

HERMETIC AND OPEN TURBOPAK CENTRIFUGAL LIQUID CHILLERS

RENEWAL PARTS

Supersedes: 160.44-RP1(SECT.1)(1085) &
160.44-RP1(SECT.1)(SB1)(790)

1192

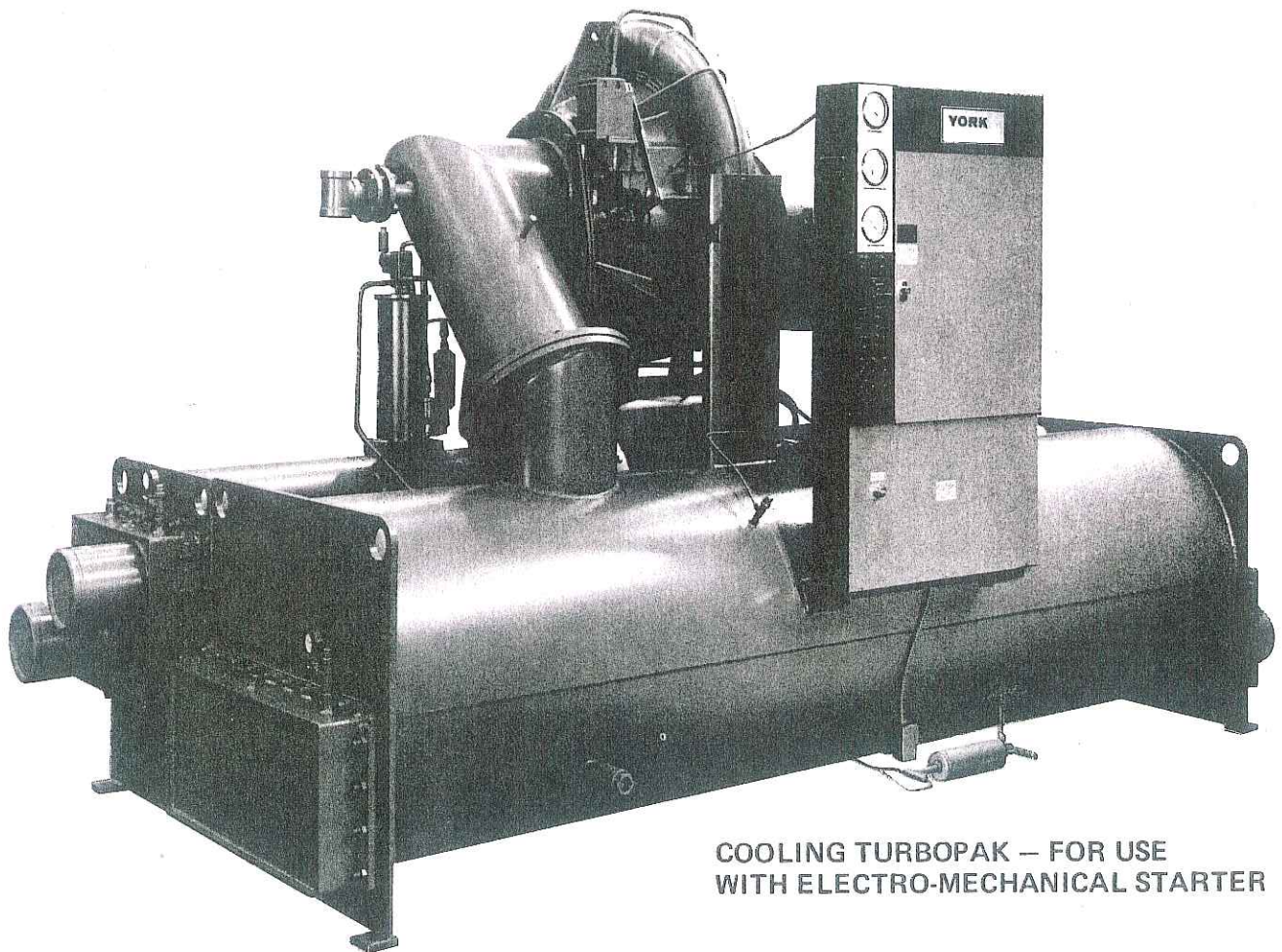
Form 160.44-RP1.1

TURBOPAK PARTS

MODEL HT/OT A1 A1 B1 THRU HT/OT F3 F3 C2 (STYLE A & B)
MODEL YT G1 G1 E1 THRU YT L3 L3 E3 (STYLE A)
COOLING

MODEL HT/OT A1 M1 B1 THRU HT/OT F3 S3 C2 (STYLE A & B)
MODEL YT G1 T1 E1 THRU YT L3 X3 E3 (STYLE A)
