

SPECIFICATIONS HL970A

ENGINE	
Maker / Model	CUMMINS / L9
Type	Tier 4F/ Stage V Emission Certified, 6 cylinder diesel engine with No Manual Regeneration.
Gross Power (SAE J1995)	325 HP (242 kW) at 2,100 rpm
Net Power (SAE J1349)	322 HP (240 kW) at 2,100 rpm
Max. Power	330 HP (246 kW) at 2,000 rpm
Peak Gross Torque (SAE J1995)	1,207 lb.ft (1636 N-m) at 1,100 rpm
Displacement	8.9 ℓ (543 cu in)

*Stage V & Tier 4 Final Certified

TRANSMISSION			
Travel Speed, km/h (mph)		4 Speed T/M	5 Speed T/M with lock up clutch
Forward	1st	7.4 (4.6)	7.4 (4.6)
	2nd	12.5 (7.8)	12.6 (7.8)
	3rd	27.8 (17.3)	20.1 (12.5)
	4th	40.0 (24.9)	28.7 (17.8)
	5th	-	40.0 (24.9)
Reverse	1st	7.4 (4.6)	7.4 (4.6)
	2nd	12.5 (7.8)	12.6 (7.8)
	3rd	27.8 (17.3)	28.7 (17.8)

• This is the maximum travel speed of a standard machine with unfilled bucket.

AXLES	
Drive System	Four-wheel drive system
Mount	Fixed
Rear Axle Oscillation	Oscillating ±11 ° degrees
Hub Reduction	Planetary reduction at wheel end
Differential	Conventional
Reduction Ratio	24.666

HYDRAULIC SYSTEM	
Type	Load sensing hydraulic system
Pump	Variable displacement piston pump 359 lpm
Control Valve	2 Spool (Bucket, Boom) 3 Spool (Bucket, Boom, Aux)
System Pressure	280 bar (4,061 psi)
Lift Circuit	The valve has four functions: Raise / Hold / Lower / Float Can adjust automatic kickout from horizontal to full lift.
Tilt Circuit	The valve has three functions: Tilt back / Hold / Dump Can adjust automatic bucket positioner to desired load angle.
Cylinder	Type: double acting No. of cylinders-bore × stroke
	Lift 2-165 × 780 mm (2-6.5" × 2' 6.7")
	HL970A Tilt 1-180 × 565 mm (1-7.1" × 1' 10.2")
	HL970A XT Tilt 1-180 × 570 mm (1-7.1" × 1' 10.4")
Cycle Time	Raise : 6.0 Sec. / Dump : 1.5 Sec. Lower : 4.3 Sec. / Total : 11.8 Sec.

* Hyundai Bio Hydraulic Oil (HBHO) available

OVERVIEW			
Description		HL970A	HL970A XT
Operating Weight		24,700 kg (54,455 lb)	25,002 kg (55,120 lb)
Bucket Capacity	Heaped	4.20 m³ (5.50 yd³)	4.20 m³ (5.50 yd³)
	Struck	3.60 m³ (4.70 yd³)	3.60 m³ (4.70 yd³)
Breakout Force-Bucket		21,715 kg (47,875 lb)	21,775 kg (48,010 lb)
Tipping Load	Straight	19,550 kg (43,100 lb)	16,250 kg (35,830 lb)
	Full Turn	16,892 kg (37,240 lb)	13,950 kg (30,755 lb)

TIRES	
Type	Tubeless, loader design tires
Standard	26.5R25 L3, ★ ★, L3
Options Include	26.5-25, 20PR L5
	26.5R25 XHA, ★, XHA
	26.5-25 20PR L3

BRAKES	
Service Brakes	Hydraulically actuated, wet disc brakes actuate all 4 wheels independent axle-by-axle system. Self adjusting & 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, 242 lpm
System Pressure	210 bar (3,046 psi)
Cylinder	Double acting 2-95 × 468 mm (2-3.7" × 1' 6.4")
Steering Angle	40° to both right and left angle, respectively
Features	Center-point frame articulation. Tilt and telescopic steering column.

