



First Choice
Group

SPARE PARTS DIAGRAM FOR



HOSHIZAKI

Ice Machine

CM-90DE

CM-110DE

FM-120DE

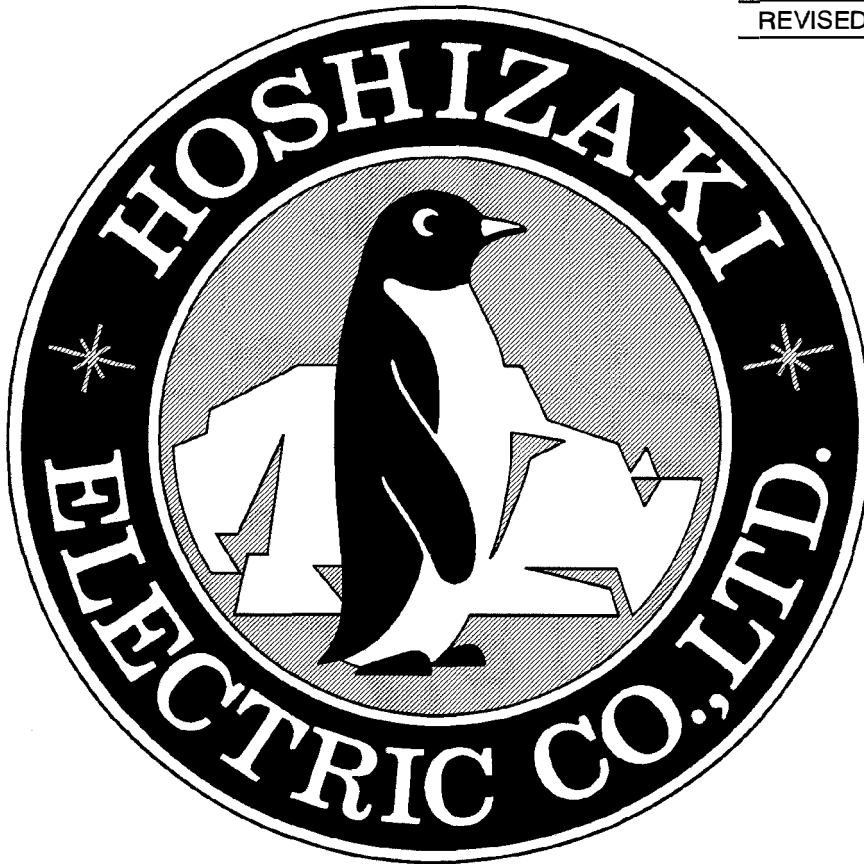
FM-120DE-N

First Choice Group
Blakeney Way, Kingswood Lakeside
Cannock, Staffs, WS11 8LD
TEL: 01543 577778 FAX: 01543504141
Email: enquires@firstchoice-cs.co.uk
Web: www.firstchoice-cs.co.uk

NO. 22BD-1859

ISSUED: OCT. 15, 1997

REVISED: NOV. 01, 2000



**HOSHIZAKI
SELF-CONTAINED ICEMAKER**

**MODEL CM-90DE
CM-110DE
FM-120DE
FM-120DE-N**

**PARTS LIST
(HE)**

F-1 JUL. 1996
G-1 JUL. 1997
H-1 DEC. 1997
H-2 FEB. 1998
H-3 MAR. 1998
H-4 MAY 1998
J-1 DEC. 1998
K-0 DEC. 1999

MATERIAL ABBREVIATIONS

PLASTIC

ABS	=	Acrylonitrile-butadien-styrene
AC	=	Polyacetal
EVA	=	Ethylene vinyl acetate
PA	=	Polyamide = Nylon
PC	=	Polycarbonate
PE	=	Polyethylene
PES	=	Polyester
PETP	=	Polyethylene terephthalate = Tetlon
PF	=	Phenol-formaldehyde
PP	=	Polypropyleneoride
PS	=	Polystyrene
PTFE	=	Polytetrafluoroethylene = Teflon
PUR	=	Polyurethane
PVC	=	Polyvinyl chloride

RUBBER

EPDM	=	EP rubber
NBR	=	Nitrile butadiene rubber
NR	=	Natural rubber
SI.R	=	Silicone rubber
SY.R	=	Synthetic rubber

STEEL

G.S	=	Galvanized steel
S.S	=	Stainless steel

AUXILIARY CODE

Ex.1

K-0
└─┬─┘ Parts are the same as in the preceding year.
└───┘ "K" is the tenth in alphabetical order with "I" skipped.
So, "K" indicates "1990".

Ex.2

A-1
└─┬─┘ "A" is the first in alphabetical order.
└───┘ So, "A" indicates "1991".

Ex.3

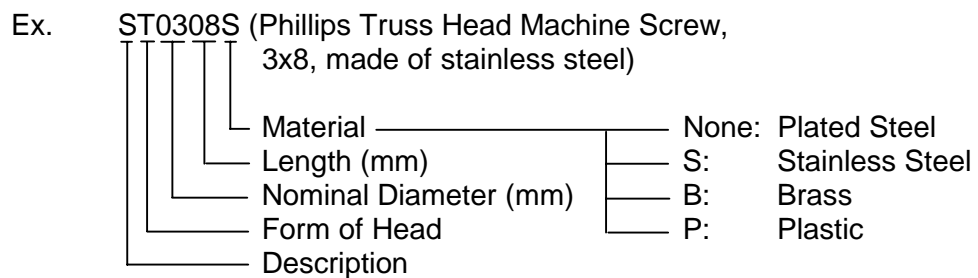
A-2
└─┬─┘ Each time a part is changed in a year, this number advances.

(Note)

— = Part deleted.
X = Part deleted and replaced by "O" part.
O = New part for "X" in the same auxiliary code.

FASTENER ABBREVIATION LIST

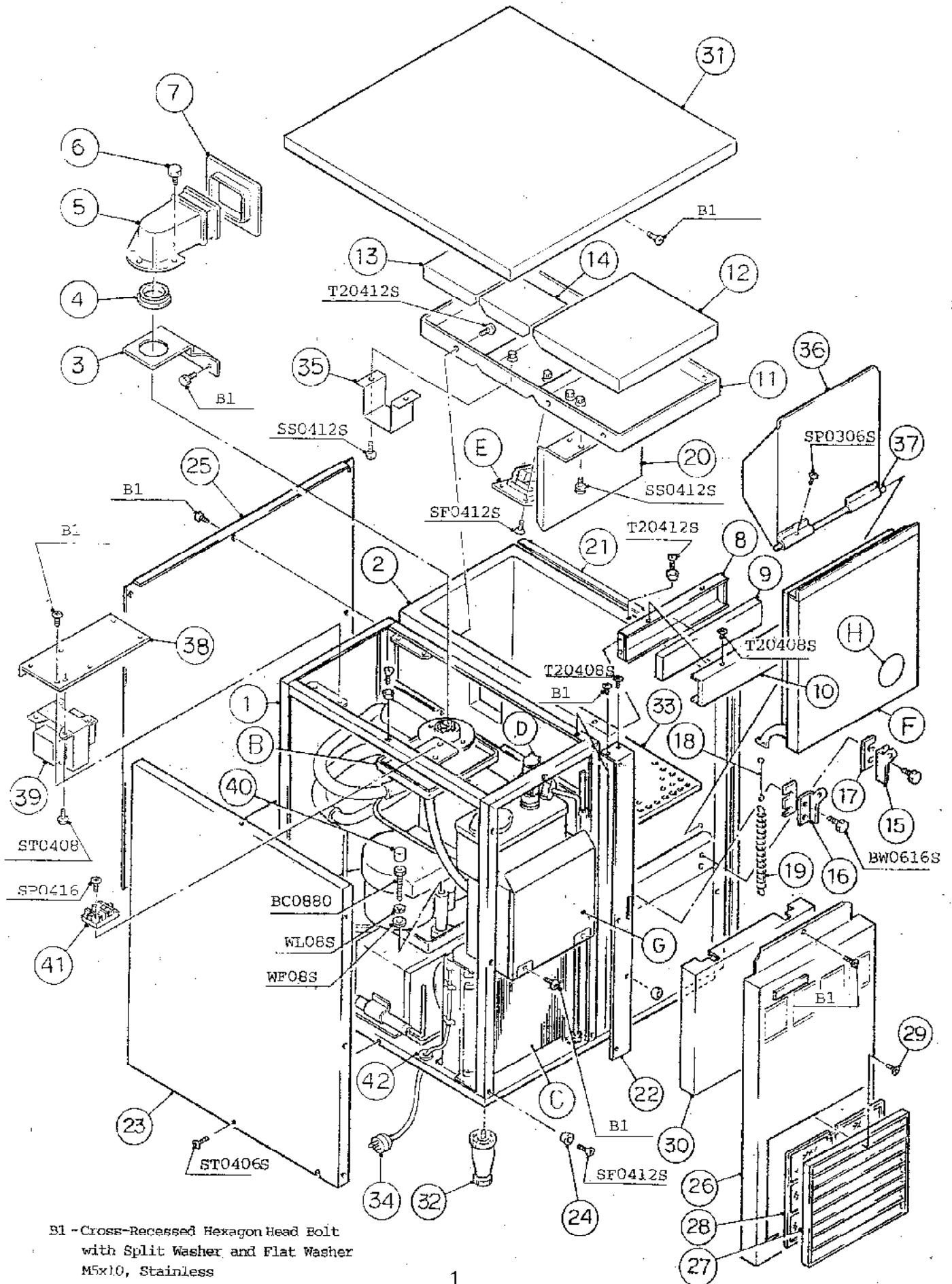
ST	Phillips Truss Head Machine Screw
SP	Phillips Pan Head Machine Screw
SF	Phillips Flat Head Machine Screw
SS	Phillips Pan Head Machine Screw with Split Lock Washer
SW	Phillips Pan Head Machine Screw with Split Lock Washer and Flat Washer
T1	Phillips Truss Head Tapping Screw (Correspond to Type A)
T2	Phillips Truss Head Tapping Screw (Correspond to Type B)
T3	Phillips Truss Head Tapping Screw (Correspond to Type C)
FT	Phillips Truss Head Tapping Screw (Special)
BH	Hexagon Head Bolt
BC	Socket Head Cap Screw
BS	Hexagon Bolt with Split Washer
BW	Hexagon Bolt with Split Washer and Flat Washer
BF	Hexagon Flange Bolt
BR	Cross-Recessed Hexagon Head Bolt
BRW	Cross-Recessed Hexagon Head Bolt with Split Lock Washer and Flat Washer
WL	Split Lock Washer
WT	External Tooth Washer
WF	Flat Washer
WS	Spring Washer
NH	Hexagon Nut
NF	Hexagon Flange Nut
NC	Hexagon Cap Nut
NS	Square Nut
NW	Wing Nut



