FORKLIFT

SERVICE MANUAL

22, 25, 30BHA-7

HYUNDAI

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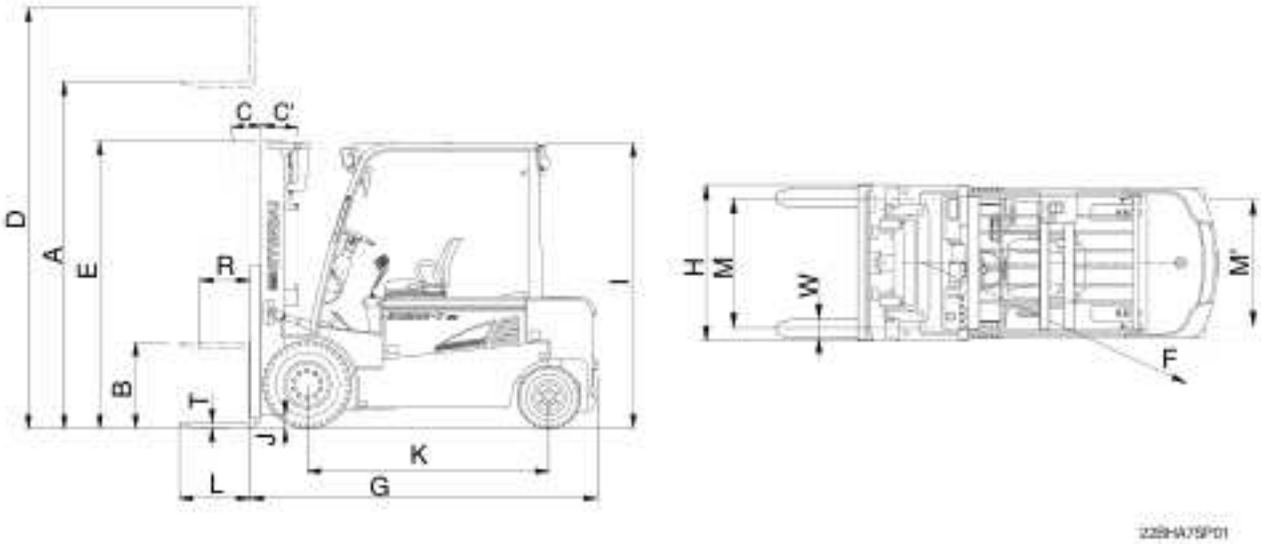
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2. SPECIFICATIONS



22BHA7SP01

Model			Unit	22BHA-7	25BHA-7	30BHA-7
Capacity			kg	2200	2500	3000
Load center		R	mm	500	←	←
Weight			kg	4194	4434	4895
Fork	Lifting height	A	mm	3300	←	←
	Free lift	B	mm	115	←	←
	Lifting speed[Unload/Load]		mm/sec	500/420	500/410	500/340
	Lowering speed[Unload/Load]		mm/sec	450/500	←	460/510
	L × W × T	L,W,T	mm	1050 × 100 × 45	←	1050 × 125 × 45
Mast	Tilt angle forward/backward	C/C'	degree	6/8	←	←
	Max height	D	mm	4485	←	←
	Min height	E	mm	2152	←	←
Body	Travel speed[Unload/Load]		km/h	19/18	←	←
	Gradeability[Load]		%	29	26	23
	Min turning radius[Outside]	F	mm	1970	2030	2170
ETC	Max hydraulic pressure		kgf/cm²	190	←	←
	Hydraulic oil tank		ℓ	25.6	←	←
Overall length		G	mm	2357	2422	2569
Overall width		H	mm	1200	←	←
Overhead guard height		I	mm	2152	←	←
Ground clearance(Mast)		J	mm	107	←	←
Wheel base		K	mm	1575	←	1719
Wheel tread front/Rear		M	mm	993/980	←	←

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6) GENERAL SUGGESTION FOR SAFETY

For a proper installation take care of the following recommendations:

⚠ After operation, even with the key switch open, the internal capacitors may remain charged for some time. For safe operation, we recommend that the battery is disconnected, and a short circuit is made between battery positive and battery negative power terminals of the inverter using a resister between 10 ohm and 100 ohm.

⚠ Do not connect the inverter to a battery with a nominal value different from the value indicated on the controller plate. If the battery value is greater, the MOS may fail; if it is lower, the control unit does not "power up"

⚠ During battery charge, disconnect the controller from the battery.

⚠ Do not connect the controller to a battery with a nominal voltage different than the value indicated on the controller label. A higher battery voltage may cause power section failure. A lower voltage may prevent the logic operating.

⚠ Before doing any operation, ensure that the battery is disconnected and when all the installation is completed start the machine with the drive wheels raised from the floor to ensure that any installation error do not compromise safety.

