HITACHI

ZW 550

WHEEL LOADER

- **Model Code** : ZW550
- **Operating Weight** : 45 130 - 45 960 kg
- **Bucket Capacity** : ISO Heaped : 6.0 - 10.0 m^3
- **Max. Engine Output** : 360 kW (483 HP)

Introducing the New Productive Wheel Loaders:

ZW Series

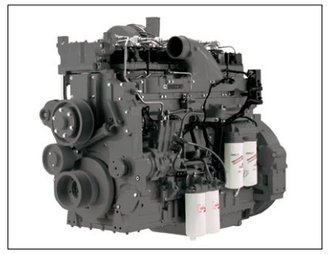
Top-Class Production with High Dependability

- **The new engine complying with the Emission Regulations EU Stage III A**
- **The advanced low-noise design complying with the coming EU noise regulation 2000/14/EU Stage II**

Note : Pictures may or may not include standard and optional equipment specified individually by country.

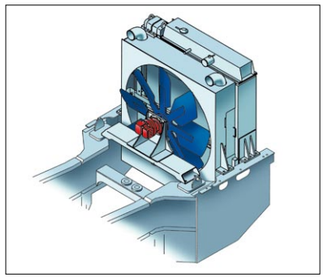
Extra Power and Performance for Top-Class Productivity

Computer-Controlled Engine



The Engine Control Module (ECM) provides essential operating data for efficient fault diagnosis and troubleshooting. The Cummins diagnosis tools also provide key engine data for quick, accurate analysis. The Cummins In-Line Combustion Solution, provided to meet the EPA Tier III Emission Regulation, makes engine design simple, and permits economical maintenance.

Advanced Hydraulic Cooling Fan



Hydraulic cooling fan speed varies with changes in operating temperatures to reduce noise and fuel consumption. The automatic reversible fan comes standard with a manual override that swings open for easy cleaning of radiators.

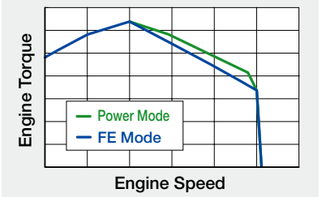
Improved Rimpull Control and Acceleration

The powertrain is designed for more efficient operation in various applications. Improved torque control and matching between engine and torque converter deliver higher performance.

Load-Sensing Hydraulic Steering System

The load-sensing hydraulic steering system boosts steering force, when needed, in the main hydraulic circuit. This makes possible the full use of pump torque for higher job efficiency.

Power Mode and Fuel-Efficient Mode

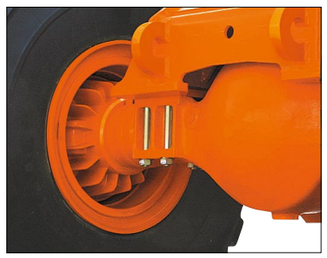


There are two engine modes –- Power mode and Fuel-Efficient mode. Select the Power mode to boost power for higher production, and the Fuel-Efficient mode for fuel economy.

Idle Management System

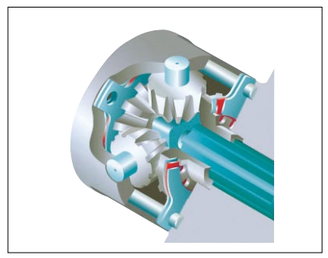
The idle management system keeps engine speed low during long-time idling for fuel saving. This system also increases engine speed for quick warming-up of the ZW550 in cold weather.

Outboard Wet Disc Brakes



The outboard-mounted, sealed wet disc brakes produce plenty of braking force, and keep out dirt. Dual lines are independently provided for front and rear axles for added safety.

Limited Slip Differential [LSD] (Optional)



The Limited Slip Differential (LSD) effectively yields big traction force to suit job needs.

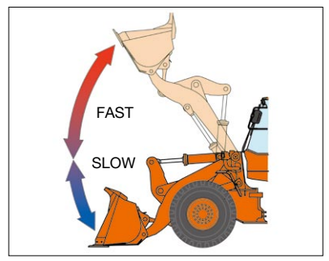
Lock-Up Torque Converter (Optional)

The lock-up clutch in the torque converter allows direct drive in the top speed range. This remarkably increases fuel efficiency in long haul, load-and-carry operation, and hill climbing.

