

ZAXIS-5G series
Forestry Excavator

HITACHI

Reliable solutions

ZAXIS 110MF

Southeast Asia

Forester



HYDRAULIC EXCAVATOR

Model Code : ZX110MF-5G
Engine Rated Power : 63 kW (84.5 HP)
Operating Weight : 14,100 - 15,500 kg
Backhoe Bucket (ISO Heaped) : 0.45 m³



The Forester ZX110MF-5G Built for Harsh Forestry Work.

HITACHI introducing ZX110MF-5G, the power warrior successor to our tested and proven successful ZX110MF. The new ZAXIS-5G takes everything that the ZX110MF is renowned for and pushes it several steps further, offering you unprecedented durability, quality, fuel efficiency and impressive cooling system that is purpose built for the harshness of forestry work.

For Indonesia

The forester ZX110MF-5G, built on years of operating experience in Indonesia, offers high productivity and durability what customers expect most on tough forestry job sites.

By HITACHI

The ZX110MF-5G, designed and built on Hitachi original technologies and manufacturing prowess, to allow for productive, reliable forestry work.



- 2.26m reinforced arm for forestry
- Reinforced forestry boom
- Exclusive cab guards (optional)
- Exclusive body guards (optional)
- Durable, reliable engine
- Skidding bar (optional)
- Side bumper
- Exclusive reinforced undercarriage (Idler bracket, upper roller, 4 track guard, track links)
- Robust fix grapple (optional)

960 mm single high grouser shoes (optional)

Performance

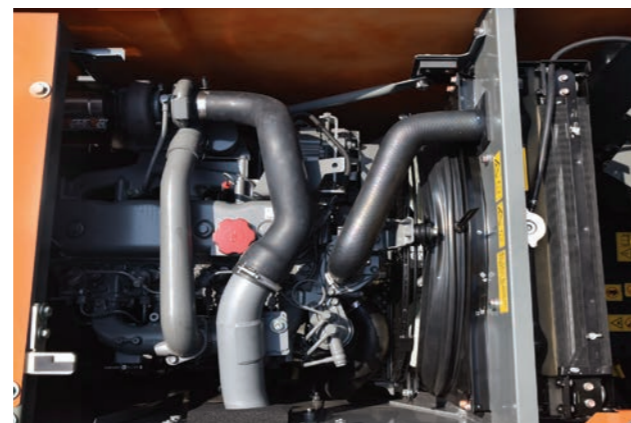
Long Reach Front

Max. working Reach (with fix grapple) 7 780 mm



Durable Non-Common Rail Type Engine

ZX110MF-5G comes with an impressive, durable non-common Rail Type Engine which is inherited from previous models, and recognized for it.



Up To 25% In Fuel Consumption Savings

Increase productivity by 6% while saving up to 11% fuel on PWR mode. Our ECO mode advances fuel efficiency further to a staggering 25%.

25%

*Eco Mode Fuel Saving

11%

*PWR Mode Fuel Saving

Swift Front Movements with HIOS* III Hydraulics

Rapid Arm Roll-in

20%

*Increase Arm Roll-in Speed

Rapid Arm roll-in speed increased by 20%, thanks to the *HIOS III hydraulic system developed by industry-leading hydraulic technologies and a wealth of experience. Actuators work quickly by boom weight, without needing a regenerative circuit and pressure oil.

*Human & Intelligent Operation System

* % comparison vs conventional ZX110MF

Robust Forestry Undercarriage

The forestry undercarriage is rugged enough to move about in woods and deliver plenty of traction force. A low ground pressure also helps increase high mobility. The forestry undercarriage is high and wide: Ample ground clearance and wide track gauge reduce striking against obstacles such as stumps and stumps.



