

ZW-7 series

HITACHI

Reliable Solutions

# ZW140-7

LANDCROS



## WHEEL LOADER

Model code : ZW140-7

Engine maximum power : 154 HP (115 kW)

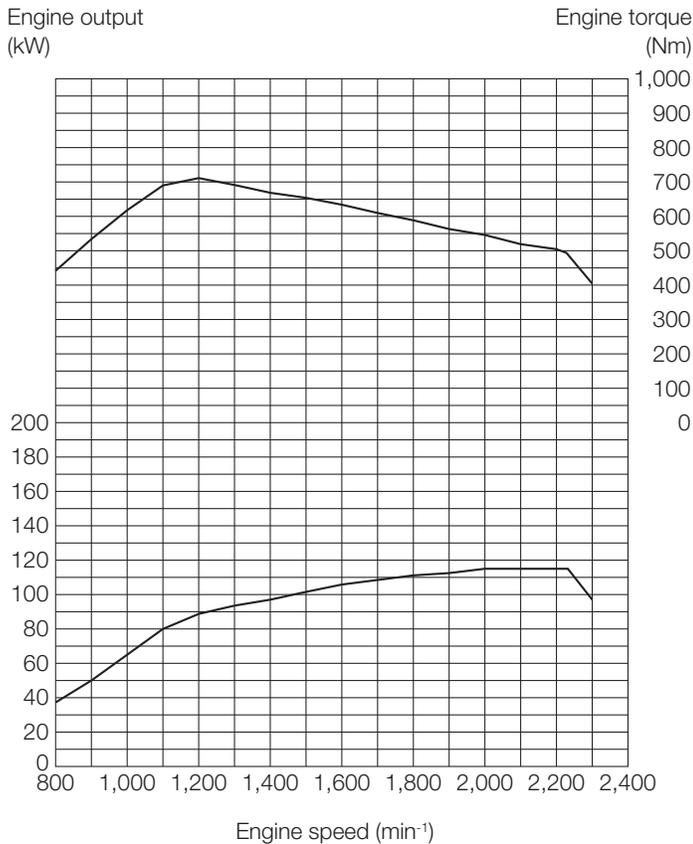
Operating weight : 25,760 - 26,490 lb. (11,680 - 12,010 kg)

Bucket capacity : 2.5 - 3.1 yd<sup>3</sup> (1.9 - 2.4 m<sup>3</sup>)

# SPECIFICATIONS

## ZW140-7

ENGINE	
Model	CUMMINS B4.5
Type	4 cycle water-cooled, direct injection
Aspiration	Turbocharger and intercooled
Aftertreatment	DPF+SCR system
No. of cylinders	4
Maximum power	
ECE R120 gross	154 HP (115 kW) at 2,200 min <sup>-1</sup>
ISO 9249 : 2007 net	153 HP (114 kW) at 2,200 min <sup>-1</sup>
Rated power	
ISO 14396 : 2002	154 HP (115 kW) at 2,200 min <sup>-1</sup>
ISO 9249 : 2007 net	153 HP (114 kW) at 2,200 min <sup>-1</sup>
Maximum torque	
ISO 9249 : 2007 net	519 lbf ft (704 Nm) at 1,200 min <sup>-1</sup>
Bore and stroke	4.2" x 4.9" (107 mm x 124 mm)
Piston displacement	273.4 in <sup>3</sup> (4.46 L)
Batteries	2 x 12 V
Air cleaner	Two element dry type with restriction indicator



POWER TRAIN		
Transmission	Electronically controlled 2 motor hydrostatic transmission with summation gear box, Gear box : Fixed gear ratio, powershift countershaft type	
Cooling method	Forced circulation type	
Travel speed* Forward / Reverse		
Operating Mode	Standard Mode	Power Mode
1st mph (km/h)	8.1 (13) / 8.1 (13)	8.1 (13) / 8.1 (13)
2nd mph (km/h)	8.1 (13) / 8.1 (13)	8.1 (13) / 8.1 (13)
3rd mph (km/h)	12.4 (20) / 12.4 (20)	12.4 (20) / 12.4 (20)
4th mph (km/h)	24.2 (39) / 24.2 (39)	24.2 (39) / 24.2 (39)

