SERVICE MANUAL

EH45
Compact Excavator



6-75750NA

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1. STANDARD WORKING TIME TABLE FOR THE MAINTENANCE OF EXCAVATOR

(1) Standard maintenance time table

1) Units of working time : 6 minutes = 0.1 hour

2) Calculating method of standard maintenance time :

Maintenance time = Working time X Number of workers

(Working time = Maintenance time / Number of workers)

3) When more than one work are done,

a) Add each standard maintenance time

b) Assy works include the following works marked with black dot •

4) O / H : The removing and installing time are not included.

5) Abbreviations in the table.

ASSY	; Assembly	F hose	; Flexible hose
ATT	; Attachment	Inst.	; Installation
BRG	; Bearing	O/H	; Overhaul
C/V	; Control valve	SOL	; Solenoid
Cyl	; Cylinder	SW	; Switch
E/G	; Engine	V	; Valve

(2) Classification of work code

No.	GROUP	WORK TO BE DONE
01	Attachment	To indicate removing,
02	Canopy and Guard	installing, replacement
03	Upper Structure	and overhaul.
04	Under carriage	

GROUP No.		EQUIPMENT PORTION	WORK TO BE DONE	UNIT	REMARKS	UNIT : HOUR
01 Attachment	00	Bucket portion			Refer to 32-I item2	
	01	Bucket ASSY	Removal/Inst.	1 pc.	Include adjustment	0.4
	02	• Bucket removing/ installing position	Preparation	1 pc.		0.1
	03	• Bucket installing pin	Removal/Inst.	1 pc.	Include stopper pin.	0.1
	04	• Bucket drive pin	- ditto -	1 pc.		0.1
	05	• Bucket sling and transfer	Preparation	1 pc.		0.1
	06	Bucket (Single)	O/H	1 pc.	Not include removing and installing	0.6
	07	• Bushing	Replace	1 pc.		0.5
	10	Arm portion			Refer to 32-I item 3	
	11	Arm ASSY	Removal/Inst.	1 pc.		0.8
	12	• Bucket cylinder removing/ installing position and piping	Preparation	1 pc.		0.2
	13	• Bucket cylinder rod pin	Removal/Inst.	1 pc.	Include stopper pin.	0.1
	14	• Bucket cylinder head pin	– ditto –	1 pc.	Include stopper pin.	0.1
	15	• Bucket cylinder assy	– ditto –	1 pc.		0.1
	16	• Arm cylinder rod pin	– ditto –	1 pc.	Include stopper pin.	0.1
	17	• Boom top pin	– ditto –	1 pc.		0.1
	18	• Arm sling and transfer	– ditto –	1 pc.		0.1
	20	Boom portion			Refer to 32-I item 4	
	21	Boom ASSY	Removal/Inst.	1 pc.		1.0
	22	• Boom removing/ installing position	Preparation	1 pc.		0.1
	23	• Boom cylinder temporary slinging	– ditto –	1 pc.		0.1
	24	• Boom cylinder rod pin	Removal/Inst.	1 pc.	Include stopper pin.	0.1
	25	• Boom cylinder piping	– ditto –	1 pc.		0.1
	26	• Arm & Bucket piping	– ditto –	1 pc.		0.2

