HITACHI

Reliable Solutions

ZW310



WHEEL LOADER

Model code: ZW310-7

Engine maximum power: 233 kW / 312 hp Operating weight: 24 640 – 25 140 kg Bucket ISO heaped: 3.4 – 4.5 m³



YOU'RE IN CONTROL

You're at the heart of Hitachi's design for its latest range of wheel loaders. To continuously improve on previous generation machines, we've focused on enhancing your experience in the cab as an operator.

We've considered the challenges you face as the owner of a successful business. And we've zoomed in on the ways in which we can support you over the life cycle of your machine.

By putting you at the heart of the ZW-7 range, we invite you to take control – over your workspace and your fleet. And by working in partnership, we will help you to create your vision.



INSIDE



4. Complete Control In control of your assets



13. Control ZoneFeel the difference



6. Increase your safetyBe in control of your environment



16. Manage your machine In control of your performance



8. Boost your uptime Improve your profit



22. SpecificationsKnow your machine

COMPLETE CONTROL

The new ZW-7 range of wheel loaders puts you firmly in control, so you can feel assured of your machine's performance, and supported by the technological expertise and services that Hitachi provides.





The cab interior provides a comfortable working environment.





Approach speed control maximises fuel efficiency on loading operations.





The payload checker helps you work more productively and accurately when loading trucks.









ConSite Pocket app allows you to manage and monitor your fleet remotely.





Options such as Hitachi ground engaging tools enable you to enhance the performance of your wheel loader.





Integrated console and seat suspension gives a greater sense of control and seatmounted electric control levers reduce fatigue.





Visibility of the job site is excellent thanks to the Aerial Angle® camera system and new LCD monitor.







Maintenance is quick and easy due to improved access to components and anti-clogging radiators.





Higher engine output at lower engine RPM increases performance.



Your ability to work safely is vital, not only for your own wellbeing, but also for the successful completion of any project. To protect yourself and your machine from potential hazards, the new Hitachi ZW-7 wheel loaders give you a superior view of your surroundings, so you can see the job site from all angles.

The visibility you enjoy from the cab includes an exceptional 270-degree bird's-eye view with the Aerial Angle® camera system. You can choose from two image options to view the machine's immediate environment, which enables you to control your own safety – as well as that of those around you.

The rear obstacle detection system also enhances safety on the job site, with real-time speed, machine position status and large detection zone.

To help you to work more confidently and efficiently, even in the most challenging of conditions, ZW-7 wheel loaders are fitted with some impressive new features. From the LED work lights and roller sunshade, you'll have the visibility you need when it matters most.





Electrically adjusted mirrors provide a clear rear view.



Choose between different image layouts to suit your working environment. $% \label{eq:choose} % A = \{ (x,y) \in \mathbb{R}^n : y \in \mathbb{R}^n : y$



Rear obstacle detection system enhances safety on the job site.



LED work lights improve visibility in challenging conditions.

BOOST YOUR UPTIME

Completing a project on time and on budget depends on the ability of your construction equipment to perform all day, every day. That's why Hitachi owners have profited from generations of ultra-reliable and durable machinery – and the ZW-7 range is no exception.

The latest Hitachi wheel loaders have been built to last, so that you can remain in complete control of your assets. They have been tested rigorously and continuously at dedicated facilities in Japan with the goal of significantly boosting your uptime.

As a result, several unique durability-enhancing components have been fitted to the ZW310-7, including the axles and frame. The intelligent fan operation system prevents radiators from clogging by adjusting the periodic intervals of the automatic reversible fan electronically.

Downtime is minimised by the priority given to easy maintenance features, such as the improved cooling package and anti-clogging radiators as standard, which save you time and money.



Daily inspection reminders make life easier for operators.



Easy maintenance features minimise downtime.



Intelligent fan operation system prevents radiators clogging.



Engine cover enables convenient access for daily inspections.





