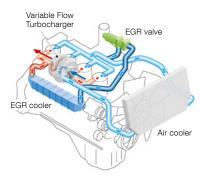
injector reliability has been improved through the use of ultra-hard wear resistant materials such as diamond-like carbon.



Cooled Exhaust Gas Recirculation (EGR)

Cooled EGR, a technology well-proven in existing Komatsu engines, reduces NOx emissions. These components ensure reliable performance during the

demanding work conditions of construction equipment.



Redesigned Combustion Chamber

The combustion chamber located at the top of the engine piston has a new shape designed to improve combustion and further reduce NOx, PM, fuel consumption, and noise levels.

Komatsu Closed Crankcase Ventilation (KCCV)

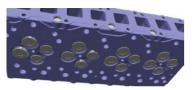
Crankcase emissions (blowby gas) are passed through a CCV filter. The CCV filter traps oil mist which is returned back to the crankcase while the gas, which is almost oil mist free, is fed back to the air intake.



Newly Designed 16 Valve Cylinder Head

Komatsu has designed and developed a new 16 valve cylinder head. It enables to reduce exhaust emissions by

maximised air intake quantity and optimised fuel combustion.



Electronically Controlled Common Rail Type Engine

- Multi-staged injection
- Low Noise Design
- Optimal arrangement of sound absorbing materials
- Partition between the cab and engine room
- Airtight valve room



SHORT SWING RADIUS

ULTRA SHORT SWING SUPERIOR IN SAFETY AND NARROW WORKABILITY

PC78UU – 10 design uses a Tight Tail concept for both ends. This enables the machine to rotate fast, easy and confident. There is less to worry about in tight space conditions because there is little protrusion from either the tail end of the front end.

230mm

tracks (back)

200mm

amount of protrusion from tracks (front)



amount of protrusion from tracks (back)



amount of protrusion from



Locking Lever

Engine can only be started in the unlocked position.



Locking Lever automatic lock function

When the operator unintentionally releases the lock lever with the operating lever or pedal activated, caution is displayed on the monitor and the motion of the car body is locked.



ID Key to reduce machine theft risk

It is not possible to start the engine without the ID key. The ID key is built into the IC chip as the start key,

where you can only start the machine after inputting the ID key. If the registered ID key was stolen or lost, you can erase the ID key.

	KOMATSU	
104-102		

Potentiometer

Prevents damage to sensor parts such as interference prevention system.



Offset Potentiometer

Built in working machine hydraulic hose

Guard the hydraulic hose from touching obstacles.



ROPS CAB STRUCTURE

ROPS CAB PROTECTION

Equipped with a ROPS cab for driver protection structure if the hydraulic excavator falls. It has high impact absorption capability, outstanding durability and impact resistance. For falling objects, it complies with OPG Top Guard level 2 and head guard standard of industrial safety and health laws.

Rear monitoring system

The rear area can be clearly seen on the high definition LCD monitor



Other safety equipment

Secondary engine stop switch

In preparation for an emergency, an engine stop switch was equipped at the bottom of the seat



 Set belt Caution indicator

Lights up when seat belt is not fastened.



- Retractable seat belt
 Emergency escape hammer
- Reinforced tempered glass



- Mirror for view of left rear area
 Travel alarm
- Travel alarmThermal Guard



Fan Guard



 Oil Scattering prevention cover





WORKABILITY

OFFSET BOOM

OFFSET BOOM TO INCREASE THE ACCURACY AND EFFICIENCY OF SIDE EXCAVATION WORK

Equipped with an offset boom with maximum boom range of 1050mm on both sides. Now it is possible to accurately and efficiently perform the side excavation work in narrow areas and walls together with the rear ultra-small turning.

Outside Track Excavation with 600mm Bucket

Left side **410**mm

Right side **120**mm

Powerful & Smooth Work

With the evolved total peak control, we realised an increase in work while suppressing fuel consumption.

Workload

Increased by 3%

Vs PC78UU-8 Based on typical work pattern collected via KOMTRAX.

Excellent Driving Performance

Refined the strong traction that is popular with PC78UU, the maximum towing power has been further increased by 2%. With high hill climbing ability and steering performance, it demonstrates excellent driving performance.

Maximum traction



Vs PC78UU-8 Based on typical work pattern collected via KOMTRAX.

Equipped with a swing return prevention valve

A swivel motor with a swinging return restraining valve with smooth turning stop as standard build. It is easy to position the working machine and it helps prevent the load of the bucket from spilling out.