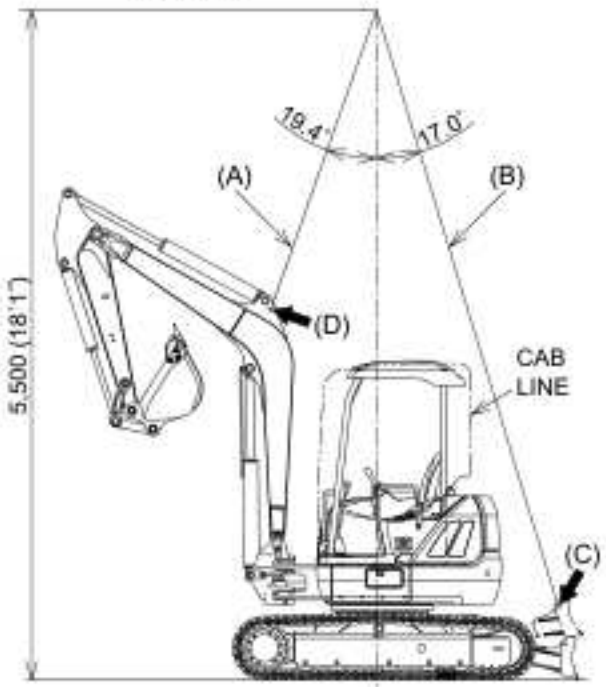
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GROUP No.		EQUIPMENT PORTION	WORK TO BE DONE	UNIT	REMARKS	UNIT : HOUR
01 Attachment	27	• Boom assy temporary slinging	Removal / Inst.	1 pc.		0.1
	28	• Boom foot pin	– ditto –	1 pc.	Include stopper pin.	0.1
	29	• Boom assy slinging	– ditto –	1 pc.		0.1
	30	Arm cylinder removing / installing	– ditto –	1 pc.		0.3
	31	• Arm cylinder piping	– ditto –	1 pc.		0.1
	32	• Arm cylinder head pin	– ditto –	1 pc.	Include stopper pin.	0.1
	33	• Arm cylinder slinging	– ditto –	1 pc.		0.1
	40	Boom cylinder removing / installing	– ditto –	1 pc.		0.3
	41	• Boom cylinder piping	– ditto –	1 pc.		0.1
	42	• Boom cylinder head pin	– ditto –	1 pc.		0.1
	43	• Boom cylinder slinging	– ditto –	1 pc.		0.1
	50	Bucket cylinder	O / H	1 pc.		2.5
	51	• Pin bushing	Replace	1 set	Include seal.	1.0
	60	Arm cylinder	O / H	1 pc.		2.5
	61	• Pin bushing	Replace	1 set	Include seal.	1.0
	70	Boom cylinder	O / H	1 pc.		2.5
	71	• Pin bushing	Replace	1 set	Include seal.	1.0
	80	Swing portion			Refer to 32-I item 5	
	81	Swing bracket assy	Removal / Inst.	1 pc.		0.4
	82	• Swing cylinder rod pin	– ditto –	1 pc.		0.1
	83	• Swing bracket slinging	– ditto –	1 pc.		0.1
	84	• Swing center pin	– ditto –	1 pc.		0.1
	85	Swing cylinder removing / installing	– ditto –	1 pc.	After removing swing bracket.	0.3
	86	• Swing cylinder hose	Removal / Inst.	2 pcs.		0.2
	87	• Swing cylinder head pin	– ditto –	1 pc.		0.1
	88	Swing cylinder	O / H	1 pc.		2.5
	89	• Pin bushing	Replace	1 pc.	Include seal.	1.0
		Other necessary works	Removal / Inst.	1 set	Pannel assy (3)	0.1
	90	Dozer portion			Refer to 32-I item 6	
	91	Dozer ASSY	Removal / Inst.	1 pc.		0.6
	92	• Dozer cylinder hose	– ditto –	2 pcs.		0.2
	93	• Dozer cylinder rod pin	– ditto –	1 pc.		0.1
	94	• Dozer installing pin	– ditto –	2 pcs.		0.2
	95	Dozer cylinder	O / H	1 pc.		2.5
	96	• Pin bushing	Replace	1 set	Include seal.	1.0
02 Canopy & Guard	00	Canopy portion			Refer to 33-I item 1	
	01	Canopy assy	– ditto –	1 pc.		0.2
	02	• Hand rail	– ditto –	1 pc.		0.1
	10	Cab portion (Option)			Refer to 33-I item 1	
	11	Cab assy	Removal / Inst.	1 pc.		0.4
	12	• Harness	Removal / Inst.	1 pc.		0.1
	20	Bonnet & Guard			Refer to 33-I item 2	
	21	Cover assy (1)	Removal / Inst.	1 pc.		0.1
	22	Pannel assy (2)	Removal / Inst.	1 pc.		0.1
	23	Pannel assy (3)	Removal / Inst.	1 pc.		0.1
	24	Bonnet assy (4)	Removal / Inst.	1 pc.		0.1