(Note) Second character is numerical except the list.

Ex. S1, S2, B3 etc.

And abbreviations and names are shown under the illustration.



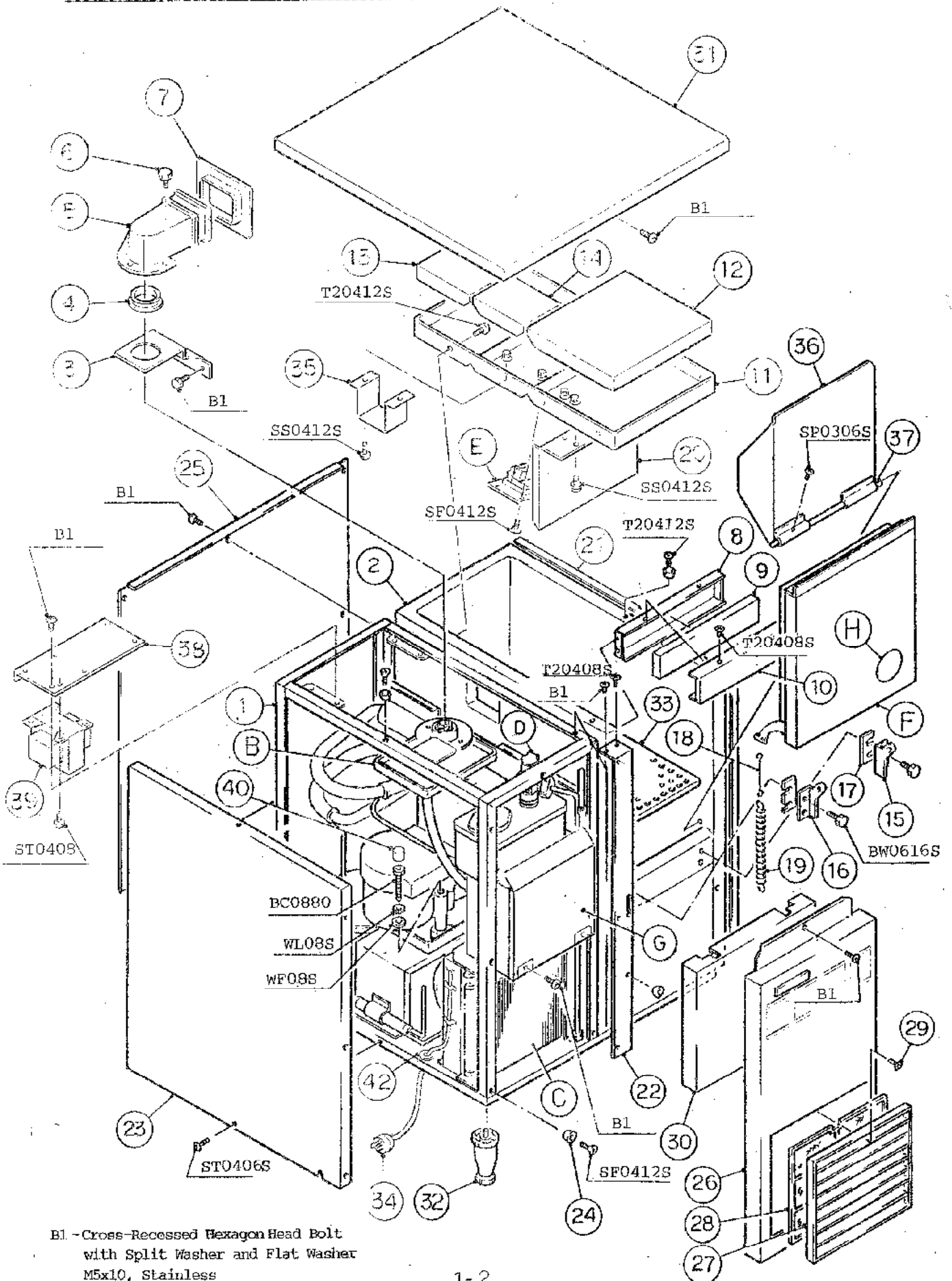
B1 - Cross-Recessed Hexagon Head Bolt
 with Split Washer and Flat Washer
 M5x10, Stainless

HE

CM-110DE
FM-120DE, FM-120DE-N

A. GENERAL ASSY

(K-0)(J-?) (H-4)
(H-3)(H-2)(H-1)



B1 - Cross-Recessed Hexagon Head Bolt
with Split Washer and Flat Washer
M5x10, Stainless

HE

MODEL: CM-90DE, CM-110DE TITLE: A. GENERAL ASSY							
FM-120DE, FM-120DE-N							
INDEX NO.	DESCRIPTION	MATERIAL OR MODEL NUMBER	PART NUMBER	REQ'D NUMBER			
				F-1	G-1	H-1 H-2 H-3	H-4 J-1 K-0
B	ICE MAKING UNIT	-	-	1	1	1	1
C	REFRIGERATION CIRCUIT	-	-	1	1	1	1
D	WATER CIRCUIT ASSY	-	-	1	1	1	1
E	BIN SWITCH ASSY	(S-0360)	310810A01	1	1	1	1
F	DOOR ASSY	-	310998A06	1	1	1	1
G	CONTROL BOX ASSY	-	336726A01	1	1	1	-
		-	341579A01				1
H	LABEL LOCATION	(CM-90DE)	224391A01	1	1	-	
	LABEL LOCATION	(CM-110DE)	228228A01			1	1
	LABEL LOCATION	(FM-120DE)	224391A02	1	1	-	
			228228A02			1	1
LABEL LOCATION	(FM-120DE-N)	228228A04				1	
1	FRAME	STEEL	108065G01	1	1	1	1
2	BIN - FOAMED	ABS	205776G07	1	1	1	1
3	BRACKET - EVAPORATOR	S.S	318532-01	1	1	1	1
4	PACKING - CYLINDER	EPDM	427151-01	1	1	1	1
5	SPOUT	PC	208791-01	1	1	1	1
6	THUMBSCREW	S.S, ABS	415949G03	3	3	3	3
7	PACKING (C) - SPOUT	EPDM	430837-01	1	1	1	1
8	FRAME - FRONT	S.S	430921-01	1	1	1	1
9	INSULATION - FRONT COVER	PS FOAM	418332-01	1	1	1	1
10	FRONT FRAME	S.S	418333-01	1	1	1	1
11	COVER - BIN TOP	(CM-90,110DE) ABS	224390G01	1	1	1	1
	COVER - BIN TOP	(FM-120DE, -N) ABS	224338G01	1	1	1	1
12	INSULATION	(CM-90,110DE) PE FOAM	418711-01	1	1	1	1
	INSULATION (A)	(FM-120DE, -N) PE FOAM	418334-01	1	1	1	1
13	INSULATION (B)	PE FOAM	418334-02	1	1	1	1
14	INSULATION (E)	PE FOAM	418335-04	1	1	1	1