HEAT RECOVERY

150 THRU 750 TONS



COOLING TURBOPAK — FOR USE
WITH ELECTRO-MECHANICAL STARTER

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	Model YTH 108, 120 and 126 — 160.44-RP2 (Section 1)
	Model YTJ 67, 76, 85, 95 — 160.45-RP1.1 (Section 1)
ELECTRONIC CONTROL CENTER	160.44-RP1 (Section 3)
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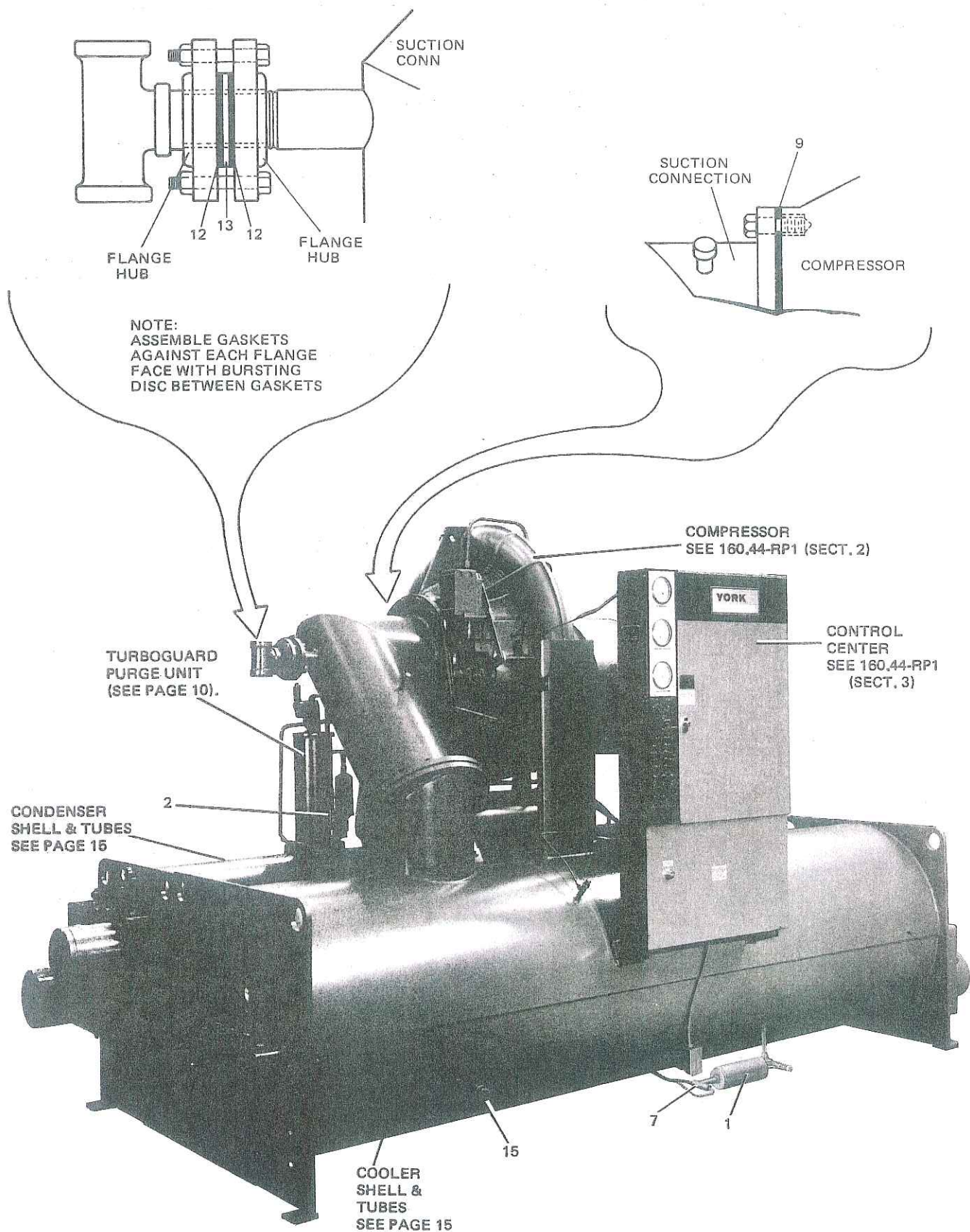