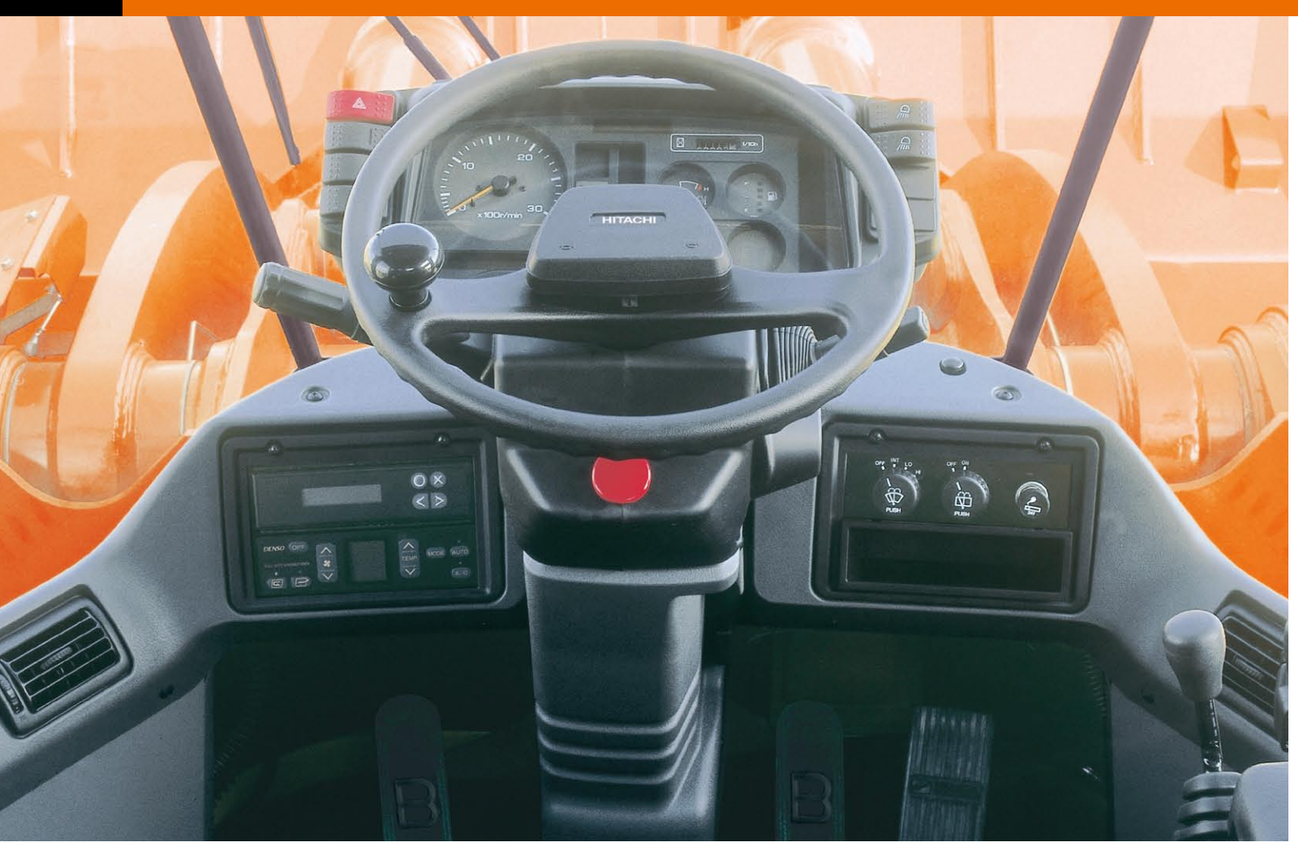
Active Traction Control

Wheel slippage can be significantly reduced by superior traction control that adjusts engine speed automatically to suit ground conditions, avoiding spinning of the machine.

