

ZW series

HITACHI

ZW
550



WHEEL LOADER

- **Model Code** : ZW550
- **Operating Weight** : 45 780 kg - 46 610 kg
- **Bucket Capacity** : ISO Heaped : 6.0 - 10.0 m³
- **Engine Power** : 377kW (506HP)

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

Introducing the Productive Wheel Loaders:

ZW Series

Top-Class Production with High Dependability

High Productivity

- Computer-controlled engine
- Improved rimpull control and acceleration
- Power mode and fuel-efficient mode
- Advanced hydraulic cooling fan
- Load-sensing hydraulic steering system
- Idle management system
- Outboard wet disc brakes
- Limited slip differential (LSD) (Optional)
- Lock-up torque converter (Optional)
- Active traction control
- Efficient loading system (ELS)

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Comfortable Cab

- High visibility
- ROPS/FOPS (Optional)
- Full-auto air conditioner/heater
- Single shift lever
- Fully adjustable suspension seat
- Machine operation diagnostic module (MODM)
- Assortment of accessories
- Directional switch (Optional)
- Down-shift switch
- Adjustable steering column
- Adjustable clutch cut-off timing
- Lift arm auto-leveler
- Shift hold switch (Optional)

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High Durability and Dependability

- Strong lift arms and bucket
- Sealed bucket hinge pins
- Buffer rings for hydraulic cylinders
- Extended greasing intervals of universal joints
- Full box-section track frame
- Wet disc parking brakes
- Ride control system (Optional)

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Easy Maintenance

- Easy access to engine and filters
- Halogen head lights
- LED Brake and tail lights (Optional)
- DT connectors

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Specifications

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- The engine complying with the Emission Regulations EU Stage III A



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

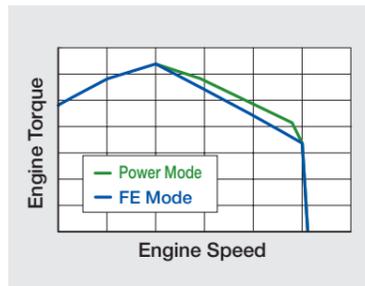


The Engine Control Module (ECM) provides essential operating data for efficient fault diagnosis and troubleshooting. The Cummins diagnosis tools also provide key engine data for quick, accurate analysis. The Cummins In-Line Combustion Solution, provided to meet the EPA Tier III Emission Regulation, makes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

Improved Rimpull Control and Acceleration

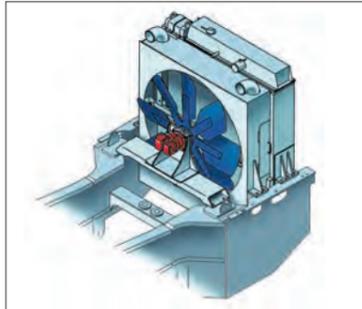
The powertrain is designed for more efficient operation in various applications. Improved torque control and matching between engine and torque converter deliver higher performance.

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.

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.

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.

Idle Management System

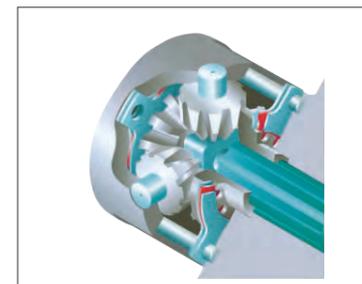
The idle management system keeps engine speed low during long-time idling for fuel saving. This system also increases engine speed for quick warming-up of the ZW550 in cold weather.

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.

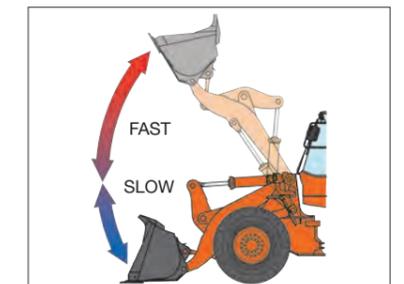
Lock-Up Torque Converter (Optional)

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.