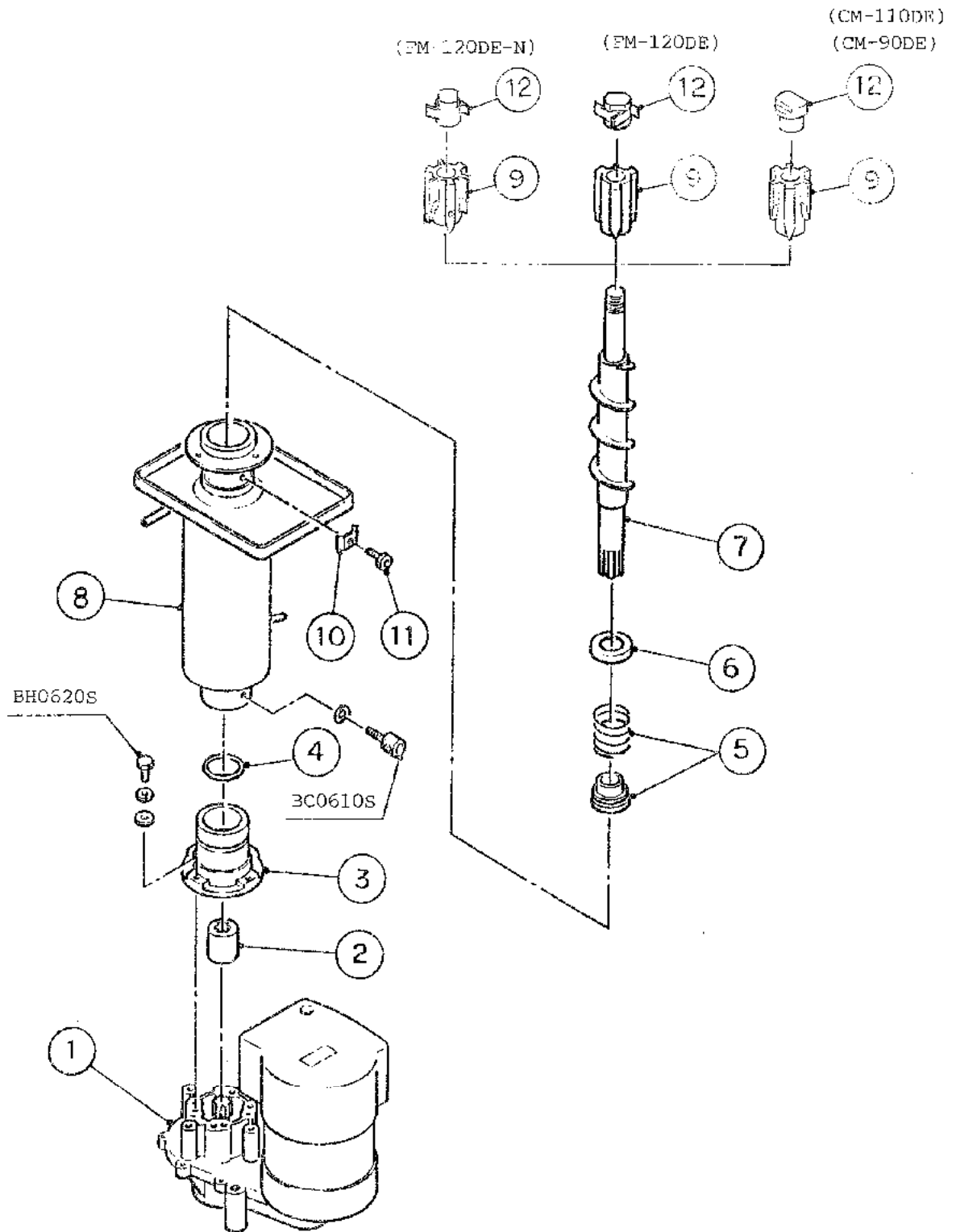
HE

MODEL: CM-90DE, CM-110DE TITLE: A. GENERAL ASSY							
FM-120DE, FM-120DE-N							
INDEX NO.	DESCRIPTION	MATERIAL OR MODEL NUMBER	PART NUMBER	REQ'D NUMBER			
				F-1	G-1	H-1 H-2 H-3	H-4 J-1 K-0
15	HINGE (RIGHT)	S.S	4H0456-01	1	1	1	1
16	HINGE (LEFT)	S.S	426053-01	1	1	1	1
17	HINGE SPACER (B)	S.S	4H0605-02	2	2	2	2
18	HOOK (H)	S.S	404060-07	1	1	1	1
19	SPRING	ZINC COATED PIANO WIRE	4H0491-01	1	1	1	1
20	SEPARATOR - STORAGE BIN	(CM-90,110DE) S.S	418710-01	1	1	1	1
21	SIDE PANEL (RIGHT)	S.S	311006-03	1	1	1	1
22	CENTER PANEL	S.S	312081-01	1	1	1	1
23	SIDE PANEL (LEFT)	S.S	336140-02	1	1	1	1
24	COLLAR	S.S	4H0171-01	6	6	6	6
25	REAR PANEL	S.S	336141-02	1	1	1	1
26	FRONT PANEL (LEFT)	S.S	217479-03	1	1	1	1
27	LOUVER (A)	CALP	103344-07	1	1	1	1
28	AIR FILTER (A)	PP	208840G03	1	1	1	1
29	TAPPING SCREW (BLACK)	STEEL, 4x8	433954-01	1	1	1	1
30	FRONT PANEL (RIGHT)	S.S	311011-01	1	1	1	1
31	TOP PANEL	S.S	322860G05	1	1	1	1
32	ADJUSTABLE LEG	SDNH-100HN- 12EP	429119-01	4	4	4	4
33	DRAIN BOARD	S.S	418336-01	1	1	1	1
34	POWER SUPPLY CORD (CONTINENTAL)	GTCE-3	450412-01	1	1	1	1
	POWER SUPPLY CORD (UK)	GTBS-3	452359-01	1	1	1	1
35	BRACKET	S.S	450431-01	1	1	1	1
36	SLOPE	ABS	310996G01	1	1	1	1
37	SHAFT - DOOR, INNER BIN	S.S	418796-01	1	1	1	1
38	BRACKET - TRANSFORMER	G.S	336643-01	1	1	-	
		G.S	339878-01			1	1

HE
CM-90DE, CM-110DE
FM-120DE, FM-120DE-N

B. ICE MAKING UNIT

(K-0) (J-1)
(H-4) (H-3) (H-2)
(G-1) (H-1) (F-1)



