HORSEPOWER

Gross: 110 kW 148 HP / 2000 min -1 Net: 104 kW 139 HP / 2000 min -1

OPERATING WEIGHT HB205-1M0: 20200 - 20830 kg HB215LC-1M0: 21220 - 21850 kg

HYDRAULIC EXCAVATOR

KOMATSU[®]

HB205-1M0 HB215LC-1M0



HYBRID SYSTEM

- N ----

The Leading-edge Machine of the New Generation of Hydraulic Excavators, Focus both on Environmental Concerns and Practical Performance

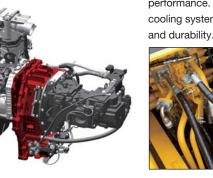
Most components including those of the hybrid system are developed and manufactured by Komatsu. They are compact in design and feature excellent reliability and durability.

Reliable and Durable Hybrid Components Developed and Manufactured by Komatsu

Generator/motor

VONATSU

The generator/motor is positioned between the engine and hydraulic pump for effective power transmission to the hydraulic pump. The generator sometimes produces electric power and charges the capacitor during the period when the engine is idling.

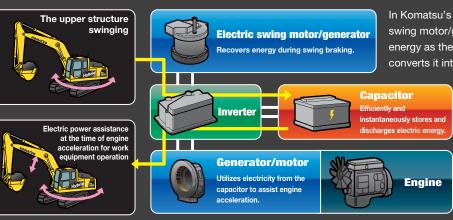


Inverter and Capacitor

The inverter and the capacitor have high reliability with the dedicated cooling system. The capacitor can charge or discharge more quickly than the battery hybrid system, bacause it doesn't require any chemical reactions that take some lag generating the electric current, while the battery requires. The quickness is the advantage for matching the frequent change of the engine speed of construction equipment. The invertor and the capacitor also have the advantage of long life, which require no maintainance because of its little degration.



KOMATSU HYBRID SYSTEM



Easy-to-understand Hybrid Operation Monitor Screen

Energy Management Screen

The operation status of the hybrid system is displayed on the screen as energy flows, which include capacitor charging/discharging and engine assist by the generator/motor.



Hybrid System Temperature Gauge

The hybrid system temperature gauge is displayed on the screen. This allows the operator to understand the severity of the load on the hybrid system at a glance.



Strengthened **Revolving Frame**

The revolving frame is reinforced to protect the hybrid components from impact.



In Komatsu's unique hybrid system, the electric swing motor/generator captures and regenerates energy as the upper structure slows down and converts it into electric energy. The regenerated

energy is stored in the capacitor and used by the generator/motor to assist the engine when it needs to accelerate. Thus, the hybrid system reduces fuel consumption significantly. Most components of the system are developed and manufactured by Komatsu.

*: Except capacitor cells

Electric Swing Motor/generator

The electric swing motor/generator is installed. This recovers the energy during swing braking. The motor/generator accelerates the swing of the upper structure more efficiently than the conventional hydraulic motor and provides excellent swing performance. The dedicated lubrication and

cooling systems are employed for reliability





WORKABILITY & ECOLOGY

Komatsu's Next Generation Technologies that Enabled the Hydraulic Excavator to Satisfy both Environment-friendliness and High Working Performance.

HB205/215LC-1M0 realizes 22%* reduction in fuel consumption while keeping a high level of performance and consumes less fuel even than HB205/215LC-1

Low Emission Engine

Komatsu SAA4D107E-1-A engine is EPA Tier 3 and EU Stage 3A emissions equivalent, without sacrificing power or machine productivity.



*: Compared with PC200-8M0 at P mode and 100% working efficiency. Fuel consumption varies depending on job conditions.

Low Operation Noise

Enables low noise operation using the low-noise engine and methods to cut noise at source.

Fuel-saving Technology

The technology of Engine and Pump control HB205/215LC-1M0 introduces the technology of Engine and Hydraulic Pump control, providing further fuel savings with suffcient oil flow at lower Engine speed.

