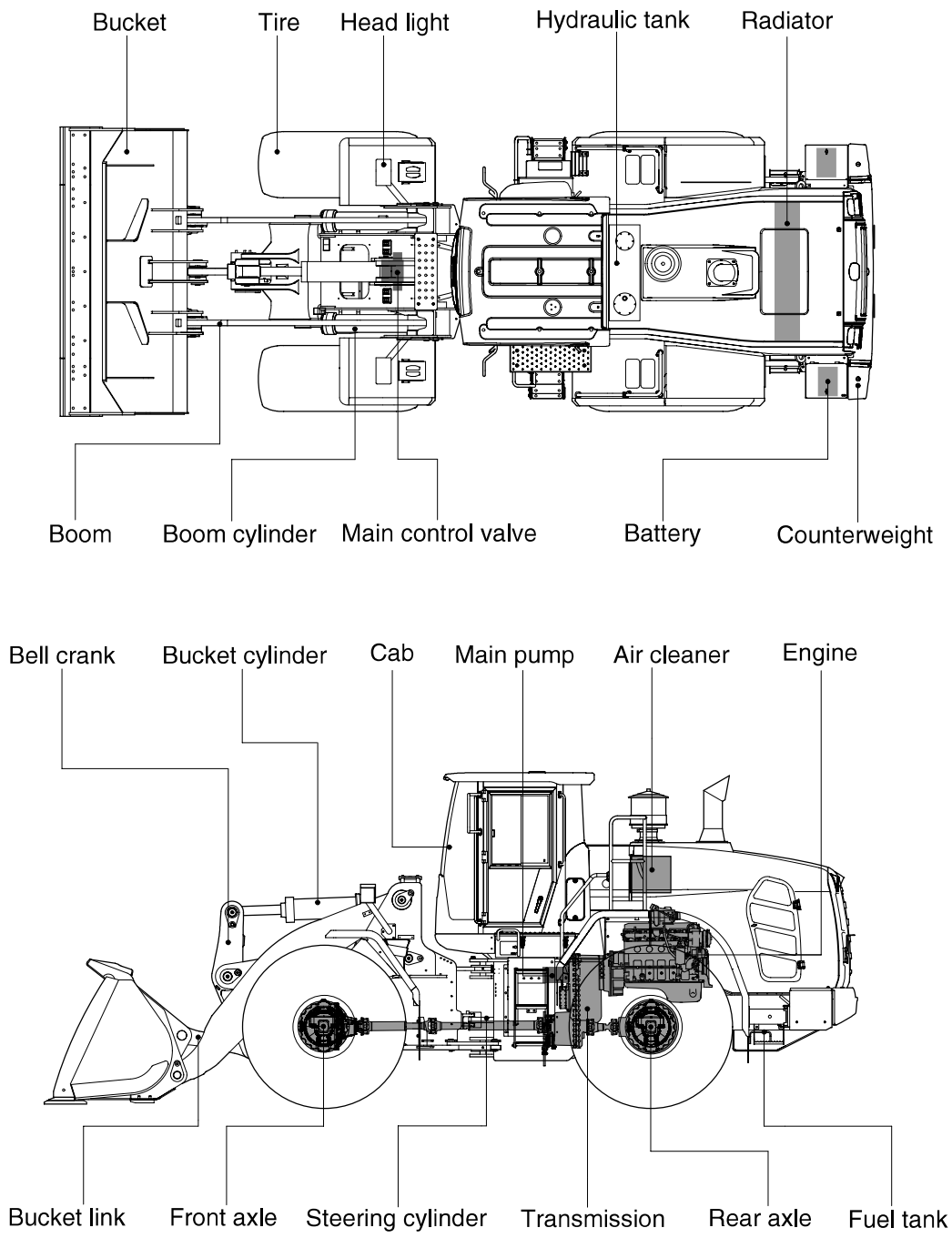


2. SPECIFICATIONS

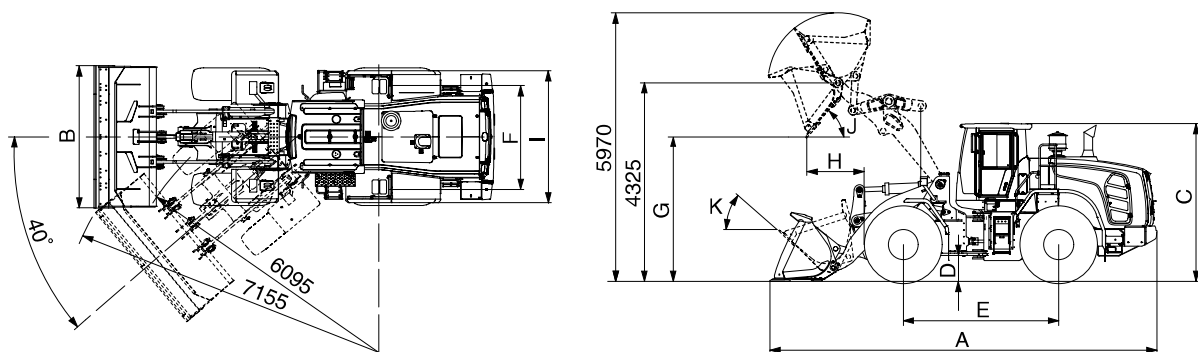
1. MAJOR COMPONENTS



970A2SE01

2. SPECIFICATIONS

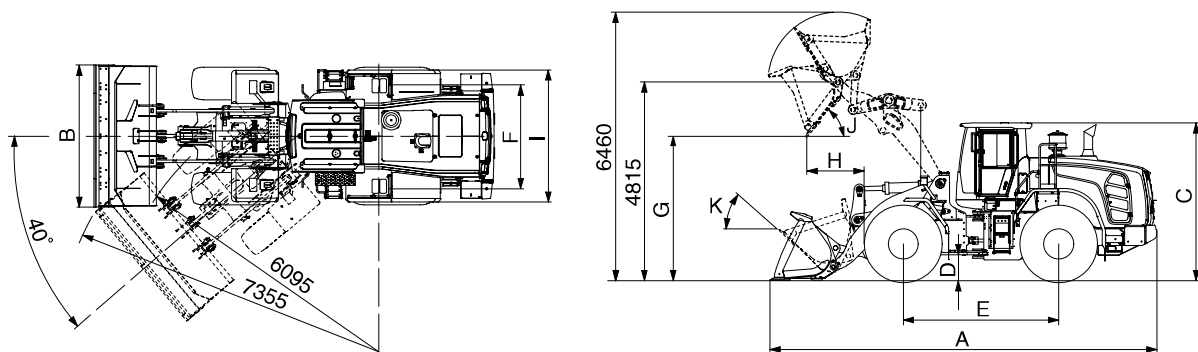
1) WITH BOLT-ON CUTTING EDGE TYPE BUCKET (HL970A)



970A2SE03

Description			Unit	Specification
Operating weight			kg (lb)	24200 (53355)
Bucket capacity	Struck		m³ (yd³)	3.6 (4.7)
	Heaped			4.2 (5.5)
Overall length	A		mm (ft-in)	8740 (28' 8")
Overall width	B			3100 (10' 2")
Overall height	C			3590 (11' 9")
Ground clearance	D			480 (1' 7")
Wheelbase	E			3500 (11' 6")
Tread	F			2300 (7' 7")
Dump clearance at 45°	G			3080 (10' 1")
Dump reach (full lift)	H			1270 (4' 2")
Width over tires	I			2980 (9' 9")
Dump angle	J			degree (°)
Roll back angle (carry position)	K		47	
Cycle time	Lift (with load)		sec	6.0
	Dump (with load)			1.5
	Lower (empty)			4.3
Maximum travel speed			km/hr (mph)	40.0 (24.9))
Braking distance			m (ft-in)	13.3 (43' 8")
Minimum turning radius (center of outside tire)				6.09 (20' 0")
Gradeability			degree (°)	30
Breakout force			kg (lb)	21715 (47875)
Travel speed	Forward	First gear	km/hr (mph)	7.4 (4.6)
		Second gear		12.5 (7.8)
		Third gear		27.8 (17.3)
		Fourth gear		40.0 (24.9)
	Reverse	First gear		7.4 (4.6)
		Second gear		12.5 (7.8)
		Third gear		27.8 (17.3)