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EU Model SK45SR-2

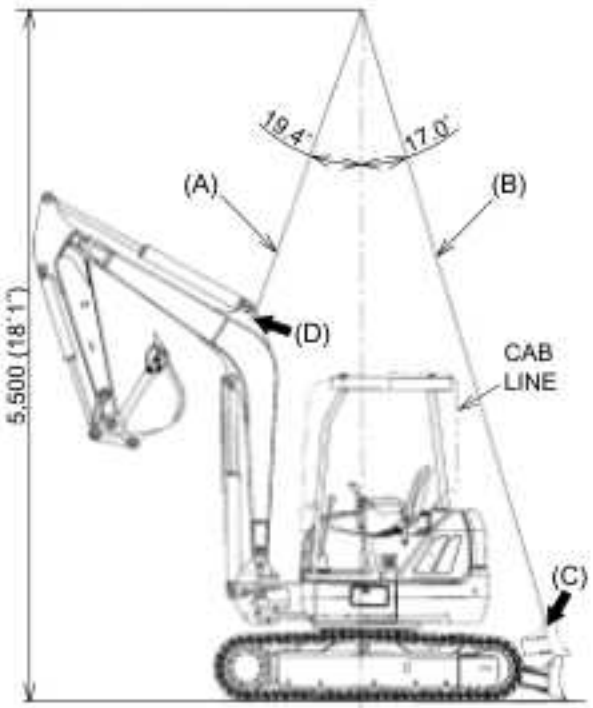
Weight : 4,630 kg
(10,210 lb)



Note : This figure is calculated with Japanese standard bucket.
Bucket weight : 104 kg (230 lb)