HE

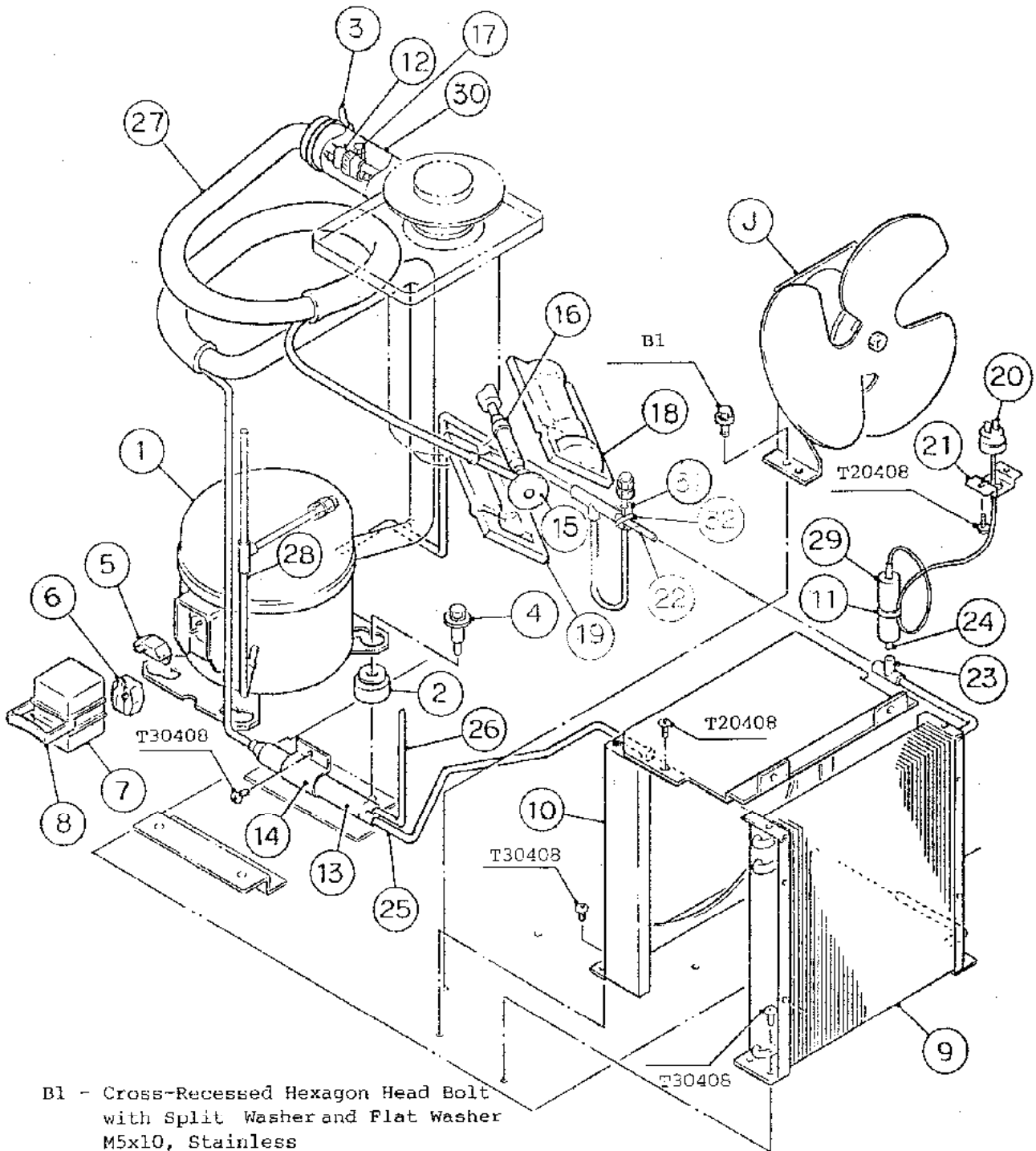
CM-110DE

FM-120DE, FM-120DE-N

C. REFRIGERATION CIRCUIT

(K-0)(J-1)(H-4)

(H-3)(H-2)(H-1)



B1 - Cross-Recessed Hexagon Head Bolt
with Split Washer and Flat Washer
M5x10, Stainless

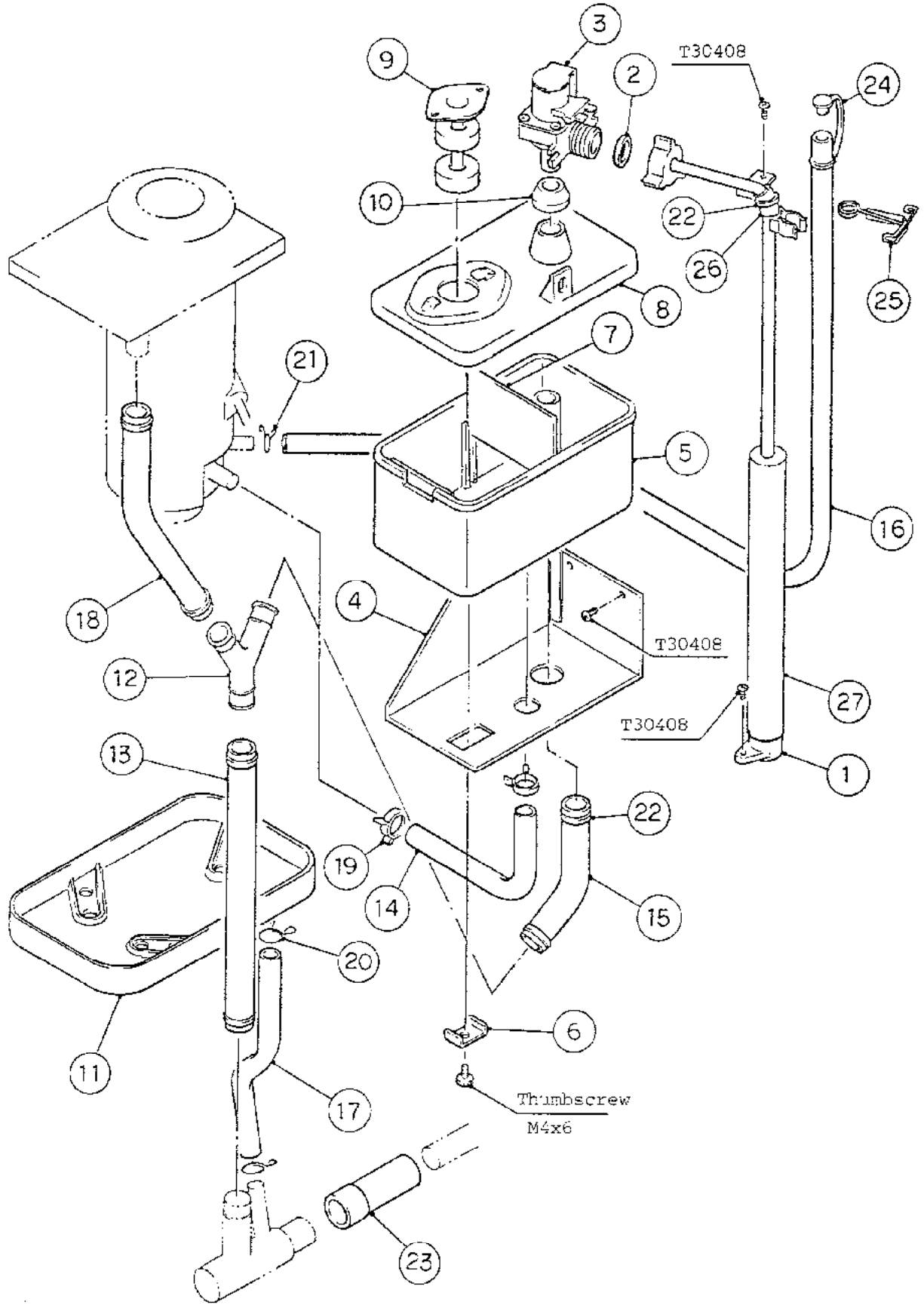
HE

MODEL: CM-90DE, CM-110DE TITLE: C. REFRIGERATION CIRCUIT							
FM-120DE, FM-120DE-N							
INDEX NO.	DESCRIPTION	MATERIAL OR MODEL NUMBER	PART NUMBER	REQ'D NUMBER			
				F-1	G-1	H-1 H-2 H-3	H-4 J-1 K-0
J	FAN MOTOR ASSY	(S-0911)	336283A01	1	1	1	1
1	COMPRESSOR	KE100Y-5ZV	444737-01	1	1	1	1
2	CUSHION	CR-Y2	443695-01	4	4	4	4
3	TIE	CV-150	7920-0003	4	4	4	4
4	BOLT	-	448834-01	4	4	4	4
5	OVERLOAD	4TM408UFBYY-62	448090-01	1	1	1	1
6	CONNECTOR	-	435923-01	1	1	1	1
7	TERMINAL COVER		434797-01	1	1	1	1
8	STRAP	S.S	434798-01	1	1	1	1
9	CONDENSER - AIR-COOLED	-	210453-03	1	1	1	1
10	SHROUD	G.S	224314G01	1	1	1	1
11	TIE	CV-100	7920-0002	1	1	1	1
12	HOLDER - EXP. VALVE - 3/8	S.S	3A0107-01	1	1	1	-
	HOLDER - EXP. VALVE		451267-01				1
13	DRIER	KC-7860	444395-01	1	1	1	1
14	STRAP	G.S	419349-01	1	1	1	1
15	EXPANSION VALVE	HFE-5QHD-1	446808-01	1	1	1	1
16	REDUCER	COPPER	421904-01	1	1	1	1
17	CLAMP	S.S	443461-02	1	1	1	1
18	COVER (C) - EXPANSION VALVE	PE FOAM	324313-03	1	1	1	1
19	COVER (D) - EXPANSION VALVE	PE FOAM	324313-04	1	1	1	1
20	PRESSURE SWITCH	ACB-2UB05	433441-06	1	1	1	1
21	BRACKET - PRESSURE SWITCH	G.S	425506-01	1	1	1	1
22	COPPER TUBE (H1)	COPPER	329589-02	1	1	-	
	COPPER TUBE A/H	COPPER	340763G01			1	1
23	TEE	COPPER	420041-03	1	1	1	1
24	COPPER TUBE (A) - CAPILLARY	COPPER	446047-01	1	1	1	1
25	COPPER TUBE (H2)	COPPER	442787-01	1	1	1	1
26	PROCESS TUBE (B)	COPPER	428058-02	1	1	1	1
27	HEAT EXCHANGER	COPPER	218669G01	1	1	1	1