Efficient Loading System [ELS]



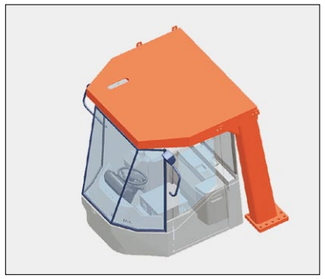
The Efficient Loading System (ELS) can increase traction force during digging while reducing fuel consumption. This achieves more production with less fuel.



High Visibility

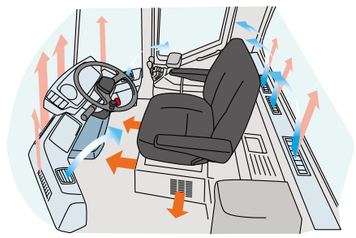
The cab gives good visibility with inside and outside rear view mirrors. The front windshield is a flat glass mounted with rubber gaskets for easy replacement. The cab rests on viscous mounting to absorb shocks and noise for operator comfort.

Outer ROPS/FOPS Standards



Outer ROPS/FOPS structure is adopted to protect the operator from injury in the case of an accident.
ROPS: Roll-Over Protective Structure, ISO3471
FOPS: Falling Object Protective Structure, ISO3449

Full-Auto Air Conditioner/Heater



The air conditioner/heater is controlled automatically and thermostatically to enhance operator comfort. Air vents promote good air circulation inside, and defrosting all the year around. The cab is pressurized to keep out dirt.

Comfortable

Single Shift Lever
The single shift lever with twist grip is provided on the steering column for the convenience of handling.

Fully Adjustable Suspension Seat

The suspension seat is fully adjustable for riding comfort, reducing operator fatigue and increasing operator's productivity.

Directional Switch (Optional)

The directional switch is located next to control levers for easy travel direction changing. The operator does not need to left hand off the steering wheel.

Down-Shift Switch
The down-shift switch, mounted on the lift arm control lever, allows the operator to make easy downshifting from the 2nd to 1st gear.

Machine Operation Diagnostic Module [MODM]

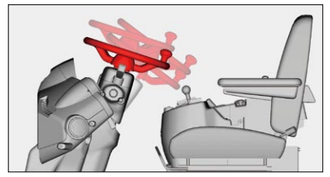
The Machine Operation Diagnostic Module (MODM) delivers important operating data for efficient operation, maintenance and troubleshooting.

Assortment of Accessories
An assortment of accessories, including radio, glove box, cup holder and storage compartment, are conveniently located inside.

Adjustable Clutch Cut-off Timing
Clutch cut-off timing can be adjusted to suit job needs, like efficient operation on level ground, and surefooted operation on gradient.

Lift Arm Auto-Leveler
The lift arm can be automatically raised and lowered to the preset level. High and low lift arm kickouts can be programmed, using switches inside the cab.

Adjustable Steering Column



The steering column is tiltable and telescopic to suit operator's build for comfortable positioning and operation.

Shift Hold Switch (Optional)
The shift hold switch, located on the control lever, allows the operator to hold the transmission in the current range when in the auto mode.

Durable and Dependable

Strong Lift Arms and Bucket

The strong lift arms and linkage yield high production during digging, loading and hauling. Big bucket breakout force and optimum bucket rollback bring about high production and good load retention.
Buckets are designed and shaped for efficient scooping-up and loading. Bolt-on cutting edges are easy to replace.
The bucket leveler and boom kickout come standard.

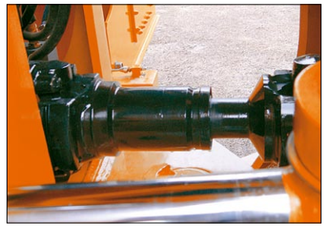
Sealed Bucket Hinge Pins

The bucket hinge pins are hermetically sealed to retain grease inside for longer service life.

Buffer Rings for Hydraulic Cylinders

Hydraulic cylinders utilize buffer rings for better sealing with less leakage.