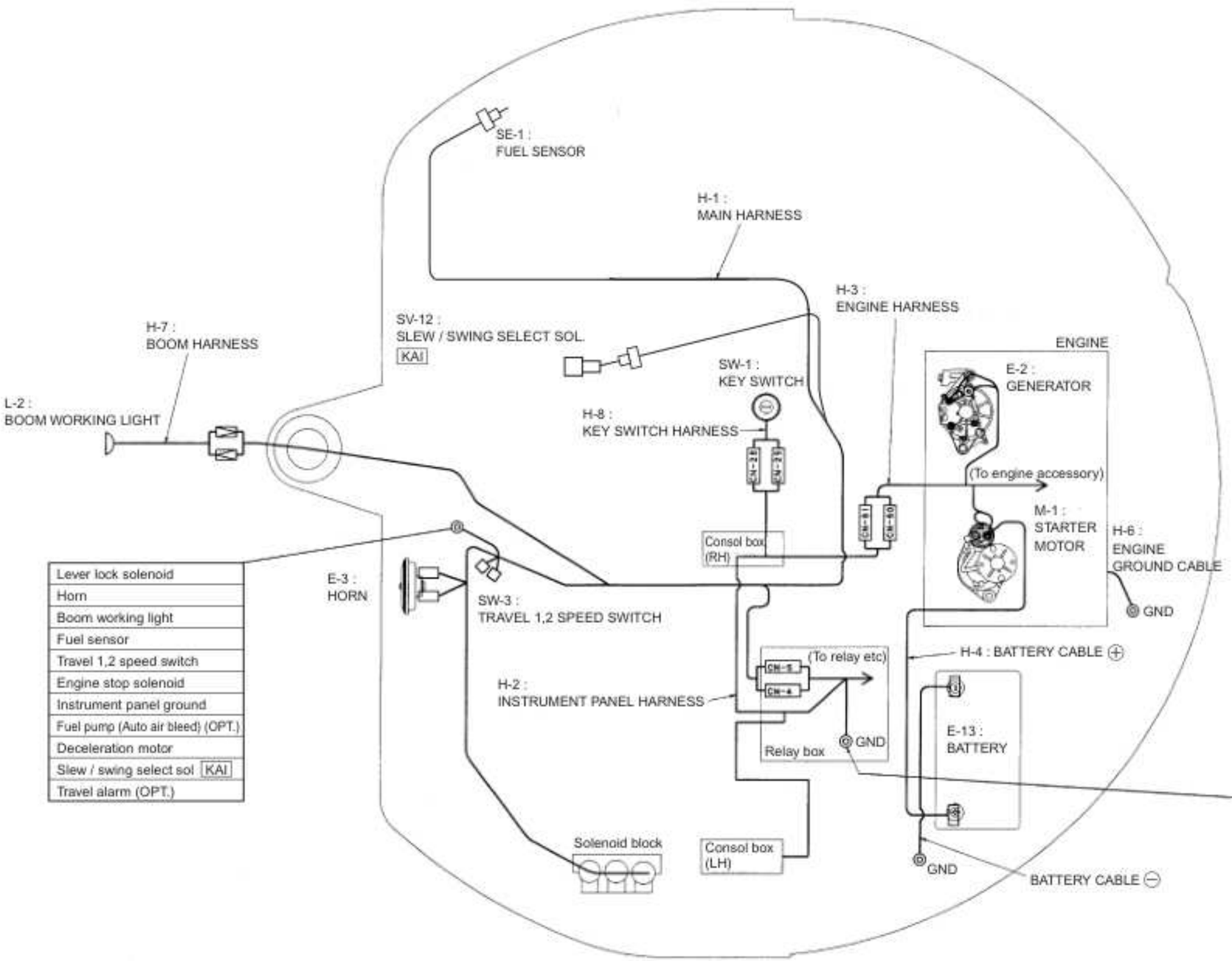
KAI Model SK45SR-2

Weight : 4,630 kg
(10,210 lb)



Note : This figure is calculated with Japanese standard bucket.
Bucket weight : 104 kg (230 lb)

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Lever lock solenoid
Horn
Boom working light
Fuel sensor
Travel 1,2 speed switch
Engine stop solenoid
Instrument panel ground
Fuel pump (Auto air bleed) (OPT.)
Deceleration motor
Slew / swing select sol KAI
Travel alarm (OPT.)

