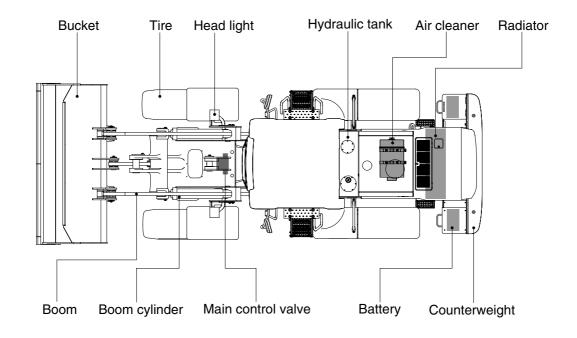
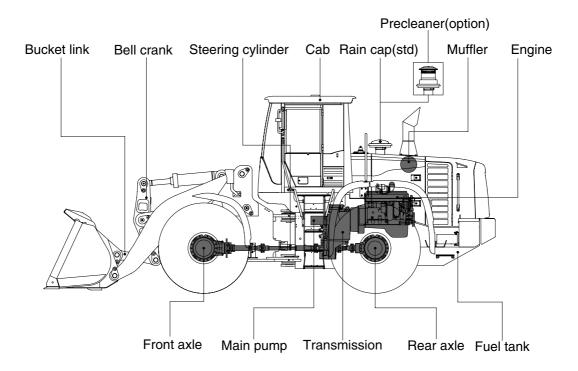
2. SPECIFICATIONS

1. MAJOR COMPONENTS

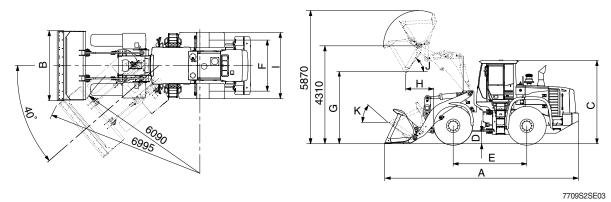




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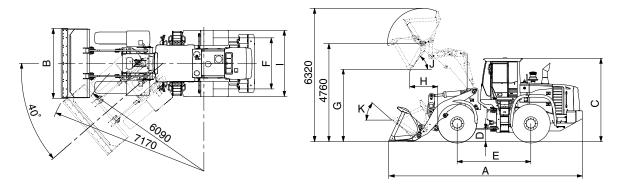
2. SPECIFICATIONS

1) WITH BOLT-ON CUTTING EDGE TYPE BUCKET (HL770-9S)