* from ground to reinforce undercover

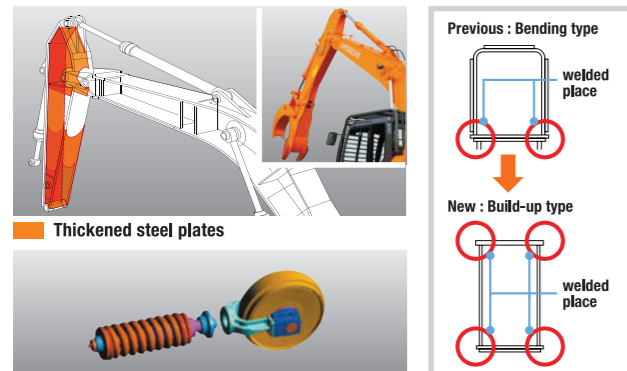


Durability

Durability is demonstrated via several important features.

Strengthened Front

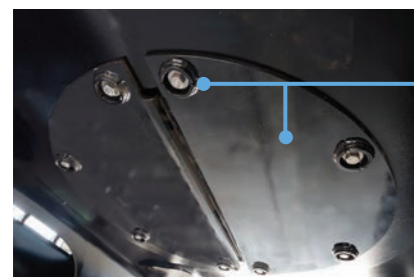
Succeeded feature from ZX110MF, the forestry boom is strengthened with thicker plates than a standard boom and by additional welding. Furthermore the reinforced arm is also strengthened with thickened plates and build-up welding.



Idler track spring and adjuster cylinder

Reinforced Track Under Cover

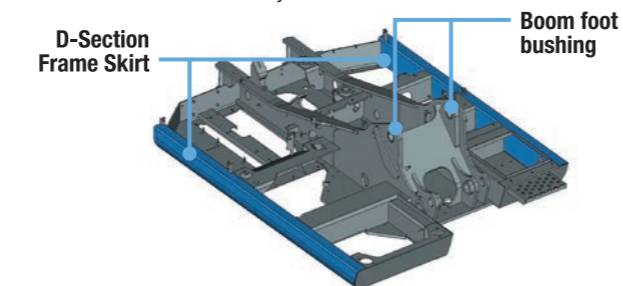
Strengthened and increased plate thickness of track under cover are additionally reinforced by bars and bolt guards to protect the hydraulic equipment as well as to drastically reduce deformation by external force.



Thicker plate with rib reinforcement bars and bolt guards

Strengthened Upperstructure Frame

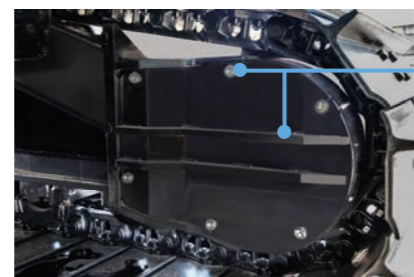
A D-section skirt is implemented with durable frame to increase rigidity against damage by obstacles, and with the projection aspect ratio enlarged by 43%, the frame strength is improved. Boom foot bushing installed in the brackets at the boom foot (frame side) for improving on durability.



* % comparison vs conventional ZX110MF

Strengthened Travel Motor Cover

Strengthened travel motor cover which offers increased protection to the machine. The travel motor cover is made from a combination of overlap type cover, plates of increased thickness, and thicker rib reinforcement bars.



Thicker plate with rib reinforcement bars

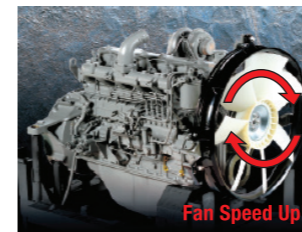
Maintenance

Improved Heat Balance

15%
*Larger Opening Space

In-built high speed engine fan with improved fan pulley ratio remarkably increases airflow volume. Enhancements in engine cover design includes a 15% larger opening space in the side cover allowing better airflow and suction, resulting in a greatly improved cooling performance.

