

CAB & INTERIOR	STD	OPT
Alternator, 100 amp	●	
Alarms, audible and visual		
Air filter clogging	●	
Transmission error	●	
Battery voltage	●	
Brake oil pressure	●	
Engine oil pressure	●	
Parking brake	●	
Fuel level	●	
Hydraulic oil temperature	●	
Coolant temperature	●	
Transmission oil temperature	●	
Service brake oil pressure	●	
Coolant level	●	
Water in fuel	●	
Alarm, backup	●	
Batteries, PT		
900 CCA, 12V, (2)	●	
Gauges		
Engine coolant temperature	●	
Fuel level	●	
Speedometer	●	
Transmission oil temperature	●	
Horn, electric	●	
Indicator lights		
T/C lockup	●	
High beam	●	
Turn signal	●	
FNR joystick steering		●
Pilot cutoff	●	
LCD Display		
Clock and fault code	●	
Operating hour counter	●	
Engine rpm	●	
Transmission gear range	●	
Indicator	●	
Job time and distance	●	
Temperature (coolant, hydraulic oil, t/m oil)	●	
Lighting system		
LED dome light	●	
2 stop and taillights	●	
4 turn signals	●	
Brake lights (counterweight)	●	
2 headlights on front tower	●	
2 working lights on front roof	●	
4 working lights on front roof, 2 working lights on rear roof		●
4 working lights (2 xenon) on front roof, 2 working lights on rear roof		●
4 working lights (LED) on front roof, 2 working lights (LED) on rear roof		●
2 working lights on grill	●	
Switches		
Hazard	●	
Ignition	●	
Parking	●	
Battery master switch	●	
FNR	●	
Diff lock		●
SCR cleaning / inhibit	●	
Secondary steering test		●
Pilot cutoff	●	
Membrane switches in monitor		
Main light	●	
Work light	●	
Auto grease		●
Quick coupler		●
Ride control	●	
Work load	●	
Beacon lamp		●
Rear wiper	●	
Mirror heat	●	
Auto position	●	
Fine modulation		●

CAB & INTERIOR	STD	OPT
Cab (sound suppressed and pressurized) with		
Cigar lighter and ashtray	●	
Coat hook	●	
Automatic climate control		
Air conditioner and heater	●	
Defroster	●	
Intermittent wiper and washer, front and rear	●	
Seat		
2" retractable seat belt and adjustable		●
2" static seat belt and adjustable mechanical suspension (heated)		●
3" static seat belt and adjustable adjustable mechanical suspension		●
2" retractable seat belt and adjustable air suspension (heated)	●	
Personal storage space		
Console box	●	
Holder, can and cup	●	
Rearview mirrors (1 inside)	●	
Rearview mirrors (2 outside)	●	
Rearview mirrors (2 outside, heated)	●	
Steering column, tilt and telescopic	●	
Steering wheel with knob	●	
Roller type sunshade (front window)	●	
Roller type sunshade (rear window)		●
Tinted safety glass	●	
One door cab	●	
Magazine pocket	●	
Pedals		
One accelerator pedal	●	
One brake pedal	●	
Dual-brake pedal		●
Radio / USB player	●	
Bluetooth	●	
Miracast	●	
Rubber floor mat	●	
Wrist rest	●	
24V to 12V DC converter (20 amps)	●	
ENGINE	STD	OPT
Antifreeze	●	
Engine, SCANIA, DC09 085A		
Tier 4 Final / Stage 4	●	
Engine enclosure, lockable	●	
Engine fuel priming pump	●	
Fan guard	●	
Reversible cooling fan	●	
Fuel/water separator	●	
Clean emission module		
DOC and SCR	●	
Rain cap, engine air intake	●	
Radiator	●	
Starting aid (air intake heater)	●	
Fuel heater	●	
Coolant-level sight gauge	●	
Engine oil-level dipstick gauge	●	
3-stage air precleaner		●
Fuel heater (dual)		●
Air cleaner with auto dust eject	●	
POWER TRAIN	STD	OPT
Brakes: service, enclosed wet-disc	●	
Parking brake	●	
Torque converter	●	
Transmission F4 / R3, computer-controlled, electronic soft-shift, auto-shift and kick-down features included	●	
Transmission F5 / R3 with lockup clutch		●
Transmission oil sight level	●	
Limited slip differential (front, rear)	●	
Transmission oil cooler	●	
Transmission oil cooler with thermostat		●
Hyd. lock differential (front)		●
Front axle cooling system		●

