

HITACHI

CONSTRUCTION WHEEL LOADER

ZW250-7

Reliable Solutions



Gross Power : 252 HP (188 kW)

Operating Weight : 46,100 – 47,290 lb (20,910 – 21,450 kg)

Bucket Capacity : 4.8 – 5.2 yd³ (3.7 – 4.0 m³)

Model Code : ZW250-7

ZW250

Hitachi Construction Machinery Group

LANDCROS

Japanese Excellence—Reliable Solutions

SPECIFICATIONS

ZW250-7

ENGINE	
Model	CUMMINS B6.7
Type	4-cycle water-cooled, direct injection
Aspiration	Turbocharger and intercooled
Aftertreatment	DPF and SCR system
No. of cylinders	6
Maximum power	
ECE R120, gross	188 kW (252 HP) at 1,800 min ⁻¹ (rpm)
ISO 9249 : 2007, net	183 kW (245 HP) at 1,800 min ⁻¹ (rpm)
Rated power	
ISO 14396 : 2002, gross	168 kW (225 HP) at 2,200 min ⁻¹ (rpm)
ISO 9249 : 2007, net	163 kW (218 HP) at 2,200 min ⁻¹ (rpm)
Maximum torque	
ISO 9249 : 2007 net	875 ft lbf (1,186 Nm) at 1,300 min ⁻¹ (rpm)
gross	859 ft lbf (1,164 Nm) at 1,300 min ⁻¹ (rpm)
Bore and stroke	4.21" x 4.88" (107 mm x 124 mm)
Piston displacement	408.0 cu.in (6.69 L)
Batteries	2 x 12 V
Air cleaner	Two element dry type with restriction indicator

POWER TRAIN	
Transmission	Torque converter, shaft 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* Forward / Reverse	
1st mph (km/h)	3.6 (5.8) / 3.8 (6.1) [3.6 (5.8) / 3.8 (6.1)]
2nd mph (km/h)	6.3 (10.1) / 6.6 (10.7) <6.5 (10.5) / 6.9 (11.1) > [6.6 (10.7) / 7.0 (11.2)] [<6.8 (11.0) / 7.2 (11.6)>]
3rd mph (km/h)	9.1 (14.6) / 14.2 (22.8) <9.6 (15.5) / 15.7 (25.3) > [10.0 (16.1) / 15.7 (25.2)] [<10.5 (16.9) / 17.0 (27.4)>]
4th mph (km/h)	13.8 (22.2) <15.1 (24.3)> [15.0 (24.1)] [<16.2 (26.1) >]
5th mph (km/h)	21.1 (33.9) <24.2 (38.9)> [21.1 (33.9)] [<24.2 (38.9) >]

*With 23.5R25 (L3) tires
< >: Data at Lock-up clutch ON
[] : Data at Power Mode

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

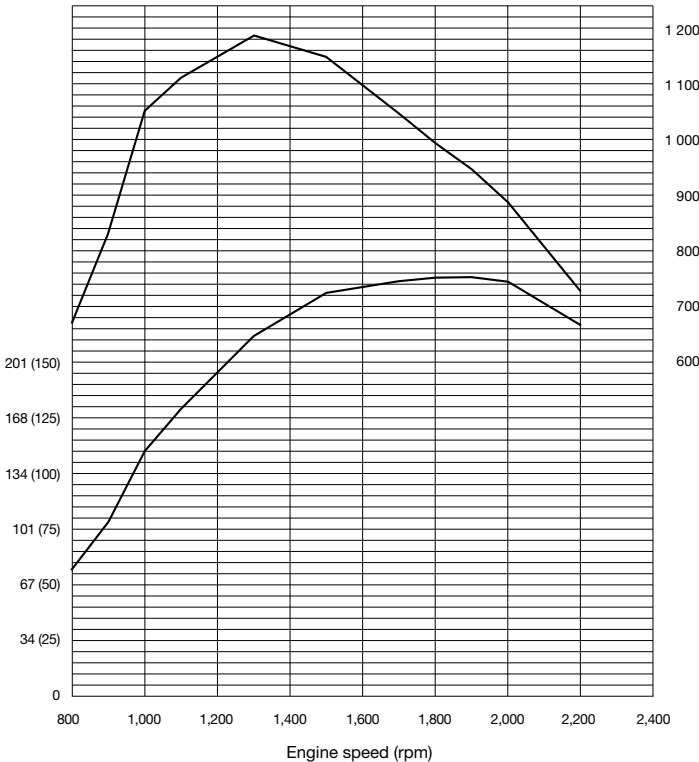
TIRES	
Tire size	23.5R25(L3) tires

BRAKES	
Service brakes	Inboard mounted fully hydraulic 4 wheel disc brake. Front & rear independent brake circuit
Parking brakes	Spring applied, hydraulically released, dry disc type with external output shaft