UU's unique advanced system

Height limiter

Right Maximum boom offset

1050mm

An adjustable boom height limiter can be set prior to operation.

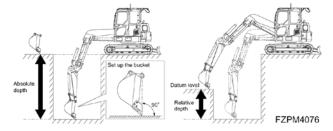


Digital depth display

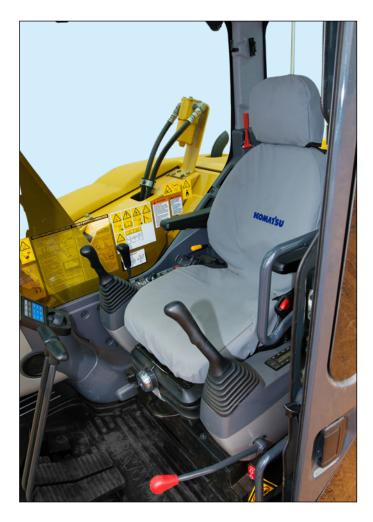
Ditching, trenching, or digging is even more efficient with this automatic depth measurement system

Left Maximum boom offset

1050mm



COMFORT



Large Cab

Large cab provides ample operation space. The cab has a wide doorway for easy access.



Sliding Convex Door

The sliding convex door facilitates easy entrance and exit in confined areas.



Auxiliary Input (MP3 Jack)

By connecting an auxiliary device such as an MP3 player to the auxiliary input, the operator can hear the sound through the speakers installed in the cab.



2 X 12 V Power Outlets

The converter is increased in capacity and two power supply sockets are installed to supply electric power for various use.



Low Cab Noise

Cab is highly rigid and has excellent sound absorption ability. Thorough improvement of noise source reduction and use of low noise engine, hydraulic equipment, and air conditioner allows this machine to generate a low level of noise.

Automatic Air Conditioner

The automatic air conditioner allows the operator to easily and precisely set the cab temperature using the large LCD color monitor panel. The bi-level control function improves air flow and keeps the inside of the cab comfortable throughout the year.

INFORMATION & COMMUNICATION TECHNOLOGY



Supports Efficiency Improvement

The main screen displays recommendations for better energy-saving operations as needed. The operator can use the ECO guidance menu to check the operation records, ECO guidance records, average fuel consumption logs, etc.



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ECO guidance

ECO guidance menu **Operator Identification Function**

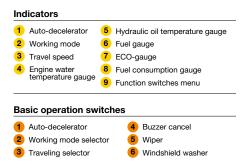
An operator identification ID can be set for each operator, and used to manage operation information of individual

machines as KOMTRAX data. Data sent from KOMTRAX can be used to analyse operation status by operator as well as by machine.

Opera	itor ID Input
	Ba 1 2 3 4 5 6 7
	Input operator ID.

Large Multi-lingual High Resolution **LCD Monitor**

A large user-friendly high resolution LCD colour monitor enables safe, accurate and smooth work. Visibility and resolution are further improved compared with current 7-inch large TFT LCD. Simple and easy to operate switches. Function keys facilitate multi-function operations. Displays information and datas in 25 languages to globally support operators around the world.



Equipment Management Monitoring System (EMMS)

Monitor Function

Controller monitors engine oil level, coolant temperature,

battery charge air clogging, etc. If the controller detects an abnormality, it is displayed on the LCD.



Maintenance Function

The monitor displays replacement time of oil and filters on the LCD when the replacement interval is reached.

Trouble Data Memory Function

Monitor stores abnormalities for effective troubleshooting.



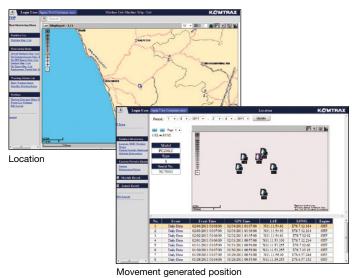
KOMTRAX

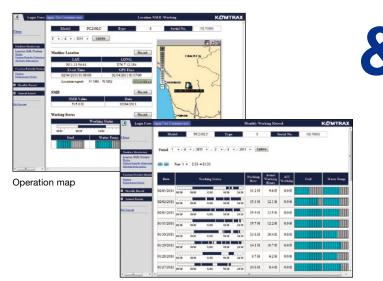
KØMTRAX

Assists Customer's Equipment Management and Contributes to Fuel Cost Cutting

Equipment Management Support

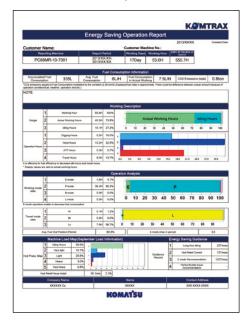
KOMTRAX terminal installed on your machine collects and sends information such as machine location, working record, machine conditions, etc. using wireless communication. You can review the KOMTRAX data remotely via the online application. KOMTRAX not only gives you the power of knowledge on your machine, but also the convenience of managing your fleet on the web.