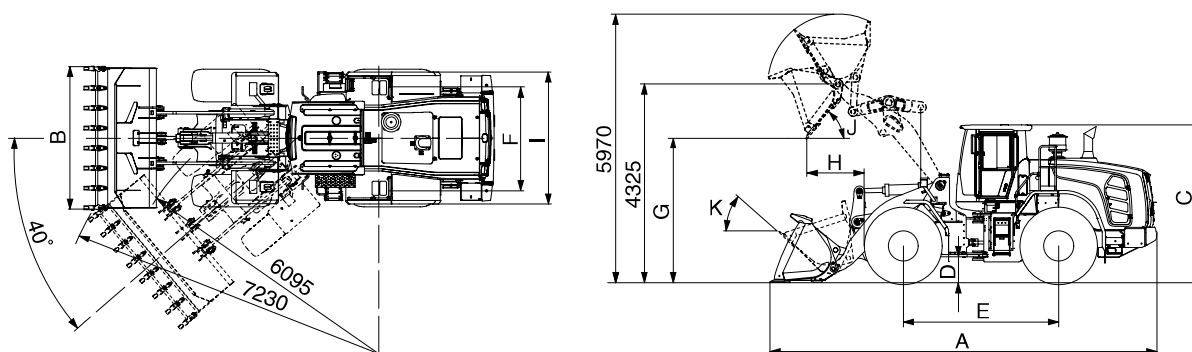
WITH BOLT-ON CUTTING EDGE TYPE BUCKET (HL970A XT)



970A2SE03-1

Description			Unit	Specification
Operating weight			kg (lb)	25000 (55120)
Bucket capacity	Struck		m³ (yd³)	3.6 (4.7)
	Heaped			4.2 (5.5)
Overall length	A		mm (ft-in)	9280 (30' 5")
Overall width	B			3100 (10' 2")
Overall height	C			3590 (11' 9")
Ground clearance	D			480 (1' 7")
Wheelbase	E			3500 (11' 6")
Tread	F			2300 (7' 7")
Dump clearance at 45°	G			3570 (11' 9")
Dump reach (full lift)	H			1255 (4' 1")
Width over tires	I			2980 (9' 9")
Dump angle	J			degree (°)
Rollback angle (carry position)	K		49	
Cycle time	Lift (with load)		sec	6.0
	Dump (with load)			1.5
	Lower (empty)			4.3
Maximum travel speed			km/hr (mph)	40.0 (24.9)
Braking distance			m (ft-in)	13.3 (43' 8")
Minimum turning radius (center of outside tire)				6.09 (20' 0")
Gradeability			degree (°)	30
Breakout force			kg (lb)	21775 (48010)
Travel speed	Forward	First gear	km/hr (mph)	7.4 (4.6)
		Second gear		12.5 (7.8)
		Third gear		27.8 (17.3)
		Fourth gear		40.0 (24.9)
	Reverse	First gear		7.4 (4.6)
		Second gear		12.5 (7.8)
Third gear		27.8 (17.3)		

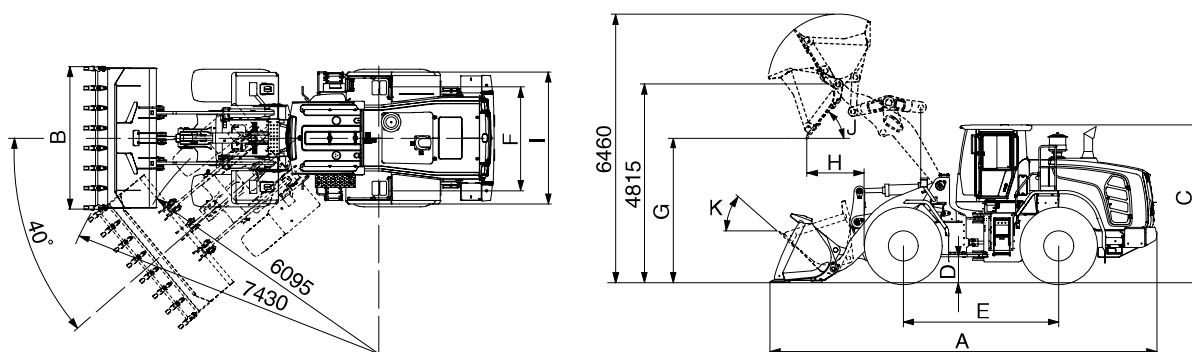
2) WITH TOOTH TYPE BUCKET (HL970A)