⚠ Take care all the inductive devices in the truck (horn, solenoid valves, coils, contactors) have a proper transient suppression device.

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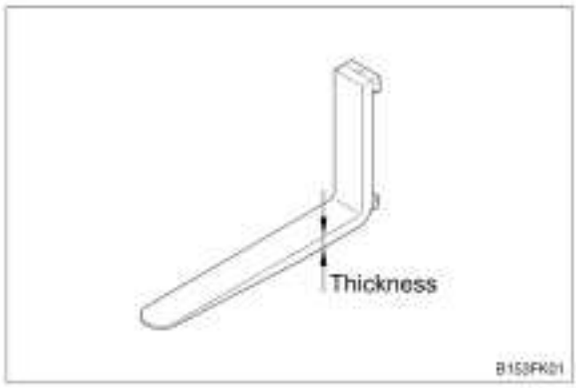
1. OPERATIONAL CHECKS

1) FORKS

(1) Measure thickness of root of forks and check that it is more than specified value.
EX : ℓ =1050mm(41.3in)

mm(in)

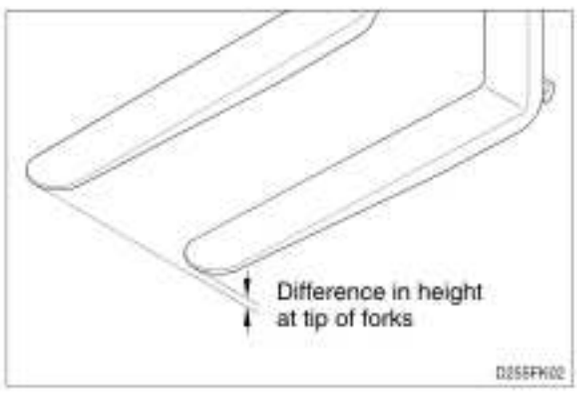
STD Fork assy	Applicable model	Standard	Limit
F173796-02	22/25BHA-7	45(1.8)	40(1.6)
64FG-31020	30BHA-7	45(1.8)	40(1.6)



(2) Set forks in middle and measure difference in height at tip of forks.

mm

Model	Fork length	Height difference
22/25/30BHA-7	equal or below 1200	3
	above 1200	6



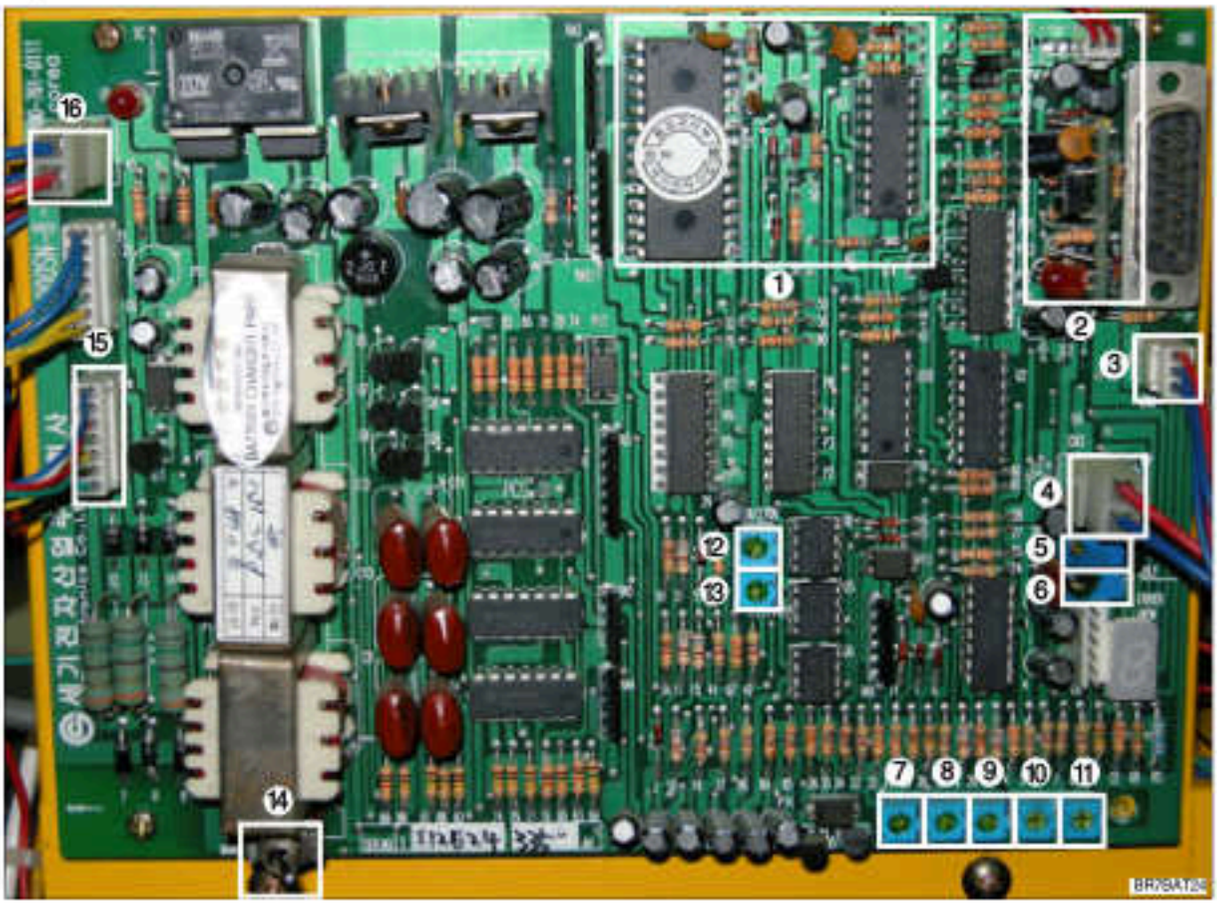
(3) Most force is concentrated at root of fork and at hook, so use crack detection method to check cracks.