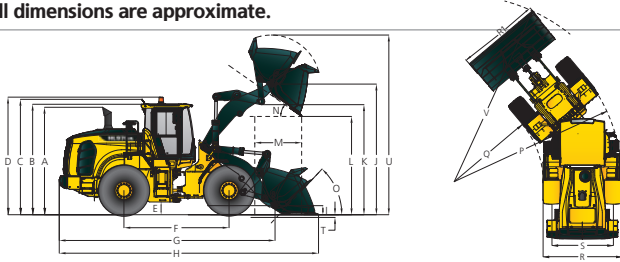
SERVICE REFILL CAPACITIES	
Fuel Tank	365 liters (96.4 US gal)
Def Tank	44.5 liters (11.8 US gal)
Cooling System	47 liters (12.4 US gal)
Crankcase	22.7 liters (6.0 US gal)
Transmission	53 liters (14 US gal)
Front Axle	42 liters (11.1 US gal)
Rear Axle	42 liters (11.1 US gal)
Hydraulic Tank	152 liters (40.2 US gal)
Hydraulic System (Including Tank)	276 liters (72.9 US gal)

CAB NOISE LEVEL	
Guaranteed noise level presented below can be differed depending on a range of factors such as operating condition, speed of a cooling fan, types of engine and so forth. Hearing protection shall be necessary if an operator is working in the improperly maintained cabin or exposed to a noisy environment by leaving doors and/or windows open.	
With cooling fan speed at maximum value:	
Operator sound pressure level (ISO 6396:2008)	70 dB(A)
Exterior sound power level (ISO 6395:2008)	107 dB(A)
* Distance of 15 m (49.2 ft), moving forward in second gear ratio.	

CABIN	
ROPS / FOPS Cabin Meet ISO 3471 and ISO 3449	

HL970A DIMENSIONS

All dimensions are approximate.



Unit : mm (ftin)

Description	HL970A	HL970AXT
A Height to Top of Exhaust Pipe	3,570 (11' 9")	3,570 (11' 9")
B Height to Top of Cabin	3,590 (11' 9")	3,590 (11' 9")
C Height to Top of Product Link Antenna	3,665 (12' 0")	3,665 (12' 0")
D Height to Top of Warning Beacon	3,720 (12' 2")	3,720 (12' 2")
E Ground Clearance	480 (1' 7")	480 (1' 7")
F Wheelbase	3,500 (11' 6")	3,500 (11' 6")
G Overall Length (without Bucket)	7,395 (24' 3")	7,935 (26' 0")
H Shipping Length (with Bucket Level on Ground)	8,740 (28' 8")	9,280 (30' 5")
I Hinge Pin Height at Carry Position	500 (1' 8")	615 (2' 0")
J Hinge Pin Height at Maximum Lift	4,325 (14' 2")	4,815 (15' 10")

Description	HL970A	HL970AXT
K Lift Arm Clearance at Maximum Lift	3,605 (11' 10")	4,095 (13' 5")
L Dump Clearance at Maximum Lift and 45° Discharge	3,080 (10' 1")	3,570 (11' 9")
M Reach at Maximum Lift and 45° Discharge	1,270 (4' 2")	1,255 (4' 1")
N Dump Angle at Maximum Lift and Dump (on Stops)	50	50
O Roll Back Angle	Ground	43
	Carry	49
P Clearance Circle (Diameter) to Outside of Tires	12,885 (42' 3")	12,885 (42' 3")
Q Clearance Circle (Diameter) to Inside of Tires	6,800 (22' 4")	6,800 (22' 4")
R Width Over Tires (Unloaded)	2,980 (9' 9")	2,980 (9' 9")
R1 Overall Width (with bucket)	2,740 (9')	2,740 (9')
S Tread Width	2,300 (7' 7")	2,300 (7' 7")