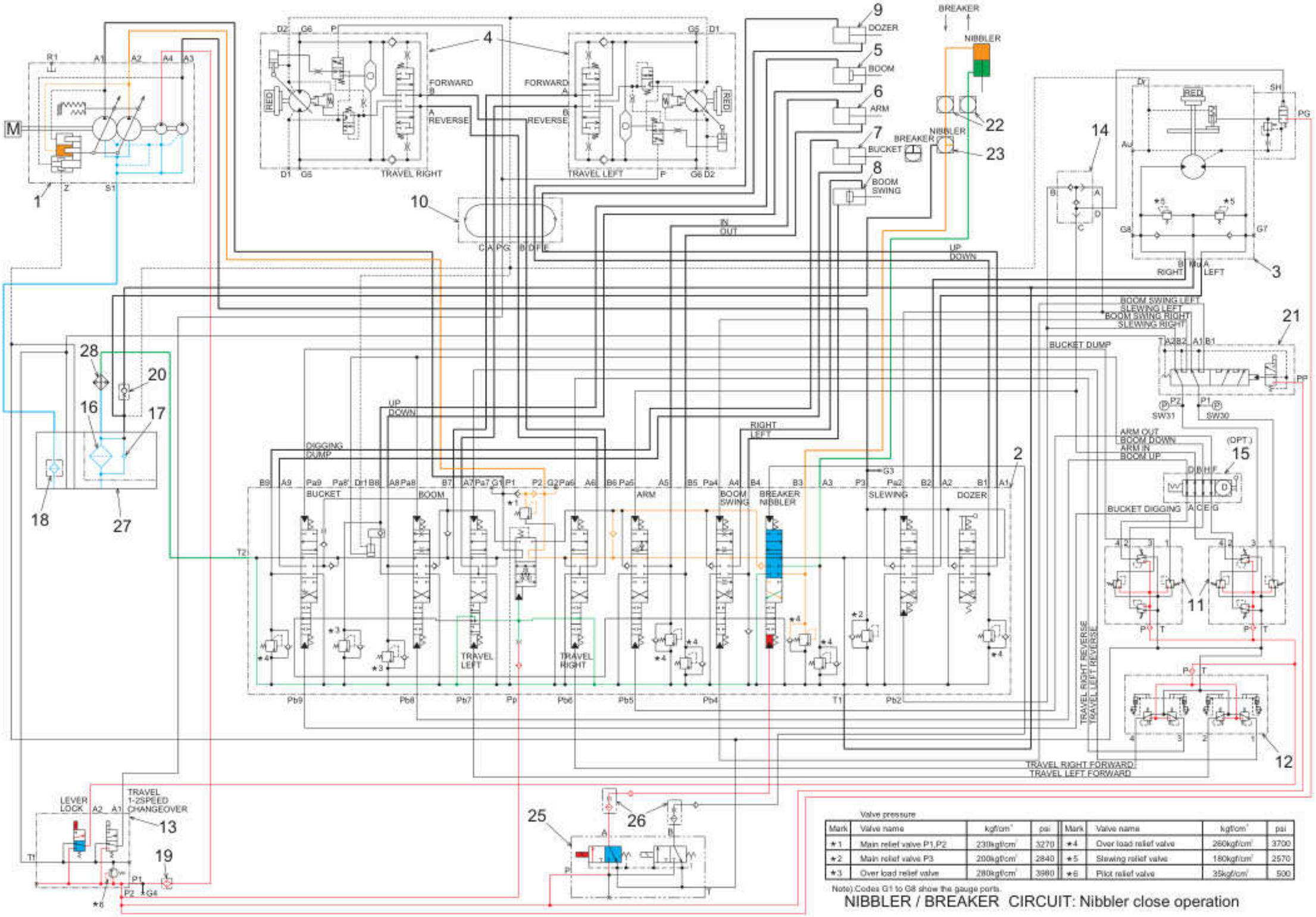
Gauge cluster
Tuner (OPT.)
Heater switch (OPT.)
Battery relay
Safety relay
Charge indicator relay
Timer unit
Spare power source
Holding circuit unit
Diode (D-12)
Diode (D-2)
Deceleration switch
Diode (D-1)
Wiper motor (Cab) (OPT.)
Washer motor (Cab) (OPT.)
Filter clogging switch

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6.4 TROUBLESHOOTING

Troubles	Possible Causes	Remedy
External Oil Leakage	●O-ring is defective. ●Dust seal is defective. ●Looseness of attaching screw of flange.	●Replace all the seal parts. ●Replace all the seal parts. ●Retighten.
Internal Oil Leakage	●Slipper seal and back-up ring are defective. ●Excessive wear on sliding surfaces.	●Replace all the seal parts. ●Replace the assembly.
Stem Sticks	●Stem and body are stuck together.	●Carry out grinding and honing. If excessive looseness cause oil leakage, replace the assembly.
Flange Looseness	●Capscrew tightening is insufficient.	●Retighten with the specified torque.

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Valve pressure

Mark	Valve name	kgf/cm²	psi	Mark	Valve name	kgf/cm²	psi
★1	Main relief valve P1,P2	230kgf/cm²	3270	★4	Over load relief valve	260kgf/cm²	3700
★2	Main relief valve P3	200kgf/cm²	2840	★5	Slewing relief valve	180kgf/cm²	2570
★3	Over load relief valve	280kgf/cm²	3980	★6	Pilot relief valve	35kgf/cm²	500

Note) Codes G1 to G8 show the gauge ports.

NIBBLER / BREAKER CIRCUIT: Nibbler close operation

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