FIG. 1 - HT TURBOPAK - FRONT VIEW

SOLID STATE
STARTER
SEE 160.44-RP1 (SECT. 4)

FORM 160.44-RP1.1

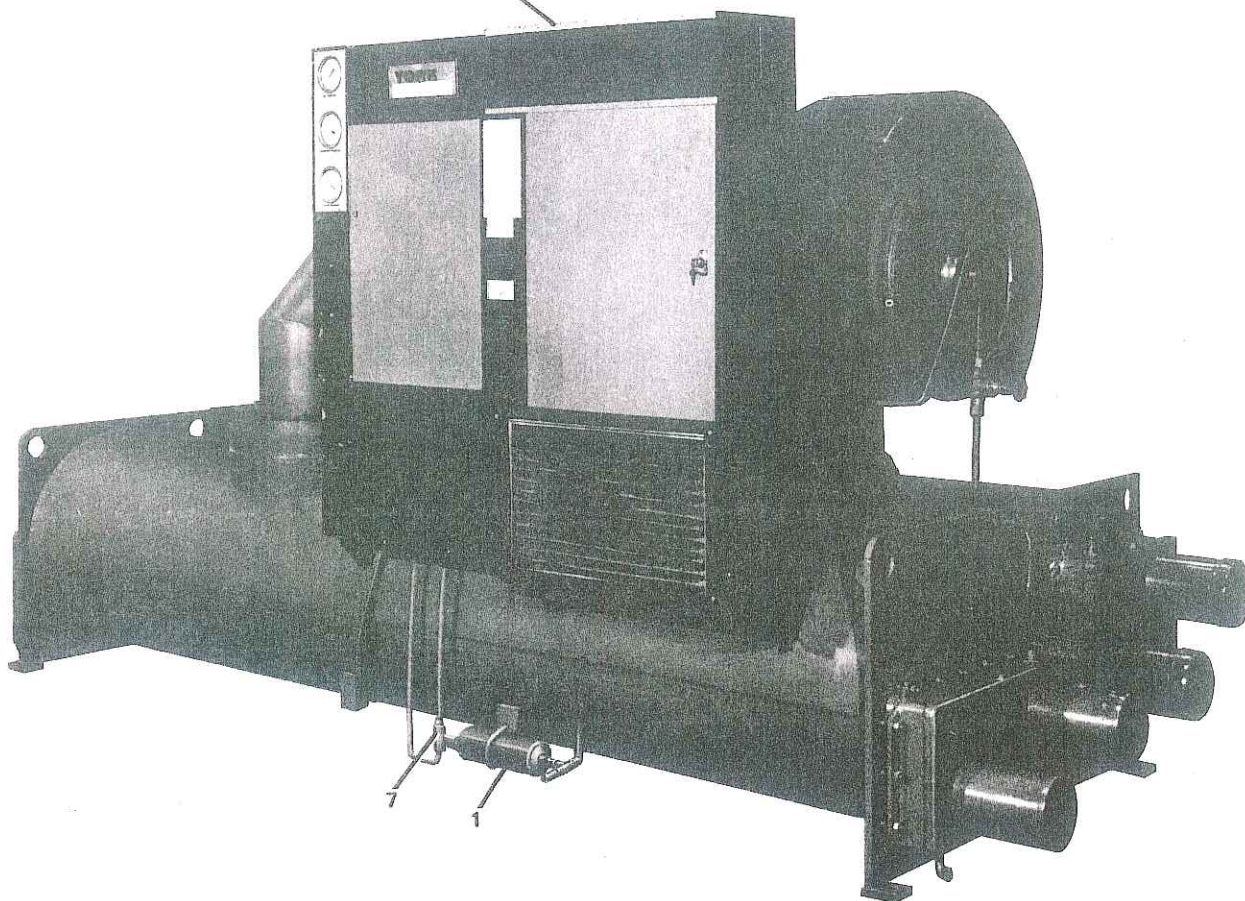


FIG. 2 —HT TURBOPAK — FRONT VIEW COMPRESSOR END.

BASIC UNIT PARTS

ITEM	DESCRIPTION	PART NO.	QUAN.	FIG.
1	Dehydrator (Oil Educator)	026-14777-007	1	1
2	Strainer (Purge Unit)	029-16764	1	1
3	Filter Refrigerant (Hermetic Comp'r. only)	026-15405	1	7
4	Cartridge for Refrigerant Filter ¹ (Hermetic Comp'r. only)	026-15761	1	7
5	Filter Oil	026-21982	1	1
6	Cartridge for Oil Filter ¹	026-11225	1	1
7	Oil Educator	364-18241	1	2
8	Discharge Connection Gasket (8" Flange) Comp. Model	070-12208	1	6
	(10" Flange) Comp. Model	070-10630		
	(12" Flange - Model YT) Comp. Model	070-10633		
9	Suction Connection Gasket (12" Flange) Comp. Model	028-08778-002	2	1
	(14" Flange) Comp. Model	028-08778-003		
	(20" Flange - Model YT) Comp. Model	028-08778-004		
10	Plate Orifice (Refrigerant Drain from Compressor Motor HT only)	066-82762	1	7
11	Gasket, 3-1/8 O.D. x 2-1/2 I.D. Comp'r. and Oil Reservoir Flanges	066-84786	1	7
12	Gasket, 4" O.D. x 2-5/8 I.D. Bursting Disc	066-83601	2	1
13	Disc, Bursting	026-09353 ²	1	1
14	Gasket, 4-7/8 x 2-7/8 I.D. x 1/8 Thk.	066-23477	2	6
15	Sight Plug	026-16556	1	1
16	Valve, 3/4 NPTE x 3/4 FLA	022-03195	1	1

¹ Order one Gasket Kit, Part Number 028-08312, with every refrigerant filter cartridge and oil filter cartridge.

² Order Bursting Disc Kit 367-25263.