Energy-saving Operation Support Report

KOMTRAX can provide various useful information which includes the energy-saving operation support report created based on the operating information of your machine such as fuel consumption and idle time.

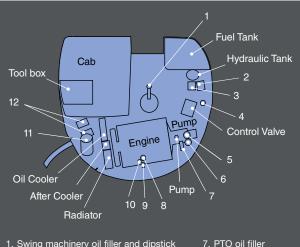


Monthly status summary

MAINTENANCE FEATURES

Optimum Maintenance Layout

With the engine hood, right side hood and side service doors, it is possible to access the major maintenance points from ground level. Furthermore, the fuel drain valve, engine oil filter and swing machinery oil filler are remote mounted, facilitating easy maintenance.



- 1. Swing machinery oil filler and dipstick
- 2. Windshield washer tank
- 3. Coolant reserve tank
- 4. Fuel drain valve
- Engine oil filter
- 6. Fuel prefilter (with water separator)

Easy Access to Engine Oil Filter, Engine Main **Fuel Filter and Fuel Drain Valve**

Engine oil filter, engine main fuel filter and fuel drain valve are remote mounted to improve accessibility.

Equipped with the Fuel Prefilter (with Water Separator)

Removes water and contaminants in the fuel to prevent fuel problems. (with built-in priming pump)



Engine oil filter

Engine oil filter

10. Fuel main filter

Air cleaner

12. Batteries

Engine oil dipstick

Fuel filter



Fuel prefilter with water separator



Fuel drain valve

Fan Belt Auto-tensioner

You can service the fan belt easily.



Battery isolation switch

A standard battery isolation switch allows a technician to disconnect the power supply and lock out before servicing the machine.



Air Conditioner Filter

The air conditioner filter is removed and installed without the use of tools facilitating filter maintenance.



External air conditioner filter

Side-by-side Cooling

Since radiator, aftercooler and oil cooler are arranged in parallel, it is easy to clean, remove and install them. Radiator, aftercooler, and oil cooler made of aluminium have high cooling efficiency and are easily recycled.

Washable Floor

The PC78UU-10's floor is easy to keep clean. The gently inclined surface has a flanged floor mat and drainage holes to facilitate run off.





Large Tool Box

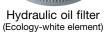
Large tool box provides plenty of space. Grease pump storage space is also provided.



Long Life Oils, Filters

High performance filters are used in the hydraulic circuit and engine. By increasing the oil and filter replacement intervals, maintenance costs can be significantly reduced.

Engine oil & Engine oil filter	every 500 hours	
Hydraulic oil	every 5000 hours	Manual Contraction
Hydraulic oil filter	every 1000 hours	Munning





SPECIFICATIONS

Model	
Туре	Water-cooled, 4-cycle, direct injection
Aspiration	. Turbocharged, aftercooled, cooled EGR
Number of cylinders	
Bore	
Stroke	
Piston displacement	
Horsepower:	
	Queen EO 7 LIN (CO OLID) / 1000 min 1

*EPA Tier 4 and EU Stage 3B emissions certified

WDRAULICS

TypeHydrauMind (Hydraulic Mechanical Intelligence New Design) system, closed-center system with load-sensing valves and pressure-compensated valves

Main pump:

 Type
 Variable displacement, axial piston

 Maximum flow
 160 ltr/min 42.3 U.S. gal/min

 Type (for machine with blade)
 Fixed displacement gear

 Maximum flow
 63 ltr/min 16.6 U.S. gal/min

Hydraulic motors:

Travel......2 x piston motor with parking brake Swing1 x piston motor with swing holding brake

Relief valve setting:

Travel circuit	26.5 MPa 270 kgf/cm ² 3,840 ps 26.5 MPa 270 kgf/cm ² 3,840 ps 20.6 MPa 210 kgf/cm ² 2,990 ps
Blade circuit (Raise)	12.7 MPa 130 kgf/cm² 1,850 ps 21.1 MPa 215 kgf/cm² 3,060 ps

Hydraulic cylinders:

(Number of cylinders - bore x stroke x rod diameter)