TOTAL VEHICLE CONTROL & HYBRID SYSTEM

In addition to the engine, hydraulic components, main valve and electronic components that control them, the hybrid system components such as the generator/motor, swing electric motor/generator, inverter and capacitor are also developed and manufactured by Komatsu. They are neatly arranged on the machine. Controlling the inverter enables the optimum operation of the generator/motor,

electric swing motor/generator and engine according to the work at hand, allowing the machine to demonstrate its potential fully while reducing fuel consumption significantly. The machine monitor displays the bar chart that indicates the average fuel consumption in the previous 5 minutes. The ECO-gauge shows the work load to assist the operator to perform energy-saving operations. Hybrid HB205/215LC-1M0 reduceds CO2 emissions making them environmentally-friendly machines.



Compared with PC200-8M0 at P mode and 100% working efficiency Fuel consumption varies depending on job condit

motor / generator



Δ

Assistance for Energy-saving Operation for Reduced CO₂ Emissions

Work Mode Selectable

Selectable two work modes - P mode for large production and E mode for fuel-saving, it depends on your priority. **P mode** – Power or production priority mode has improved fuel consumption, while maintaining maximum production. **E mode** – Economy or fuel priority mode reduces fuel consumption, but maintains the P mode-like work equipment speed for light duty

work. You can select Power or Economy modes using a one-touch operation on the monitor panel depending on work loads.







KOMTRAX Report for Supporting Energy-saving Operation

The report includes actual operating hours, hydraulic stall hours, etc of the machine, which are extracted from the KOMTRAX information. Customers can get the report and use it for energy-saving operation.

Idling Caution

To prevent unnecessary fuel consumption, an idling caution is displayed on the monitor, if the engine idles for 5 minutes or more.

Fuel Consumption Monitor and ECO-gauge

The bar chart displayed at the center of the screen shows the average fuel consumption in previous 5 minutes to promote energy-saving operation. The screen can be switched to past average fuel consumption log screens for 12 hours and one week .

The ECO-gauge appears on the right of the screen. Operating the



SAFETY & COMFORT

Comfortable and Relaxing Operating Environment for the Operator

The silent and spacious ROPS cab and various safety features allow the operator to operate the machine comfortably and efficiently.



Standard Equipment









Cigar lighte





















One-touch storable front window lower glass

Retractable Seat Belt Emergency Escape Hammer

Safety Design

Lock Lever

in LOCK position.

Reinforced and Tinted Window Glass

The lever makes all hydraulic controls in the cab inoperable. The neutral start function allows the engine to start with this lever only

Large Side-view, Rear, and Sidewise Mirrors Enlarged left-side mirror and addition of rear and side mirror allow the HB205/215LC-1M0 to meet the new ISO visibility requirements.



Side View Mirror

- Rear View Monitoring System (optional)
- Thermal and Fan Guards **Pump/engine Room Partition** Large Handrail
- Large Step
- **Travel Alarm**



The machine is equipped with a ROPS cab that conforms to ISO 12117-2 for excavators as standard equipment. The ROPS cab has high shock-absorption performance, featuring excellent durability and impact strength. It also satisfies the requirements of ISO OPG top guard level 1 for falling objects. Combined with the retractable seat belt, The ROPS cab protects the operator in case of tipping over and against falling objects.



Comfortable Cab for Reduced Operator Fatigue

Low Noise Level similar to that of a modern automobile

Cab Damper Mounts Significantly reduces vibration at operator seat.

1

Pressurized Cab

Auto air conditioner, air filter and a higher internal air pressure prevent external dust from entering the cab.











Wide Cab

Wide and spacious cab provides ample leg room, allowing an operator with a large body frame to take the appropriate operational posture. Reclining it further allows it to be placed into fully flat state with the headrest attached. The operator seat can be reclined, and the adjustment is up to fully flat position with the headrest attached.



Full-automatic Air Conditioner, with fresh air in take



ICT & KOMTRAX

The up-to-date ICT Makes the KOMTRAX System Easy-to-use, Convenient, and Worthy of Your Confidence

KOMTRAX with advanced ICT assists the operator in operating the machine and the administrator in managing their machines and reducing fuel cost.

Large Multi-lingual High Resolutional LCD Monitor

A large user-friendly high resolution LCD color 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 data in 13 languages to globally support operators around the world.