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 2.8" x 21.3" (2 x 70 mm x 542 mm)

Engine output
HP(kW)

Engine torque
(Nm)



HYDRAULIC SYSTEM	
Arm and bucket are controlled by multifunction lever	
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 (Serve as steering pump)	
Variable displacement axial plunger pump	
Maximum flow	72.7 gal (275 L) /min at 2,200 min ⁻¹ (rpm)
Maximum pressure	4 260 psi (29.4 MPa)
Fan pump	
Fixed Displacement Gear Pump	
Maximum flow	17.4 gal (65.8 L) /min at 2,200 min ⁻¹ (rpm)
Maximum pressure	2 250 psi (15.5 MPa)
Hydraulic cylinders	
Type	Double acting type
No. x Bore x Stroke	Arm: 2 x 5.1" x 37" (2 x 130 mm x 940 mm)
	Bucket: 1 x 6.5" x 20.9" (1 x 165 mm x 530 mm)
Filters	Full-flow 9 micron return filter in reservoir
Hydraulic cycle times	
Lift arm raise	5.3 s
Lift arm lower	3.5 s
Bucket dump	1.4 s
Total	10.2 s

*Data at Power Mode

ENVIRONMENT	
Engine Emissions	
Complies with EU stage V	
Sound level	
Sound level in cab according to ISO 6396: 2008	LpA 68 dB(A)
External sound level according to ISO 6395: 2008 and EU Directive 2000/14/EC	LwA 105 dB(A)

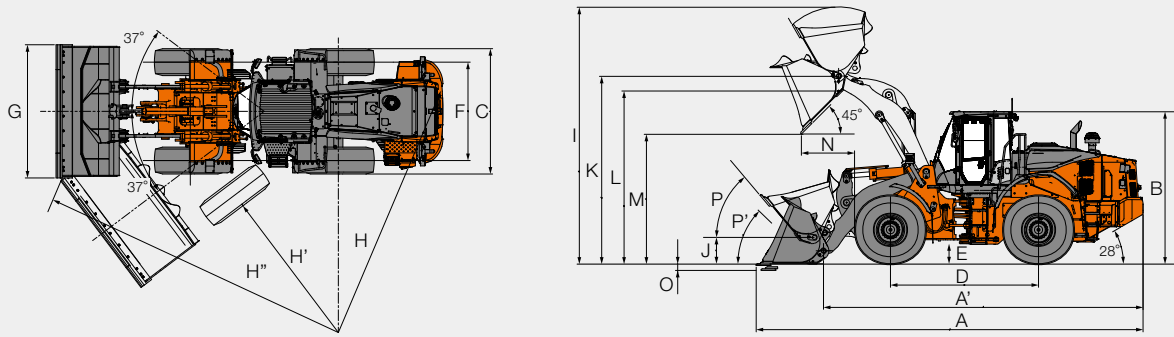
SERVICE REFILL CAPACITIES	
Fuel tank	80.6 gal (305 L)
Engine coolant	10.3 gal (39 L)
Engine oil	6.6 gal (25 L)
Torque converter and transmission	7.1 gal (27 L)
Front axle differential and wheel hubs	11.4 gal (43 L)
Rear axle differential and wheel hubs	11.4 gal (43 L)
Hydraulic oil tank	30.4 gal (115 L)
DEF/AdBlue® tank	9.0 gal (34 L)