970A2SE04

Description			Unit	Specification
Operating weight			kg (lb)	24110 (53155)
Bucket capacity	Struck		m³ (yd³)	3.4 (4.4)
	Heaped			4.0 (5.2)
Overall length	A		mm (ft-in)	8890 (29' 2")
Overall width	B			3150 (10' 4")
Overall height	C			3590 (11' 9")
Ground clearance	D			480 (1' 7")
Wheelbase	E			3500 (11' 6")
Tread	F			2300 (7' 7")
Dump clearance at 45°	G			2955 (9' 8")
Dump reach (full lift)	H			1355 (4' 6")
Width over tires	I			2980 (9' 9")
Dump angle	J			degree (°)
Rollback angle (carry position)	K		47	
Cycle time	Lift (with load)		sec	6.0
	Dump (with load)			1.5
	Lower (empty)			4.3
Maximum travel speed			km/hr (mph)	40.0 (24.9)
Braking distance			m (ft-in)	13.3 (43' 8")
Minimum turning radius (center of outside tire)				6.09 (20' 0")
Gradeability			degree (°)	30
Breakout force			kg (lb)	22990 (50685)
Travel speed	Forward	First gear	km/hr (mph)	7.4 (4.6)
		Second gear		12.5 (7.8)
		Third gear		27.8 (17.3)
		Fourth gear		40.0 (24.9)
	Reverse	First gear		7.4 (4.6)
		Second gear		12.5 (7.8)
		Third gear		27.8 (17.3)

WITH TOOTH TYPE BUCKET (HL970A XT)



970A2SE04-1

Description			Unit	Specification
Operating weight			kg (lb)	24910 (54920)
Bucket capacity	Struck		m³ (yd³)	3.4 (4.4)
	Heaped			4.0 (5.2)
Overall length	A		mm (ft-in)	9430 (31'11")
Overall width	B			3150 (10' 4")
Overall height	C			3590 (11' 9")
Ground clearance	D			480 (1' 7")
Wheelbase	E			3500 (11' 6")
Tread	F			2300 (7' 7")
Dump clearance at 45°	G			3445 (11' 4")
Dump reach (full lift)	H			1340 (4' 5")
Width over tires	I			2980 (9' 9")
Dump angle	J			degree (°)
Rollback angle (carry position)	K		49	
Cycle time	Lift (with load)		sec	6.0
	Dump (with load)			1.5
	Lower (empty)			4.3
Maximum travel speed			km/hr (mph)	40.0 (24.9)
Braking distance			m (ft-in)	13.3 (43' 8")
Minimum turning radius (center of outside tire)				6.09 (20' 0")
Gradeability			degree (°)	30
Breakout force			kg (lb)	23050 (50820)
Travel speed	Forward	First gear	km/hr (mph)	7.4 (4.6)
		Second gear		12.5 (7.8)
		Third gear		27.8 (17.3)
		Fourth gear		40.0 (24.9)
	Reverse	First gear		7.4 (4.6)
		Second gear		12.5 (7.8)
		Third gear		27.8 (17.3)

3. WEIGHT

Item		kg	lb
Front frame assembly		2153	4746
Rear frame assembly		2387	5262
Front fender (LH & RH)		80	176
Counterweight (HL970A)		1100	2425
Counterweight (HL970A XT)		1600	3527
Cab assembly		1061	2339
Engine assembly		777	1712
Transmission assembly (4-speed/5-speed)		807/857	1779/1889
Driveshaft (front)		41	90
Driveshaft (center)		37	81
Driveshaft (rear)		22	48
Front axle (include differential)		1242	2738
Rear axle (include differential)		1321	2912
Tire (26.5 R25, ★★, L3)		474	1044
Hydraulic tank assembly		393	866
Fuel tank assembly		383	844
Main pump assembly		90	198
Fan & brake pump assembly		12	26
Main control valve (2 spool/3 spool)		90/106	198/233
Flow amplifier		29	63
Boom assembly	HL970A	1649	3635
	HL970A XT	1959	4318
Bell crank assembly		483	1065
Bucket link		77	169
4.2 m ³ bucket, with bolt on cutting edge		2243	4944
4.0 m ³ bucket, with tooth		2152	4744
Boom cylinder assembly		201	443
Bucket cylinder assembly		210	462
Steering cylinder assembly		43	94
Seat		89	196
Battery		51	112