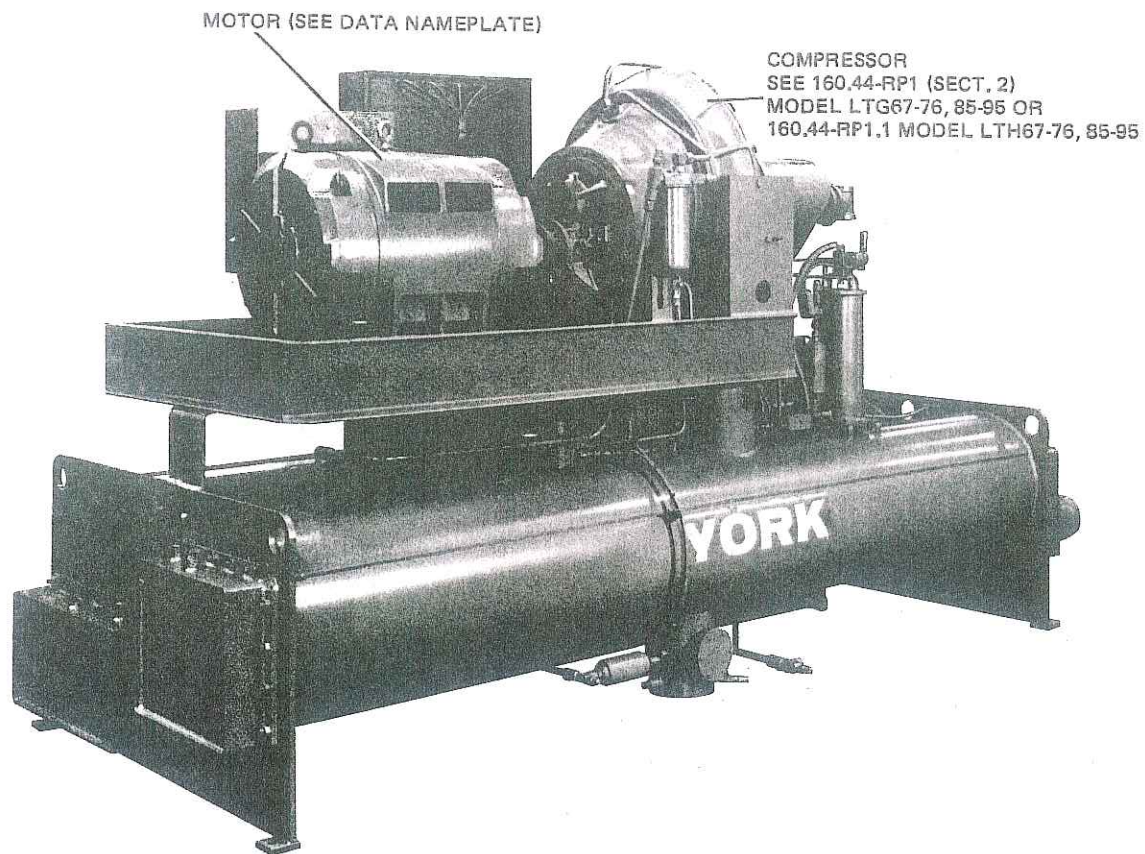


FIG. 4 — OT TURBOPAK — REAR VIEW

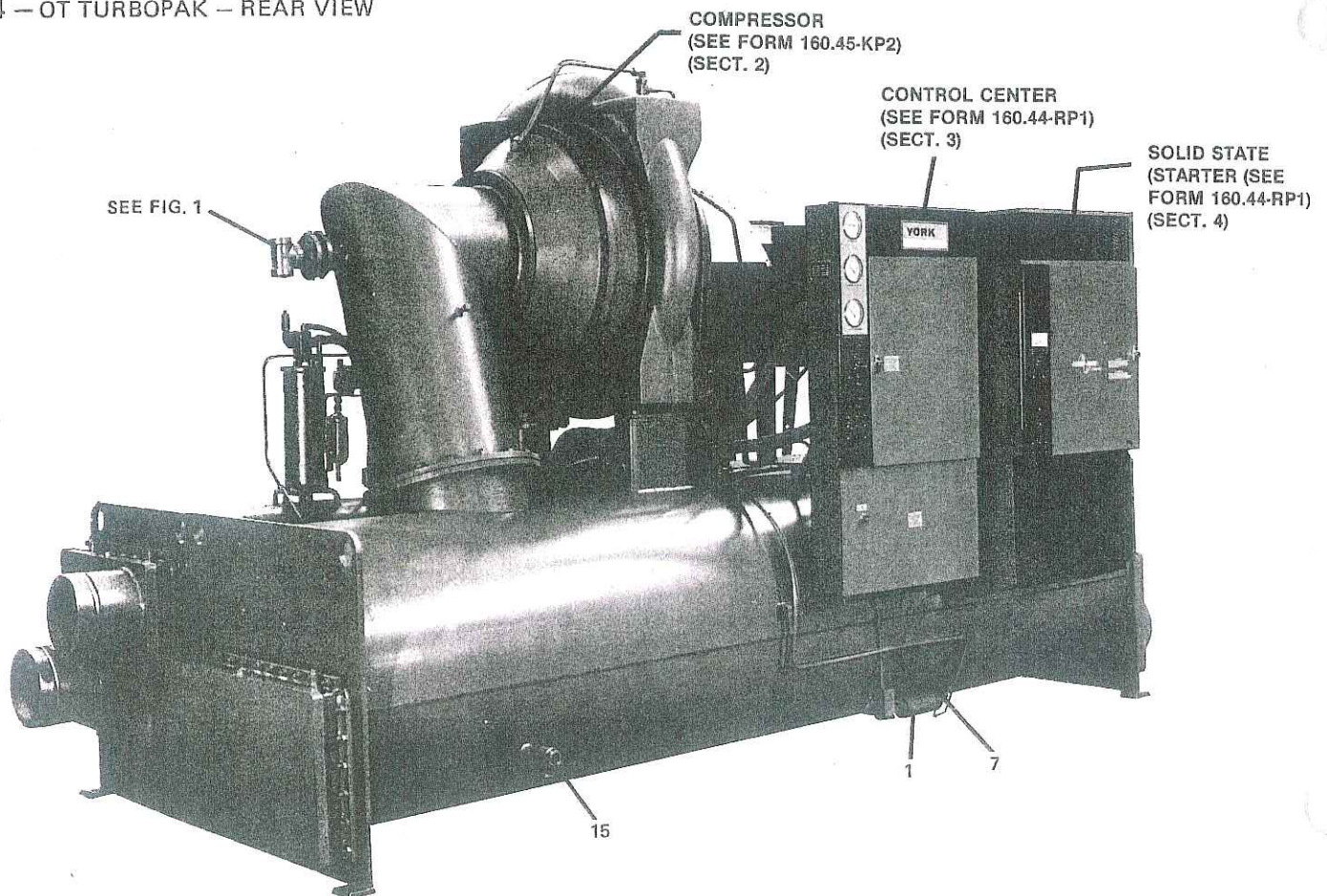