\*With 20.5 R25 (L3) tires

AXLE AND FINAL DRIVE	
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 limited slip differential
Oscillation angle	Total 20° (+10°, -10°)
Final drives	Heavy-duty planetary, mounted inboard

TIRES	
Tire size	20.5R25 (L3) tires

BRAKES	
Service brakes	Inboard mounted fully hydraulic 4 wheel wet disc brakes. Front & rear independent brake circuit, HST (Hydro Static Transmission) system provides additional hydraulic braking capacity
Parking brakes	Spring applied, hydraulically released, wet disc type

STEERING SYSTEM	
Type	Articulated frame steering
Steering angle	Each direction 40° ; total 80°
Cylinders	Double-acting piston type
No. x Bore x Stroke	2 x 2.8" x 21.3" (2 x 65 mm x 419 mm)

# SPECIFICATIONS

## ZW140-7

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)	
Fixed displacement gear pump	
Maximum flow	51.2 gal (194 L) /min at 2,200 min <sup>-1</sup>
Maximum pressure	2,990 psi (20.6 MPa)
Brake and fan and pilot oil pump	
Fixed displacement gear pump	
Maximum flow	11.9 gal (44.9 L) /min at 2,200 min <sup>-1</sup>
Maximum pressure	2,250 psi (15.5 MPa)
Hydraulic cylinders	
Type	Double acting type
No. x Bore x Stroke	Arm: 2 x 4.9" x 24.4" (2 x 125 mm x 620 mm)
	Bucket: 1 x 5.9" x 17.5" (1 x 150 mm x 445 mm)
Filters	Full-flow 10 micron return filter in reservoir
Hydraulic cycle times	
Lift arm raise	4.9 s
Lift arm lower	3.1 s
Bucket dump	1.2 s
Total	9.2 s

\*Data at Power Mode

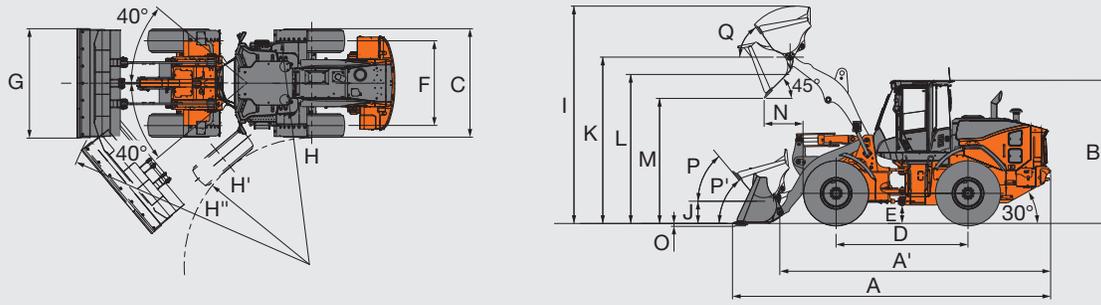
ENVIRONMENT	
Engine Emissions	
EPA Final Tier 4 / EU stage V	
Sound level	
Sound level in cab according to ISO 6396: 2008	LpA 66 dB(A)
External sound level according to ISO 6395: 2008 and EU Directive 2000/14/EC	LwA 103 dB(A)

SERVICE REFILL CAPACITIES	
Fuel tank	54.1 gal (205 L)
Engine coolant	5.3 gal (20 L)
Engine oil (Including oil pan)	4.3 gal (16 L)
Front axle	6.3 gal (24 L)
Rear axle	6.6 gal (25 L)
Hydraulic oil tank	21.2 gal (80 L)
DEF/AdBlue® tank	6.6 gal (25 L)