IMPROVE YOUR PROFIT

The success of your business depends on the reliability and efficiency of your construction machinery. With Hitachi's latest ZW-7 wheel loaders, you can count on the highest quality, the ultimate in operating comfort and reduced running costs – all of which will have a positive impact on your bottom line.

You can look forward to increasing your profits thanks to the powerful performance, low total cost of ownership and exceptional efficiency of the Stage-V compliant ZW310-7. It delivers high levels of productivity due to fast cycle times, a high breakout force and loading capacity, and improved acceleration on inclines, thanks to a number of sensors installed on several machine components.

Short loading operations are completed faster and more efficiently using the approach speed control feature, which reduces fuel consumption. To enhance productivity and save fuel with reduced cycle times, operators will benefit from the auto power up function, which automatically increases the RPM to maintain the same travel speed when going uphill.

Another way for your operators to control fuel efficiency – and reduce costs – is by using the all-new ECO gauge. They can also improve performance with several adjustable functions to suit the material and job site conditions.

Your operators can also work more productively and accurately thanks to the payload checker. This enables them to keep track of load weights in real time on the monitor and find out how much material is in the bucket or truck. The display shows when the bucket or truck is overloaded, so you can adjust the final load to achieve target capacity.



Work more productively and accurately using the payload checker.



The ECO gauge helps to deliver better fuel consumption.



Approach speed control maximises efficiency.



CONTROL ZONE

Enhanced comfort and safety features are at your fingertips in the refined cab of ZW-7 wheel loaders, giving you the power to perform productively, with ease and reduced fatigue.

- **Seat-mounted electric control levers** help to reduce fatigue.
- **Multifunction or finger-type control lever** options to suit your preference.
- (3) Integrated console and seat suspension gives a greater sense of control.
- 4 USB power supply and smartphone holder helps you stay connected.
- 5 Armrest-Integrated sub monitor controller provides fast access to main functions.
- **6 Ergonomically designed adjustable armrest** so you can work comfortably.
- (7) User-friendly storage space keeps your workspace tidy and clutter-free.
- 8 Heated heavy duty seat with horizontal suspension.
- **9 Drinks holder** is easy to detach for cleaning.

- **Joystick Steering System** (optional) provides exceptional control.
- (11) Anti-slip steering wheel for effortless operation.
- **3.5" colour liquid crystal display** in the front dashboard is easy to view.
- **Spacious cab** gives you a pleasant working environment.
- **Panel switch integrated functions** are user-friendly.
- **15** Electrically adjusted mirrors switch is easy to use.
- **16 High-resolution 8" monitor** is easy to use and navigate.
- **Bluetooth®** for hands-free calls and DAB+ radio for music while you work. Audio is easily controlled.



Operation is easy with ergonomically designed controls and switches.



All commonly used functions can be selected at a glance using the side panel switch.



Hitachi's redesigned, state-of-the-art ZW-7 cab gives you the perfect working environment. The ultra-spacious ZW310-7 offers you an industry-leading, first-class cab with the ultimate in comfort and quality, as well as some of the lowest noise and vibration levels in the market.

Feel the difference with the synchronised motion of the seat and console, and seat-mounted electric control levers, which have been designed to ensure you feel less tired at the end of the working day.

Easy operation comes with the ergonomic design of the multifunction lever, the anti-slip steering wheel and the 40% larger fully adjustable armrest with integrated controller. You can navigate quickly through the menu on the 8" LCD monitor with the multifunctional controller. The hi-res screen is also easier to view, and the refreshed layout offers a clear display and desirable functionality.

With more storage for your personal belongings, such as your coat, smartphone and drink, you'll feel instantly relaxed and ready for your shift. Practical functions of the control levers, such as the quick power switch and horn, will make your working day effortless.



You're in control with a spacious, tidy and enjoyable working environment.



The LCD monitor is easy to view with hi-res screen.