HL970A OPERATING SPECIFICATIONS WITH BUCKETS

Linkage Bucket Type		General Purpose Pin On		General Purpose - Hook On	High Lift Linkage Change
Edge Type	Bolt - On Cutting Edges	Bolt-On Cutting Edges	Bolt-On Cutting Edges	Bolt-On Cutting Edges	
Capacity - Rated	4.20 m³ (5.50 yd³)	5.20 m³ (6.80 yd³)	4.50 m³ (5.90 yd³)	4.20 m³ (5.50 yd³)	-
Capacity - Rated at 110% Fill Factor	4.62 m³ (6.00 yd³)	5.72 m³ (7.50 yd³)	5.90 m³ (4.95 yd³)	4.62 m³ (6.00 yd³)	-
Width	3,100 mm (10' 2" ft/in)	3,250 mm (10' 8" ft/in)	3,100 mm (10' 2" ft/in)	3,100 mm (10' 2" ft/in)	-
Dump Clearance at Maximum Lift & 45° Discharge	3,080 mm (10' 1" ft/in)	2,975 mm (9' 9" ft/in)	3,040 mm (9' 12" ft/in)	2,865 mm (9' 5" ft/in)	+490 mm (+1' 7" ft/in)
Reach at Maximum Lift & 45° Discharge	1,270 mm (4' 2" ft/in)	1,375 mm (4' 6" ft/in)	1,310 mm (4' 4" ft/in)	1,485 mm (4' 10" ft/in)	-15 mm (-0.6" ft/in)
Digging Depth	100 mm (0' 4" ft/in)	100 mm (0' 4" ft/in)	100 mm (0' 4" ft/in)	100 mm (0' 4" ft/in)	+15 mm (+0.6" ft/in)
T Shipping Length (with Bucket)	8,740 mm (28' 8" ft/in)	8,890 mm (29' 2" ft/in)	8,800 mm (28' 10" ft/in)	9,045 mm (29' 8" ft/in)	+540 mm (+1' 9" ft/in)
U Overall Height with Bucket at Maximum Lift	5,970 mm (19' 7" ft/in)	6,120 mm (20' 1" ft/in)	6,030 mm (19' 9" ft/in)	6,185 mm (20' 4" ft/in)	+490 mm (+1' 7" ft/in)
V Loader Clearance Circle with Bucket at Carry Position	14,310 mm (46' 11" ft/in)	14,540 mm (47' 8" ft/in)	14,350 mm (47' 1" ft/in)	14,500 mm (47' 7" ft/in)	+400 mm (+1' 4" ft/in)
Static Tipping Load. Straight (No Tire Deflection)	18,350 kg (40,455 lb)	17,900 kg (39,465 lb)	18,300 kg (40,345 lb)	16,500 kg (36,380 lb)	-2,100 kg (-4,625 lb)
Static Tipping Load. Articulated (No Tire Deflection)	15,850 kg (34,945 lb)	15,500 kg (34,175 lb)	15,800 kg (34,835 lb)	14,250 kg (31,420 lb)	-1,900 kg (-4,185 lb)
Breakout Force	21,715 kg (47,875 lb)	19,540 kg (43,080 lb)	20,785 kg (45,825 lb)	17,700 kg (39,025 lb)	+60 kg (+135 lb)
Operating Weight*	24,200 kg (53,355 lb)	24,475 kg (53,960 lb)	24,255 kg (53,475 lb)	24,840 kg (54,765 lb)	+800 kg (+1,765 lb)

* All height and tire related dimensions are with standard 20.5 R25, ★ ★, L3 tires.

