

# Concentrated Servicing Points



## Wide-Open Engine Cover

Daily maintenance is simplified with the wide-open engine cover and low-profile counterweight. The engine cover can be opened at a touch and held with a gas damper for quick inspection, replacement and replenishment.

## HN Bushings



The time-tested HN bushings are utilized at joints of the front attachment, extending lubricating intervals up to 250 hours.

*Note: For an initial 50-hour lubricating interval, refer to the Operator's Manual.*

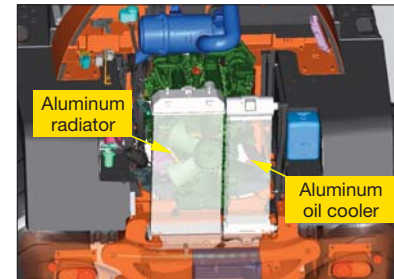
## Brake Oil Reservoir

The brake oil reservoir allows direct checking of brake oil. Its warning light turns on for alerting.

## Battery

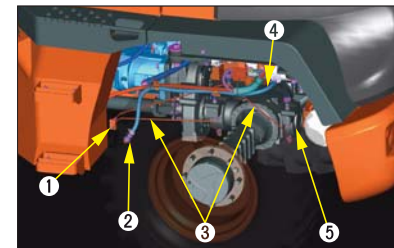
Battery electrolyte level can be checked at a glance through an opening of the counterweight.

## Aluminum Radiator and Oil Cooler



The aluminum radiator and oil cooler are located side by side for easy cleaning.

## Remote Lubrication and Engine Oil Drain



- 1 Remote lubricating point (via grease nipple)
- 2 Engine oil drain plug
- 3 Piping
- 4 Hose
- 5 Rear oscillation

Remote lubrication and engine oil drain eliminates the need for getting under the rear oscillation.

## Concentrated Electric Parts

Electric parts, such as relays, are grouped at one point for simple maintenance.

## Coolant Reservoir

The coolant reservoir allows for direct coolant level checking.

## Double-Element Air Cleaner

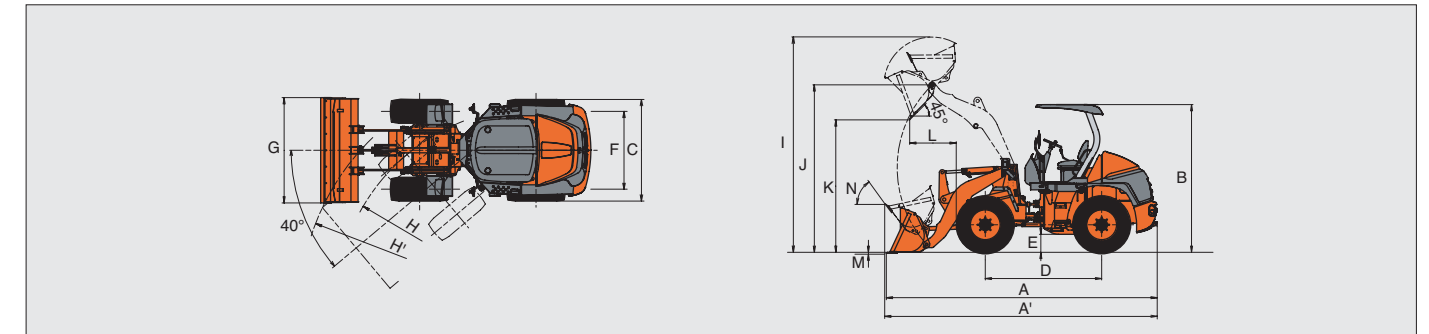
The double-element air cleaner is located strategically for the convenience of inspection and replacement.

## Fuel Filter and Water Separator

A cartridge type fuel filter is used for easy replacement. The water separator has a transparent cup for easy water level checking.