HE
CM-90DE, CM-110DE
FM-120DE, FM-120DE-N

D. WATER CIRCUIT

(K-0) (J-1)
(H-4) (H-3) (H-2)
(G-1) (H-1) (F-1)



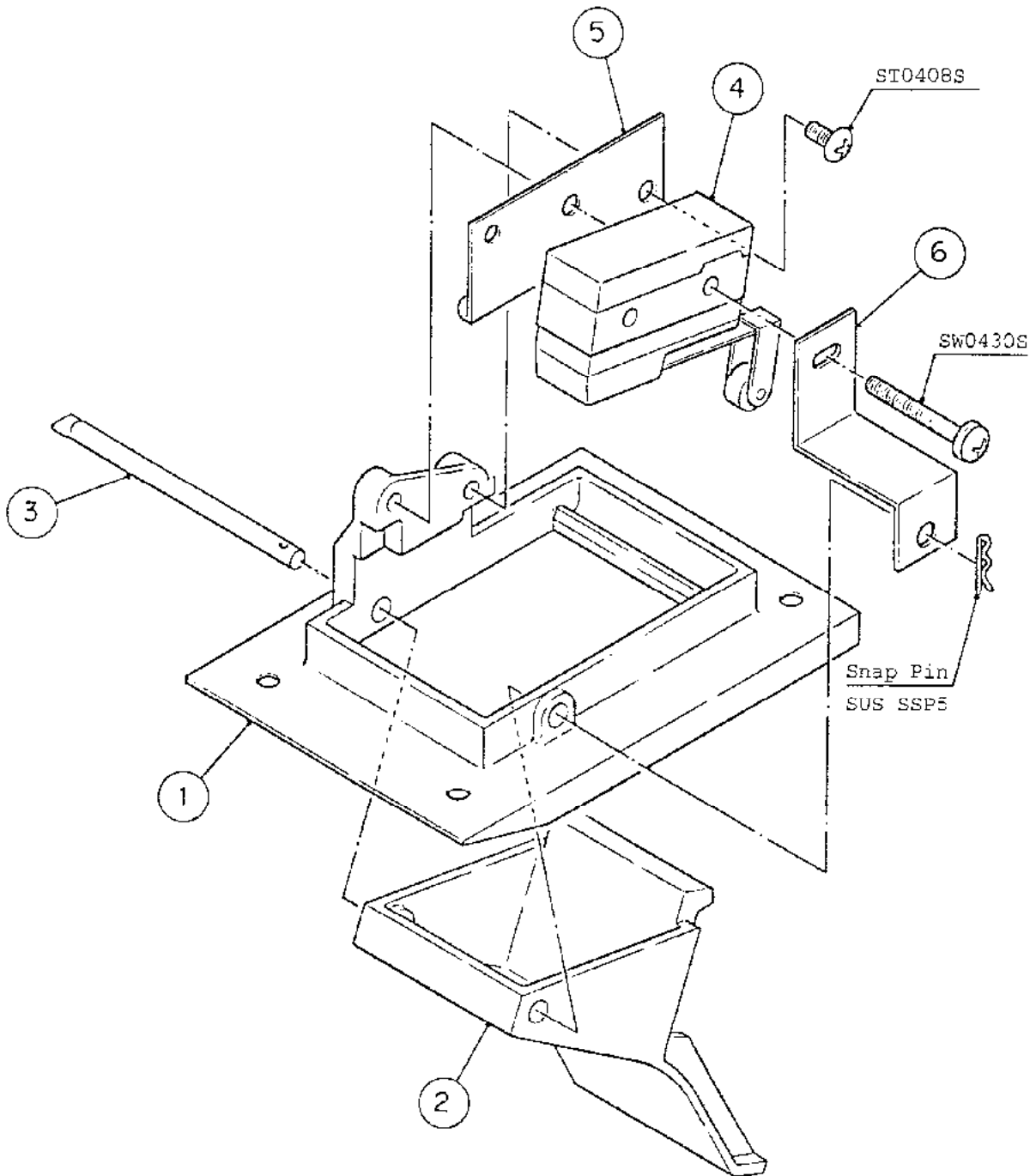
HE

MODEL: CM-90DE, CM-110DE TITLE: D. WATER CIRCUIT							
FM-120DE, FM-120DE-N							
INDEX NO.	DESCRIPTION	MATERIAL OR MODEL NUMBER	PART NUMBER	REQ'D NUMBER			
				F-1	G-1	H-1 H-2 H-3	H-4 J-1 K-0
1	PIPE - WATER SUPPLY	S.S	328517G01	1	1	1	-
		S.S	342401G01				1
2	PACKING	SI. R	413854-02	1	1	1	1
3	WATER VALVE	V-19	452358-01	1	1	1	-
			455733-01				1
4	BRACKET - RESERVOIR	G.S	328518-01	1	1	1	1
5	RESERVOIR	ABS	214802G01	1	1	1	1
6	COLLAR	S.S	423416-01	1	1	1	1
7	SEPARATOR - RESERVOIR	ABS	423538-01	1	1	1	1
8	COVER - RESERVOIR	ABS	103070-01	1	1	1	1
9	FLOAT SWITCH	TW-1221-101	435490-01	1	1	1	1
10	COVER - RESERVOIR INLET	SI. R	415094-01	1	1	1	1
11	DRAIN PAN	ABS	318155-01	1	1	1	1
12	"Y" JOINT	ABS	431347-01	1	1	1	1
13	HOSE	7716-1821, L=235	105668-16	1	1	1	1
14	SILICONE HOSE	7730-1216, L=180	105668-33	1	1	1	1
15	SILICONE HOSE	7730-1721, L=130	105668-34	1	1	1	1
16	HOSE	7716-0913, L=500	105668-19	1	1	1	1
17	HOSE	7716-1216, L=155	105668-20	1	1	1	1
18	HOSE	7711-1821, L=245	105668-21	1	1	1	1
19	CLAMP (D)	T15	423866-04	2	2	2	2
20	CLAMP	SK-16	435934-04	2	2	2	2
21	CLAMP	SK-13	435934-01	1	1	1	1
22	TIE	CV-150	7920-0003	7	7	7	7
23	HOSE - PUMP DISCHARGE	EPDM	415699-03	1	1	1	1
24	CAP	PE	414914-01	1	1	1	1

HE
CM-90DE, CM-110DE
FM-120DE, FM-120DE-N

E. BIN SWITCH ASSY

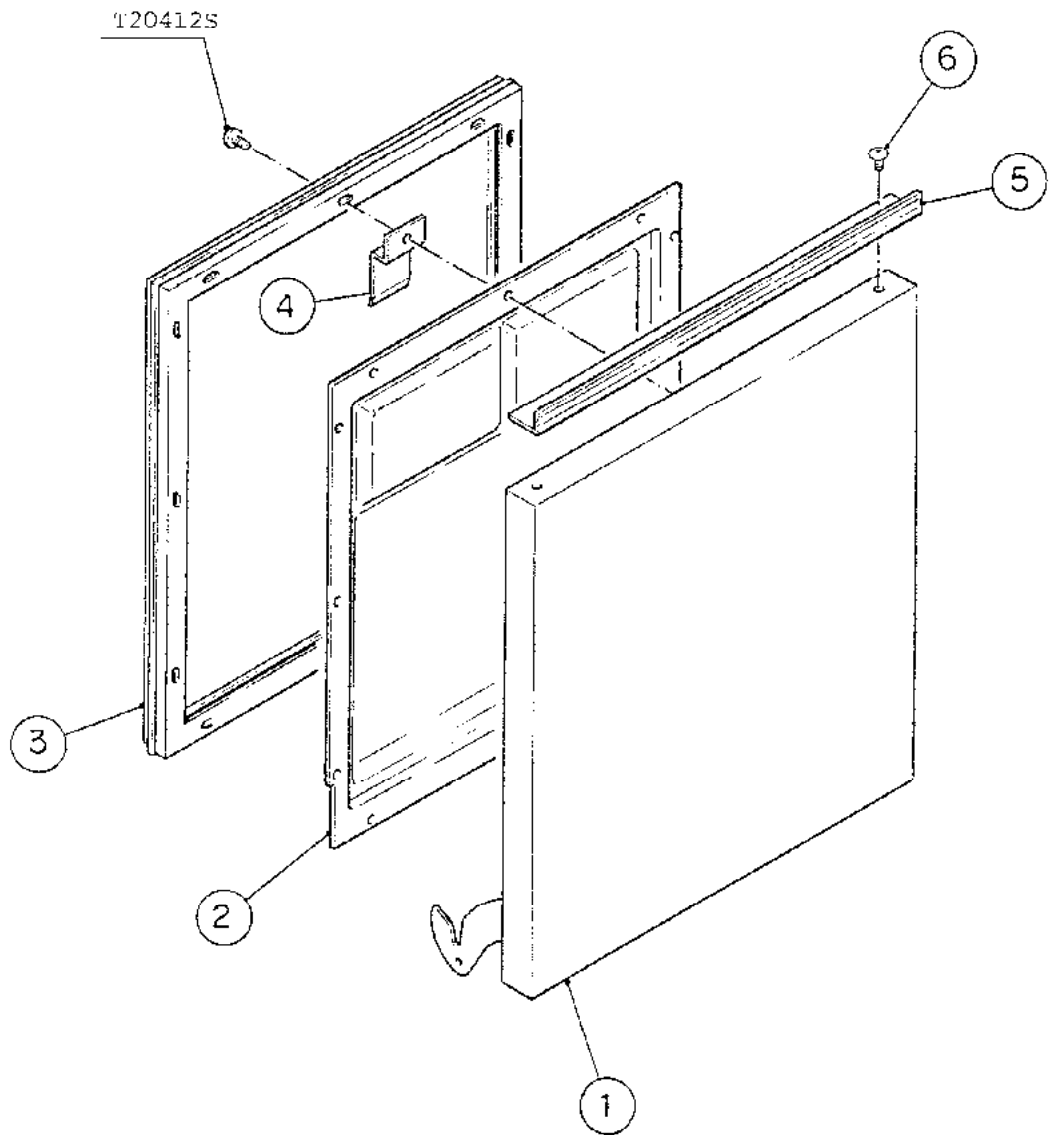
(K-0) (J-1)
(H-4) (H-3) (H-2)
(G-1) (H-1) (F-1)