Struck Heaped Make Mak	77098				
Struck Heaped Mai (ydi) May (ydi)	Description			Unit	Specification
Heaped Heaped Mode	Operating weight			kg (lb)	22500 (49600)
Heaped A.0 (5.2)	Dualest sansait	.,	Struck		3.45 (4.5)
Overall width B 3100 (10' 2") Overall height C 3590 (11' 9") Ground clearance D 480 (1' 7") Wheelbase E mm (ft-in) 3500 (11' 6") Tread F 2300 (7' 7") 2300 (7' 7") Dump clearance at 45° G 3117 (10' 3") 1254 (4' 1") Width over tires I 2975 (9' 9") 48 Pump reach (full lift) H 49 48 Boll back angle (carry position) K 49 49 Cycle time Lift (with load) 5.7 5.7 Cycle time Dump (with load) sec 1.4 Lower (empty) 2.7 48 Maximum travel speed km/hr (mph) 38.0 (23.6) Braking distance m (ft-in) 38.0 (23.6) Minimum turning radius (center of outside tire) degree (") 30 Breakout force kg (lb) 20760 (45770) First gear 5econd gear 12.1 (7.5) Third gear 5m/hr (mph) 38.0 (23.	Бискет сарасп	у	Heaped	m³ (ya³)	4.0 (5.2)
Overall height C 3590 (11' 9") 480 (1' 7") Wheelbase E mm (ft-in) 3500 (11' 6"	Overall length		Α		8650 (28' 5")
Ground clearance	Overall width		В		3100 (10' 2")
Wheelbase E mm (ft-in) 3500 (11' 6") Tread F 2300 (7' 7") Dump clearance at 45° G 3117 (10' 3") Dump reach (full lift) H 1254 (4' 1") Width over tires I 2975 (9' 9") Dump angle J 48 Roll back angle (carry position) K 49 Lift (with load) 5.7 Cycle time Dump (with load) 5.7 Cycle time Lift (with load) 5.7 Lower (empty) Sec 1.4 Lower (empty) 38.0 (23.6) Braking distance 12 (39' 4") Minimum turning radius (center of outside tire) m (ft-in) 6.09 (20' 0") Gradeability degree (") 30 Breakout force kg (b) 20760 (45770) Forward First gear 6.9 (4.3) Travel speed First gear 6.9 (4.3) Fourth gear Fourth gear 6.9 (4.3) Forward First gear 6.9 (4.3) Reverse	Overall height		С		3590 (11' 9")
Tread	Ground clearar	nce	D		480 (1' 7")
Dump clearance at 45° G 3117 (10' 3")	Wheelbase		E	mm (ft-in)	3500 (11' 6")
Dump reach (full lift) H 1254 (4' 1") 2975 (9' 9")	Tread		F		2300 (7' 7")
Width over tires	Dump clearance	ce at 45°	G		3117 (10' 3")
Dump angle	Dump reach (fu	ull lift)	Н		1254 (4' 1")
Roll back angle (carry position) K	Width over tires	S	I		2975 (9' 9")
Cycle time	Dump angle		J	d	48
Cycle time Dump (with load) sec 1.4 Lower (empty) 2.7 Maximum travel speed km/hr (mph) 38.0 (23.6) Braking distance 12 (39' 4") Minimum turning radius (center of outside tire) 6.09 (20' 0") Gradeability degree (°) 30 Breakout force kg (lb) 20760 (45770) Forward First gear 6.9 (4.3) Second gear 12.1 (7.5) Travel speed Fourth gear km/hr (mph) 38.0 (23.6) First gear 6.9 (4.3) 6.9 (4.3) Reverse Second gear 12.1 (7.5)	Roll back angle	(carry position)	K	degree ()	49
Lower (empty) 2.7	Cycle time		Lift (with load)		5.7
Maximum travel speed km/hr (mph) 38.0 (23.6) Braking distance 12 (39' 4") 12 (39' 4") Minimum turning radius (center of outside tire) 6.09 (20' 0") Gradeability degree (°) 30 Breakout force kg (lb) 20760 (45770) Forward First gear 6.9 (4.3) Second gear 12.1 (7.5) Travel speed Fourth gear km/hr (mph) 38.0 (23.6) First gear 6.9 (4.3) Reverse Second gear 12.1 (7.5)			Dump (with load)	sec	1.4
Braking distance					2.7
Minimum turning radius (center of outside tire) m (ft-in) 6.09 (20' 0") Gradeability degree (°) 30 Breakout force kg (lb) 20760 (45770) Forward First gear 6.9 (4.3) Second gear 12.1 (7.5) Third gear 25.8 (16.0) Fourth gear km/hr (mph) 38.0 (23.6) First gear 6.9 (4.3) Reverse Second gear 12.1 (7.5)	Maximum trave	el speed		km/hr (mph)	38.0 (23.6)
Minimum turning radius (center of outside tire) 6.09 (20' 0")	Braking distant	се		(ft :)	12 (39' 4")
Forward Forward Forward First gear	Minimum turnir	ng radius (center	of outside tire)	m (II-In)	6.09 (20' 0")
Forward First gear 6.9 (4.3) Second gear 12.1 (7.5) Third gear 25.8 (16.0) Fourth gear 88.0 (23.6) First gear 6.9 (4.3) 25.8 (16.0) First gear 6.9 (4.3) 12.1 (7.5)	Gradeability			degree (°)	30
Second gear 12.1 (7.5)	Breakout force			kg (lb)	20760 (45770)
Travel speed Third gear 25.8 (16.0) Fourth gear km/hr (mph) 38.0 (23.6) First gear 6.9 (4.3) Reverse Second gear 12.1 (7.5)	Travel speed		First gear		6.9 (4.3)
Travel speed		Forward	Second gear		12.1 (7.5)
First gear 6.9 (4.3) Reverse Second gear 12.1 (7.5)		Forward	Third gear		25.8 (16.0)
Reverse Second gear 12.1 (7.5)			Fourth gear	km/hr (mph)	38.0 (23.6)
			First gear		6.9 (4.3)
Third gear 25.8 (16.0)		Reverse	Second gear		12.1 (7.5)
			Third gear		25.8 (16.0)