FIG. 5 — YT TURBOPAK — FRONT VIEW

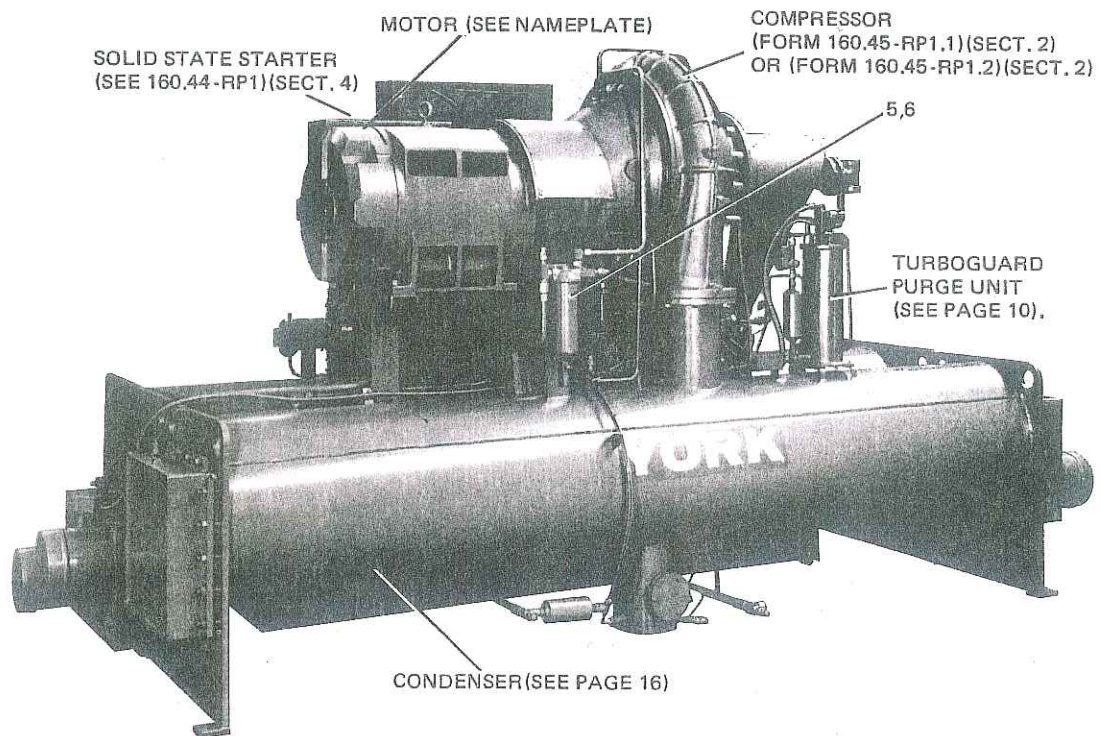