POWER TRAIN	STD	OPT
Tires		
26.5 R25, L3	●	
26.5 - 25, 20PR, L3		●
26.5 - 25, 20PR, L5		●
26.5 R25, XHA2		●
23.5-25, 20PR, L3		●
26.5-25, 28PR, L3		●
26.5-25, 32PR, L3		●
Travel speed limiter (20-40 km/h)	●	
HYDRAULIC SYSTEM	STD	OPT
Boom kick-out, automatic	●	
Bucket positioner, automatic	●	
Diagnostic pressure taps	●	
Hydraulic oil cooler	●	
Hydraulic control, 2 spool	●	
Hydraulic control, 3 spool	●	
Joystick control (EH control)	●	●
Lever control-single axis (EH control)	●	●
Joystick steering		●
Ride control system	●	
Secondary steering system		●
Extra piping for auxiliary function		●
Quick coupler piping		●
Auto grease system		●
OTHER	STD	OPT
Articulation locking bar	●	
Counterweight	●	
Additional counterweight		●
Door and cab locks, one key	●	
Doors, service access (locking)	●	
Drawbar with pin	●	
Ergonomically located and slip-resistant, left and right	●	
Handrails	●	
Ladders	●	
Platforms	●	
Steps	●	
Fenders (front / rear)	●	
Hydraulic oil-level sight gauge	●	
Lift and tie-down hooks	●	
Loader linkage, sealed	●	
Z-bar design	●	
Vandalism protection caplocks	●	
Tool kit		●
Tooth, 1 piece, bolt-on type		●
Tooth, 2 pieces, bolt-on type		●
Cutting edge, bolt-on type		●
Pallet forks		●
Guards		
Crankcase		●
Transmission		●
Mudguards		●
Wheel chock		●
License plate and lamp		●
Hi-mate remote management system		
Mobile	●	
Satellite		●
Rearview camera	●	
SAFETY	STD	OPT
Beacon light, rotating		●
Fire extinguisher		●
Operator suit		●

PLEASE CONTACT
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SPECIFICATIONS

HL970

Tier 4 Final Engine



*Photo may include optional equipment.

Net Power | **Operating Weight** | **Standard Bucket**
308 HP (230 kW) / 2,100 rpm | 24,000 kg / 52,909 lb | 4.2 m³ / 5.5 yd³



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SPECIFICATIONS HL970

ENGINE	
Make/model	SCANIA / DC09 085A
Type	Water-cooled, 4-cycle, turbocharged charge air-cooled, direct-injection, electronically controlled diesel engine
Gross power	311 HP (232 kW) / 2100 rpm
Net power	308 HP (230 kW) / 2100 rpm
Maximum torque	174 kg-m (1259 lb-ft) / 1200 rpm
No. of cylinders	5
Bore x stroke	130 mm (5.12") x 140 mm (5.51")
Displacement	9.3ℓ (568 in ³)
Compression ratio	17.0 : 1
Air cleaner	Dry, two-stage dual elements
Alternator	24V - 100 amp
Battery	2 x 12V, 900 CCA
Starting motor	24V - 6.0 kW

TRANSMISSION	
Torque converter type	3-elements, single-stage, single-phase

* Fully automatic power shift, countershaft type with soft-shift in range and direction.

Travel speed, km/h (mph)	4 speed T/M		5 speed T/M
	with lockup clutch		
Forward	1st	7.3 (4.5)	7.2 (4.5)
	2nd	12.2 (7.6)	12.4 (7.7)
	3rd	27.2 (16.9)	19.7 (12.2)
	4th	40.0 (24.9)	28.1 (17.5)
	5th	40.0 (24.9)	40.0 (24.9)
Reverse	1st	7.3 (4.5)	7.2 (4.5)
	2nd	12.2 (7.6)	12.4 (7.7)
	3rd	27.2 (16.9)	28.1 (17.5)

AXLES	
Drive system	Four-wheel drive system
Mount	Rigid front axle and oscillating rear axle
Rear axle oscillation	Oscillation ±11° of center pin-loaded
Hub reduction	Planetary reduction at wheel end
Differential	Conventional
Reduction ratio	24.666