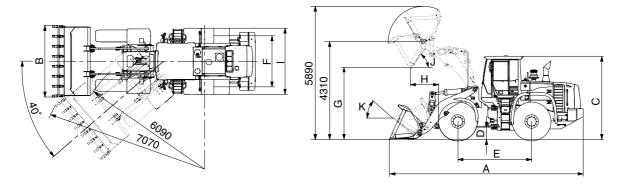
WITH BOLT-ON CUTTING EDGE TYPE BUCKET (HL770XTD-9S)



7709S2SE03-1

Description			Unit	Specification
Operating weight			kg (lb)	23250 (51260)
D 1 1 2		Struck	- (Is)	3.45 (4.5)
Bucket capacit	у	Heaped	m³ (yd³)	4.0 (5.2)
Overall length		A		9125 (29' 11")
Overall width		В		3100 (10' 2")
Overall height		С		3590 (11' 9")
Ground clearar	nce	D		480 (1' 7")
Wheelbase		Е	mm (ft-in)	3500 (11' 6")
Tread		F		2300 (7' 7")
Dump clearance	e at 45°	G		3570 (11' 9")
Dump reach (fu	ıll lift)	Н		1260 (4' 2")
Width over tires	S	I		2975 (9' 9")
Dump angle	Dump angle		degree (°)	48
Roll back angle	Roll back angle (carry position)			50
		Lift (with load)		5.7
Cycle time		Dump (with load)	sec	1.4
				2.7
Maximum trave	el speed		km/hr (mph)	38.0 (23.6)
Braking distant	ce		m (ft-in)	12 (39' 4")
Minimum turnir	ng radius (cente	r of outside tire)	111 (II-II1)	6.09 (20' 0")
Gradeability			degree (°)	30
Breakout force			kg (lb)	20430 (45040)
		First gear		6.9 (4.3)
Travel speed	Forward	Second gear		12.1 (7.5)
	rorward	Third gear		25.8 (16.0)
		Fourth gear	km/hr (mph)	38.0 (27.6)
		First gear		6.9 (4.3)
	Reverse	Second gear		12.1 (7.5)
		Third gear		25.8 (16.0)

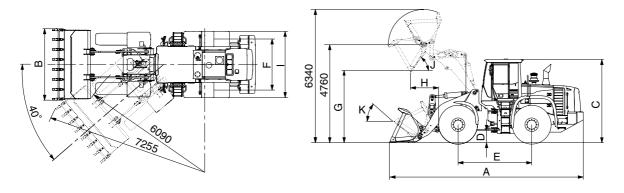
2) WITH TOOTH TYPE BUCKET (HL770-9S)