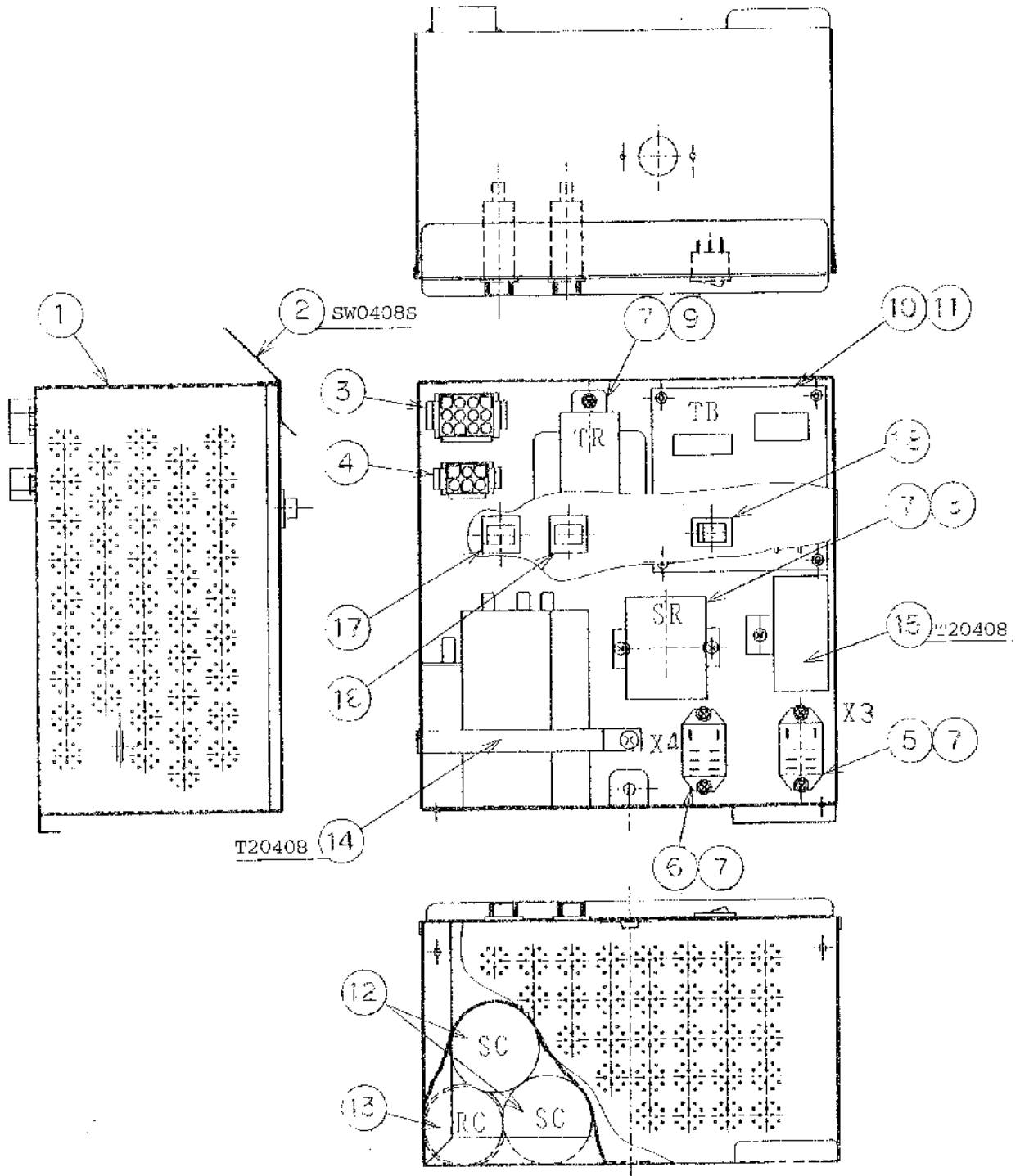


HE
CM-90DE , CM-110DE
FM-120DE, FM-120DE-N

F. DOOR ASSY

(K-0)(J-1)
(H-4)(H-3)(H-2)
(G-1)(H-1)(F-1)

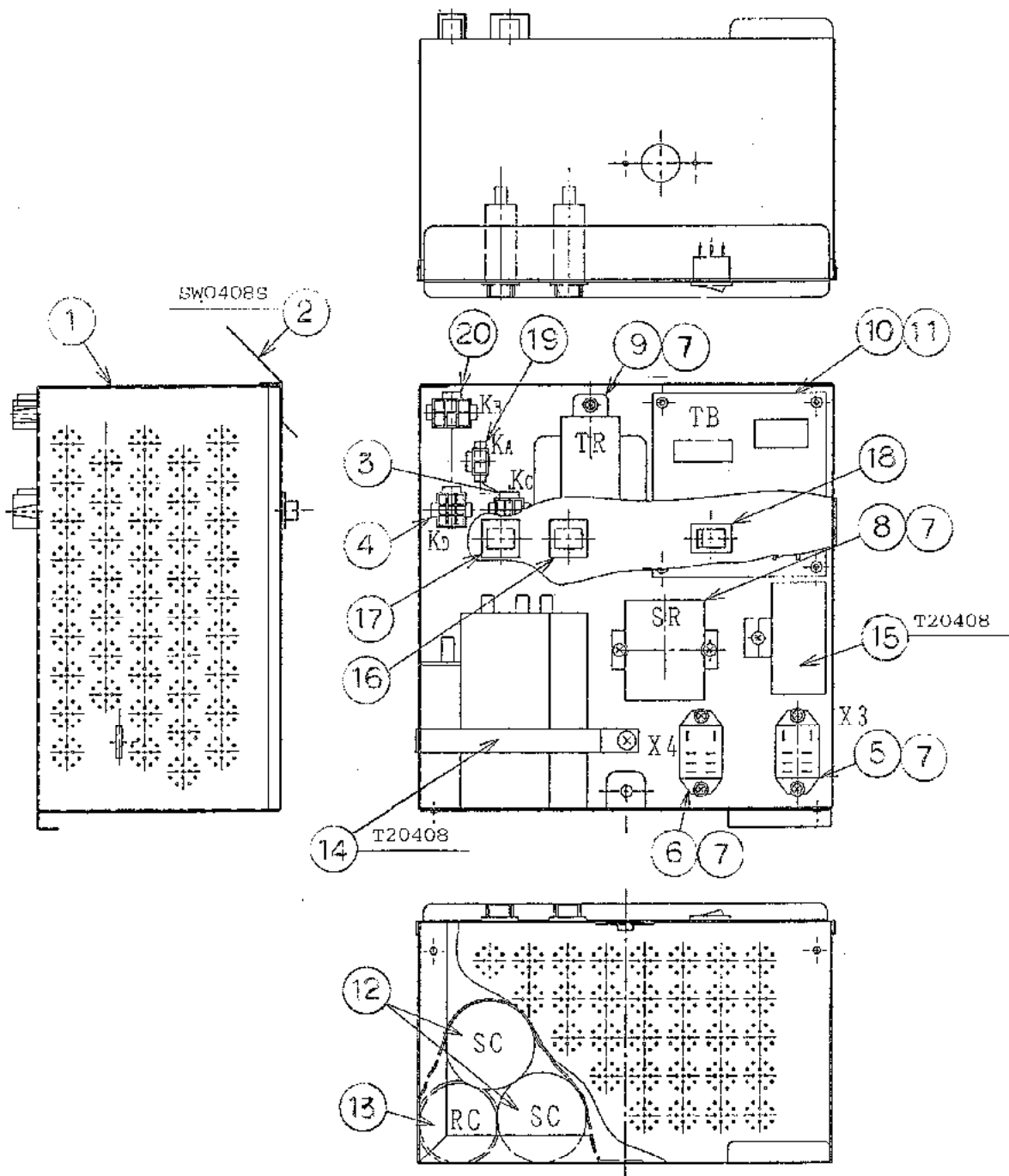




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CM-90DE, CM-110DE
FM-120DE, FM-120DE-N