TFT : Thin Film Transistor LCD : Liquid Crystal Display



Indicators

1 Auto-decelerator	6 Hybrid system temperature gauge
2 Working mode	7 Fuel gauge
3 Travel speed	8 ECO-gauge
 Engine coolant temperature gauge 	 Average fuel consumption monitor
5 Hydraulic oil temperature gauge	10 Function switches menu

Basic operation switches

1 Auto-decelerator	4 Buzzer cancel
2 Working mode selector	5 Wiper
3 Traveling selector	6 Windshield washer

Operator Assistance Function for Effective and Efficient Operation

Fuel Consumption and Energy Flow Screens

The operator can check information of recent fuel consumption rates and the energy flow among engine and hybrid components on the machine monitor at any time.



Rear View Monitoring System that Conforms to ISO Standard (optional)

The machine is equipped with a rear view camera, allowing the operator to see the blind spot behind the machine on the large LCD





Password Protection for Engine Start (Immobilizer) The engine cannot be started unless the registered password is entered correctly.



KOMTRAX Message

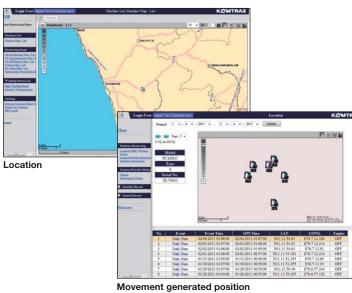
KOMTRAX communication function allows you to get and read messages from your Komatsu dealer on the machine monitor.

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 informations on your machine, but also the convenience of managing your fleet on the Web.



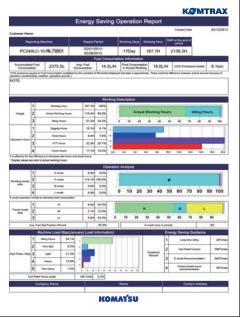


Monthly status summary



CONSTRAX

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.





(e.g. PC240LC-10)

MAINTENANCE

Simplified Check and Maintenance Work for Keeping the Machine at its Best

Excellent Maintainability for Reduced Check and Maintenance Time

Side-by-side Cooling

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



Toolbox The toolbox is installed currently with the step.

Air Conditioner Filter The air conditioner filter is removed and installed without the use of tools facilitating filter maintenance



Equipped with the Engine Eco-drain Valve as Standard.



Large Capacity Fuel Tank of 400 Liters with Rustproof Treatment

Sloping Track Frame for Reduced Accumulation of Dirt and Sand and Easy Removal

Washable Cab Floor Mat

Gas Assisted Engine Hood Damper Cylinders



Accurate and Prompt Diagnosis Thanks to EMMS

EMMS (Equipment Management Monitoring System

Monitor Function any abnormality, it is displayed on the LCD.

Maintenance Function Monitor informs replacement time of oil and filters on LCD when the replacement interval is reached.

Trouble Data Memory Function Monitor stores abnormalities for effective troubleshooting.

Equipped with the Fuel Pre-filter (with Water Separator) Removes water and contaminants in the fuel to prevent fuel problems. (with built-in priming pump)

A DANGER Keep off swing area

15 117



KOMATSU

.

- Charles

111 117

10

BHOLE

EMMS

Controller monitors engine oil level, coolant temperature, battery charge and air clogging, etc. If controller finds





High Efficiency Fuel Filter

Fuel system reliability is even better with high efficiency fuel filter.



Easy Access to Engine Oil Filter and Fuel Drain Valve







Long-life Oil, Filter

Uses high-performance filtering materials and long-life oil. Extends the oil and filter replacement interval.

Engine oil & Engine oil filter	every 500 hours
Hydraulic oil	every 5000 hours
Hydraulic oil filter	every 1000 hours

Work Equipment Greasing Interval; Every 500 Hours

SPECIFICATIONS



Model Komatsu SAA4D107E-1-A Type..... Water-cooled, 4-cycle, direct injection Aspiration Turbocharged, aftercooled Number of cylinders4 Piston displacement4.46 L Horsepower:

SAE J1995 Gross 110 kW (148 HP) / 2000 min⁻¹ ISO 9249 / SAE J1349 Net 104 kW (139 HP) / 2000 min⁻¹ Fan drive method for radiator cooling Mechanical Governor All-speed control, electronic

EPA Tier 3 and EU Stage 3A emissions equivalent.