Boom	1–120 mm x 1015 mm x 70 mm 4.7" x 40.0" x 2.8"
Arm	1-110 mm x 715 mm x 65 mm 4.3" x 28.1" x 2.6"
Bucket	1–90 mm x 710 mm x 55 mm 3.5" x 28.0" x 2.2"
Boom offs	et1-110 mm x 350 mm x 55 mm 4.3" x 13.8" x 2.2"
Blade	

DRIVES AND BRAKES

Steering control		Two lever with pedals
Drive method		Hydrostatic
Maximum drawbar pull	66.9 kl	N 6820 kgf 15,050 lbf
Maximum travel speed (a	auto shift):	
ŀ	High	5.0 km/h 3.1 mph
L	_OW	2.9 km/h 1.8 mph
Service brake		Hydraulic lock
Parking brake		Mechanical disc

SWING SYSTEM

Driven by	Hydraulic motor
Swing reduction	Planetary gear
Swing circle lubrication	Grease-bathed
Swing lock	Mechanical disc brake
Swing speed	

0

Centre frame	X-frame
Track frame	Box-section
Seal of track	Sealed track
Track adjuster	Hydraulic
Number of shoes (each side)	
Number of carrier rollers (each side)	1
Number of track rollers (each side)	5

COOLANT & LUBRICANT CAPACITY

Fuel tank	125 Itr 30 U.S. gal
Radiator	10 ltr 2.6 U.S. gal
Engine	11.5 (11.0) Itr 3.0 (2.9) U.S. gal
Final drive, each side	1.1 Itr 0.3 U.S. gal
Swing drive	2.0 Itr 0.5 U.S. gal
Hydraulic tank	. 102 (56) Itr 26.9 (14.8) U.S. gal



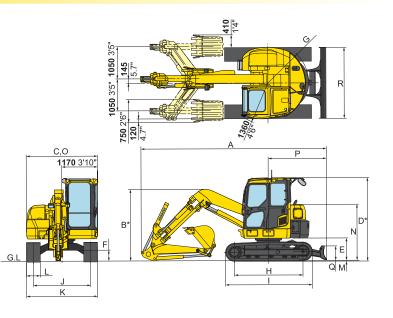
Operating weight includes **3749 mm** 12'4" offset boom, **1720 mm** 5'8" arm, SAE heaped **0.28 m³** 0.37 yd³ backhoe bucket, blade, rated capacity of lubricants, coolant, full fuel tank, operator, and standard equipment.

Shoes Width	Operating Weight	Ground Pressure
450mm 17.7"	7,960kg 17,550lb	34.3kPa 0.35kg/cm² 4.98psi



DIMENSIONS

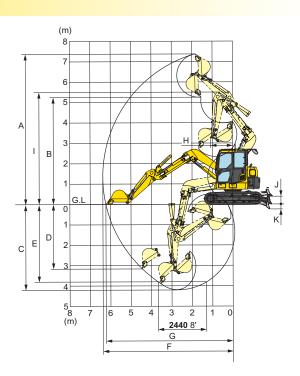
	Boom Length	3749 mm	12'4"
	Arm Length	1720 mm	5'8"
Α	Overall length	6060 mm	19'11"
В	Overall height (to top of boom)*	2325 mm	8'1"
C	Overall width	2330 mm	7'8"
D	Overall height (to top of cab)*	2730 mm	2'5"
Е	Ground clearance, counterweight	735 mm	2'5"
F	Ground clearance, minimum	360 mm	1'2"
G	Tail swing radius	1340 mm	4'5"
Η	Track length on ground	2235 mm	7'4"
Т	Track length	2840 mm	9'4"
J	Track gauge	1870 mm	6'2"
K	Width of crawler	2320 mm	7'7"
L	Shoe width	450 mm	17'7"
М	Grouser height	20 mm	0'8"
Ν	Machine cab height	1835 mm	6'0"
0	Machine cab width	2330 mm	7'8"
Р	Distance swing centre to rear end	1915 mm	6'3"
Q	Blade height	470 mm	1'7"
R	Blade width	2320 mm	7'7"
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*: including grouser height