* % comparison vs conventional ZX110MF

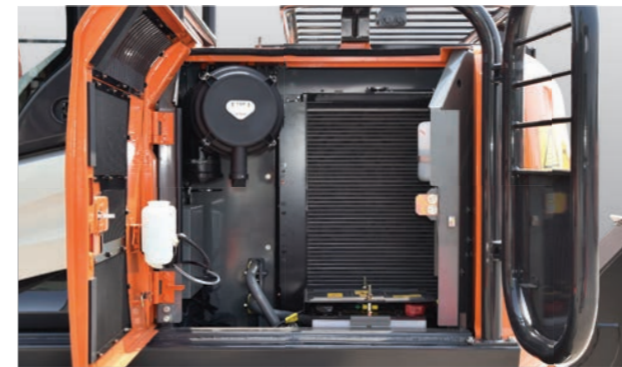


Suction Area



Sustainable Dust-Proof Performance

Robust EPDM sponge is chosen as door cover sealing material. Having excellent antiweatherability, over a protracted period of time, reducing the clogging of oil cooler and radiator.



Exclusive Guards for Forestry Cab and Body

Forestry Cab Guard (Optional)

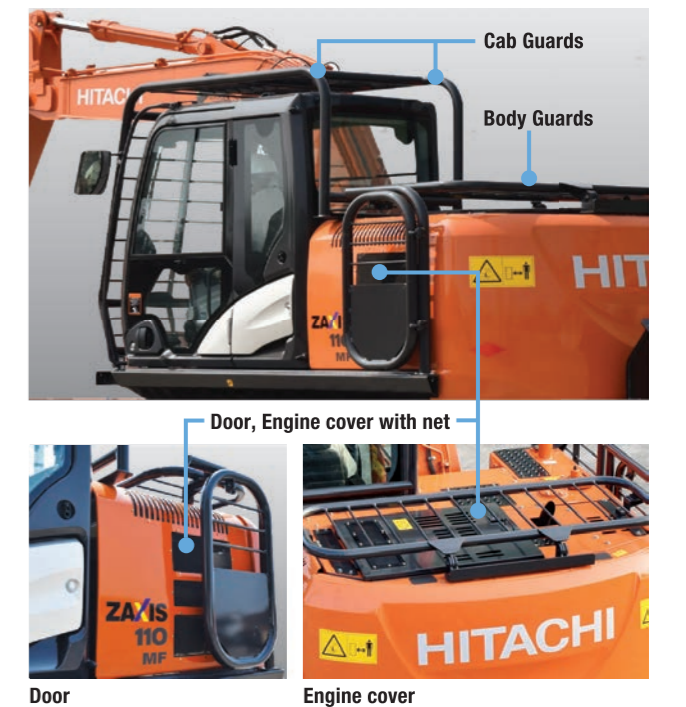
The forestry cab is protected with a cab guard at front, top and rear for surrounding obstacles. The guard at the top can be opened for emergency evacuation.

Body Guards (Optional)

The body is protected with body guards on the top and both sides. The top guard serves to protect the engine; and side body guards to protect the radiator and hydraulic pumps.

Dust Prevention Nets

The engine and radiator compartments are provided with dust-prevention nets to keep clean inside, reducing the entry of airborne debris and dust.



Door

Engine cover

Crank Type Skidding Bar (Optional)

60%
*Increase Towing Hook

A significant improvement in design maintains high minimum ground clearance height, bringing about a substantial reduction of interference from stumps and large rocks. Improved durability with a 60% increase in towing hook, while employing mount only pins instead of the conventional pins and bolts facilitate greater ease of attaching and removal of the Skidding Bar.

* % comparison vs conventional ZX110MF



Skidding Bar in logging operations

SPECIFICATIONS

ENGINE

Model	Isuzu BB-4BG1T
Type	4-cycle water-cooled, direct injection
Aspiration	Turbocharged
No. of cylinders	4
Rated power	
ISO 9249, net	63 kW (84.5 HP) at 2 150 min ⁻¹ (rpm)
SAE J1349, net	63 kW (84.5 HP) at 2 150 min ⁻¹ (rpm)
Maximum torque	340 N·m (35 kgf·m) at 1 600 min ⁻¹ (rpm)
Piston displacement	4.329 L
Bore and stroke	105 mm X 125 mm
Batteries	2 x 12 V / 55 Ah