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

Number of selectable working modes5 Main pump:

Туре	Variable displacement piston type
Pumps for	Boom, arm, bucket and travel circuits
Maximum flow	439 L / min
Supply for control	circuit Self-reducing valve
Hydraulic motors:	
Traval	0 v avial pietan matara with parking brake

Travel2 x axial piston motors with parking brake Relief valve setting:

Implement circuits	37.3 MPa 380 kg/cm ²
Travel circuit	37.3 MPa 380 kg/cm ²
Pilot circuit	3.2 MPa 33 kg/cm ²
Hydraulic cylinders:	

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

Boom	2–120 mm x 1334 mm x 85 mm
Arm	1–135 mm x 1490 mm x 95 mm
Bucket for 2.41 m arm	1–115 mm x 1120 mm x 80 mm
for 2.93 m arm	1–115 mm x 1120 mm x 80 mm



Steering control	
Drive method	Hydrostatic
Maximum drawbar pull .	178 kN 18200 kg
Gradeability	
Maximum travel speed:	High5.5 km/h
(Auto-Shift)	Mid
(Auto-Shift)	Low3.0 km/h
Service brake	Hydraulic lock
Parking brake	Mechanical disc brake

SWING SYSTEM

Drive method	Electric drive
Swing reduction	Planetary gear
Swing circle lubrication	Grease-bathed
Service brake	Electric brake
Holding brake/Swing lock	. Mechanical disc brake
Swing speed	12.4 min ⁻¹

UNDERCARRIAGE

Center frame X-frame
Frack frame Box-section
Seal of trackSealed track
Frack adjuster Hydraulic
Number of shoes (each side)
HB205-1M0
HB215LC-1M0
Number of carrier rollers 2 each side
Number of track rollers (each side)
HB205-1M07
HB215LC-1M09



uel tank	400 L
Coolant (Engine)	17.3 L
(Hybrid)	.5.5 L
inal drive, each side	.3.3 L
wing drive	.7.1 L
wing motor	.1.6 L
enerator motor	.6.0 L
lydraulic tank	135 L

OPERATING WEIGHT (APPROXIMATE)

Operating weight including 5700 mm one-piece boom, 2925 mm arm, SAE heaped 0.80 m³ backhoe bucket, rated capacity of lubricants, coolant, full fuel tank and standard equipment.

	HB205-1M0		HB215LC-1M0	
Shoes	Operating Weight	Ground Pressure	Operating Weight	Ground Pressure
600 mm	20200 kg	46.3 kPa 0.47 kg/cm ²	21220 kg	44.0 kPa 0.45 kg/cm ²
700 mm	20580 kg	40.4 kPa 0.41 kg/cm ²	21600 kg	38.3 kPa 0.39 kg/cm ²
800 mm	20830 kg	35.8 kPa 0.37 kg/cm ²	21850 kg	33.9 kPa 0.35 kg/cm ²



	Arm Length	2925 mm
A	Overall length	9425 mm
Length on ground (transport) : HB205-1M0		4815 mm
P	: HB215LC-1M0	5000 mm
C	Overall height (to top of boom)*	2970 mm

		HB205-1M0	HB215LC-1M0		
D	Overall width	2800 mm	3080 mm		
E	Overall height (to top of cab)*	3040 mm	3040 mm		
F	Ground clearance, counterweight	1085 mm	1085 mm		
G	Ground clearance (minimum)	440 mm	440 mm		
н	Tail swing radius	2750 mm	2750 mm		
Т	Track length on ground	3275 mm	3655 mm		
J	Track length	4070 mm	4450 mm		
K	Track gauge	2200 mm	2380 mm		
L	Width of crawler	2800 mm	3080 mm		
М	Shoe width	600 mm	700 mm		
Ν	Grouser height	26 mm	26 mm		
0	Machine cab height	2095 mm	2095 mm		
Р	Machine cab width	2710 mm	2710 mm		
Q	Distance, swing center to rear end	2710 mm	2710 mm		

* : Including grouser height

WORKING RANGE

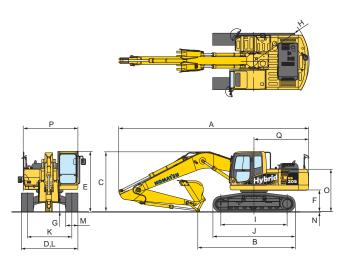
	Arm Length	2925 mm
Α	Max. digging height	10000 mm
В	Max. dumping height	7110 mm
C	Max. digging depth	6620 mm
D	Max. vertical wall digging depth	5980 mm
Ε	Max. digging depth of cut for 2400 mm level	6370 mm
F	Max. digging reach	9875 mm
G	Max. digging reach at ground level	9700 mm
H	Min. swing radius	3040 mm
SAE rating	Bucket digging force at power max.	132 kN 13500 kg
SAEr	Arm crowd force at power max.	103 kN 10500 kg
ISO rating	Bucket digging force at power max.	149 kN 15200 kg
ISO L	Arm crowd force at power max.	108 kN 11000 kg