WORKING RANGE

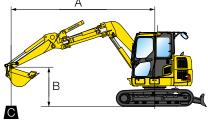
	Boom Length	3749 mm	12'4"	
	Arm Length	1720 mm	5'8"	
Α	Maximum digging height	7330 mm	24'1"	
В	Maximum dumping height	5260 mm	17'3"	
C	Maximum digging depth	4230 mm	13'10"	
D	Maximum vertical wall digging depth	3190 mm	10'6"	
Ε	Maximum digging depth of cut for 2440 mm 8' level	3795 mm	12'5"	
F	Maximum digging reach	6400 mm	21'0"	
G	Maximum digging reach at ground	6240 mm	20'6"	
Н	Minimum swing radius	1200 mm	3'11"	
I	Maximum height of min. swing radius	5460 mm 17'11'		
J	Maximum lift above ground (blade)	380 mm	1'3"	
К	Maximum drop below ground (blade)	245 mm	9'6"	
ISO	Bucket digging force Arm crowd force	61.3 kN 6250 kgf 13,780 lbf 38.8 kN 3960 kgf 8,730 lbf		



BACKHOE BUCKET AND ARM COMBINATION

Bucket Capacity (heaped)		Width		Wainki	Number of Teeth	Arm Length
AE, PCSA	CECE	Without Side Cutters	With Side Cutters	Weight	Number of Teeth	1720 mm 5'8"
0.09 m³ 0.12 yd³	0.08 m³ 0.10 yd³	350 mm 14"	450 mm 18"	145 kg 320 lb	3	0
0.12 m³ 0.16 yd ³	0.11 m³ 0.14 yd ³	450 mm 18"	550 mm 22"	160 kg 355 lb	3	0
0.20 m ³ 0.26 yd ³	0.18 m³ 0.24 yd³	550 mm 22"	650 mm 26"	185 kg 410 lb	3	0
0.28 m³ 0.37 yd ³	0.25 m³ 0.33 yd ³	650 mm 26"	750 mm 30"	210 kg 465 lb	4	0

LIFT CAPACITIES



A: Reach from swing centre

- B: Bucket hook height
- C: Lifting capacity
- Cf: Rating over front
- Cs: Rating over side
- €: Rating at maximum reach

- CONDITION:
- Bucket: 0.28 m³ 0.37 yd³ SAE heaped
- Arm length: 1720 mm 5'8"
- Shoe width: 450 mm 17'7" triple grouser
- Blade above ground

A A	🔁 MAX		4.5 m		3.0 m		1.5 m	
В	Cf	Cs	Cf	Cs	Cf	Cs	Cf	Cs
5.0 m	*1610	1590			*2440	*2440		
3.0 m	1090	880	1450	1180	*3020	2470	*5220	*5220
0.0 m	900	710	1190	940	2320	1780		
-2.0 m	1240	970	1180	930	2310	1770	*4220	*4220

CONDITION:

- Bucket: 0.28 m³ 0.37 yd³ SAE heaped
- Arm length: 1720 mm 5'8"
- Shoe width: 450 mm 17'7" triple grouser
- Blade on ground

								Unit: kg
A	A 🛛 名 MAX		4.5 m		3.0 m		1.5 m	
B	Cf	Cs	Cf	Cs	Cf	Cs	Cf	Cs
5.0 m	*1610	1590			*2440	*2440		
3.0 m	*1580	880	*2270	1180	*3020	2470	*5220	*5220
0.0 m	*2090	710	*2570	940	*4040	1780		
-2.0 m	*1970	970	*1780	930	*3090	1770	*4220	*4220

*Load is limited by hydraulic capacity rather than tipping. Ratings are based on SAE Standard No. J1097. Rated loads do not exceed 87% of hydraulic lift capacity or 75% of tipping load.

STANDARD EQUIPMENT

- Air cleaner, double element with auto dust evacuator Alternator, 35 Ampere, 24 V
- Arm
- **1720mm** 5'8" arm assembly
- Automatic air conditioner
- Auto deceleration
- Batteries, 55 Ah/2 x 12 V
- Blade.
- 2320mm 7'7" blade assembly

OPTIONAL EQUIPMENT

- Boom.
 - 3749mm 12'4" boom assembly Bolt-on top guard,
 - [Operator Protective Guards level 2] Cab which includes: floor mat, intermittent front
 - windshield wiper and washer, large ceiling window, sunshade, pull-up front window, removable lower windshield
 - Cooling fan, suction type
 - Counterweight, 800 kg
 - KOMTRAX

Monitor panel

Rear view mirrors (left side rear, rear)

Unit: kg

Printed in Australia

- Rear view monitoring system
- Seat belt 78mm 3"
- Shoes.
- 450mm 17'7" Triple grouser
- Starting motor 4.5 kW
- Suspension seat
- Travel alarm
- Working lights
- 2 on boom

- 12 V electric plug
- Heavy counterweight, 1150 kg
- Hydraulic control unit 1 additional actuator

 Shoes. 450mm 17'7" Road Liner

www.Komatsu.com.au