OVERVIEW			
Description	UNIT	HL970	HL970XTD
Operating weight	kg (lb)	24 000 (52,909)	24 800 (54,672)
Bucket capacity	Heaped	m ³ (yd ³)	4.2 (5.5)
	Struck	m ³ (yd ³)	3.6 (4.7)
Breakout force-bucket	kg (lb)	21 775 (48,006)	21 715 (47,873)
	kg (lb)	19 150 (42,218)	17 250 (38,029)
Tipping load	Straight	kg (lb)	16 575 (36,543)
	Full turn	kg (lb)	14 845 (32,729)

TIRES	
Type	Tubeless, loader design tires
Standard	26.5 R25, ★, L3
Options include	26.5-25, 20PR, L3
	26.5-25, 20PR, L5
	26.5, R25 XHA2
	23.5-25, 20PR, L3
	26.5-25, 28PR, L3
	26.5-25, 32PR, L3

HYDRAULIC SYSTEM	
Type	Load-sensing hydraulic system
Pump	Variable-displacement piston pump, 323 lpm (85 gpm)
Control valve	2 spool (bucket, boom) 3 spool (bucket, boom, aux)
System pressure	280 kgf/cm ² (3983 psi)
Lift circuit	Valve has four functions: raise, hold, lower and float Can adjust automatic kick-out from horizontal to full lift
Tilt circuit	Valve has three functions: tilt back, hold and dump Can adjust automatic bucket positioner to desired load angle
Cylinder	Type: Double acting
	No. of cylinders-bore x stroke:
	Lift: 2-160 mm (6.3") x 780 mm (30.7") Tilt: 1-180 mm (7.1") x 565 mm (22.2") HL970 HL970XT Tilt: 1-180 mm 7.1" x 570 mm (22.4")
Cycle time	Raise: 5.7 sec Dump: 1.4 sec Lower: 3.1 sec Total: 10.2 sec

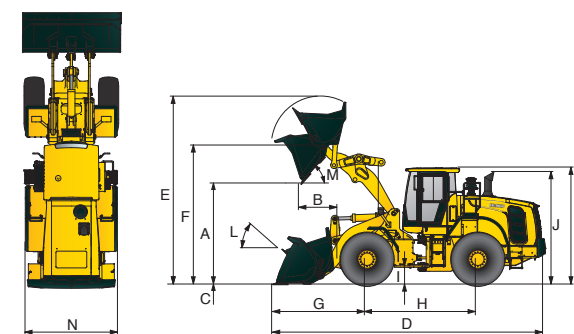
BRAKES	
Service brakes	Hydraulically actuated, wet-disc brakes actuate all 4 wheels independent axle-by-axle system Self-adjusting and wheel speed brake
Parking brake	Spring-applied, hydraulically released brake
Emergency brake	When brake oil pressure drops, indicator light alerts operator and parking brake automatically applies

STEERING SYSTEM	
Type	Load-sensing hydrostatic articulated steering
Pump	Variable-displacement piston pump, 208 lpm (55 gpm)
Relief valve setting	210 kgf/cm ² (2987 psi)
Cylinder	Double acting 2-95 mm (3.7") x 480 mm (18.9")
Steering angle	40° both right and left angle, respectively
Additional features	Center-point frame articulation Tilt and telescopic steering column

SERVICE REFILL CAPACITIES	
Fuel tank	300 ℓ (79.3 gal)
DEF tank	60 ℓ (15.9 gal)
Cooling system	42 ℓ (11.1 gal)
Crankcase	36 ℓ (9.5 gal)
Transmission	43 ℓ (11.4 gal)
Front axle	51 ℓ (13.5 gal)
Rear axle	40 ℓ (10.6 gal)
Hydraulic tank	152 ℓ (40.2 gal)
Hydraulic system (including tank)	276 ℓ (72.9 gal)

DIMENSIONS

All dimensions are approximate.



Description	UNIT	HL970	HL970XT
Bucket Type	General purpose bolt-on cutting edge		
A. Dumping clearance at max. height and 45° dump angle	mm (ft-in)	3 570 (11' 8.6")	3 080 (10' 1.3")
B. Reach	Full lift	mm (ft-in)	1 270 (4' 2.0")
	2134 mm height (7 ft)	mm (ft-in)	1 905 (6' 3.0")
C. Digging depth	mm (ft-in)	100 (3.9")	115 (4.5")
D. Overall length	on ground	mm (ft-in)	8 740 (28' 8.1")
	at carry	mm (ft-in)	8 640 (28' 4.2")
			9 145 (30' 5.4")
			(28' 4.2") (30')