HYDRAULIC SYSTEM

Hydraulic Pumps

Main pumps	2 variable displacement axial piston pumps
Maximum oil flow	2 x 100 L/min
Pilot pump	1 gear pump
Maximum oil flow	33 L/min

Hydraulic Motors

Travel	2 variable displacement axial piston motors
Swing	1 axial piston motor

Relief Valve Settings

Implement circuit	34.3 MPa (350 kgf/cm ²)
Swing circuit	31.4 MPa (320 kgf/cm ²)
Travel circuit	34.3 MPa (350 kgf/cm ²)
Pilot circuit	4.0 MPa (41 kgf/cm ²)
Power boost	36.3 MPa (370 kgf/cm ²)

Hydraulic Cylinders

	Quantity	Bore	Rod diameter
Boom	2	95 mm	70 mm
Arm	1	105 mm	75 mm
Bucket	1	95 mm	65 mm

UPPERSTRUCTURE

Revolving Frame

D-section skill for resistance to deformation.

Swing Devise

Swash plate piston motor with planetary reduction gear is bathed in oil. Swing circle is single-row. Swing parking brake is spring-set/hydraulic-released disc type.

Swing speed	12.8 min ⁻¹ (rpm)
Swing torque	31.0 kNm (3 160 kgfm)

Operator's Cab

Independent spacious cab, 1 005 mm wide by 1 675 mm high, conforming to ISO* Standards.

* International Organization for Standardization

UNDERCARRIAGE

Tracks

Heat-treated connecting pins with dirt seals. Hydraulic (grease) track adjusters with shock-absorbing recoil springs.

Numbers of Rollers and Shoes on Each Side

Upper rollers	2
Lower rollers	6
Track shoes	42
Track guards	4

Traction Device

Each track driven by 2-speed axial piston motor. Parking brake is spring-set/hydraulic-released disc type. Automatic transmission system: High-Low.

Travel speeds	High : 0 to 4.2 km/h
	Low : 0 to 2.4 km/h

Maximum traction force .. 130 kN (13 300 kgf)

Gradeability 70% (35 degree) continuous

SERVICE REFILL CAPACITIES

Fuel tank	280.0 L
Engine coolant	19.0 L
Engine oil	15.8 L
Swing device	3.2 L
Travel device (each side)	4.0 L
Hydraulic system	170.0 L
Hydraulic oil tank	70.0 L

WEIGHTS AND GROUND PRESSURE

Equipped with 4.27 m boom, 2.26 m arm and 0.45 m³ bucket (ISO heaped), 1 650 kg counterweight.

Shoe type	Shoe width	kg	kPa(kgf/cm ²)
Triple grouser	800 mm	14 100	26 (0.27)
Single high grouser	960 mm	14 600	23 (0.23)

WEIGHT: BASIC MACHINE and COMPONENTS

Basic Machine Weight

Weights of the basic machines [including 1 650 kg counterweight and triple grouser shoes, excluding front-end attachment, fuel, hydraulic oil, engine oil and coolant etc.] are:

Shoe width	Weight
Triple grouser 800 mm	11 500 kg
Single high grouser 960 mm	12 100 kg

Component weights

	Weight
Counterweight	1 650 kg
4.27 m boom (with arm cylinder)	870 kg
2.26 m arm (with bracket for fix grapple, bucket cylinder)	640 kg
Fix grapple	650 kg
0.50 m ³ bucket	400 kg

BUCKET AND ARM DIGGING FORCES

Arm length	2.26 m
Bucket digging force ISO	95 kN (9 700 kgf)
Bucket digging force SAE : PCSA	83 kN (8 500 kgf)
Arm crowd force ISO	57 kN (5 800 kgf)
Arm crowd force SAE : PCSA	54 kN (5 500 kgf)

BACKHOE ATTACHMENTS

Boom and arms are of welded, box-section design. Bucket is of welded steel structure. Side clearance adjust mechanism provided on the bucket joint bracket.