4. SPECIFICATION FOR MAJOR COMPONENTS

1) ENGINE

Item	Specification
Model	Cummins L9
Type	4-cycle turbocharged, charge air cooled diesel engine
Control type	Electronic control
Cooling method	Water cooling
Number of cylinders and arrangement	6 cylinders, in-line
Firing order	1-5-3-6-2-4
Combustion chamber type	Direct injection type
Cylinder bore × stroke	114 × 145 mm (4.5" × 5.7")
Piston displacement	8900 cc (543 cu in)
Compression ratio	16.7 : 1
Rated gross horse power	325 hp (242 kW) at 2100 rpm
Peak gross torque	167 kgf · m (1207 lbf · ft) at 1100 rpm
Engine oil quantity	23 ℓ (6.1 U.S. gal)
Wet weight	777 kg (1713 lb)
High idling speed	2130 ± 50 rpm
Low idling speed	800 ± 25 rpm
Rated fuel consumption	223 g/kW · hr
Starting motor	24 V - 6.4 kW
Alternator	24 V - 95 Amp
Battery	2 × 12 V × 200 Ah

2) MAIN PUMP

Item	Specification	
	Steering	Loader
Type	Variable tandem piston pump	
Capacity	110 cc/rev	61 cc/rev
Maximum operating pressure	210 kgf/cm ² (2990 psi)	280 kgf/cm ² (3980 psi)
Rated oil quantity (at 2200 rpm)	242 ℓ /min (63.9 U.S.gpm)	134 ℓ /min (35.4 U.S.gpm)
Maximum speed	2100 rpm	

3) FAN + BRAKE PUMP

Item	Specification
Type	Variable piston pump
Capacity	28 cc/rev
Maximum operating pressure	250 kgf/cm ² (3560 psi)
Rated oil quantity (at 2200rpm)	62 ℓ /min (16.3 U.S.gpm)
Maximum speed	2100 rpm

4) MAIN CONTROL VALVE

Item	Specification
Type	2 spool / 3 spool
Operating method	Hydraulic pilot assist
Main relief valve pressure	280 kgf/cm ² (3980 psi)
Overload relief valve pressure	340 kgf/cm ² (4840 psi)
Overload relief valve pressure (dump)	310 kgf/cm ² (4410 psi)

5) REMOTE CONTROL VALVE (EH TYPE)

Item	Specification
Type	Fingertip
Axle	Single axle for boom, bucket, auxiliary
Operating voltage	4.5~5.5 V
Output signal	0.5~4.5 V (neutral 2.5 V)

6) REMOTE CONTROL VALVE (FNR TYPE)

Item	Specification
Type	Joystick
Axle	Two axle for boom, bucket, roller for auxiliary
Operating type	CAN J1939
Baud rate	500 kbps

7) CYLINDER

Item		Specification
Boom cylinder	Bore dia × Rod dia × Stroke	Ø 165 × Ø 95 × 780 mm
Bucket cylinder (HL970A)	Bore dia × Rod dia × Stroke	Ø 180 × Ø 95 × 565 mm
Bucket cylinder (HL970A XT)	Bore dia × Rod dia × Stroke	Ø 180 × Ø 95 × 570 mm
Steering cylinder	Bore dia × Rod dia × Stroke	Ø 95 × Ø 50 × 468 mm

8) DYNAMIC POWER TRANSMISSION DEVICES

Item			Specification
4-speed transmission (std)	Model		ZF 4WG 260
	Type	Converter	Single-stage, single-phase
		Transmission	Full-automatic power shift
	Gear shift		Forward fourth gear, reverse third gear
	Control		Electrical single lever type, kick-down system Automatic kick down from 2nd to 1st gear FNR switch on joystick lever (option)
	Pump rated flow		115 ℓ /min (30.4 U.S.gpm) at 2000 rpm
	Travel speed		See the page 2-2.
5-speed transmission (opt)	Model		ZF 5WG 260
	Type	Converter	Single-stage, double-phase (with lock up clutch)
		Transmission	Full-automatic power shift
	Gear shift		Forward fifth gear, reverse third gear
	Control		Electrical single lever type, kick-down system Automatic kick down from 2nd to 1st gear FNR switch on joystick lever (option)
	Pump rated flow		135 ℓ /min (35.7 U.S.gpm) at 2000 rpm
	Travel speed	Forward 1/2/3/4/5	7.4 / 12.6 / 20.1 / 28.7 / 40.0 km/hr
		Reverse 1/2/3	7.4 / 12.6 / 28.7 km/hr
Axle	Drive devices		4-wheel drive
	Front		Front fixed location
	Rear		Oscillation ± 11° of center pin-loaded
Wheels	Tires		26.5 R25, ★★, L3
Brakes	Travel		Four-wheel, wet-disc type, full hydraulic
	Parking		Spring applied, hydraulic released brake on T/M
Steering	Type		Full hydraulic, articulated
	Steering angle		40° to both right and left angle, respectively