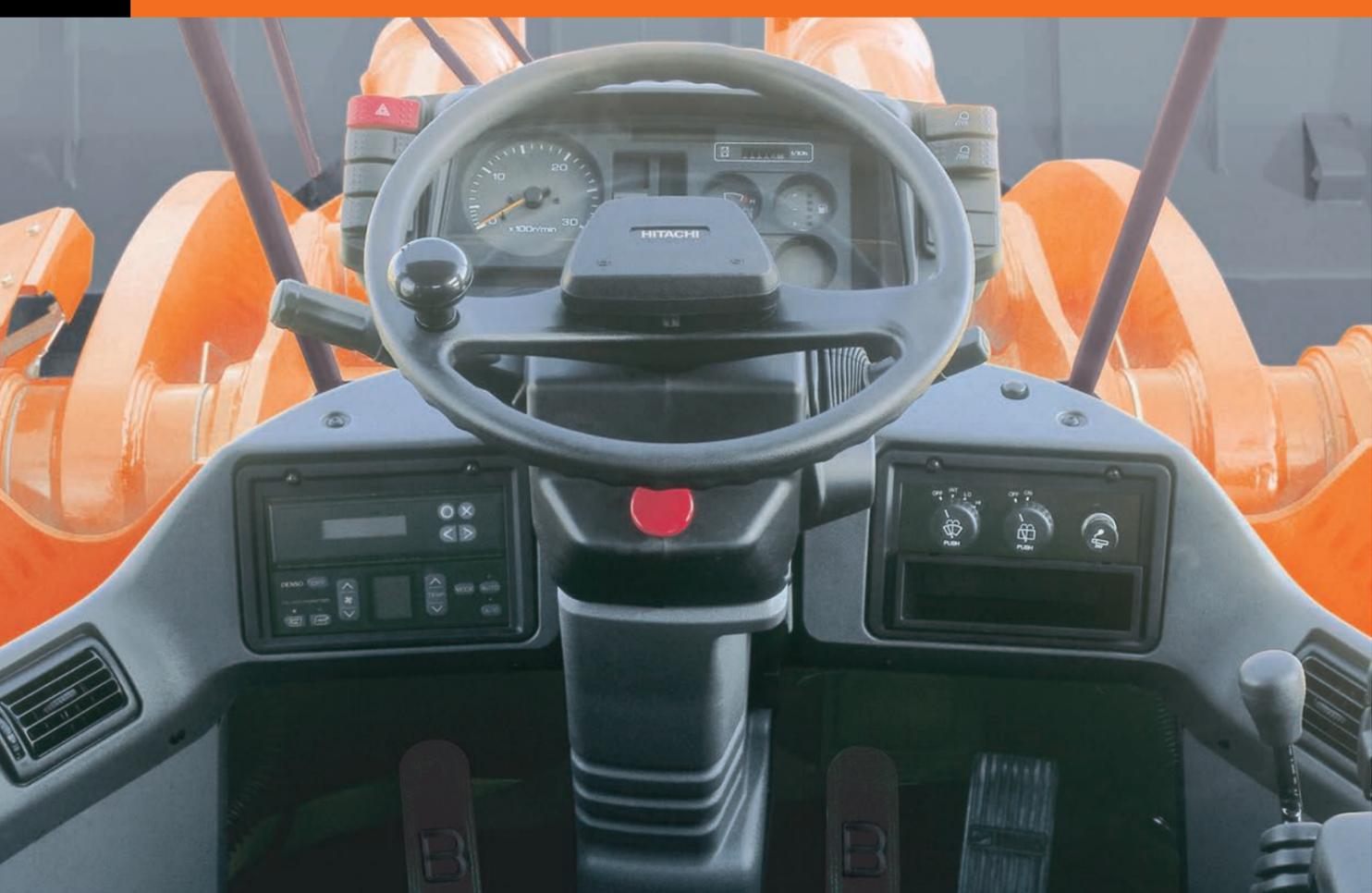
Efficient Loading System [ELS]



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



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



Comfortable

Single Shift Lever

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

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.

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.



Fully Adjustable Suspension Seat



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

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.

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.

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 (Optional)



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.

Machine Operation Diagnostic Module [MODM]



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

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.