# SPECIFICATIONS

## ZW140-7

### DIMENSIONS AND SPECIFICATIONS ZW140-7



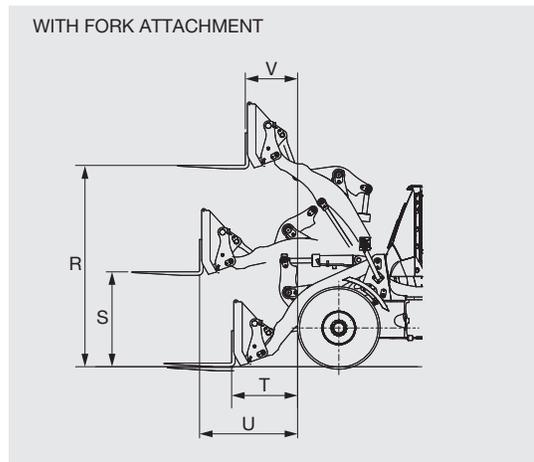
Bucket type			Standard arm	Standard arm	Standard arm	High-lift arm
			General purpose	Material handling	with Quick coupler	General purpose
			Bolt-on cutting edge	Bolt-on cutting edge	Bolt-on cutting edge	Bolt-on cutting edge
Bucket capacity	ISO 7546: 1983 Heaped	yd <sup>3</sup> (m <sup>3</sup> )	2.7 (2.1)	3.1 (2.4)	2.5 (1.9)	2.7 (2.1)
	ISO 7546: 1983 Struck	yd <sup>3</sup> (m <sup>3</sup> )	2.3 (1.8)	2.6 (2.0)	2.1 (1.6)	2.3 (1.8)
A	Overall length.....	ft-in (mm)	23' 10" (7,250)	23' 12" (7,310)	24' 6" (7,445)	25' 4" (7,720)
A'	Overall length (without bucket).....	ft-in (mm)	20' 2" (6,200)		21' 9" (6,700)	
B	Overall height up to cab top.....	ft-in (mm)	10' 9" (3,275)			
C	Width over tires outside tire .....	ft-in (mm)	8' 3" (2,490)			
D	Wheel base .....	ft-in (mm)	9' 10" (3,000)			
E	Ground clearance Minimum .....	ft-in (mm)	1' 4" (425)			
F	Tread.....	ft-in (mm)	6' 4" (1,930)			
G	Bucket width .....	ft-in (mm)	8' 5" (2,560)			
H	Turning radius (centerline of outside tire) .....	ft-in (mm)	16' 8" (5,085)			
H'	Turning radius to inside of tires .....	ft-in (mm)	9' 6" (2,880)			
H''	Loader clearance radius, bucket in carry position.....	ft-in (mm)	19' 5" (5,900)	19' 5" (5,920)	19' 7" (5,950)	19' 12" (6,090)
I	Overall operating height bucket full raise .....	ft-in (mm)	16' 5" (5,005)	16' 11" (5,155)	16' 11" (5,140)	17' 8" (5,365)
J	Carry height of bucket pin at carry position.....	ft-in (mm)	1' 9" (520)		1' 8" (510)	1' 9" (520)
K	Height to bucket hinge pin, fully raised.....	ft-in (mm)	12' 5" (3,800)		13' 7" (4,160)	
L	Lift arm clearance at max lift .....	ft-in (mm)	11' 7" (3,550)		12' 10" (3,915)	
M	Dumping clearance 45 degree, full height.....	ft-in (mm)	9' 4" (2,845)	9' 2" (2,805)	8' 10" (2,705)	10' 6" (3,205)
N	Reach, 45 degree dump, full height.....	ft-in (mm)	2' 11" (910)	3' 1" (950)	3' 5" (1,050)	3' 6" (1,070)
O	Digging depth (horizontal digging angle).....	in (mm)	1.4" (35)		5" (125)	
P	Max. roll back at carry position .....	deg	50		49	50
P'	Max. roll back at ground level .....	deg	42		43	
Q	Roll back angle at full height .....	deg	55		51	

# SPECIFICATIONS

## ZW140-7

Bucket type		Standard arm	Standard arm	Standard arm with Quick coupler	High-lift arm
		General purpose	Material handling	General purpose	General purpose
		Bolt-on cutting edge	Bolt-on cutting edge	Bolt-on cutting edge	Bolt-on cutting edge
Static tipping load ISO 14397-1: 2007 (Section 1-5) *	Straight ..... lb (kg)	20,340 (9,220)	20,230 (9,170)	18,590 (8,430)	16,040 (7,270)
	Full turn ..... lb (kg)	17,850 (8,090)	17,740 (8,040)	16,220 (7,350)	14,000 (6,340)
Breakout force	..... kN	94.8	89.0	77.2	95.4
	..... lbf (kgf)	21,300 (9,670)	20,000 (9,080)	17,300 (7,870)	21,400 (9,730)
Operating weight * .....		25,760 (11,680)	25,940 (11,760)	26,490 (12,010)	26,430 (11,990)

Note: \*: Static tipping load and operating weight marked with\* include 20.5R25 (L3) tires (No ballast) with lubricants, full fuel tank and operator. Machine stability and operating weight depend on counterweight, tire size and other attachments.