Ergonomically placed sub monitor controller provides easy access.



The cab has ample space for your belongings.

MANAGE YOUR MACHINE

Hitachi offers a wide range of after-sales services to help you feel in total control of your fleet and workload. These initiatives give you access to vital data and tools to manage your machine.

Remote monitoring systems Owner's Site and ConSite send operational data daily via GPRS or satellite from your wheel loader to www.globaleservice.com. This includes: ratios of operating hours to enhance efficiency; fuel consumption to manage running costs; and machine location for planning purposes. ConSite summarises the information in a monthly email.

The ConSite Pocket App sends you real-time alerts for issues arising with your machine. You'll receive recommendations on what to do and step-by-step help guides. The app also enables you to see the location of your fleet.



The alerts on the ConSite Pocket App provide real-time information.



A wide range of data on Global e-Service enhances efficiency.



Monitoring the performance of your wheel loader ensures exceptional reliability.





Minimise downtime with Hitachi Genuine Parts.



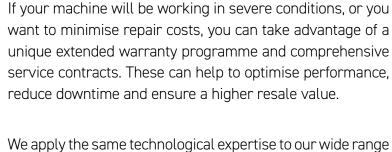
Extended warranties and service contracts provide optimal performance.





Hitachi provides the highest level of technical support.

PROTECT YOUR INVESTMENT



We apply the same technological expertise to our wide range of high-quality parts as we do our machines. As a result, you can minimise unscheduled downtime and ensure maximum availability.

The parts range includes Hitachi Genuine Parts, Performance Parts and filters. We also offer robust ground engaging tools and high-quality buckets, which have been manufactured to the same exacting standards.







EH dump trucks and EX ultra-large excavators



Special application excavators



With extensive expertise in designing and manufacturing wheel loaders, as well as a 50-year heritage in producing hydraulic excavators and a reputation as the industry's leading mining machine manufacturer, the Hitachi network will give you access to a range of exceptional construction equipment.

Like the new ZW-7 wheel loaders, Hitachi excavators, rigid dump trucks, and special application machines incorporate advanced technology and pioneering expertise. This is inspired by parent company Hitachi Ltd, which was founded on the philosophy to make a positive contribution to society through technology.

In addition to the latest products made at stateof-the-art facilities and built to the highest quality standards, you'll have the support of our experienced engineers and dedicated dealer personnel. You'll also benefit from marketleading services and initiatives, such as Premium Used, which have been created to enhance your experience as a Hitachi customer.

Whatever vision you wish to create, Hitachi has the product, people, solutions and services you need to make it become a reality – and empower you to take control of your world.



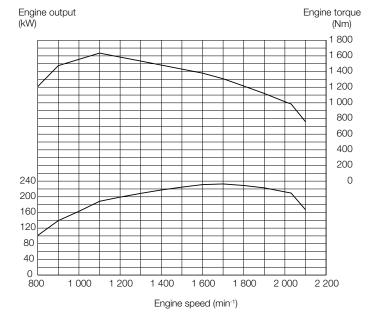
Zaxis medium excavators



Zaxis mini excavators

SPECIFICATIONS

ENGINE	
Model	CUMMINS L9
Type	4 cycle water-cooled, direct injection
Aspiration	Waste-gate turbocharger and intercooled
Aftertreatment	DPF + SCR system
No. of cylinders	6
Maximum power	
ECE R120 gross	233 kW (312 hp) at 1 700 min ⁻¹ (rpm)
ISO 9249 : 2007 net	226 kW (303 hp) at 1 700 min ⁻¹ (rpm)
Rated power	
ISO 14396 : 2002 gross	213 kW (286 hp) at 2 000 min ⁻¹ (rpm)
ISO 9249 : 2007 net	204 kW (274 hp) at 2 000 min ⁻¹ (rpm)
Maximum torque	
ISO 9249 : 2007 net	1 600 Nm at 1 100 min ⁻¹ (rpm)
gross	1 636 Nm at 1 100 min-1 (rpm)
Bore and stroke	137 mm x 146 mm
Piston displacement	8.9 L
Batteries	2 x 12 V
Air cleaner	Two element dry type with restriction indicator