# DIMENSIONS & SPECIFICATIONS

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Bucket type	ZW80						ZW90														
	Standard Arm		Standard Arm with Quick-Coupler		High Lift Arm		Standard Arm		Standard Arm with Quick-Coupler		High Lift Arm										
	General purpose with bolt-on cutting edges						General purpose with bolt-on cutting edges														
Bucket capacity	ISO heaped	m <sup>3</sup>	0.9	1.0	0.9	1.0	0.7	0.9	1.1	1.2	1.1	1.2	0.9	1.1							
	ISO struck	m <sup>3</sup>	0.7	0.8	0.7	0.8	0.58	0.7	0.9	1.0	0.9	1.0	0.75	0.9							
A Overall length	mm	5 120	5 245	5 280	5 400	5 625	5 725	5 490	5 630	5 650	5 785	5 800	5 840								
B Overall height, bucket on ground (with canopy)	mm	2 790						2 990													
Overall height, bucket on ground (with ROPS/FOPS cab)	mm	2 850						3 050													
C Width over tires	mm	1 920						2 150													
D Wheel base	mm	2 200						2 350													
E Ground clearance	mm	340						430													
F Tread	mm	1 470						1 690													
G Bucket width	mm	1 990						2 350				2 210	2 350								
H Turning radius (centerline of outside tire)	mm	3 795						4 100													
H' Loader clearance circle, bucket in carry position	mm	4 475	4 505	4 540	4 570	4 700	4 740	4 900	4 915	4 935	4 985	4 930	5 035								
I Overall operating height	mm	4 065		4 165		4 315		4 410		4 285		4 265		4 380		4 370		4 430		4 480	
J Height to hinge pin, fully raised	mm	3 165						3 505						3 365		3 560					
K Dump clearance 45 degree, full height	mm	2 500	2 415	2 390	2 305	2 915	2 845	2 705	2 620	2 595	2 510	2 930	2 900								
L Reach, 45 degree dump, full height	mm	880	960	990	1 075	1 140	1 210	910	995	1 020	1 105	1 065	1 095								
M Digging depth (horizontal digging angle)	mm	65						335						70		170		170			
N Max. roll back at carry position	deg	53		49		52		53		50		53									
Static tipping load*	straight	kgf	3 650	3 560	3 350	3 290	2 630	2 590	4 620	4 600	4 420	4 350	4 010	3 970							
	Full 40 degree turn	kgf	3 110	3 030	2 840	2 780	2 220	2 180	3 790	3 770	3 610	3 540	3 280	3 240							
Breakout force	kN(kgf)	46.6 (4 750)	39.0 (3 975)	36.8 (3 755)	31.8 (3 245)	55.2 (5 625)	46.4 (4 735)	51.3 (5 230)	43.1 (4 390)	40.6 (4 140)	35.0 (3 575)	55.5 (5 660)	46.6 (4 750)								
Operating weight (with canopy)*	kg	4 895	4 940	5 030	5 050	4 995	5 025	6 005	6 020	6 130	6 155	6 035	6 075								
Operating weight (with ROPS/FOPS canopy)*	kg	4 960	5 005	5 095	5 115	5 060	5 090	6 070	6 085	6 195	6 220	6 100	6 140								
Operating weight (with ROPS/FOPS cab)*	kg	5 115	5 160	5 250	5 270	4 215	5 245	6 225	5 240	6 350	6 375	6 255	6 295								

Notes: 1. All dimensions, weight and performance data based on ISO 6746-1:1987, ISO 7131:1997 and ISO 7546:1983  
 2. Static tipping load and operating weight marked with \* include 17.5/65-20 10PR: ZW80, 16.9-24 10PR: ZW90 tires (no ballast) with lubricants, coolant, full fuel tank and operator.  
 Machine stability and operating weight depend on counterweight, tire size and other attachments.

## BUCKET SELECTION GUIDE

ZW80 : General purpose bucket with bolt-on cutting edges	Bucket Capacity m <sup>3</sup>	Material density kg/m <sup>3</sup>								
		800	1 000	1 200	1 400	1 600	1 800			
Standard arm	0.9									
	1.0									
Standard lift with quick-coupler	0.9									
	1.0									
High lift arm	0.7									
	0.9									

ZW90 : General purpose bucket with bolt-on cutting edges	Bucket Capacity m <sup>3</sup>	Material density kg/m <sup>3</sup>								
		800	1 000	1 200	1 400	1 600	1 800			
Standard arm	1.1									
	1.2									
Standard lift with quick-coupler	1.1									
	1.2									
High lift arm	0.9									
	1.1									

# SPECIFICATIONS

ENGINE	ZW80	ZW90
Model	KUBOTA V3307-DI-T	
Type	4-cycle water-cooled,direct injection	
No. of cylinders	4	
Maximum power	SAE J1349, with Fan net 45.6 kW (61 HP) at 2 200 min <sup>-1</sup> (2 200 rpm)	53.1 kW (71 HP) at 2 400 min <sup>-1</sup> (2 400 rpm)
	ISO 9249, with Fan net 45.6 kW (61 HP) at 2 200 min <sup>-1</sup> (2 200 rpm)	53.1 kW (71 HP) at 2 400 min <sup>-1</sup> (2 400 rpm)
Bore and stroke	94 mm x 120 mm	
Piston displacement	3.331 L	
Batteries	12Vx 662 CCA, 159-min.rated reserve	
Air cleaner	Double stage dry type	

POWER TRAIN	ZW80	ZW90
Transmission controls	Hydrostatic (HST) transmission automatically controls power and 2-speed	
Travel speed : Forward & Reverse	34 km/h with 17.5/65-20 10PR tires	32 km/h with 16.9-24 10PR tires