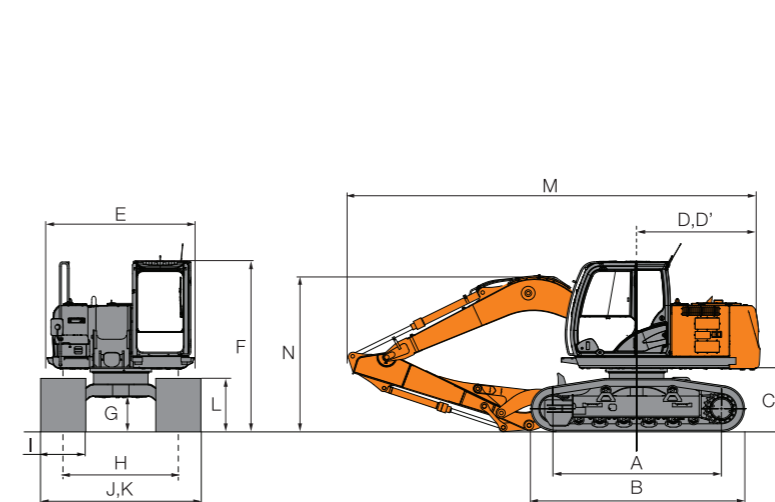
Buckets

Capacity	Width		No. Of teeth	Weight	Recommendation
	Without side cutters	With side cutters			
ISO heaped	800 mm	920 mm	5	400 kg	2.26 m arm
*0.45 m ³	800 mm	920 mm	5	400 kg	☉

* Side-pin-type-bucket

☉ Suitable for materials with density of 1 800 kg/m³ or less

DIMENSIONS

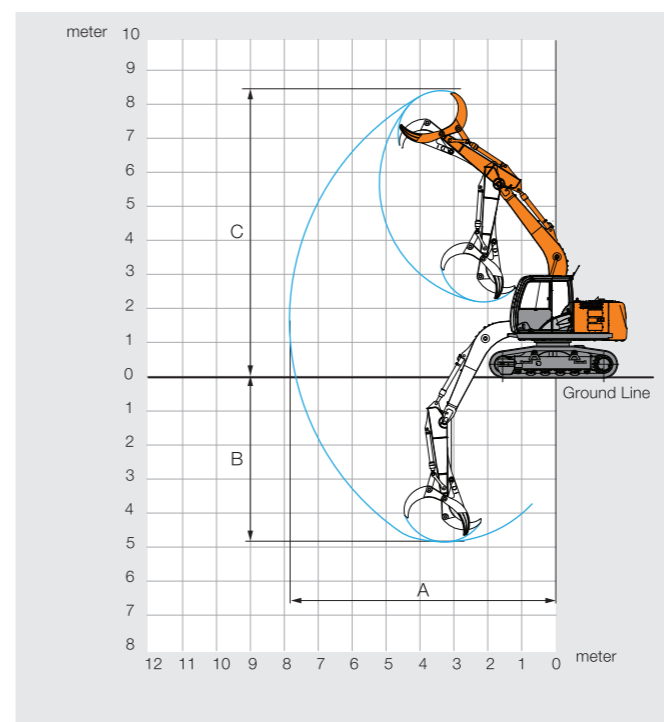


Unit: mm

	ZX110MF-5G	
A Distance between tumbler	2 990	
B Undercarriage length	3 790	
*C Counterweight clearance	1 070	
D Rear-end swing radius	2 190	
D' Rear-end length	2 190	
E Overall width of upperstructure	2 620	
F Overall height of cab	3 020	
*G Min. ground clearance	575	
H Track gauge	2 040	
I Track shoe width	G 800	SHG 960
J Undercarriage width	2 840	3 000
K Overall width	2 840	3 000
*L Track height with triple grouser shoes	940	
M Overall length		
With 2.26 m arm (with Fix grapple)	7 300	
With 2.26 m arm (with 0.45 m ³ bucket)	7 300	
N Overall height of boom		
With 2.26 m arm (with Fix grapple)	2 780	
With 2.26 m arm (with 0.45 m ³ bucket)	2 780	