2. MAST

1) Check for cracks at mast stay, tilt cylinder bracket, guide bar, fork carriage and roller shaft weld. Check visually or use crack detection method. Repair any abnormality.
2) Set mast vertical, raise forks about 10cm from ground and check front-to-rear clearance and left-to-right clearance between inner mast and fork carriage, and between outer mast and inner mast. Use these figures to judge if there is any play at roller or rail.
   · Front-to-rear clearance : Within 2.0mm(0.08in)
   · Left-to-right clearance : Within 2.5mm (0.10in)
3) Check that there is an oil groove in bushing at mast support.
4) Set mast vertical, raise forks about 10cm from ground, and push center of lift chain with finger to check for difference in tension.
   If there is any difference in tension, adjust chain stopper bolt.
5) Check visually for abnormalities at thread of chain anchor bolt, and at contact surface between chain wheel and chain.
   Rotate chain wheel by hand and check for any play of bearing.

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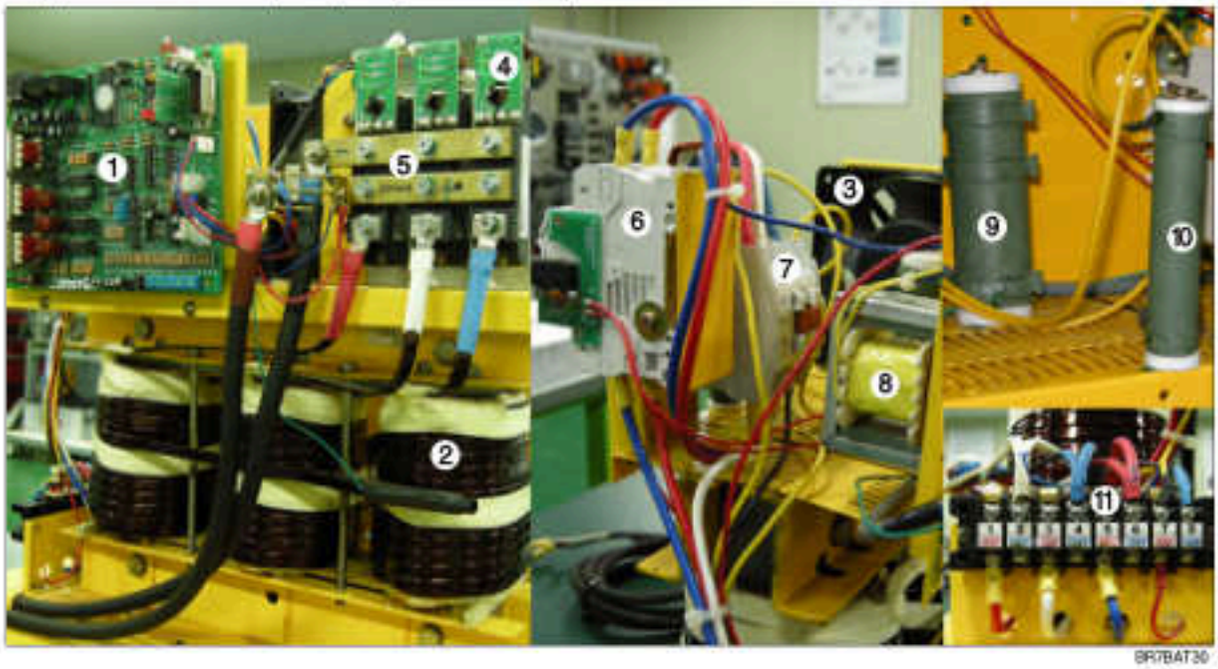
8) PCB MAJOR PARTS NAME AND LOCATION