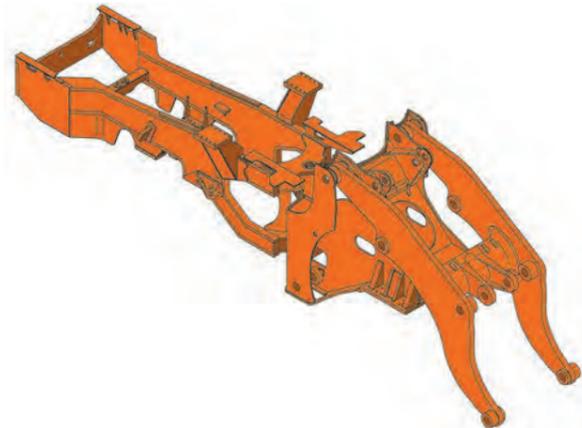
Extended Greasing Intervals of Universal Joints



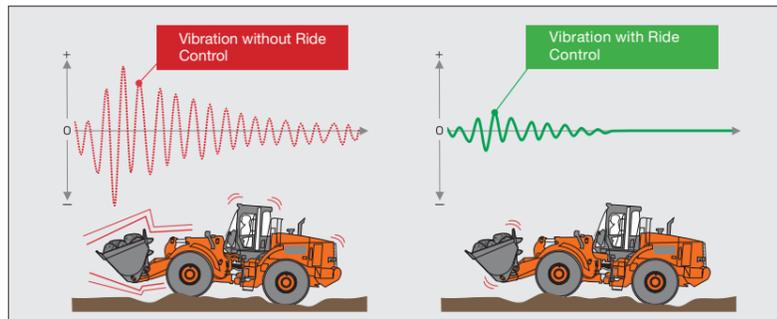
Universal joints are hermetically sealed to extend greasing intervals up to 12 000 hours, simplifying maintenance and increasing durability.

Full Box-Section Track Frame

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



Ride Control System (Optional)

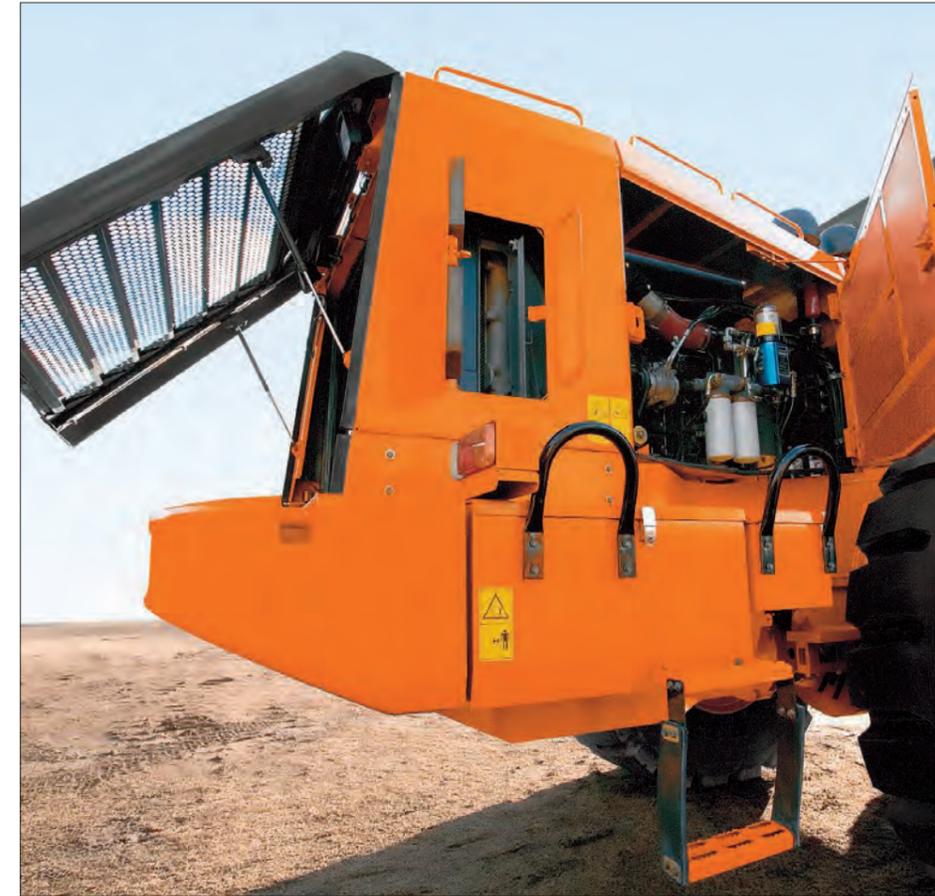


The ride control system can reduce pitching and bouncing when traveling on rough terrain and snow road. This system automatically controls the movement of machine to reduce shocks and vibration.