* Excluding track shoe lug G: Triple grouser shoe
SHG : Single high grouser shoe

WORKING RANGES

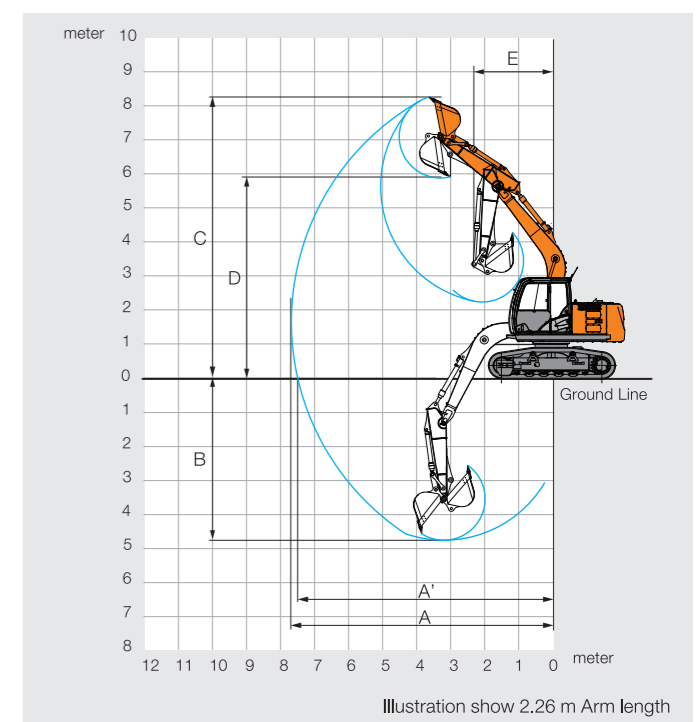


FIX GRAPPLE

Unit:mm

	2.26 m arm (with Fix grapple)
A Max. working reach	7 780
B Max. working depth	4 870
C Max. working height	8 470

Excluding track shoe lug



BACKHOE BUCKET

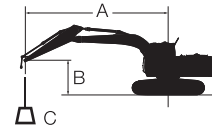
Unit:mm

	2.26 m arm (with 0.45 m ³ bucket)
A Max. digging reach	7 740
A' Max. digging reach (on ground)	7 550
B Max. digging depth	4 820
C Max. cutting height	8 370
D Max. dumping height	5 960
E Min. swing radius	2 370

Excluding track shoe lug

LIFTING CAPACITIES (Without Bucket)

- Notes: 1. Ratings are based on ISO 10567.
 2. Lifting capacity does not exceed 75% of tipping load with the machine on firm, level ground or 87% full hydraulic capacity.
 3. The load point is the center-line of the bucket pivot mounting pin on the arm.
 4. *Indicates load limited by hydraulic capacity.
 5. 0 m = Ground.



- A: Load radius
 B: Load point height
 C: Lifting capacity

For lifting capacities, subtract bucket and quick hitch weight from lifting capacities without bucket.

ZX110MF-5G

Rating over-front Rating over-side or 360 degrees Unit : kg

Conditions	Load point height m	Load radius								At max. reach		
		1.5 m		3.0 m		4.5 m		6.0 m		meter		
Boom 4.27 m	4.5					*3 100	*3 100			*1 720	*1 720	5.85
Arm 2.26 m	3.0			*5 090	*5 090	*3 710	3 620	*2 930	2 330	*1 710	*1 710	6.37
Without Bracket	1.5			*7 100	6 290	*4 460	3 430	3 380	2 270	*1 830	*1 830	6.51
Shoe 800 mm	0 (Ground)			*7 220	6 080	4 910	3 310	3 330	2 220	*2 110	2 080	6.28
	-1.5	*5 060	*5 060	*7 230	6 070	4 780	3 280			*2 740	2 410	5.65
	-3.0			*5 660	*5 660					*3 550	3 450	4.44

EQUIPMENT

Standard and optional equipment may vary by country, so please consult your Hitachi dealer for details.