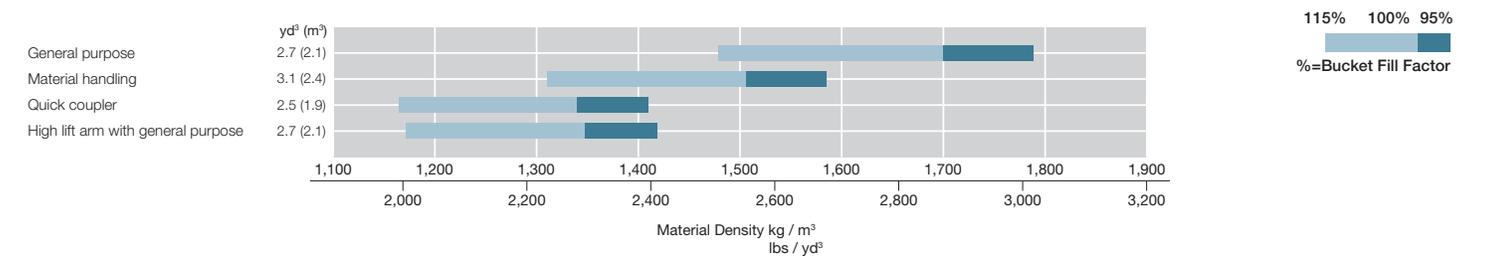
Attachment type		Fork
R	Max. stacking height .....	11' 11" (3,640)
S	Height of fork at maximum reach .....	5' 9" (1,750)
T	Reach at ground level .....	3' 4" (1,020)
U	Max. reach .....	5' 5" (1,660)
V	Reach at max. stacking height .....	2' 8" (830)
Static tipping load ISO 14397-1:2007 (Section 1-5) *	Straight .....	12,900 (5,850)
	Full turn .....	11,270 (5,110)
Max. payload per EN 474-3, 80 % .....		9,020 (4,090)
Max. payload per EN 474-3, 60 % .....		6,760 (3,060)
Fork tine length .....		48" (1,220)
Operating weight * .....		25,980 (11,780)

Note: \*: Static tipping load and operating weight marked with\* include 20.5R25 (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 width in (mm) (outside tire)	Overall height in (mm)	Overall length in (mm)
		Straight	Full turn			
Belly guard (bolt on type) (front/rear)	+150 (+70)	+90 (+40)	+90 (+40)	±0	±0	±0

### BUCKET SELECTION GUIDE



# EQUIPMENT

## ZW140-7

● : Standard equipment ○ : Optional equipment

ENGINE	ZW140-7
Aftertreatment device	●
Aftertreatment manual regeneration with inhibit switch	●
Cold start automatic warm-up setting	●
Air filter double elements	●
Pre-cleaner (sy-clone type)	●
Anti-clogging radiator (wide fin pitch)	●
Automatic reversible cooling fan with temperature sensing	●
Spin-on type engine oil filter	●
Spin-on type fuel main filter	●
Spin-on type fuel pre-filter (with water separator function)	●
Coolant tank level sight gauge	●
DEF/AdBlue® tank with refilling interface magnet	●
Adjustable engine idle shut-down control system	●
Engine oil remote drain	●
Fan guard	●

BRAKE SYSTEM	ZW140-7
Front and rear independent brake circuits	●
Inboard mounted fully hydraulic 4 wheel wet disc	●
Spring-applied/Hydraulic-released parking brake	●
Dual brake pedals	●

HYDRAULIC SYSTEM	ZW140-7
Electro-hydraulic multi-function (MF) control lever	●
Control lever lock switch	●
Lift arm adjustable dual level kickout settings	●
Adjustable bucket leveler kickout setting (automatic return to dig control)	●
M F lever proportional switch for 3rd function	●
Hydraulic filters	●
Lift arm float control detent	●
Quick coupler piping with switch control	●
Tank oil level sight gauge	●
Speed adjustable ride control system (OFF-AUTO type)	●
Control lever adjustable operating characteristic mode settings	●
3rd hydraulic functions detent settings	●
Direct acting hydraulic power steering system	●

