WHEEL LOADER

SERVICE MANUAL

HL730TM-3

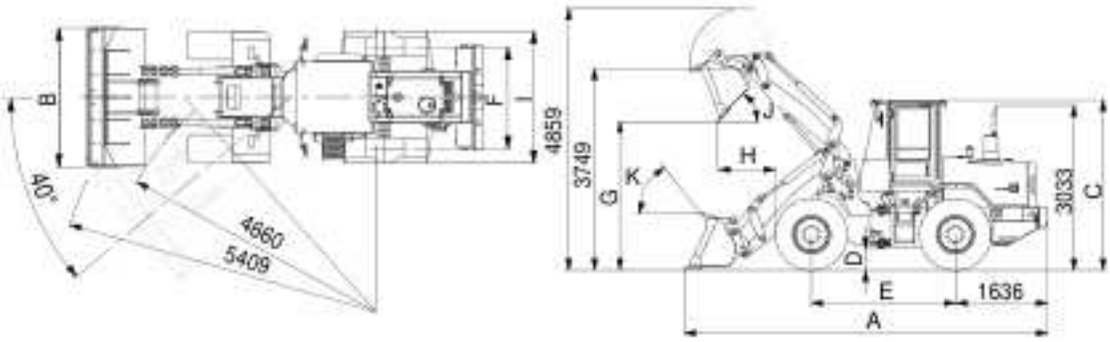
HYUNDAI

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2. SPECIFICATIONS

1) WITHOUT CUTTING EDGE TYPE BUCKET



Description			Unit	Specification
Operating weight			kg(lb)	9490(20920)
Bucket capacity		Struck	m³(yd³)	1.2(1.6)
		Heaped		1.5(2.0)
Overall length		A	mm(ft-in)	6742(22' 1")
Overall width		B		2400(7' 10")
Overall height		C		3180(10' 5")
Ground clearance		D		373(1' 3")
Wheelbase		E		2700(8' 10")
Tread		F		1850(6' 1")
Dump clearance at 45°		G		2818(9' 3")
Dump reach		H		1048(3' 5")
Width over tires		I		2295(7' 6")
Dump angle		J	Degree (°)	50
Roll back angle(Carry position)		K		54
Cycle time		Lift(With load)	sec	5.3
		Dump(With load)		1.4
		Lower(Empty)		2.3
Maximum travel speed			km/hr(mph)	38.1(23.6)
Braking distance			m(ft-in)	13.9(45' 7")
Minimum turning radius(Center of outside tire)				4.66(15' 3")
Gradability			Degree (°)	30
Travel speed	Forward	First gear	km/hr(mph)	7.1(4.4)
		Second gear		12.3(7.6)
		Third gear		22.6(14.0)
		Fourth gear		38.1(23.6)
	Reverse	First gear		7.4(4.6)
		Second gear		13.0(8.1)
		Third gear		23.8(14.7)

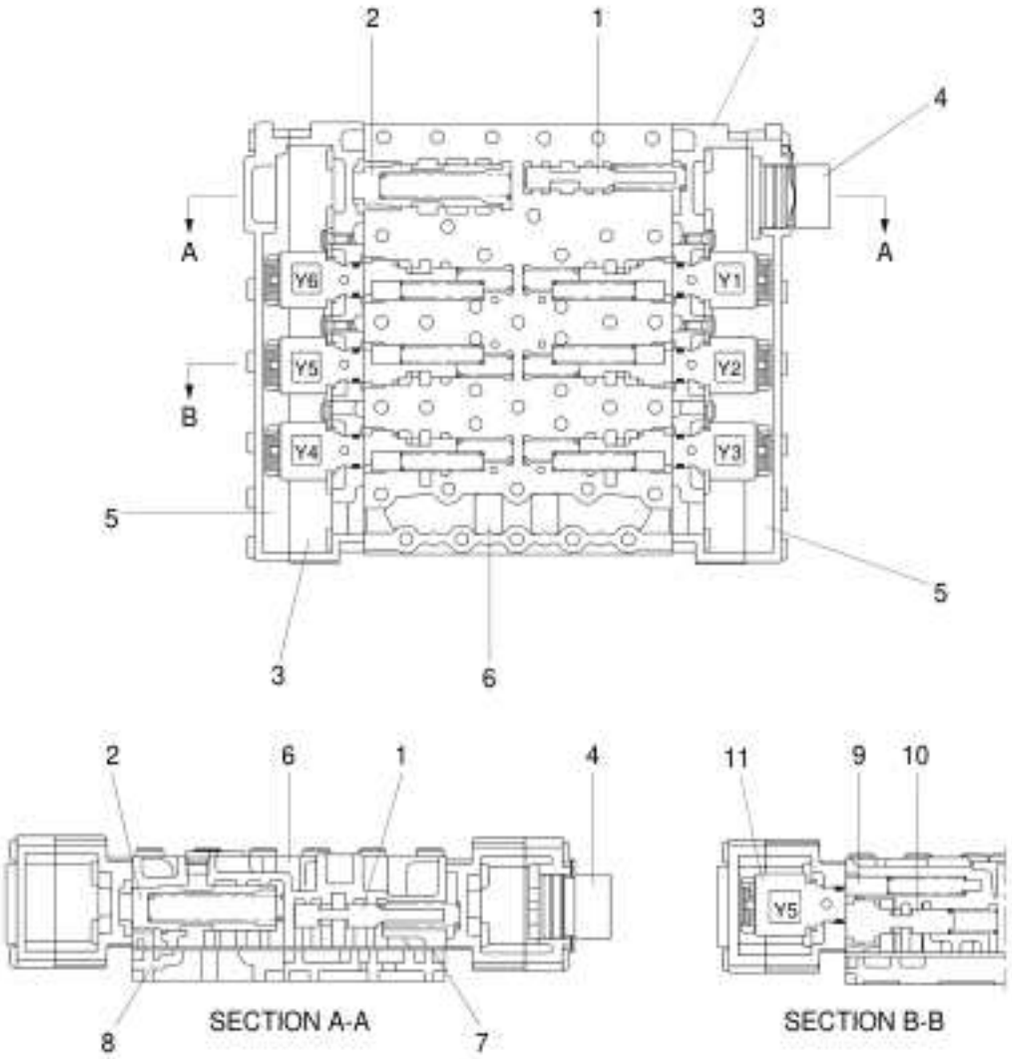
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3. WEIGHT