POWER TRAIN	
Transmission	Torque converter, countershaft type powershift with computer-controlled automatic shift and manual shift features included
Torque converter	Three element, single stage, single phase with lock-up clutch
Main clutch	Wet hydraulic, multi-disc type
Cooling method	Forced circulation type
Travel speed* Forward / R	everse
1st	6.7 [6.7] {6.9} / 6.0 [6.7] {6.9} km/h
2nd	11.4 (11.5) [11.4 (11.5)] {11.9 (11.9)} / 10.3 (10.4) [11.4 (11.5)] {11.9 (11.9)} km/h
3rd	22.1 (22.5) [22.1 (22.5)] {22.1 (22.5)} / 22.1 (22.5) [22.1 (22.5)] {22.1 (22.5)} km/h
4th	36.0 (36.0) [36.0 (36.0)] {36.0 (36.0)} / 36.0 (36.0) [36.0 (36.0)] {36.0 (36.0)} km/h
With 26.5R25(L3) tires): Data at Lock-up clutch ON]: Data at Power Mode }: Data at Power+ Mode	

AXLE AND FINAL DRIV	E
Drive system	Four-wheel drive system
Front and rear axle	Semi-floating
Front	Fixed to the front frame
Rear	Trunnion support
Reduction and differential gear	Two stage reduction with torque proportioning differential
Oscillation angle	Total 24° (+12°,-12°)
Final drives	Heavy-duty planetary, mounted inboard

TIRES	
Tire size	26.5R25(L3)

BRAKES	
Service brakes	Inboard mounted fully hydraulic 4 wheel wet disc brake. Front & rear independent brake circuit
Parking brakes	Spring applied, hydraulically released, located in transmission.

STEERING SYSTEM	
Type	Articulated frame steering
Steering angle	Each direction 37°; total 74°
Cylinders	Double-acting piston type
No. x Bore x Stroke	2 x 85 mm x 498 mm

HYDRAULIC SYSTEM Arm and bucket are controlled by multifunction lever Four position valve; Raise, hold, lower, Arm controls float Bucket controls with automatic bucket return-to-dig control Three position valve; Roll back, hold, dump Main pump (Serve as steering pump) Variable piston type 300 L/min at 2 000 min-1 (rpm) Maximum flow Maximum pressure 31.4 MPa Fan pump Gear type Maximum flow 85 L/min at 2 000 min-1 (rpm) 16.5 MPa Maximum pressure Hydraulic cylinders Type Double acting type No. x Bore x Stroke Arm: 2 x 145 mm x 884 mm Bucket: 1 x 180 mm x 525 mm Filters Full-flow 15 micron return filter in reservoir Hydraulic cycle times Lift arm raise 5.6 s (5.5 s) Lift arm lower 4.1 s (4.1 s) Bucket dump 1.2 s (1.2 s) Total 10.9 s (10.8 s) *Data at Power Mode

ENVIRONMENT

Engine Emissions

EU stage V

Sound level

Sound level in cab according to LpA 69 dB(A)

External sound level according

to ISO 6395 : 2008 and EU LwA 108 dB(A) Directive 2000/14/EC

Air Conditioning System

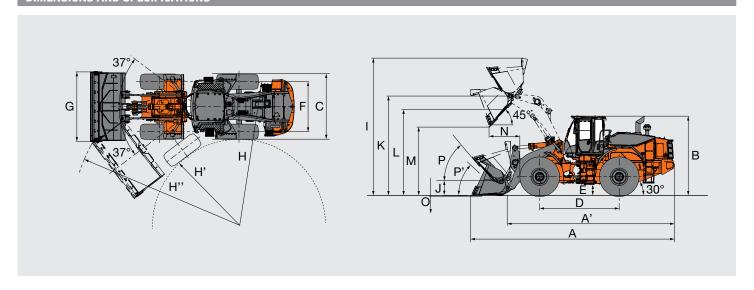
The air conditioning system contains fluorinated greenhouse gases.