Description	UNIT	HL970	HL970XT
E. Overall height (fully raised)	mm (ft-in)	5 970 (19' 7.0")	6 460 (21' 2.3")
F. Bucket pivot height (max)	mm (ft-in)	4 330 (14' 2.5")	4 815 (15' 9.6")
G. Front overhang	mm (ft-in)	3 025 (9' 11.1")	3 455 (11' 4.0")
H. Wheelbase	mm (ft-in)	3 500 (11' 5.8")	3 500 (11' 5.8")
I. Ground clearance	mm (ft-in)	480 (1' 6.9")	480 (1' 6.9")
J. Height over exhaust	mm (ft-in)	3 515 (11' 6.4")	3 515 (11' 6.4")
K. Height over cab	mm (ft-in)	3 590 (11' 9.3")	3 590 (11' 9.3")
L. Rollback angle	on ground	deg	43
	at carry	deg	47
M. Dump angle	deg	50	50
Clearance circle, over bucket (carry position)	mm (ft)	14 030 (46.03)	14 430 (47.34)
	mm (ft)	12 878 (42.25)	12 878 (42.25)
Clearance circle, inside of tires	mm (ft)	6 928 (22.73)	6 928 (22.73)
	mm (ft)	3 100 (10' 2.1")	3 100 (10' 2.1")
N. Overall width	with bucket	mm (ft-in)	3 100 (10' 2.1")
	without bucket	mm (ft-in)	2 975 (9' 9.1")
	mm (ft-in)	3 100 (10' 2.1")	2 975 (9' 9.1")

HL970 / DENSITY OF OPERATING MATERIALS

Loose material	Material Density
Earth / clay	1.5~1.7 tons / m ³ (2528~2865 lb / yd ³)
Sand and gravel	1.5~1.7 tons / m ³ (2528~2865 lb / yd ³)
Aggregate	25~76 mm (1" to 3")
	19 mm (3") and larger
	1.6~1.7 tons / m ³ (2697~2865 lb / yd ³)
	1.8 tons / m ³ (3034 lb / yd ³)

HL970 / DENSITY OF OPERATING MATERIALS

Lift arm	Bucket	Type	Struck	Heaped
Standard lift arm	General purpose	Cutting edge	4.5 m ³ (5.8 yd ³)	5.2 m ³ (6.8 yd ³)
		1-bolt-on tooth	4.3 m ³ (5.6 yd ³)	5.0 m ³ (6.5 yd ³)
		Cutting edge	3.6 m ³ (4.7 yd ³)	4.2 m ³ (5.5 yd ³)
		1-bolt-on tooth and segment edge	3.6 m ³ (4.7 yd ³)	4.2 m ³ (5.5 yd ³)
		2-bolt-on tooth and segment edge	3.4 m ³ (4.5 yd ³)	4.2 m ³ (5.5 yd ³)
		1-bolt-on tooth	3.4 m ³ (4.5 yd ³)	4.0 m ³ (5.2 yd ³)
		2-bolt-on tooth	4.0 m ³ (5.2 yd ³)	4.0 m ³ (5.2 yd ³)
		Cutting edge	3.0 m ³ (3.9 yd ³)	3.5 m ³ (4.6 yd ³)
		Cutting edge	4.5 m ³ (5.8 yd ³)	5.2 m ³ (6.8 yd ³)
		1-bolt-on tooth	4.3 m ³ (5.6 yd ³)	5.0 m ³ (6.5 yd ³)
High lift arm (XTD)	General purpose	Cutting edge	3.6 m ³ (4.7 yd ³)	4.2 m ³ (5.5 yd ³)
		1-bolt-on tooth and segment edge	3.6 m ³ (4.7 yd ³)	4.2 m ³ (5.5 yd ³)
		2-bolt-on tooth and segment edge	3.4 m ³ (4.5 yd ³)	4.2 m ³ (5.5 yd ³)
		1-bolt-on tooth	3.4 m ³ (4.5 yd ³)	4.0 m ³ (5.2 yd ³)
		2-bolt-on tooth	4.0 m ³ (5.2 yd ³)	4.0 m ³ (5.2 yd ³)
		Cutting edge	3.0 m ³ (3.9 yd ³)	3.5 m ³ (4.6 yd ³)
		Cutting edge	4.5 m ³ (5.8 yd ³)	5.2 m ³ (6.8 yd ³)