HL970A / HL970AXT BUCKET SELECTION CHART

Standard Lift Arm - General Purpose Bucket

Type	m³ (yd³)	Material Density [ton / m³]																	
		0.8	0.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0	2.1	2.2	2.3	2.4	2.5
Bolt-On Cutting Edge	4.2 (5.49)	4.8 m³ (6.28 yd³)														4.0 m³ (5.23 yd³)			
Bolt-On Cutting Edge	5.2 (6.8)	6.0 m³ (7.85 yd³)														4.9 m³ (6.41 yd³)			
Bolt-On Cutting Edge	4.5 (5.89)															4.3 m³ (5.62 yd³)			
Cutting Edge (ISO Quick Coupler)	4.2 (5.49)	4.8 m³ (6.28 yd³)														4.0 m³ (5.23 yd³)			

High Lift Arm (XT) - General Purpose

High Lift Arm (x1) - General Purpose		Material Density [ton / m³]																		
Type	m³ (yd³)	0.8	0.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0	2.1	2.2	2.3	2.4	2.5	
Bolt-On Cutting Edge	4.2 (5.49)	4.8 m³ (6.28 yd³)													4.0 m³ (5.23 yd³)					
Bolt-On Cutting Edge	5.2 (6.8)	6.0 m³ (7.85 yd³)							4.9 m³ (6.41 yd³)											
Bolt-On Cutting Edge	4.5 (5.89)	5.2 m³ (6.8 yd³)												4.3 m³ (5.62 yd³)						
Cutting Edge (ISO Quick Coupler)	4.2 (5.49)	4.8 m³ (6.28 yd³)										4.0 m³ (5.23 yd³)								

115% 100% 95%

ENGINE	STD	OPT
ENGINE, CUMMINS, L9		
3 Stage air precleaner	•	
Alternator, 95A	•	
Fuel warmer	•	
Engine oil level dipstick gauge	•	
Fuel / water separator	•	
WGT (Waste Gate Turbo)	•	
CLEAN EMISSION MODULE		
DOC, DPf and SCR	•	
Active Emission Regeneration (No Manual Regeneration Required)		
Stage V Certified Emissions	•	
EGR Free	•	
Automatic Regeneration	•	
COOLING SYSTEM		
Antifreeze	•	
Auto Reversing Fan (adjustable Time/ Interval Frequencies) w/ Manual Override	•	
Coolant Level Sight Gauge	•	
Fan guard	•	
Wide Fin Radiator	•	
POWER TRAIN		
TRANSMISSION		
Transmission F4/R3, computer controlled, electronic soft shift, auto-shift and kick-down features included	•	
Transmission oil sight level	•	
Wide Fin Transmission Oil Cooler	•	
AXLE		
Conventional (Rear)	•	
Hydraulic differential (Front)	•	
Limited slip differential (Front / Rear)		•
BRAKE		
Parking brake	•	
Service brake (Enclosed wet-disc)	•	
TIRES		
26.5 R25 L3, ★★, L3	•	
26.5-25, 20PR L5		•
26.5 R25 XHA, ★, XHA		•
26.5-25, 20PR L3		•
HYDRAULIC SYSTEM		
Diagnostic pressure taps	•	
Hyundai Bio Hydraulic Oil (VG46)		•
Hydraulic oil level sight gauge	•	
Hydraulic Oil VG32		•
Hydraulic Oil VG46	•	
Wide Fin Hydraulic Oil Cooler	•	
HYDRAULIC CONTROL		
Fingertip		•
Joystick		•
ELECTRO-HYDRAULIC CONTROL		
Boom kickout, automatic	•	
Bucket positioner, automatic	•	
Extra piping for auxiliary function		•
Fingertip	•	
Joystick	•	
Quick coupler piping	•	
Ride control system	•	
CAB & INTERIOR		
ALARMS, AUDIBLE AND VISUAL		
Air filter clogging	•	
Battery voltage	•	
Brake oil pressure	•	
DEF low level	•	
Engine coolant level	•	
Engine coolant temperature	•	
Engine oil pressure	•	
Fuel level	•	
Hydraulic oil temperature	•	
Parking brake	•	
Service brake oil pressure	•	
Seat belt ON/OFF	•	
Transmission error	•	
Transmission oil temperature	•	