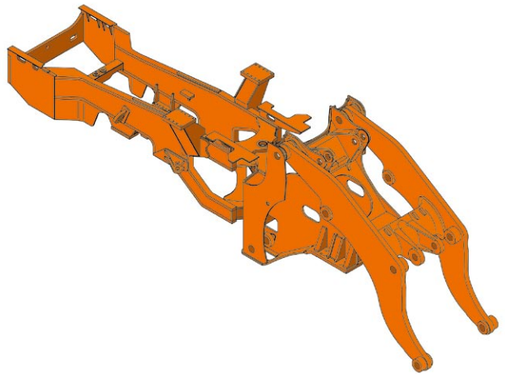
Extended Greasing Intervals of Universal Joints



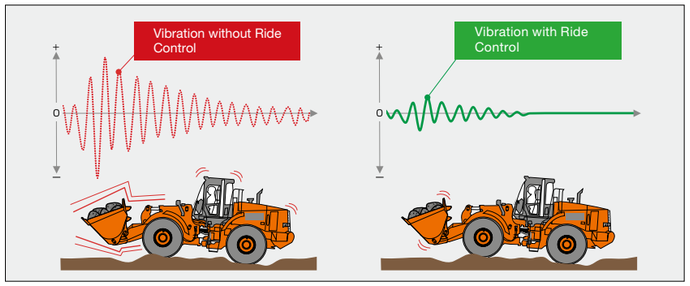
Universal joints are hermetically sealed to extend greasing intervals up to 12 000 hours, simplifying maintenance and increasing durability.

Full Box-Section Track Frame

The track frame is box-section structured to resist twisting loads.



Ride Control System (Optional)



The ride control system can reduce pitching and bouncing when traveling on rough terrain and snow road. This system automatically controls the implement to reduce shocks and vibration.

Wet Disc Parking Brake

The advanced wet disc parking brake is utilized for dependable braking.

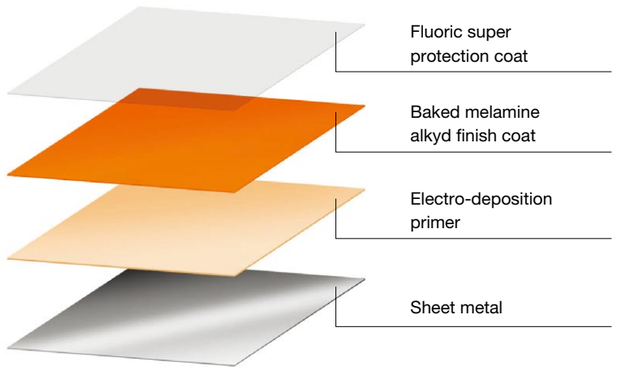
Easy Access for Quick Servicing

Easy Access to Engine and Filters

Machine covers open wide for easy access to the engine and filters for efficient servicing and inspection. Filters and grease fittings are grouped for the convenience of replacement and lubrication.

Multi-Coat Painting Process

Hitachi's advanced multi-coat painting process, consisting of electro-deposition (ED) primer, baked melamine alkyd finish coat and fluoric super protection coat, is applied to sheet metal parts like covers, achieving durable and attractive finish with high resistance to corrosion and damage.



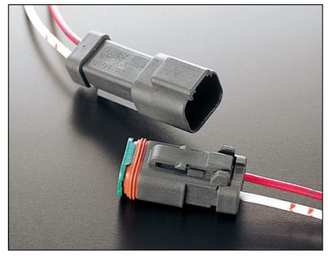
Halogen Head Lights

Front and rear working lights are bright halogen lamps for safer night-shift operation.

LED Brake and Tail Lights (Optional)

The rear tail lights are long-life LED lamps that are very bright and durable.

DT Connectors

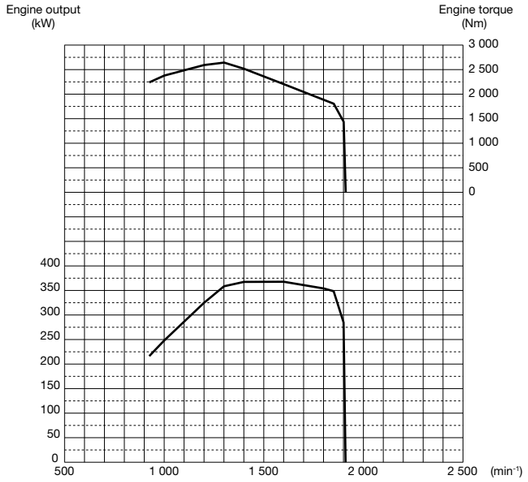


Sealed Deutsch DT connectors are used throughout the electrical system to reduce corrosion and ensure positive connection.