77092SE04

Description			Unit	Specification
Operating weight			kg (lb)	22500 (49600)
B		Struck	(4)	3.4 (4.4)
Bucket capacity	/	Heaped	m³ (yd³)	3.9 (5.1)
Overall length		А		8770 (28' 9")
Overall width		В		3150 (10' 4")
Overall height		С		3590 (11' 9")
Ground clearar	ice	D		480 (1' 7")
Wheelbase		Е	mm (ft-in)	3500 (11' 6")
Tread		F		2300 (7' 7")
Dump clearance	e at 45°	G		3000 (9' 10")
Dump reach (fu	ıll lift)	Н		1340 (4' 5")
Width over tires	5	I		2975 (9' 9")
Dump angle		J		48
Roll back angle	(carry position)	К	degree (°)	49
		Lift (with load)		5.7
Cycle time		Dump (with load)	sec	1.4
		Lower (empty)		2.7
Maximum trave	Maximum travel speed		km/hr (mph)	38.0 (23.6)
Braking distance	е		(ft in)	12 (39' 4")
Minimum turnir	g radius (cente	er of outside tire)	m (ft-in)	6.09 (20' 0")
Gradeability			degree (°)	30
Breakout force			kg (lb)	22100 (48730)
Travel speed		First gear		6.9 (4.3)
	Towns and	Second gear		12.1 (7.5)
	Forward	Third gear		25.8 (16.0)
		Fourth gear	km/hr (mph)	38.0 (23.6)
		First gear		6.9 (4.3)
	Reverse	Second gear		12.1 (7.5)
		Third gear		25.8 (16.0)

WITH TOOTH TYPE BUCKET (HL770XTD-9S)



77092SE04-1

Description			Unit	Specification
Operating weight			kg (lb)	23250 (51260)
		Struck	. (15)	3.4 (4.4)
Bucket capacity	У	Heaped	m³ (yd³)	3.9 (5.1)
Overall length		А		9270 (30' 5")
Overall width		В		3150 (10' 4")
Overall height		С		3590 (11' 9")
Ground clearar	nce	D		480 (1' 7")
Wheelbase		E	mm (ft-in)	3500 (11' 6")
Tread		F		2300 (7' 7")
Dump clearance	e at 45°	G		3445 (11' 4")
Dump reach (fu	ıll lift)	Н		1350 (4' 5")
Width over tires	3	I		2975 (9' 9")
Dump angle		J	-l (°)	48
Roll back angle	Roll back angle (carry position)		degree (°)	50
		Lift (with load)		5.7
Cycle time		Dump (with load)	sec	1.4
				2.7
Maximum trave	el speed		km/hr (mph)	38.0 (23.6)
Braking distance	е		m (ft-in)	12 (39' 4")
Minimum turnir	ng radius (cente	r of outside tire)	111 (11-111)	6.09 (20' 0")
Gradeability			degree (°)	30
Breakout force	Breakout force		kg (lb)	21690 (47820)
		First gear		6.9 (4.3)
Travel speed	Forward	Second gear		12.1 (7.5)
	Forward	Third gear		25.8 (16.0)
		Fourth gear	km/hr (mph)	38.0 (23.6)
		First gear		6.9 (4.3)
	Reverse	Second gear		12.1 (7.5)
		Third gear		25.8 (16.0)

3. WEIGHT

Item		kg	lb
Front frame assembly		2085	4600
Rear frame assembly		2422	5340
Front fender (LH & RH)		48	106
0	HL770-9S	1300	2870
Counterweight	HL770XTD-9S	1900	4190
Cab assembly	1	785	1730
Engine assembly		738	1630
Transmission assembly		753	1660
Drive shaft (front)		37	82
Drive shaft (center)		37	82
Drive shaft (rear)		21	46
Front axle (include differen	tial)	1200	2650
Rear axle (include different	tial)	1090	2400
Tire (26.5-25 20PR, L3)		394	870
Hydraulic tank assembly		275	606
Fuel tank assembly		270	595
Main pump assembly		39	85
Fan & brake pump assemb	bly	7	15
Main control valve (3 spool)	115	253
Flow amplifier		29	64
Doom occombly	HL770-9S	1610	3550
Boom assembly	HL770XTD-9S	1805	3980
Bell crank assembly		497	1100
Bucket link		73	160
4.0 m³ bucket, with bolt on cutting edge		2070	4560
3.9 m³ bucket, with tooth		2000	4410
Boom cylinder assembly		225	496
Bucket cylinder assembly		235	518
Steering cylinder assembly		44	97
Seat		40	88
Battery		55	121