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.

Halogen Head Lights



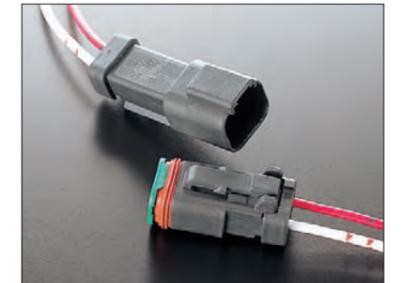
Front and rear working lights are bright halogen lamps for safer night-shift operation.

LED Brake and Tail Lights (Optional)



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

DT Connectors

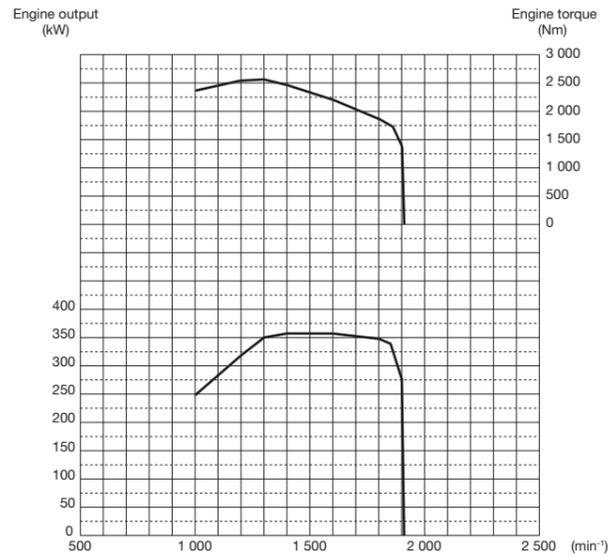


Sealed Deutsch DT connectors are used throughout the electrical system to reduce corrosion and ensure positive connection.

SPECIFICATIONS

ENGINE

Model.....	Cummins QSK19
Type	4-cycle water-cooled, direct injection
Aspiration.....	Turbocharger and intercooled
No. of cylinders	6
Maximum power	
SAE J1995/ISO 14396, gross .	389 kW (522HP) at 1 500 min ⁻¹ (rpm)
SAE J1349/ISO 9249, net.....	360 kW (483HP) at 1 500 min ⁻¹ (rpm)
Rated power	
SAE J1995/ISO 14396, gross .	377 kW (506HP) 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 Outboard 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