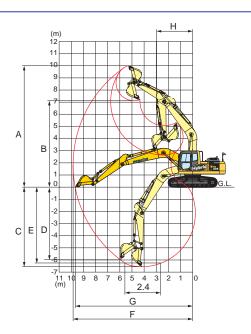


Bucket Capa	city (heaped)	Wi	dth	Weight	Number of	Arm Length	
SAE, PCSA	CECE	Without Side Cutters With Side Cutters		With Side Cutters	Teeth	2925 mm	
0.80 m ³	0.70 m ³	1045 mm	1170 mm	635 kg	5	0	
0.93 m ³	0.80 m ³	1200 mm	1325 mm	696 kg	5	•	
1.05 m ³	0.90 m ³	1330 mm	1455 mm	757 kg	6	•	

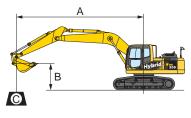
○ : General purpose use, density up to 1.8 t/m³ ● : Light duty work, density up to 1.2 t/m³

HB205/HB215LC-1M0





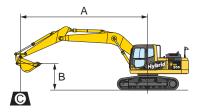
LIFTING CAPACITY WITH LIFTING MODE



- A: Reach from swing centerB: Bucket hook height
- C: Lifting capacity
- Cf: Rating over front
- Cs: Rating over side
- ⊕ : Rating at maximum reach
- Conditions :
 - 5700 mm one-piece boom
 - 0.8m³ SAE heaped bucket
 - Shoe width :
 - -HB205-1M0 600 mm triple grouser

HB205-1	MO Arm	n: 2925 mm	Bucket: 0.8 i	Bucket: 0.8 m ³ SAE heaped Shoe: 600 mm triple grouser								
A	€ MAX		7.5 m		6.0 m		4.5 m		3.0 m		1.5 m	
В	Cf	Cs	Cf	Cs	Cf	Cs	Cf	Cs	Cf	Cs	Cf	Cs
7.5 m	*2900 kg	*2900 kg			*4050 kg	*4050 kg						
6.0 m	*2750 kg	2600 kg	*3100 kg	2600 kg	*4250 kg	4100 kg						
4.5 m	*2750 kg	2150 kg	4000 kg	2550 kg	*4850 kg	3900 kg	*5500 kg	*5500 kg				
3.0 m	*2900 kg	1900 kg	3850 kg	2450 kg	5650 kg	3650 kg	*7700 kg	5850 kg	*11600 kg	11450 kg		
1.5 m	2950 kg	1800 kg	3700 kg	2300 kg	5400 kg	3400 kg	8700 kg	5300 kg	*6800 kg	*6800 kg		
0 m	3000 kg	1800 kg	3600 kg	2200 kg	5150 kg	3200 kg	8300 kg	4950 kg	*5150 kg	*5150 kg		
-1.5 m	3300 kg	2000 kg	3550 kg	2150 kg	5050 kg	3050 kg	8100 kg	4850 kg	*9300 kg	*9300 kg	*5150 kg	*5150 kg
-3.0 m	3950 kg	2400 kg			5050 kg	3100 kg	8200 kg	4900 kg	*14800 kg	9850 kg	*9700 kg	*9700 kg
-4.5 m	5700 kg	3500 kg					8400 kg	5100 kg	*12950 kg	10200 kg		

*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.