4. SPECIFICATION FOR MAJOR COMPONENTS

1) ENGINE

ltem	Specification
Model	Cummins QSL / HYUNDAI HE 8.9
Туре	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(4.49"×5.71")
Piston displacement	8900cc (543 cu in)
Compression ratio	17.8:1
Rated gross horse power	284 ps at 2000 rpm
Maximum gross torque at 1400rpm	148 kgf · m (1070 lbf · ft)
Engine oil quantity	23 ℓ (6.1 U.S. gal)
Wet weight	738 kg (1627 lb)
High idling speed	2030 ± 50 rpm
Low idling speed	800 ± 25 rpm
Rated fuel consumption	174 g/ps ⋅ hr
Starting motor	Nippondenso (24 V - 7.5 kW)
Alternator	Delco Remy 22SI (24 V - 70 Amp)
Battery	2×12 V×200 Ah

2) MAIN PUMP

Hom	Specification	
Item	Steering	Loader
Туре	Vane pump	
Capacity	137.5 cc/rev	79.3 cc/rev
Maximum operating pressure	210 kgf/cm² (2990 psi)	210 kgf/cm² (2990 psi)
Rated oil quantity	251 / min (66.3 U.S.gpm)	145 l /min (38.3 U.S.gpm)
Rated speed	2000 rpm	

3) FAN + BRAKE PUMP

Item	Specification
Туре	Gear pump
Capacity	22.4 + 11.9 cc/rev
Maximum operating pressure	150 kgf/cm² (2130 psi)
Rated speed	2000 rpm

4) MAIN CONTROL VALVE

Item	Specification
Туре	2 spool
Operating method	Hydraulic pilot assist
Main relief valve pressure	210 kgf/cm ²
Overload relief valve pressure	240 kgf/cm ²
Overload relief valve pressure (dump)	240 kgf/cm ²

5) REMOTE CONTROL VALVE

Item		Specification
Туре		Pressure reducing type
Operating procesure	Minimum	5 kgf/cm² (71 psi)
Operating pressure	Maximum	30 kgf/cm² (427 psi)
Single operation angle degree		17

6) CYLINDER

Item		Specification
Boom cylinder Bore dia × Rod dia × Stroke		ø 180 × ø 100 × 765 mm
Bucket cylinder	Bore dia × Rod dia × Stroke	ø 200 × ø 100 × 570 mm
Steering cylinder Bore dia × Rod dia × Stroke		ø 100 × ø 50 × 480 mm

7) DYNAMIC POWER TRANSMISSION DEVICES

Item			Specification	
	Model		ZF 4WG260	
	Time	Converter	Single-stage, single-phase	
	Туре	Transmission	Full-automatic power shift	
Transmission	Converter	stall ratio	2.09:1	
Hansinission	Gear shift		Forward fourth gear, reverse third gear	
	Control		Electrical single lever type, kick-down system	
	Control		Automatic kick down from 2nd to 1st gear	
	Pump rated flow		135 ℓ /min (35.7 U.S.gpm) at 2000 rpm	
	Drive devices		4-wheel drive	
Axle	Front		Front fixed location	
	Rear		Oscillation $\pm 11^\circ$ of center pin-loaded	
Wheels	Tires		26.5-25, 20PR (L3)	
Brakes	Travel		Four-wheel, wet-disc type, full hydraulic	
Diakes	Parking		Spring applied, hydraulic released brake	
Ctooring	Туре		Full hydraulic, articulated	
Steering	Steering angle		40° to both right and left angle, respectively	