SPECIFICATIONS

ZW250-7

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DIMENSIONS & SPECIFICATIONS



Bucket type			Standard arm			High-lift arm
			General purpose			Light material
			Bolt-on cutting edge	Weld-on teeth / segment edge	Bolt-on cutting edge	Bolt-on cutting edge
Bucket capacity	ISO 7546: 1983 Heaped	yd³ (m³)	4.8 (3.7)	4.8 (3.7)	5.2 (4.0)	4.8 (3.7)
	ISO 7546: 1983 Struck	yd³ (m³)	4.3 (3.3)	4.3 (3.3)	4.6 (3.5)	4.3 (3.3)
A	Overall length	ft-in (mm)	28' 3" (8 610)	28' 9" (8 760)	28' 5" (8 660)	29' 9" (9 060)
A'	Overall length, without bucket	ft-in (mm)	23' 6" (7 150)	23' 6" (7 150)	23' 6" (7 150)	25' 0" (7 600)
B	Overall height, up to cab top	ft-in (mm)	11' 2" (3 400)			
C	Width over tires, outside tire	ft-in (mm)	9' 5" (2 870)			
D	Wheel base	ft-in (mm)	10' 10" (3 310)			
E	Ground clearance, minimum	ft-in (mm)	1' 4" (420)			
F	Tread	ft-in (mm)	7' 3" (2 200)			
G	Bucket width	ft-in (mm)	10' 2" (3 100)			
H	Turning radius, centerline of outside tire	ft-in (mm)	19' 11" (6 050)			
H'	Turning radius to inside of tires	ft-in (mm)	11' 8" (3 550)			
H''	Loader clearance radius, bucket in carry position	ft-in (mm)	23' 4" (7 110)	23' 6" (7 160)	23' 5" (7 130)	24' 0" (7 300)
I	Overall operating height, bucket full raise	ft-in (mm)	18' 6" (5 620)	18' 6" (5 620)	18' 7" (5 670)	20' 0" (6 080)
J	Carry height of bucket pin, at carry position	ft-in (mm)	1' 11" (590)	1' 11" (590)	1' 11" (590)	1' 11" (590)
K	Height to bucket hinge pin, fully raised	ft-in (mm)	13' 9" (4 190)	13' 9" (4 190)	13' 9" (4 190)	15' 3" (4 650)
L	Lift arm clearance at max lift	ft-in (mm)	12' 7" (3 840)	12' 7" (3 840)	12' 7" (3 840)	14' 1" (4 290)
M	Dumping clearance 45 degree, full height	ft-in (mm)	9' 7" (2 940)	9' 3" (2 830)	9' 6" (2 900)	11' 1" (3 390)
N	Reach, 45 degree dump, full height	ft-in (mm)	3' 7" (1 100)	3' 11" (1 210)	3' 8" (1 130)	3' 8" (1 140)
O	Digging depth, horizontal digging angle	ft-in (mm)	0' 5" (140)	0' 5" (140)	0' 5" (140)	0' 6" (160)
P	Max. roll back at ground level	deg	50			
P'	Max. roll back at ground level	deg	44			45
Q	Roll back angle at full height	deg	60			53

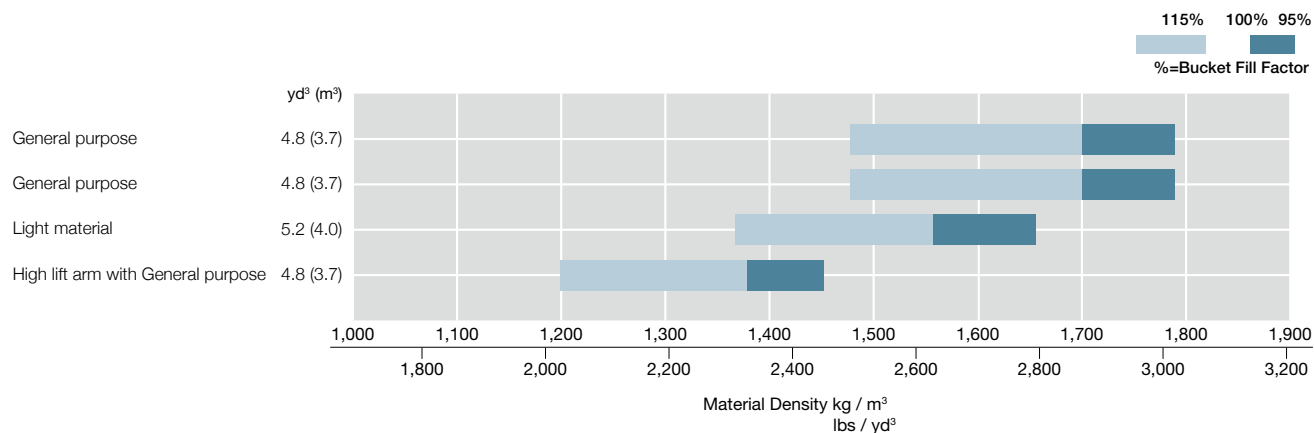
Bucket type			Standard arm			High-lift arm
			General purpose			Light material
			Bolt-on cutting edge	Weld-on teeth / segment edge	Bolt-on cutting edge	Bolt-on cutting edge
Static tipping load ISO 14397-1: 2007(Section 1-5)*	Straight	lb (kg)	37,360 (16,940)	37,270 (16,900)	32,590 (14,780)	30,750 (13,940)
	Full 37 degree	lb (kg)	32,910 (14,930)	32,840 (14,890)	28,710 (13,020)	27,090 (12,280)
Breakout force		kN	154	142	147	142
		lbf (kgf)	34,690 (15,730)	31,980 (14,500)	33,040 (14,980)	31,920 (14,470)
Operating weight*		lb (kg)	46,100 (20,910)	46,170 (20,940)	46,500 (21,090)	47,290 (21,450)
Articulate angle		deg	37			
Departure angle		deg	28			

* Static tipping load and operating weight marked with* include 23.5R25(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 lb (kg)	Tipping load lb (kg)	Overall height in (mm)
			Straight	
Tire	23.5R25 (L3) VJT	± 0	± 0	± 0
Belly guard		+ 420 (+190)	+ 310 (+140)	-