CAB & INTERIOR	STD	OPT
GAUGES		
Diesel Exhaust Fluid (DEF) level	•	
Engine coolant temperature	•	
Fuel level	•	
Horn, electric	•	
Speedometer	•	
Transmission oil temperature	•	
INDICATOR LIGHTS		
Clutch Cut Off	•	
Differential Lock	•	
Engine auto stop	•	
FNR	•	
High beam	•	
Parking brake	•	
Pilot cut off	•	
Ride control	•	
Seat belt ON/OFF	•	
Turning light	•	
LCD DISPLAY		
Clock and fault code	•	
DEF level	•	
DEF low level	•	
Engine rpm	•	
Horn, electric	•	
Job time and distance	•	
Operating hour counter	•	
Transmission gear range	•	
BATTERIES		
850CCA, 12V, 2PCS	•	
LIGHTING SYSTEM		
Brake lights(Counterweight)	•	
LED dome light	•	
2 Head lights on front tower	•	
2 Head lights (LED) on front tower		•
2 Stop and tail lights	•	
4 Turn signals	•	
2 Working lights on front roof		•
4 Working lights 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	•	
2 Working lights (LED) on grill	•	
SWITCHES		
Battery master switch	•	
Differential Lock	•	
Emergency steering		•
FNR shifter	•	
Hazard	•	
Parking	•	
Pilot cut off	•	
SYSTEM MEMORY SETTINGS		
Autolube, integrated in secondary display		•
Auto position	•	
Beacon light		•
Fine modulation	•	
Main light	•	
Mirror heat	•	
Quick coupler	•	
Rear wiper	•	
Ride control	•	
Work light	•	
Work load	•	
IGNITION		
Key	•	
Push Start Button		•
CAB (SOUND SUPPRESSED)		
24V to 12V DC converter (20A)	•	
Coat hook	•	
Magazine pocket	•	
One door cab	•	
Radio / USB player	•	

CAB & INTERIOR	STD	OPT
CAB(SOUND SUPPRESSED)		
Roller type sunshade (Front window)	•	
ROPS / FOPS CAB.	•	
Rubber floor mat	•	
Steering column, tilt and telescopic	•	
Steering wheel with knob	•	
Tinted safety glass	•	
Wrist rest	•	
DOOR		
Door and cab locks, one key	•	
Doors, service access (Locking)	•	
Doors, service access (Remote control)		•
AUTOMATIC CLIMATE CONTROL		
Air conditioner & heater	•	
Defroster	•	
Intermittent wiper and washer, front and rear	•	
SEAT		
3" Retractable seat belt & adjustable air suspension (Heated)	•	
PERSONAL STORAGE SPACE		
Console box	•	
Holder, can and cup	•	
PEDALS		
Accel pedal without ECO switch	•	
Dual-brake pedal		•
One accelerator pedal	•	
One brake pedal	•	
SAFETY		
Alarm, back-up	•	
Boom safety lock		•
Emergency steering		•
Emergency stop	•	
Fire extinguisher		•
OBJECT DETECTION		
AAVM - All Around View Monitoring		•
IMOD (Intelligent Moving Object Detection)		•
RADAR + Secondary Mornitor		•
OTHERS		
2nd Monitor		•
3 Spool MCV	•	
5 speed T/M with lockup clutch		•
Air Compressor		•
Auto Engine Shut Down	•	
Auto Grease System		•
Articulation Locking Bar	•	
Heavy Counterweight	•	
Hi-Mate, Satellite		•
ISO Quick Coupler	•	
LED Beacon Lamp		•
License Plate & 10W LED Lamp		•
Lift and tie-down hooks	•	
Loader linkage, sealed	•	
Sun Shade on Rear Window of Cabin		•
Vandalism protection caplocks	•	
Wheel Chocks		•
SAFETY		
Handrails	•	
Ladders	•	
Platforms	•	
Steps	•	
TELEMATICS		
ECD (Engine Connected Diagnostics)	•	
Hi MATE	•	
GUARDS		
Belly-Pan Guard		•
Crankcase	•	
Fenders (Front)	•	
Fenders (Rear)		•
Transmission	•	