Item	kg	lb
Front frame assembly	828	1825
Rear frame assembly	801	1766
Front fender(2EA)	28	62
Rear fender(2EA)	38	84
Counterweight	495	1091
Cab assembly	640	1411
Engine assembly	380	838
Transmission	360	794
Drive shaft(Engine to transmission)	7	15
Drive shaft(Front)	16	35
Drive shaft(Center)	17	37
Drive shaft(Rear)	10	22
Front axle(Include differential)	475	1047
Rear axle(Include differential)	485	1069
Tire(4EA)	816	1799
Hydraulic tank	92	203
Fuel tank	158	348
Main pump assembly	25	55
Main control valve	55	121
Boom	490	1080
Link(Boom to bucket link, 4EA)	65	143
Bucket link(2EA)	82	181
1.6m^3 bucket, with bolt on cutting edge	722	1592
1.5m^3 bucket, without cutting edge	600	1323
Boom cylinder assembly(2EA)	160	353
Bucket cylinder assembly(2EA)	94	207
Steering cylinder assembly(2EA)	36	79
Quick coupler cylinder(1EA)	5.5	12
Seat	40	88
Battery	44	97
Link(Boom to bucket cylinder, 4EA)	52	115
Link(Front frame to link)	10	22
Quick coupler assembly	215	474

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4) ELECTRO-HYDRAULIC SHIFT CONTROL WITH PROPORTIONAL VALVE



1	Pressure reducing valve(9 bar)	7	Intermediate sheet
2	System pressure valve(16+2 bar)	8	Duct plate
3	Housing	9	Oscillation damper
4	Cable harness	10	Follow-on slide
5	Cover	11	Pressure regulator
6	Valve block		

Transmission control see schedule of measuring points, hydraulic schematic and electro-hydraulic control unit at page 3-2, 3-14 and 3-44.