AXLE AND FINAL DRIVE	ZW80	ZW90
Drive system	Four-wheel drive system	
Front & rear axle	Semi-floating	
Front	Fixed to the front frame	
Rear	Center pivot	
Oscillation angle	total 22° (±11°)	
Final drives	Heavy-duty, planetary final drive	

TIRES (tubeless, nylon body)	ZW80	ZW90
Standard	17.5/65-20 10PR (L2)	16.9-24 10PR (L2)

BRAKES	ZW80	ZW90
Service brakes	Inboard mounted fully hydraulic wet disk	
Parking brake	Spring applied hydraulic released wet disk	

STEERING SYSTEM	ZW80	ZW90
Type	Articulated frame steering	
Steering mechanism	Full hydraulic power steering with orbitrol®	
Steering angle	Each direction 40°; total 80°	
Cylinders	Double-acting piston type	
No. x Bore x Stroke	2 x 45 mm x 340 mm	2 x 50 mm x 340 mm
Minimum turning radius at the centerline of outside tire	3 795 mm	4 100 mm

HYDRAULIC SYSTEM	ZW80	ZW90
Arm and bucket are controlled by mechanical single control lever		
Arm controls	Four position valve; Raise, hold, lower, float	
Bucket controls	Two position valve; Roll back, dump	
Main pump (Load & steer)	Gear type 72 L/min 2 200 min <sup>-1</sup> (rpm) at 20.6 MPa (210 kgf/cm <sup>2</sup> )	Gear type 79 L/min 2 400 min <sup>-1</sup> (rpm) at 20.6 MPa (210 kgf/cm <sup>2</sup> )
Relief pressure setting	20.6 MPa (210 kgf/cm <sup>2</sup> )	
Hydraulic cylinders Type	Two arm and one bucket, double acting type	
No. x Bore x Stroke	Arm: 2 x 85 mm x 552 mm Bucket : 1 x 80 mm x 457 mm	Arm: 2 x 90 mm x 552 mm Bucket : 1 x 85 mm x 457 mm
Filters	Full-flow 10 micron return filter before reservoir	
Hydraulic cycle times	Arm raise	5.0 s
	Arm lower	3.5 s
	Bucket dump	1.0 s

SERVICE RIFILL CAPACITIES	ZW80	ZW90
Fuel tank	82 L	100 L
Engine coolant	10 L	
Engine oil	11 L	
Front axle differential & wheel hubs	6 L	
Rear axle differential & wheel hubs	10 L	
Hydraulic reservoir tank	50 L	

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# STANDARD & OPTIONAL EQUIPMENT

Equipment			
○ : Standard ● : Optional △ : Estimate — : Not attachable or no setting			
Components	Items	ZW80 / ZW90	
Operator's station	Canopy	○	
	ROPS/FOPS canopy	●	
	ROPS/FOPS cab, w/front & rear work lights, 2 each, 55 W	●	
Seat, w/seat belt	Standard short-stroke suspension seat	○	
	Long-stroke suspension seat (fabric)	●	
	Long-stroke suspension seat (imitation leather)	●	
Tires and differential	Traction tires	○	
	Solid tires	△	
	Foam filled tire	△	
	Galvanized rim	●	
	LSD (Limited slip differential)	●	
Attachments	Attachment piping with auxiliary function lever (3-spool valve, 2 levers)	●	
	High-lift arm *1	●	
	Quick coupler (mechanical)	●	
	Quick coupler (hydraulic) *2	●	
	Lumber fork (pallet fork)	●	
	Roll grab (bale grab) *2	●	
	Roll fork (bale fork)	●	
	Manure fork	●	
	Ride control	●	
	Galvanized bucket	●	
	Others	Immobilizer key	●
		Back buzzer	○
Standard battery		○	
Large-capacity battery		●	
Alternator (80A)		○	
Double-element air cleaner		○	
Dust screen (radiator)		●	
Wide fin radiator		●	
Under-guard	●		

\*1 If you want to install other attachment than pin-connected bucket, contact our HITACHI authorized dealer.

\*2 Order a set of attachment piping (3-spool valve and 2 levers).

Cab and Canopy Equipment			
○ : Standard ● : Optional — : Not attachable or no setting			
Components	Items	Canopy, ROPS/FOPS canopy	ROPS/FOPS cab
Lights	Head light	○	○
	Backup light	○	○
	Front work lights (twin)	—	○
	Rear work lights (twin)	●	○
	Rear work light (single)	●	—
Air-conditioning	Air conditioner	—	●
	Heater	—	●
	Twin heaters	—	●
	Foot heater	●	—
Others	Sliding window (right door)	—	●
	Sunvisor (front)	—	●