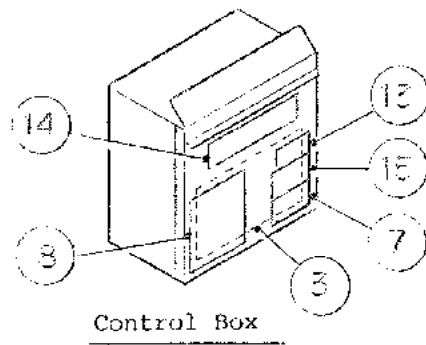
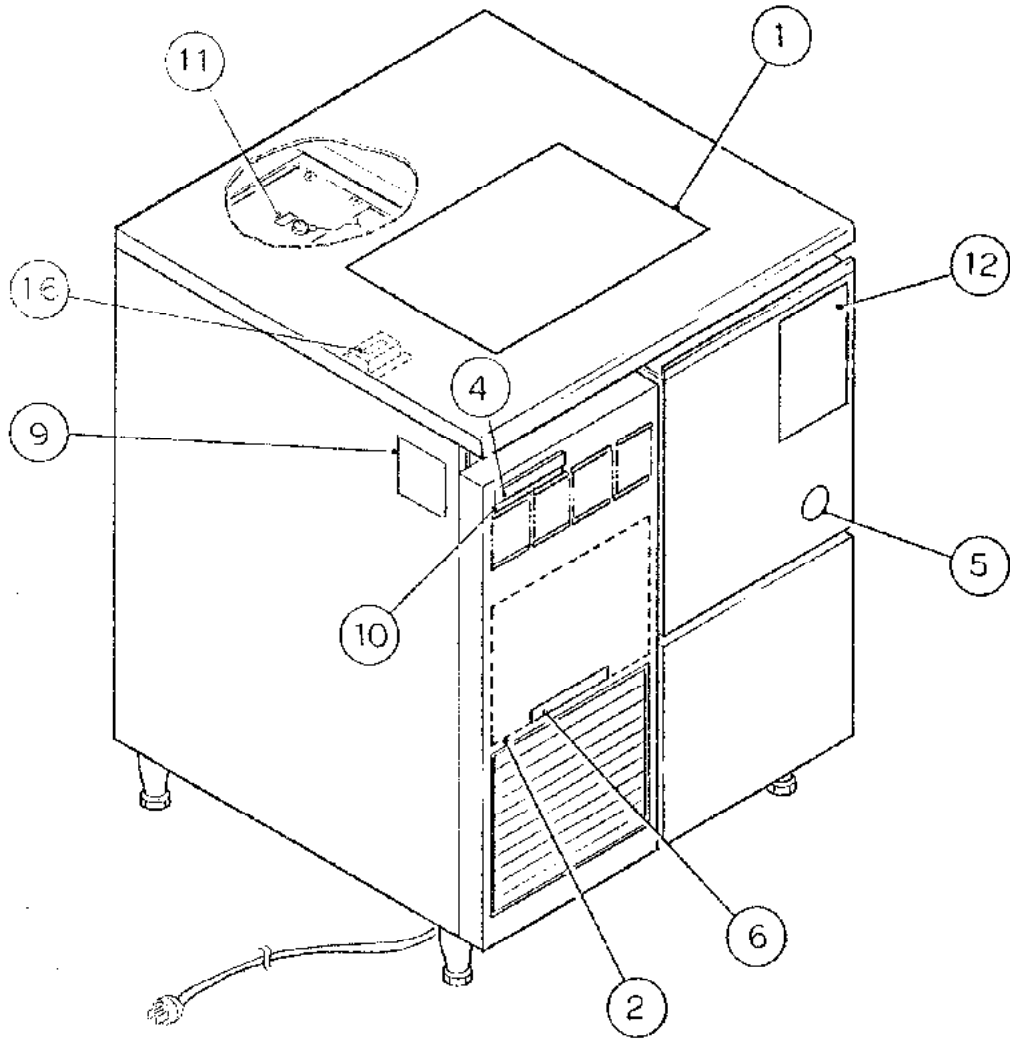
G. CONTROL BOX ASSY

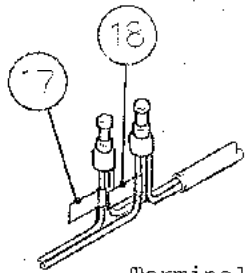
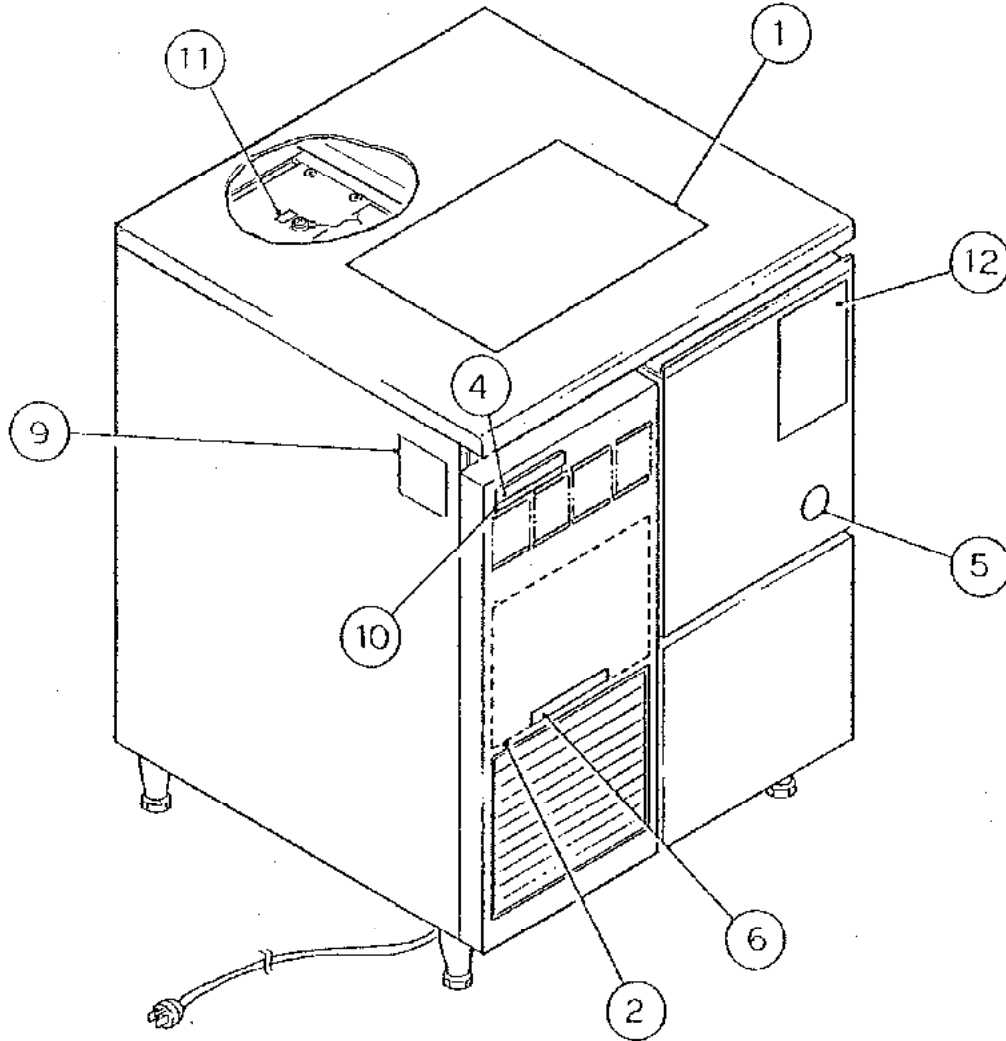
(K-0)
(H-4)(J-1)