● : Standard equipment

○ : Optional equipment

	ZX110MF-5G
ENGINE	
Air cleaner double filters	●
Auto idle system	●
Cartridge-type engine oil filter	●
Cartridge-type fuel pre-filter	●
Cartridge-type fuel main filter	●
Dry-type air filter with evacuator valve (with air filter restriction indicator)	●
Dust-Proof indoor net	●
ECO/PWR mode control	●
Engine warm-up device	●
Fan guard	●
Radiator reserve tank	●
Water separator	●
50 A alternator	●
HYDRAULIC SYSTEM	
Auto power lift	●
Control valve with main relief valve	●
High performance full-flow filter	●
Pilot filter	●
Power boost	●
Suction filter	●
One extra port for control valve	●
Work mode selector	●
CAB	
All-weather sound suppressed steel cab	●
AM-FM radio with 2 speakers	●
Ashtray	●
Auto control air conditioner	○
Cab (Center pillar reinforced structure)	●
Drink holder	●
Drink holder with hot & cool	○
Electric double horn	●
Engine shut-off lever	●
Evacuation hammer	●
Floor mat	●
Footrest	●
Front window washer	●
Front window on upper, lower and left side can be opened	●
Hot & cool box	○
Intermittent windshield wipers	●
LED room light	●
OPG top guard Level I (ISO10262) compliant cab	●
Pilot control shut-off lever	●
Rear tray	●
Seat belt	●
Rubber radio antenna	●
Seat : Fabric seat	●
Seat adjustment part : backrest, armrest, height and angle, slide forward/back	●

Short wrist control levers	●
4 fluid-filled elastic mounts	●
24 V cigarette lighter	●
MONITOR SYSTEM	
Alarm buzzers:	
Engine overheat	●
Meters:	
Hour meter, trip-meter, engine coolant temperature gauge and fuel gauge	●
Pilot lamps:	
Engine preheat, auto-idle, and attachment mode	●
Warning lamps:	
Alternator charge, engine oil pressure, engine overheat, air filter restriction and minimum fuel level	●
LIGHTS	
Additional cab roof front lights	○
2 working lights	●
UPPER STRUCTURE	
Fuel level float	●
Gap filled radiator	●
Hydraulic oil level gauge	●
Tropical cover	●
Side bumper & cab guard bracket	●
Cab guards & Body guards	○
Rear view mirror (right & left side)	●
Swing parking brake	●
Tool box	●
6.0 mm reinforced undercover	●
Utility space	●
With net door and cover	●
1 650 kg counterweight	●
2 x 55 Ah batteries	●
UNDERCARRIAGE	
High & wide track	●
Bolt-on sprocket	●
Lower rollers	●
Reinforced idler bracket	●
Reinforced track links with pin seals	●

Travel parking brake	●
4 track guards (each side)	●
Hydraulic track adjuster	●
Reinforced upper rollers	●
9.0 mm reinforced track undercover	●
Reinforced travel motor covers	●
Skidding bar	○
800 mm triple grouser shoes	●
960 mm single high grouser shoes	○
FRONT ATTACHMENTS	
Centralized lubrication system	●
Dirt seal on all bucket pins	●
Flanged pin	●
HN bushing	●
Reinforced resin thrust plate	●
Link A	●
Link B	●
WC (tungsten-carbide) thermal spraying	●
Fixed grapple	○
0.45 m³ bucket (ISO heaped)	●
0.45 m³ bucket (ISO heaped) (side pin type for Point tooth)	○
4.27 m reinforced boom	●
2.26 m reinforced arm (with grapple bracket)	●
MISCELLANEOUS	
Lockable fuel refilling cap	●
Lockable machine covers	●
Onboard information controller	●
Skid-resistant tapes, plates and handrails	●
Standard tool kit	●
Travel direction mark on track frame	●
Global e-Service	●

These specifications are subject to change without notice.

Illustrations and photos show the standard models, and may or may not include optional equipment, accessories, and all standard equipment with some differences in color and features.

Before use, read and understand the Operator's Manual for proper operation.