SPECIFICATIONS

ENGINE

Model	Cummins QSK19
Type	4-cycle water-cooled, direct injection
Aspiration	Turbocharger and intercooled
No. of cylinders	6
Maximum power	Net
ISO 9249, net	360 kW (483 HP) at 1 800 min^{-1} (rpm)
Bore and stroke	159 mm X 159 mm
Piston displacement	18.87 L
Batteries	2 X 12 V / 754 CCA, 176 Ah
Air cleaner	Two element dry type with restriction indicator



POWER TRAIN

Transmission	Torque converter, planetary gear type powershift with computer-controlled automatic shift and manual shift features included.
Torque converter	Three element, single stage, single phase
Main clutch	Wet hydraulic, multi-disc type
Cooling method	Forced circulation type
Travel speed* (km/h)	Forward / Reverse
1st	7.4 / 8.2
2nd	13.5 / 14.8
3rd	21.6 / 23.6
4th	36.0 / –

**With 35 / 65R33 (L4) tires*

AXLE AND FINAL DRIVE

Drive system	Four-wheel drive system
Front & rear axle	Full-floating
Front	Fixed to the front frame
Rear	Trunnion support
Reduction and differential gear	Single bevel gear, single stage reduction conventional type
Oscillation angle	Total 26° (+13°,-13°)
Final drives	Heavy-duty planetary, mounted outboard

TIRES

Tire size	35 / 65-33-24PR (L4)

BRAKES

Service brakes	Inboard mounted fully hydraulic 4 wheel wet disc brake. Front & rear independent brake circuit.

STEERING SYSTEM

Type	Articulated frame steering
Steering mechanism	Completely hydraulic power steering
Steering angle	Each direction 40° ; total 80°
Cylinders	Two double-acting piston type
No. x Bore x Stroke	2 x 110 mm x 720 mm
Minimum turning radius at the centerline of outside tire	7 045 mm

HYDRAULIC SYSTEM

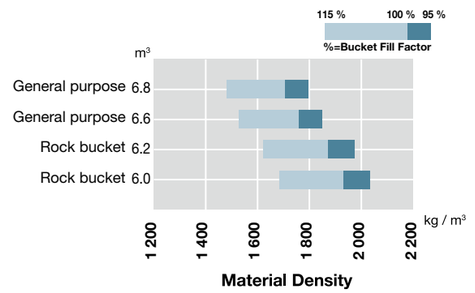
Lift arm and bucket are controlled by independent control lever.

Lift arm controls	Four position valve ; Raise, hold, lower, float
Bucket controls with automatic bucket return-to-dig control	Three position valve ; Roll back, hold, dump
Main pump / Steering pump	Fixed displacement type gear pump
Charging pump / Fan pump / Brake and assist pump	Fixed displacement type gear pump
Hydraulic cylinders	
Type	Two lift arm and two bucket, double acting type
No. x Bore x Stroke	Arm : 2 x 225 mm x 1 132 mm Bucket : 2 x 190 mm x 767 mm
Filters	Full-flow 28 micron return filter in reservoir
Hydraulic cycle times	
Lift arm raise	8.4 s
Lift arm lower	5.0 s
Bucket dump	1.7 s
Total	15.1 s