- A: Reach from swing centerB: Bucket hook heightC: Lifting capacityCf: Rating over frontCs: Rating over side
- et al a stating even side
 et al a stating even side
 et al a stating even side
 et al a stating even side
- Conditions : • 5700 mm one-piece boom
- 0.8m³ SAE heaped bucket
- 0.8m³ SAE n
 Shoe width :
 - -HB215LC-1M0 700 mm triple grouser

HB215L0	C-1MO Arm	: 2925 mm	Bucket: 0.8 m ³ SAE heaped Shoe: 700 mm triple grouser									
A	A 😧 MAX		7.5 m		6.0 m		4.5 m		3.0 m		1.5 m	
В	Cf	Cs	Cf	Cs	Cf	Cs	Cf	Cs	Cf	Cs	Cf	Cs
7.5 m	*2900 kg	*2900 kg			*4050 kg	*4050 kg						
6.0 m	*2750 kg	*2750 kg	*3100 kg	3050 kg	*4250 kg	*4250 kg						
4.5 m	*2750 kg	2550 kg	*4600 kg	3000 kg	*4850 kg	4500 kg	*5500 kg	*5500 kg				
3.0 m	*2900 kg	2250 kg	4800 kg	2850 kg	*5900 kg	4200 kg	*7700 kg	6800 kg	*11600 kg	*11600 kg		
1.5 m	*3200 kg	2150 kg	4600 kg	2750 kg	6700 kg	3950 kg	*9800 kg	6250 kg	*6800 kg	*6800 kg		
0 m	*3700 kg	2200 kg	4500 kg	2600 kg	6500 kg	3750 kg	10550 kg	5850 kg	*5150 kg	*5150 kg		
–1.5 m	4150 kg	2400 kg	4450 kg	2550 kg	6350 kg	3650 kg	10400 kg	5750 kg	*9300 kg	*9300 kg	*5150 kg	*5150 kg
–3.0 m	4950 kg	2900 kg			6350 kg	3650 kg	*10400 kg	5800 kg	*14800 kg	11800 kg	*9700 kg	*9700 kg
-4.5 m	*6700 kg	4100 kg					*9100 kg	6000 kg	*12950 kg	*12000 kg		

*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

ENGINE

- Automatic engine warm-up system
- Dry type air cleaner, double element
- Engine, Komatsu SAA4D107E-1-A
- Engine overheat prevention system
- Radiator and oil cooler dust proof net
- Suction fan

ELECTRICAL SYSTEM

- Auto-decel
- Alternator, 24 V/60 A
- Batteries, 2 × 12 V/110 Ah
- Starting motor, 24 V/4.5 kW
- Working light, 2 (boom and RH)

HYDRAULIC SYSTEM

- Boom holding valve
- PPC hydraulic control system
- Power maximizing system
- Working mode selection system

GUARDS AND COVERS

- Fan guard structure
- Track guiding guard, center section



ENGINE

- Additional filter system for poor-quality fuel
- Large capacity fuel pre-filter



ELECTRICAL SYSTEM

- Alternator, 24 V/35 A
- Batteries, large capacity
- Convator, 12 V
- Starting motor 24 V/5.5 kW
- Working lights
- -2 on cab
- -1 on counterweight

HB205/HB215LC-1M0

UNDERCARRIAGE

- Hydraulic track adjusters (each side)
- Track roller
 HB205-1M0 7 each side
 HB215LC-1M0 9 each side
- Track shoe
- -HB205-1M0 600 mm triple grouser -HB215LC-1M0 700 mm triple grouser

OPERATOR ENVIRONMENT

- Air conditioner defroster
- Multi-function color monitor
- Rear view mirrors (RH,LH,sidewise)
- ROPS cab (ISO 12117-2)

OTHER EQUIPMENT

- Counterweight
- Electric horn
- EMMS monitoring system
- KOMTRAX
- Rear reflector
- Slip-resistant plates
- Travel alarm

HYDRAULIC SYSTEM

- Long lubricating intervals for work equipment bushing (500 h)
- Service valve

UNDERCARRIAGE

Shoes, triple grouser

 HB205-1M0 700 mm, 800 mm
 HB215LC-1M0 600 mm, 800 mm

OPERATOR ENVIRONMENT

- Bolt-on top guard (Operator Protective Guards level 2 (OPG))
- Cab accessories
 —Rain visor
- -Sun visor
- Cab front guard —Full height guard —Half height guard
- Rear view monitoring system
- Seat, suspension
- Seat belt, retractable

WORK EQUIPMENT

- Arms
- -2925 mm arm assembly

Printed in Japan 201304 IP.As

www.Komatsu.com



Materials and specifications are subject to change without notice. **KOMATSU**° is a trademark of Komatsu Ltd. Japan.

CEN00529-00