BUCKET SELECTION GUIDE



ENGINE	ZW250-7
Aftertreatment device	●
Aftertreatment device regeneration inhibit switch	●
Aftertreatment device manual regeneration switch	●
Air filter double elements	●
Air intake	
Pre-cleaner (Sy-Klone)	●
Anti-clogging radiator (Wide fin pitch radiator)	●
Automatic reversible cooling fan with heat sensing	●
Cartridge-type engine oil filter	●
Cartridge-type fuel pre-filter	●
Cartridge-type fuel main filter	●
Coolant reservoir sight gauge	●
DEF/AdBlue® tank extension filler	●
DEF/AdBlue® tank with ISO magnet adapter	●
Engine auto shut-down control system	●
Engine block heater	●
Engine oil remote drain	●
Fan guard	●

BRAKE SYSTEM	ZW250-7
Front and rear independent brake circuit	●
Inboard mounted fully hydraulic 4 wheel wet disc	●
Spring-applied/Hydraulic-released parking brake	●

HYDRAULIC SYSTEM	ZW250-7
Bucket auto leveler (Automatic return to dig control)	●
Electric control lever	
for 3 spools control valve	
2 levers	●
Multi-function lever and Proportional switch for 3rd function	○
2 levers and AUX lever for 3rd function	
- Inside layout pattern (3rd - bucket - liftarm)	○
Control lever lock switch	●
Dual lift arm auto leveler and kickout system	●
Hydraulic filters	●
Lift arm float system	●
Quick coupler piping and switch	○
Reservoir sight gauge	●
Ride control system (OFF-AUTO type)	●
Work mode selector	●

CAB	ZW250-7
Adjustable steering column with POP-UP	●
Auto control air conditioner	
with single intake filter	●
Bluetooth® integrated FM/AM+radio, hands-free calling	●
Camera & monitor	
AERIAL ANGLE (Side and rear view camera)	○
Rear view camera & 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	
Inside (1)	●
Outside (2)	●
Outside (Heated, 2) electrical adjustment retractable mirror stay	○
Retractable seat belt, 3.0 in (76 mm)	●
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	●
Seat belt reminder	●
Steering system	
Joystick steering (with wheel steering)	●
Stereo speakers (2)	●
Storage	
Cup holder	●
Document holder	●
Hot & cool box	●
Seatback pocket	●
Smartphone and Tablet device holder	●
Sunscreen roller type	●
Tinted safety glass	
Front windshield: laminated	●
Others: tempered	●
USB power supply	●
Windshield washers for front and rear	●
Windshield wipers for front and rear	●
8" sub monitor	●

● : Standard equipment ○ : Optional equipment

MONITORING SYSTEM	ZW250-7
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, Lock-up converter	●
Indicator on sub monitor : payload checker, dual auto-leveler indicator rear obstacle detection and warning system (optional)	●
38 languages selection	●

ELECTRICAL SYSTEM	ZW250-7
Alternator (95A)	●
Backup alarm	●
Battery disconnect switch	●
Large capacity batteries	●
Power outlet 12 V & 24 V	●

LIGHTS	ZW250-7
Clearance lights	●
LED brake & tail lights	●
LED headlights	●
LED working lights (4 front, 2 rear on cab & 2 rear)	●
Rotating lamp	○
Turn signals with hazard switch	●
Work lights	●

POWER TRAIN	ZW250-7
Approach speed control	●
Automatic transmission with load sensing system	●
Clutch cut position switch	●
Differential	
LSD (Limited Slip Differential, front and rear)	●
DSS (Down Shift Switch)	●
Forward/Reverse lever	●
Forward/Reverse selector switch	●
Lock-up clutch (torque converter)	●
Maximum gear limited switch	●
Power mode switch	●
Quick power switch	●
Travel mode selector (Auto1-Auto2)	●

TIRES	ZW250-7
23.5R25 (L3) VJT	●

MISCELLANEOUS	ZW250-7
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	●
Cab window cleaning foot plate	●
Counterweight, built-in	●
Drawbar with locking pin	●
Emergency steering	●
Fenders	
23.5R25 (Front & full covered rear fenders with mud flaps)	○
23.5R25 (Front & rear fenders with mud flaps)	●
Exclusive Global e-Service telematics	●
Lift and tie down hooks	●
Lift arm	
High lift arm	○
Standard lift arm	●
On board information controller	●
Pilfer proof	
Battery cover with locking bracket	●
Lockable engine cover	●
Lockable fuel refilling cap	●
Standard tool kit	●
Tool box	●

HITACHI

Reliable Solutions



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Well-respected in North America since the 1970s when Hitachi Construction Machinery Group led a prominent joint venture, Hitachi Construction Machinery Americas recently established a new facility in Newnan, GA. that is poised to support local customers for years to come.

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