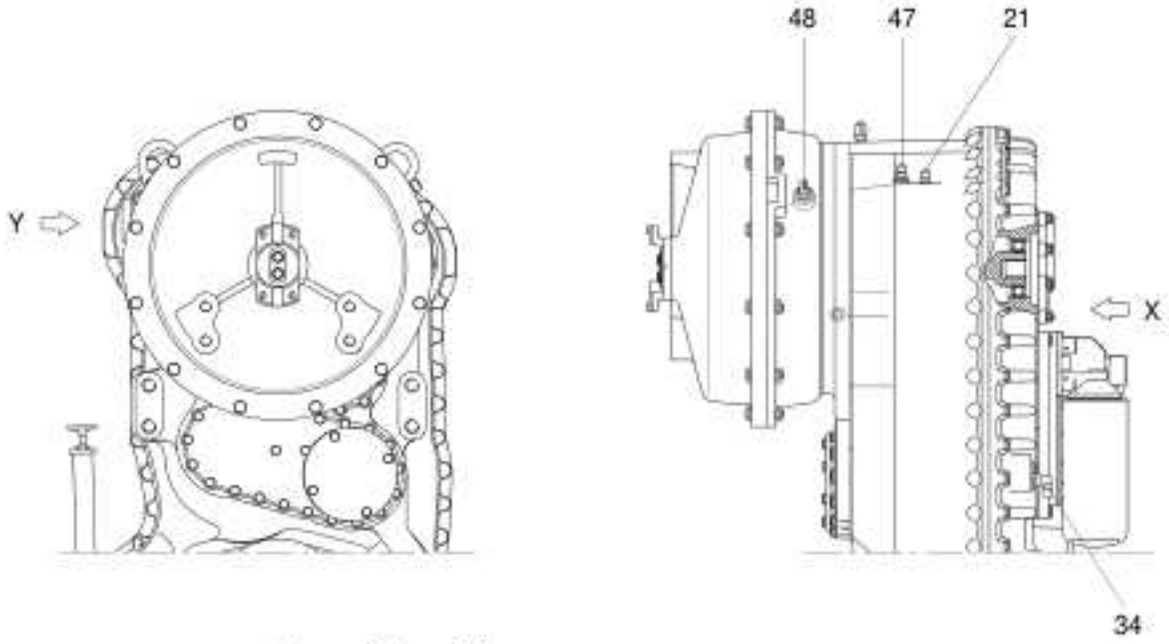
The six clutches of the transmission are selected through the 6 proportional valves P1 to P6. The proportional valve(Pressure regulator-unit) consists of pressure regulator(e.g. Y1), booster valve oscillation damper.

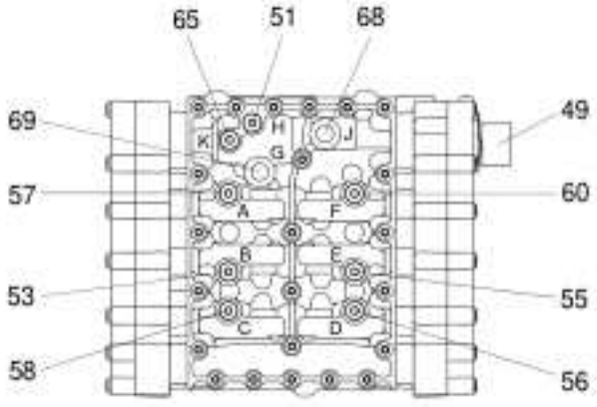
The pilot pressure of 9 bar for the control of the follow-on slides is created by the reducing valve. The pressure oil (16+2 bar) is directed through the follow-on slide to the corresponding clutch.

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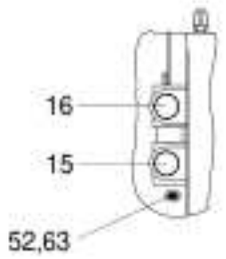
2. TRANSMISSION MEASURING POINTS AND CONNECTIONS

The measurements have to be carried outat hot transmission(About 80~95° C).