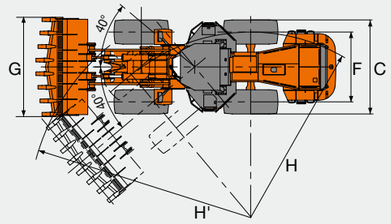
SERVICE REFILL CAPACITIES

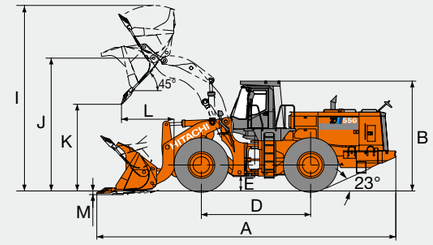
	liters
Fuel tank	660.0
Engine coolant	155.0
Engine oil	61.0
Torque convertor & transmission	90.0
Front axle differential & wheel hubs	360.0
Rear axle differential & wheel hubs	360.0
Hydraulic reservoir tank	225.0

BUCKET SELECTION GUIDE



DIMENSIONS & SPECIFICATIONS





Equipped with rock V-edge 6.2 m^3 bucket, 35/65-33-24PR (L4) tubeless tire, ROPS/FOPS canopy and cab.

Arm type			Standard arm				
Bucket type			Rock bucket		General purpose		Coal bucket
			V-edge	Straight edge	Round bottom		Round bottom
			With weld-on adaptor & teeth Segment	With weld-on adaptor & teeth Segment	With weld-on adaptor & teeth	With bolt-on cutting edges	With bolt-on cutting edges
Bucket capacity	ISO heaped	m^3	6.2	6.0	6.6	6.8	10.0
	ISO struck	m^3	5.5	5.3	5.7	5.9	8.9
A Overall length		mm	11 350	11 120	11 300	11 010	11 335
B Overall height (Top of canopy)		mm	4 170				
C Width over tires		mm	3 570				
D Wheel base		mm	4 150				
E Ground clearance		mm	545				
F Tread		mm	2 650				
G Bucket width		mm	3 770	3 770	3 770	3 770	4 100
H Turning radius (Centerline of outside tire)		mm	7 045				
H' Loader clearance circle, bucket in carry position		mm	8 425	8 425	8 480	8 400	8 635
I Overall operating height		mm	7 045	7 045	6 910	6 910	7 185
J Height to bucket hinge pin, fully raised		mm	5 040				
K Dumping clearance 45 degree, full height		mm	3 290	3 450	3 330	3 565	3 335
L Reach, 45 degree dump, full height		mm	1 995	1 830	1 930	1 760	2 015
M Digging depth (Horizontal digging angle)		mm	180	180	190	150	130
Bucket weight		kg	5 240	5 030	4 410	4 440	5 070
Static tipping load *	Straight	kgf	29 540	29 920	30 300	30 120	28 990
	Full 40 degree turn	kgf	24 750	25 070	25 390	25 240	24 300
Breakout force		kN (kgf)	377 (38 500)	449 (45 800)	401 (41 000)	376 (38 400)	311 (31 800)
Operating weight *		kg	45 960	45 750	45 130	45 160	45 790

Note:1. All dimensions,weight and perfomance data based on ISO 6746-1:1987,ISO 7137:1997 and ISO 7546:1983
2.Static tipping load and operating weight marked with include 35/65-33-24PR (L4) tires (No ballast) with lubricants, standard counterweight, full fuel tank and operator. Machine stability and operating weight depend on counterweight, tire size and other attachments.*

WEIGHT CHANGE

Option item		Operating weight kg	Tipping load kgf		Overall width mm (outside tire)	Overall height mm	Overall length mm
			Straight	Full turn			
Tires	29.5R29 (L5)	-1 120	-780	-650	-120	-40	+30
	35/65R33 (L4)	±0	±0	±0	±0	±0	±0
	35/65R33 (L5)	+550	+380	+310	±0	±0	±0
	29.5-29-28PR (L4)	-1 590	-1 100	-920	-120	-40	+30
	29.5-29-28PR (L5)	-1 120	-780	-650	-120	-20	+10
	35/65-33-24PR (L4)	±0	±0	±0	±0	±0	±0
	35/65-33-24PR (L5)	+680	+490	+410	±0	+25	-35
Heavy counterweight		+650	+1560	+1310	—	—	—
Under guard		+140	+200	+170	—	—	—