CAB	ZW140-7
Adjustable tilt and telescopic steering column with POP-UP	●
Air conditioner/heater with auto climate control	●
Powered cab air precleaner	○
Fresh and recirculation cab air filters	●
Bluetooth® integrated FM/AM+radio , hands-free calling	●
Camera and monitor	
AERIAL ANGLE (Side and rear view camera)	○*
Rear view camera and monitor	●
Coat hook	●
Evacuation hammer	●
Front/rear defroster	●
LED room light	●
Payload checker with tip-off function	●
Rear obstacle detection system (Automatic speed reduction)	○*
Rear view mirrors	
Inside (1)	●
Outside remotely adjusted and heated (2)	○*
Outside manually adjusted (2)	●
Retractable seat belt, 3.0 in (76 mm)	●
ROPS (ISO 3471 : 2008), FOPS (ISO 3449 : 2008 LEVEL II): multi-plane isolation mounted for noise , vibration reduction	●
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 indicator	●
Retractable seat belt, 3.0 inch (76 mm)	●
Steering wheel sure-grip with steering knob and horn button	●
Storage	
Cup holder	●
Document holder	●
Hot and cool box	●
Seatback pocket	●
Smartphone and Tablet device holder	●
Fire extinguisher mounting bracket	●
Retractable windshield sunscreen	●
Tinted safety glass	
Front windshield: laminated	●
Others: tempered	●
USB power supply	●
Windshield washer front and rear	●
Windshield wipers front and rear	●
Speakers (2)	●
8 inch sub monitor	●

# EQUIPMENT

## ZW140-7

● : Standard equipment ○ : Optional equipment

MONITORING SYSTEM	ZW140-7
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, odometer, battery volt, speedometer, tachometer, transmission auto-shifting 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 (excluding PL), dual auto-leveler indicator rear obstacle detection and warning system (optional)	●
35 languages selection	●

ELECTRICAL SYSTEM	ZW140-7
Alternator (24V-95 A)	●
Backup alarm	●
Battery disconnect switch with removable lever	●
Large capacity batteries (2 x 12V-930 CCA)	●
Power outlets 12 V and 24 V	●

LIGHTS	ZW140-7
LED headlights (low and high beam)	●
LED front combination clearance, turn signal and hazard lights	●
LED rear combination tail, brake, reverse, turn signal and hazard lights	●
Rotating warning beacon	○
LED working lights (4 front and 2 rear cab, 2 rear grille)	●
Headlight guards	○
Tail light guard	○

POWER TRAIN	ZW140-7
Approach speed control mode switch	●
Machine deceleration mode switch	●
LSD (limited slip differential, front and rear)	●
Lever temporary power mode switch	●
Forward/reverse column lever and MF lever switch	●
Standard/Power mode switch	●
Traction control mode switch	●
1st gear maximum speed limiter dial	●

TIRES	ZW140-7
20.5R25 (L3) VJTZ Bridgestone VJT	●

MISCELLANEOUS	ZW140-7
Articulation lock bar	●
Belly guards (bolt on front and rear)	○
Bucket cylinder guard	○
Cab front and rear roof top rails	●
Snow windshield wipers front & rear	○
Cab windshield guard (refuse)	○
Counterweight (bolt-on)	●
Drawbar with locking pin	●
Fenders	
Full front with mud flap and full rear coverage	○*
Full front with mud flap and half rear coverage	●
Global e-Service (telematics service)	●
Lift/tie down lugs (front and rear chassis)	●
Lift arm	
High lift arm	○
Standard lift arm	●
On board and remote systems monitoring	●
Anti-vandalism	
Lockable cab door	●
Lockable engine compartment doors	●
Lockable battery box and disconnect switch	●
Lockable DEF tank & tool storage compartment	●
Quick coupler	○
Radiator dust protection screen	○
Emergency secondary steering (ISO 5010:2019 compliant)	○*1
Tool storage compartment	●
Servicing tools	●

QUICK LINKS	ZW140-7
Website's Product Page	

\* Included in Premium Package offering

\*1 Standard where regulation mandated