Refrigerant type: HFC-134a, GWP: 1430, Amount: 0.75 kg, CO2e: 1.07 ton.

SERVICE REFILL CAPACITIES	
Fuel tank	379 L
Engine coolant	37 L
Engine oil	33 L
Torque converter and transmission	51 L
Front axle differential and wheel hubs	48 L
Rear axle differential and wheel hubs	48 L
Hydraulic oil tank	139 L
DEF/AdBlue® tank	48 L

SPECIFICATIONS

DIMENSIONS AND SPECIFICATIONS



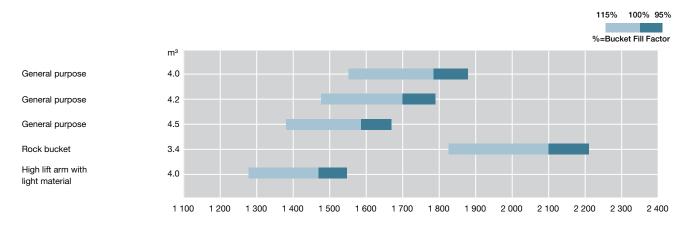
				High-lift arm			
Bucket type		General purpose Rock bucke				t Light material	
	Buoker		Bolt-on cutting edge			Bolt-on teeth	Bolt-on cutting edge
Duole	at acadeit.	ISO 7546: 1983 Heaped m ³	4.2	4.5	4.0	3.4	4.0
DUCKE	et capacity	ISO 7546: 1983 Struck m ³	3.7	4.0	3.5	2.9	3.5
Α	Overall Length	mm	9 010	9 090	8 960	9 070	9 410
A'	Overall Length (without bud	cket)mm	7 450	7 450	7 450	7 450	7 900
В	Overall Height (up to cab to	op)mm	3 530	3 530	3 530	3 530	3 530
С	Width over tires (outside tire	e) mm	2 930	2 930	2 930	2 930	2 930
D	Wheel base	mm	3 540	3 540	3 540	3 540	3 540
Е	Ground clearance (Minimur	m) mm	500	500	500	500	500
F	Tread	mm	2 230	2 230	2 230	2 230	2 230
G	Bucket width	mm	3 100	3 100	3 100	3 100	3 100
Н	Turning radius (Centerline of	of outside tire)mm	6 420	6 420	6 420	6 420	6 420
H'	Turning radius to inside of t	tiresmm	3 870	3 870	3 870	3 870	3 870
Н''	Loader clearance radius, b	ucket in carry positionmm	7 480	7 500	7 470	7 510	7 660
- 1	Overall operating height (bu	ucket full raise)mm	6 160	6 230	6 110	5 790	6 440
J	Carry height of bucket pin ((at carry position)mm	435	435	435	435	435
K	Height to bucket hinge pin,	fully raisedmm	4 425	4 425	4 425	4 425	4 740
L	Lift arm clearance at max li	ftmm	3 870	3 870	3 870	3 870	3 870
М	Dumping clearance at 45 d	legree full heightmm	3 100	3 040	3 130	3 030	3 450
Ν	Reach 45 degree dump ful	l heightmm	1 320	1 370	1 290	1 340	1 460
0	Digging depth (Horizontal o	digging angle)mm	115	115	115	80	115
Р	Max. roll back at carry posi	itiondeg	45	45	45	45	44
P'	Max. roll back at ground le	veldeg	41	41	41	41	41
Q	Roll back angle at full heigh	ntdeg	61	61	61	61	61
	tipping load	Straightkg	18 500	18 090	18 310	18 950	15 690
ISO 1	4397-1: 2007(Section 1-5) *	Full 37 degree turnlb	15 760	15 410	15 600	16 150	13 370
Droot	out force	kN	189	183	203	223	190
break	out force	kgf	19 290	18 670	20 710	22 760	19 390
Opera	ating weight *	kg	25 050	25 140	25 020	24 640	24 830
Articu	late angle	deg	37	37	37	37	37
Depar	ture angle	deg	30	30	30	30	30
Opera	iting load	kg	7 140	7 140	7 140	7 140	5 880