EQUIPMENT

STANDARD EQUIPMENT

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

ELECTRICAL

-Alternator, 75 ampere and 24 volts
-Back up alarm
-Brake and tail lights
-Electric starter
-Halogen headlights with high and low beams (2 front)
-Halogen working lights (4 front and 4 rear)
-Turn signals with four-way flasher

GAUGES AND INDICATORS

-Air cleaner warning lamp
-Auto shift indicator lamp
-Battery charge lamp
-Brake pressure warning lamp
-Engine coolant temperature gauge and warning lamp
-Engine oil pressure warning lamp
-Fuel level gauge
-High beam indicator lamp
-Hour meter
-Neutral indicator lamp
-Parking brake indicator lamp
-Tachometer
-Torque converter oil temperature gauge and warning lamp
-Transmission control warning lamp
-Transmission clutch cut-off lamp
-Transmission status monitor
-Working light indicator lamp

OPERATOR ENVIRONMENT

-Adjustable operator seat with mechanical suspension
-Two-lever for two-spool control valve
-Down-shift switch
-Transmission clutch cut-off adjust switch
-Ashtray
-Cup holder
-Cigarette lighter
-Coat hook
-Machine Operation Diagnostic Module (MODM)
-Electric dual horns
-Rubber floor mat
-Front and rear wiper and washers
-Full automatic air conditioner
-Lockable doors with sliding windows by regulator handles (left and right)
-Rear view mirrors (interior and exterior)
-Outer ROPS/FOPS for soft cab
-Soft cab (left and right doors open, walk-through design)
-Seat belt (2 inch)
-Storage compartment
-Sun visor
-Telescopic and tilt steering wheel
-Tinted safety glass (laminated glass)
-AM/FM Radio

POWER TRAIN

-Active traction control
-Air filter double elements
-Cummins QSK19 diesel engine
-Full hydraulic enclosed wet multi-disc brakes
-Automatic reversible hydraulic operated cooling fan
-Auto shift transmission
-Conventional differentials (front/rear)
-Extended greasing intervals of universal joints
-Tires, 35/65-33-24PR L4

OTHERS

-Bucket auto leveler
-Lift arm auto leveler
-Drawbar, with rocking pin
-Efficient loading system (ELS)
-Power & Fuel efficient mode
-Handrails
-Ladders, left and right
-Loading linkage, sealed Z-bar type dual cylinders
-Secondary brake
-Wet disc parking brake
-Mud guard for front fenders
-Vandalism protection kit

BUCKET

-Rock bucket (V-edge) with weld-on teeth and segments: 6.2 m^3 (ISO heaped)

OPTIONAL EQUIPMENT

Optional equipment may vary by country, so please consult your Hitachi dealer for details.

OPERATOR ENVIRONMENT

-Two-spool main control valve with mono lever
-Three-spool main control valve with three levers
-Adjustable operator seat with air suspension
-Head rest
-Seat belt (3 inch)
-Directional switch

POWER TRAIN

-Auto shift transmission with lock up torque converter
-Limited slip differential (LSD)
-Pre-air cleaner
-Brake and tail lights (LED)
-Shift hold switch
-Emergency steering system
-Ride control system, speed sensitive automatic

OTHERS

-Heavy counterweight
-Heavy counterweight for logging
-Full rear fender and mud guard
-Front wide fender and mud guard
-High lift arm
-Bucket cylinder guard
-Under guard
-Low temperature (-35 dgree C) kit

BUCKET

-Rock bucket (straight edge) with weld-on teeth and segments: 6.0 m^3 (ISO heaped)
-General purpose bucket with weld-on teeth: 6.6 m^3 (ISO heaped)
-General purpose bucket with bolt-on cutting edges: 6.8 m^3 (ISO heaped)
-Coal bucket with bolt-on cutting edges: 10.0 m^3 (ISO heaped)
-Rock bucket (V-edge) for High lift arm with weld-on teeth and segments: 5.1m^3 (ISO heaped)

*Note : * : ROPS (Roll Over Protective Structure) Conforms to ISO 3471;1994*
*** : FOPS (Falling Objects Protective Structure) Conforms to ISO 3449; 1992 Level II*

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.

Hitachi Construction Machinery
www.hcme.com

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