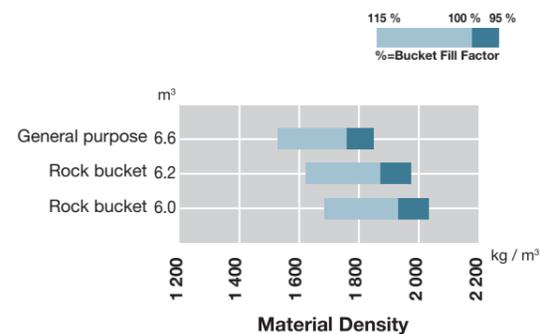
HYDRAULIC SYSTEM

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

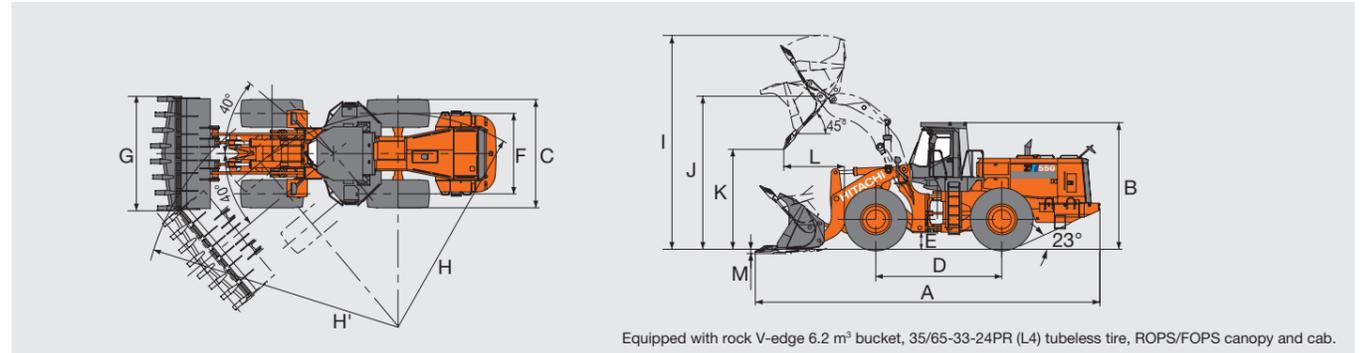
SERVICE REFILL CAPACITIES

Fuel tank	660.0	liters
Engine coolant	155.0	
Engine oil	66.0	
Torque convertor & transmission	90.0	
Front axle differential & wheel hubs.....	180.0	
Rear axle differential & wheel hubs	180.0	
Hydraulic reservoir tank	225.0	

BUCKET SELECTION GUIDE



DIMENSIONS & SPECIFICATIONS



Arm type	Standard arm			
	Rock bucket		General purpose	Coal bucket
	V-edge	Straight edge	Round bottom	Round bottom
Bucket type	With weld-on adaptor & teeth Segment	With weld-on adaptor & teeth Segment	With weld-on adaptor & teeth	With bolt-on cutting edges
Bucket capacity	ISO heaped m³	6.2	6.0	6.6
	ISO struck m³	5.5	5.3	5.7
A Overall length	mm	11 350	11 120	11 300
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
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
I Overall operating height	mm	7 045	7 045	6 910
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
L Reach, 45 degree dump, full height	mm	1 995	1 830	1 930
M Digging depth (Horizontal digging angle)	mm	180	180	190
Bucket weight	kg	5 240	5 030	4 410
Static tipping load *	Straight	31 090	31 480	31 870
	Full 40 degree turn	26 050	26 370	26 690
Breakout force	kN	377	449	402
	(kgf)	(38 500)	(45 800)	(41 000)
Operating weight *	kg	46 610	46 400	45 780

Note: 1. All dimensions, weight and performance 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, ROPS/FOPS canopy and cab, 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 (kg)		Overall width (mm) (outside tire)	Overall height (mm)	Overall length (mm)
		Straight	Full turn			
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
Belly 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 2 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
- Ashtray
- Cigarette lighter
- Coat hook
- Cup holder
- Down-shift switch
- Electric dual horns
- Front and rear wiper and washers
- Full automatic air conditioner
- Lockable doors with sliding windows by regulator handles (left and right)
- Machine Operation Diagnostic Module (MODM)
- Rear view mirrors (interior and exterior)
- Rubber floor mat
- Soft cab (left and right doors open, walk-through design)
- Storage compartment
- Sun visor
- Telescopic and tilt steering wheel
- Tinted safety glass (tempered glass)
- Transmission clutch cut-off adjust switch
- Two-lever for two-spool control valve

POWER TRAIN

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

OTHERS

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

BUCKET

- Rock bucket (V-edge) with weld-on teeth and segments: 6.2 m³ (ISO heaped)

OPTIONAL EQUIPMENT

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

OPERATOR ENVIRONMENT

- Adjustable operator seat with air suspension
- AM/FM Radio
- Directional switch
- Head rest
- Outer ROPS/FOPS for soft cab
- Seat belt (2 inch)
- Three-spool main control valve with three levers
- Two-spool main control valve with mono lever

POWER TRAIN

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

OTHERS

- Belly guard
- Bucket cylinder guard
- High lift arm
- Mud guard for front fenders
- Vandalism protection kit

BUCKET

- Coal bucket with bolt-on cutting edges: 10.0 m³ (ISO heaped)
- General purpose bucket with weld-on teeth: 6.6 m³ (ISO heaped)
- Rock bucket (straight edge) with weld-on teeth and segments: 6.0 m³ (ISO heaped)
- Rock bucket (V-edge) for High lift arm with weld-on teeth and segments: 5.1 m³ (ISO heaped)

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.

Note : * : ROPS (Roll Over Protective Structure) Conforms to ISO 3471;1994

** : FOPS (Falling Objects Protective Structure) Conforms to ISO 3449; 1992 Level II