^{*:} Static tipping load and operating weight marked with* include 26.5 R25 (L3) tires (No ballast) with lubricants, full fuel tank and operator. Machine stability and operating weight depend on counterweight, tire size and other attachments.

WEIGHT CHANGE

Option item		Operating weight	Tipping load (kg)		Overall	Overall height	Overall
		(kg)	Straight	Full turn	width (mm) (outside tire)	(mm)	length (mm)
	26.5R25(L3) XHA2	± 0	± 0	± 0	± 0	± 0	± 0
Tire	26.5R25(L3) VJT	± 0	± 0	± 0	± 0	± 0	± 0
	26.5R25(L5) XLDD2A	+660	+500	+440	+15	+35	-15
Belly guard		+240	+140	+130	± 0	± 0	± 0

BUCKET SELECTION GUIDE



EQUIPMENTS

ullet : Standard equipment $\,$ O : Optional equipment

ENGINE	ZW310-7
Aftertreatment device	•
Aftertreatment manual regeneration inhibit switch	•
Aftertreatment manual regeneration switch	•
Air filter double elements	•
Air intake	
Pre-cleaner (sy-klone type)	•
Pre-cleaner (Turbo II)	0
Anti-clogging radiator (Wide fin pitch radiator)	•
Automatic reversible cooling fan with heat sensing	•
Cartridge-type engine oil filter	•
Cartridge-type fuel main filter	•
Cartridge-type fuel pre-filter	•
Coolant reservoir sight gauge	•
DEF/AdBlue® tank extension filler	•
DEF/AdBlue® tank with ISO magnet adapter	•
Engine auto shut-down control system	•
Engine oil remote drain	•
Fan guard	•

BRAKE SYSTEM	ZW310-7
Front and rear independent brake circuit	•
Inboard mounted fully hydraulic 4 wheel wet disc	•
Spring-applied/Hydraulic-released parking brake	•

HYDRAULIC SYSTEM	ZW310-7
Bucket auto leveler (automatic return to dig control)	•
Control lever	
for 2 spools control valve	
MF lever	0
for 3 spools control valve	
MF lever & proportional switch for 3rd function	•
Control lever lock switch	•
Dual lift arm auto leveler	•
Hydraulic filters	•
Lift arm float system	•
Reservoir sight gauge	•
Ride control system (OFF-AUTO type)	•
Work mode selector	•

CAB	ZW310-7
Adjustable steering column with POP-UP	•
Auto control air conditioner	
with double intake filter	•
Pre-cleaner for air conditioner	0
Bluetooth® integrated DAB+radio, hands-free calling	•
Camera and monitor	
AERIAL ANGLE (Side and rear view camera) and monitor	•
Coat hook	•
Evacuation hammer	•
Front/rear defroster	•
Glove compartment	•
LED room light	•
Payload checker with tip-off function	•
Rear obstacle detection system	•
Rear view mirrors	
Rear view mirrors	•
Outside (Heated, 2) electrical adjustment retractable mirror Stay	•
ROPS (ISO3471: 2008), FOPS (ISO3449: 2008 LEVEL II): multi-plane isolation mounted for noise	•
Rubber floor mat	•
Seat	
Heavy duty air suspension seat equipped with horizontal suspension headrest and heater: fabric, high back, adjustable for damper, inclination of the seat, seat depth, weight-height, fore-aft position, reclining angle, armrest angle, headrest height and angle, lumbar support, 3 inch seat belt	•
Seat belt reminder	•
Steering system	
Joystick steering (with wheel steering)	•
Wheel steering	0
Storage	
Cup holder	•
Document holder	•
Hot and cool box	•
Seatback pocket	•
Smartphone and Tablet device holder	•
Sun shade film on front windshield	0
Sunscreen roller type	•
Tinted safety glass	
Front windshield: laminated	•
Others: tempered	•
USB power supply	•
Windshield washer front and rear	•
2 speakers	•
8 inch sub monitor	•