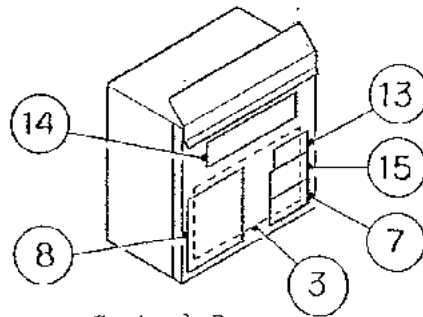
HE

MODEL: CM-90DE, CM-110DE TITLE: G. CONTROL BOX ASSY							
FM-120DE, FM-120DE-N							
INDEX NO.	DESCRIPTION	MATERIAL OR MODEL NUMBER	PART NUMBER	REQ'D NUMBER			
				F-1	G-1	H-1 H-2 H-3	H-4 J-1 K-0
1	CONTROL BOX	G.S	224343G01	1	1	1	-
		G.S	229046G01				1
2	COVER - CONTROL BOX	G.S	336725G01	1	1	1	1
3	12P PLUG HOUSING	3191-12P-201	412832-04	1	1	1	-
	RECEPTACLE HOUSING	YLR-06V	454246-04				1
4	6P PLUG HOUSING	3191-06P-201	412832-03	1	1	1	-
	RECEPTACLE HOUSING	YLR-09V	454246-06				1
5	RELAY	LY2ZF, AC24V	406132-06	1	1	1	1
6	RELAY	LY2F, 100V	406132-01	1	1	1	1
7	TAPPING SCREW	3x8, STEEL	431415-01	8	8	8	8
8	STARTER	AMVL-300TA	439611-01	1	1	1	1
9	TRANSFORMER	TR7990	450438-01	1	1	1	1
10	TIMER BOARD	H2AA144C02	437305-02	1	1	1	1
11	BOARD SUPPORT	KGLS-6S	414929-01	4	4	4	4
12	START CAPACITOR	220MS100-R	439613-01	2	2	2	2
13	RUN CAPACITOR	RS43B605ULAA CA	448088-01	1	1	1	1
14	STRAP - CAPACITOR	G.S	427254-16	1	1	1	1
15	CAPACITOR	CME25B146D	450456-01	1	1	1	1
16	PROTECTOR	W28XQ1A-3	440972-02	1	1	1	1
17	PROTECTOR	W28XQ1A-6	440972-03	1	1	1	1
18	ROCKER SWITCH	JW-S11RWW	436955-01	1	1	1	1
19	RECEPTACLE HOUSING	VLR-02V	454247-02				1
20	RECEPTACLE HOUSING	VLR-06V	454247-05				1





Terminal



Control Box

HE

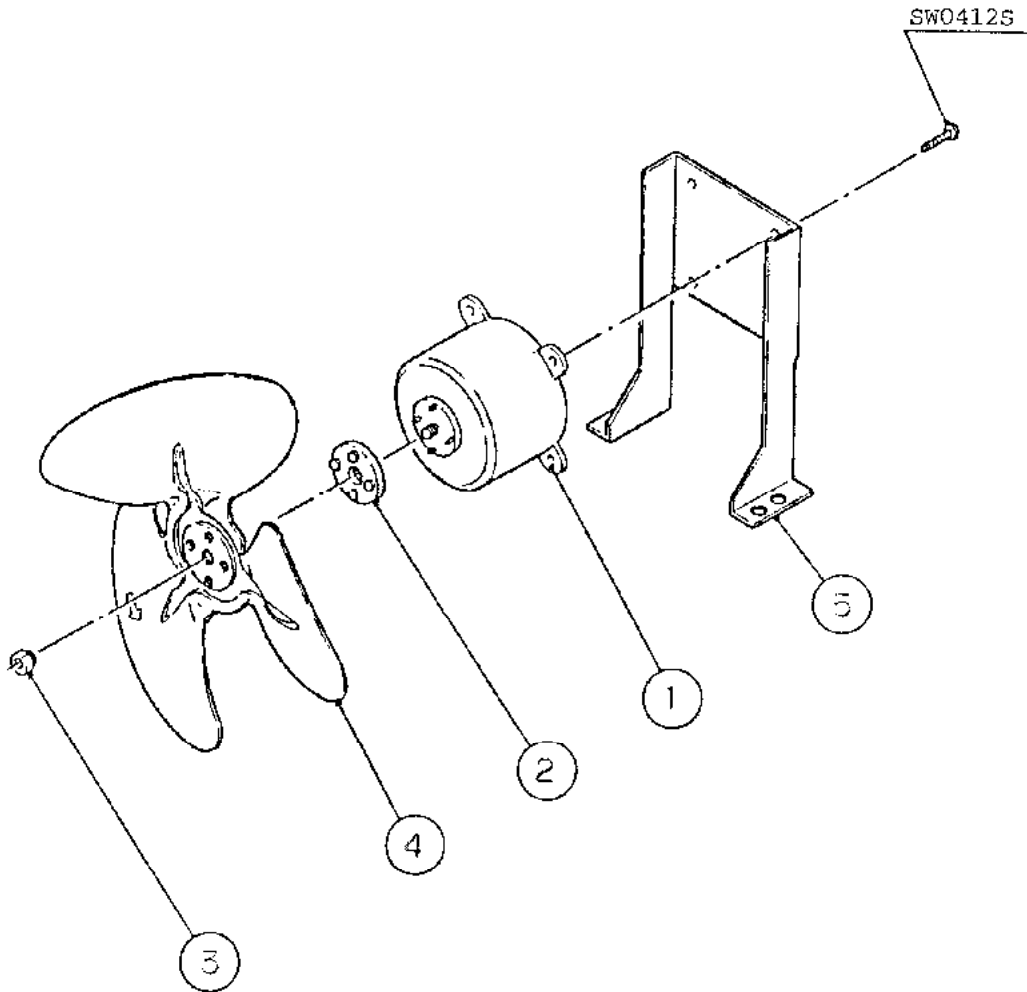
MODEL: CM-90DE, CM-110DE TITLE: H. LABEL LOCATION							
FM-120DE, FM-120DE-N							
INDEX NO.	DESCRIPTION	MATERIAL OR MODEL NUMBER	PART NUMBER	REQ'D NUMBER			
				F-1	G-1	H-1 H-2 H-3	H-4 J-1 K-0
1	INSTRUCTION SHEET - INST. OPE.	PAPER	225738-01	1	1	1	1
2	MAINTENANCE LABEL	PVC FILM	225739-01	1	1	1	1
3	WIRING LABEL	PVC FILM	338013-01	1	1	-	
		PVC FILM	339851-01			1	1
4	EMBLEM (L) - HOSHIZAKI	ABS	418634G01	1	1	1	1
5	LABEL - PENGUIN	PETP FILM	434432-01	1	1	1	x 1
		PETP FILM	454387-02				o 1
6	LABEL - AIR FILTER	PETP FILM	426177-01	1	1	1	1
7	CAUTION LABEL (A)	PVC FILM	439141-01	1	1	1	1
8	LABEL - DRAIN	PVC FILM	439917-01	1	1	1	1
9	NAMEPLATE		N/A	1	1	1	1
10	MODEL NUMBER LABEL	(CM-90DE)	451849-**	1	1	-	
	MODEL NUMBER LABEL	(CM-110DE)	454275-**			1	1
	MODEL NUMBER LABEL	(FM-120DE)	451850-**	1	1	1	1
	MODEL NUMBER LABEL	(FM-120DE-N)	459435-**				1
11	LABEL - EARTH	PETP FILM	408598-01	1	1	1	-
		PETP FILM	450452-02				1
12	CAUTION LABEL	PETP FILM	332626-01	1	1	1	1
13	LABEL - R134a	PES FILM	444463-01	1	1	1	1
14	OPERATION LABEL	PVC FILM	450492-01	1	1	1	1
15	CAUTION LABEL (D)	PVC FILM	439144-01	1	1	1	1
16	LABEL - TERMINAL	PVC FILM	450489-01	1	1	-	
17	LABEL - TERMINAL		452379-03			1	1
18	LABEL - TERMINAL		452379-04			1	1

** is the same as the Auxiliary Code.

(S-0911)

HE
CM-90DE, CM-110DE
FM-120DE, FM-120DE-N J. FAN MOTOR ASSY

(K-0)(J-1)
(H-4)(H-3)(H-2)
(G-1)(H-1)(F-1)



HE
CM-90DE, CM-110DE
FM-120DE, FM-120DE-N

K. ACCESSORIES

(K-0) (J-1)
(H-4) (H-3) (H-2)
(G-1) (H-1) (F-1)