1	Micro control unit #1	7	Over voltage	13	Set input over current
2	Micro control unit #2	8	Monitor level yellow	14	Auto/manual switch
3	CN6 voltage detect	9	Monitor level green	15	SCR control connector
4	SH current detect	10	Under current	16	CN4 RY contact point
5	Adjust charging current	11	Over current		
6	Adjust charging voltage	12	Set input over voltage		

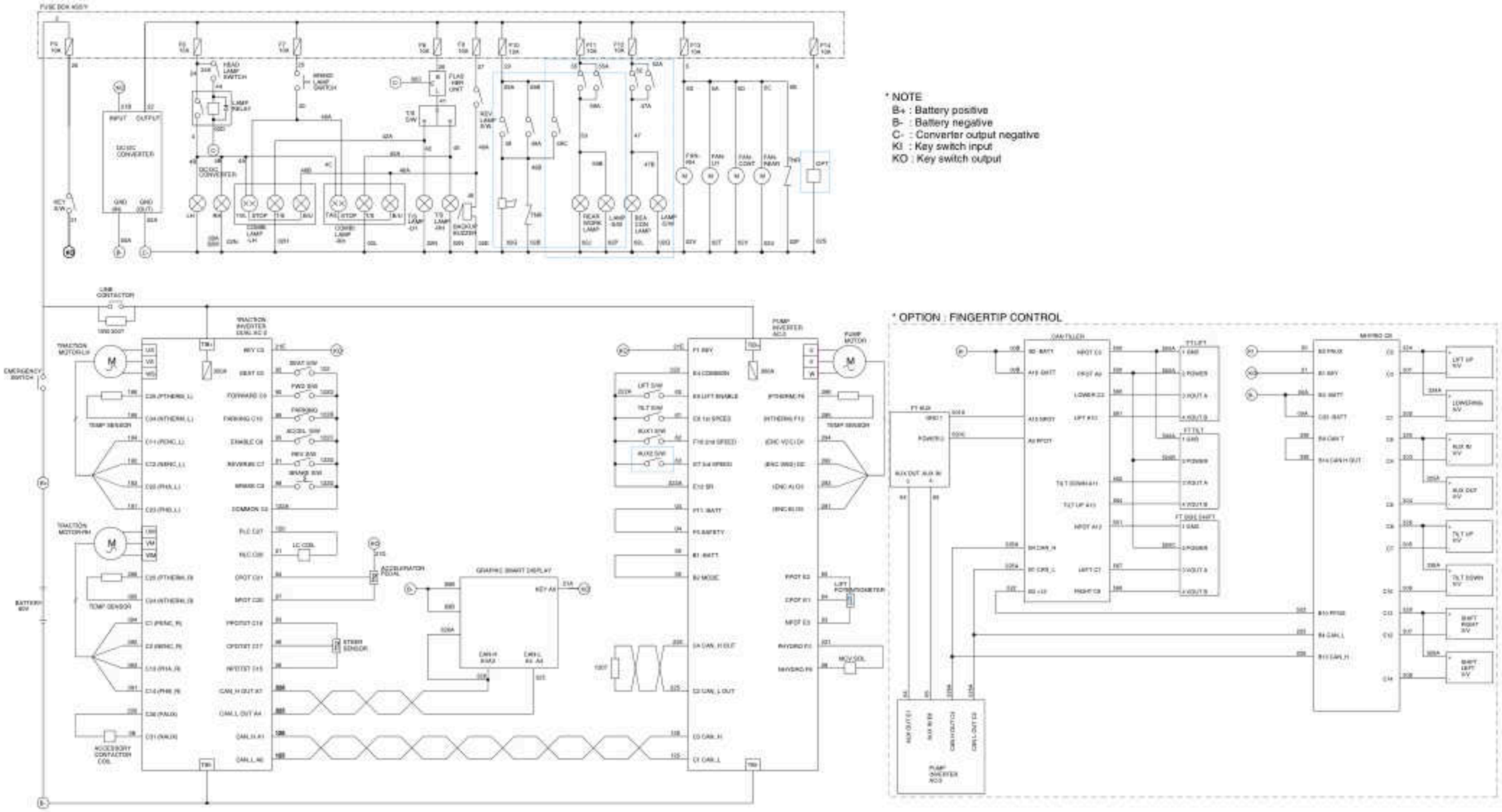
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(3) Names of each part (independent items)



1	Main PCB board	5	Shunt	9	Resistance (RD)
2	Main trans (Class H)	6	NFB	10	Resistance (DR)
3	Cooling fan	7	MG S/W	11	TAP changer
4	SCR module	8	Assistant trans		

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