• : Standard equipment O : Optional equipment

MONITORING SYSTEM	ZW310-7
Gauge: coolant temperature, fuel level, transmission oil temperature	•
Indicator lights: clearance lights, control lever lock, fuel level, high beam,parking brake, preheat, turn signals, work lights, fan reverse indicator, seat belt indicator Indicator on multifunction monitor: F-N-R shift position, gear shift position,clock, DEF alarm indicator, DEF level gauge, ECO indicator, forward/reverse selector switch indicator, hold display, hour meter, joystick steering indicator (optional), odometer, battery volt, speedometer, tachometer, transmission autoshifting indicator, Warning lights: air filter restriction, brake oil low pressure, communication system error, discharge warning, engine oil low pressure, engine warning, hydraulic oil level, low steering oil pressure, overheat, transmission warning	•
Indicator on sub monitor: payload checker, dual auto- leveler indicator rear obstacle detection and warning system (optional)	•
38 languages selection	•

ELECTRICAL SYSTEM	ZW310-7
Alternator (95 A)	•
Backup alarm	•
Battery disconnect switch	•
Large capacity batteries	•
Power outlet 12 V and 24 V	•

LIGHTS	ZW310-7
Clearance lights	•
LED brake and tail lights	•
LED headlights	•
Turn signals with hazard switch	•
Work lights	
4 front, 2 rear on cab and 2 rear LED working lights	•

POWER TRAIN	ZW310-7
Approach speed control	•
Automatic transmission with load sensing system	•
Axle oil cooler	•
Clutch cut position switch	•
Differential	
LSD (limited slip differential, front and rear)	0
TPD (torque proportioning differential, front and rear)	•
DSS (down shift switch)	•
Forward/Reverse lever	•
Forward/Reverse selector switch	•
Lock-up clutch (torque converter)	•
Power mode switch	•
Quick power switch	•
Travel mode selector (Auto1-Auto2)	•

TIRES	ZW310-7
26.5R25(L3)VJT	•
26.5R25(L3)XHA2	0
26.5R25(L5)XLDD2A	0

MISCELLANEOUS	ZW310-7
Articulation lock bar	•
Belly guard (bolt on type) (front/rear)	•
Bucket cylinder guard	•
Cab top rail	
Front rail on the cab top	•
Rear rail on the cab top	0
Cab window cleaning foot plate	•
Counterweight, built-in	•
Drawbar with locking plate	•
Emergency steering	•
Fenders	
for 26.5R25 (Front and full covered rear fenders with mud flaps)	•
Front windshield guard	•
Global e-Service	•
Lift arm	
High lift arm	0
Standard lift arm	•
Lift & tie down hooks	•
On board information controller	•
Pilfer proof	
Battery cover with locking bracket	0
Lockable engine cover	•
Lockable fuel refilling cap	•
Standard tool kit	•
Tool box	•

Prior to operating this machine, including satellite communication system, in a country other than a country of its intended use, it may be necessary to make modifications to it so that it complies with the local regulatory standards (including safety standards) and legal requirements of that particular country. Please do not export or operate this machine outside the country of its intended use until such compliance has been confirmed. Please contact your Hitachi dealer in case of questions about compliance.

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Hitachi Construction Machinery Australia www.hitachicm.com.au

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.

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