VIEW X



VIEW Y

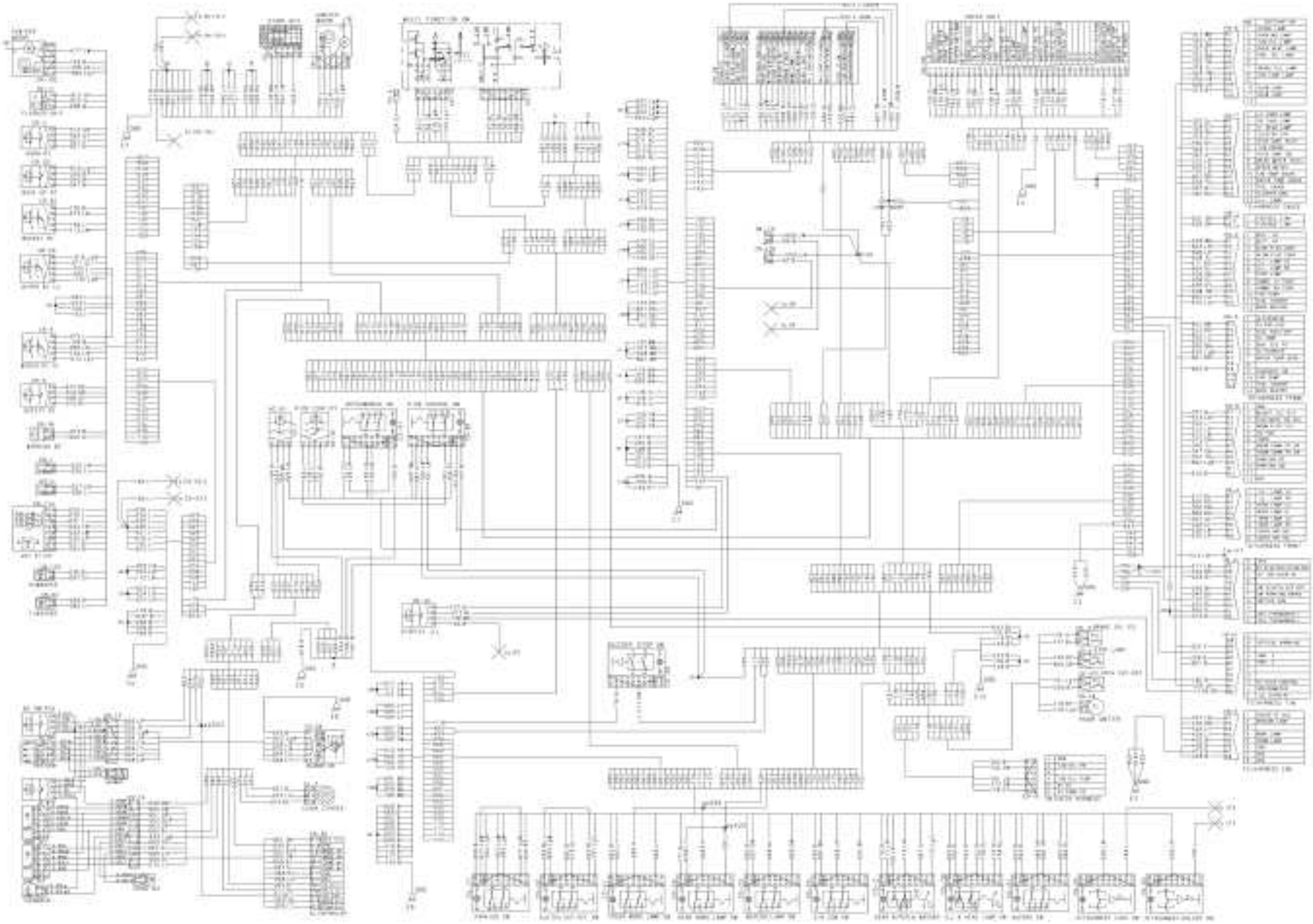
1) OIL PRESSURE AND TEMPERATURE

Port	Description		Size
51	Converter inlet-opening pressure(9 bar)	H	M10×1
52	Converter outlet-opening pressure(3.5 bar)		M14×1.5
53	Forward clutch(16+2 bar)	B	M10×1
55	Reverse clutch(16+2 bar)	E	M10×1
56	1st clutch(16+2 bar)	D	M10×1
57	2nd clutch(16+2 bar)	A	M10×1
58	3rd clutch(16+2 bar)	C	M10×1
60	4th clutch(16+2 bar)	F	M10×1
63	Converter outlet temperature 100° C, short-time 120° C		M14×1.5
65	System pressure(16+2 bar)	K	M10×1

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Problem	Cause	Remedy
Function drifts down	Leaking cylinders.	Do cylinder leakage checks in group 2.
	Leaking seals in circuit relief valve(Port relief valve) or valve stuck open.	Inspect seals. Replace relief valve.
	Leaking loader control valve.	Repair or replace valve section.
Boom drifts up	Leakage in boom down spool.	Remove and inspect boom down spool.
Boom down does not work Engine off.	Safety valve not operated.	Operate valve.
	Stuck pilot control valve.	Inspect.
	Faulty line filter.	Remove and inspect filter.
	Accumulation not operated.	Inspect.
	Main control valve spool stuck.	Inspect and repair valve.
Oil overheats	Low oil viscosity in hot weather.	Use recommended oil.
	Excessive load.	Reduce load.
	Holding hydraulic system over relief.	Reduce load.
	Leakage in work circuit.	Do boom and bucket cylinder leakage test in group 3.
	Plugged fins in oil cooler.	Inspect and clean oil cooler.
	Internally plugged oil cooler.	Do hydraulic oil cooler restriction test.
	Incorrect system or circuit relief valve setting.	Do loader system and circuit relief valve pressure test in group 3.
	Restriction in oil lines or main control valve.	Inspect for dented or kinked lines. Do hydraulic system restriction test in group 3.
	Pinched or restricted priority valve LS line.	Run engine at low idle. Steer machine back and forth. If engine load decreases while steering, a restricted LS line or priority valve malfunction is indicated. Do priority valve LS port flow test in group 3.
	Malfunctioning priority valve.	Do hydraulic system restriction test in group 3.
	Leaking system main relief valve.	Remove and inspect valve and seals.
	Worn hydraulic pump(Internal leakage).	Do hydraulic pump performance check in group 2.
Function drops before raising when valve is activated	Stuck open lift check valve.	Do control valve lift check in group 2.

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