FIG. 5 (Cont'd.) — YT TURBOPAK — REAR VIEW

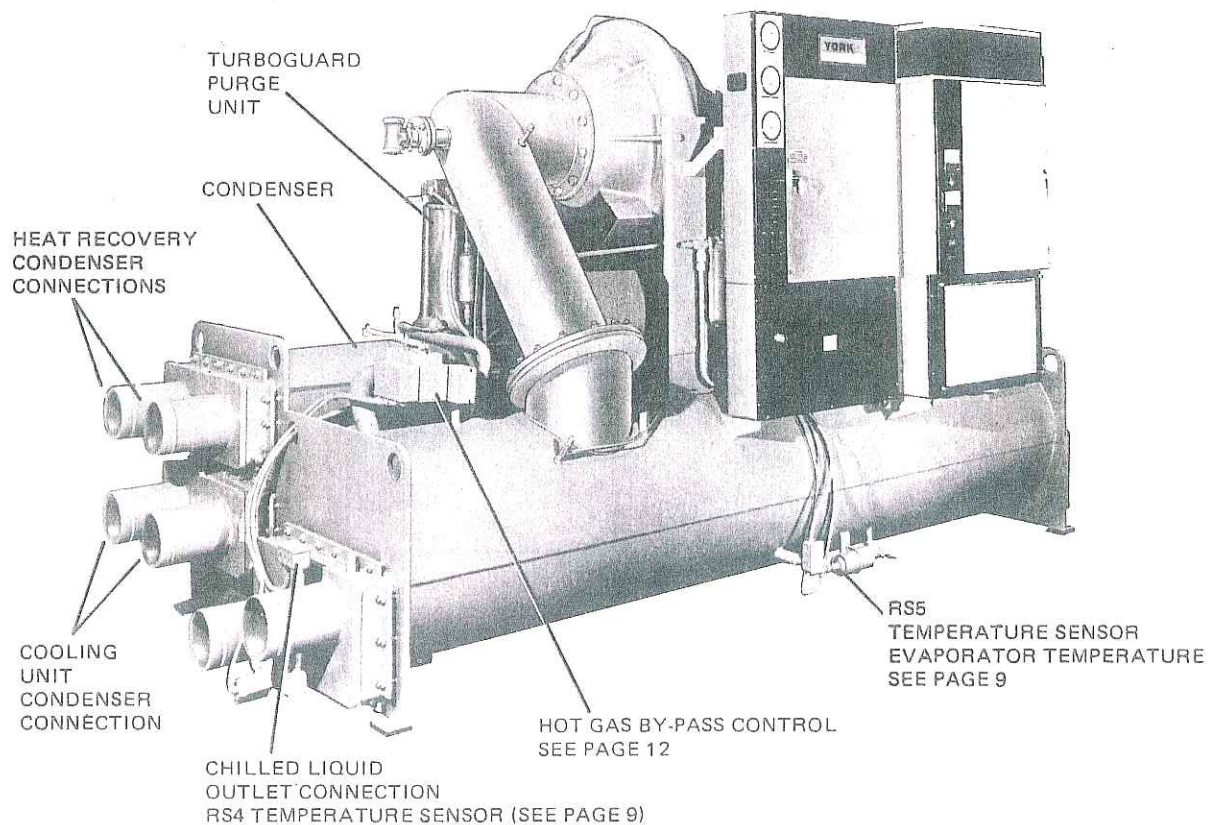


FIG. 6 — HEAT RECOVERY TURBOPAK

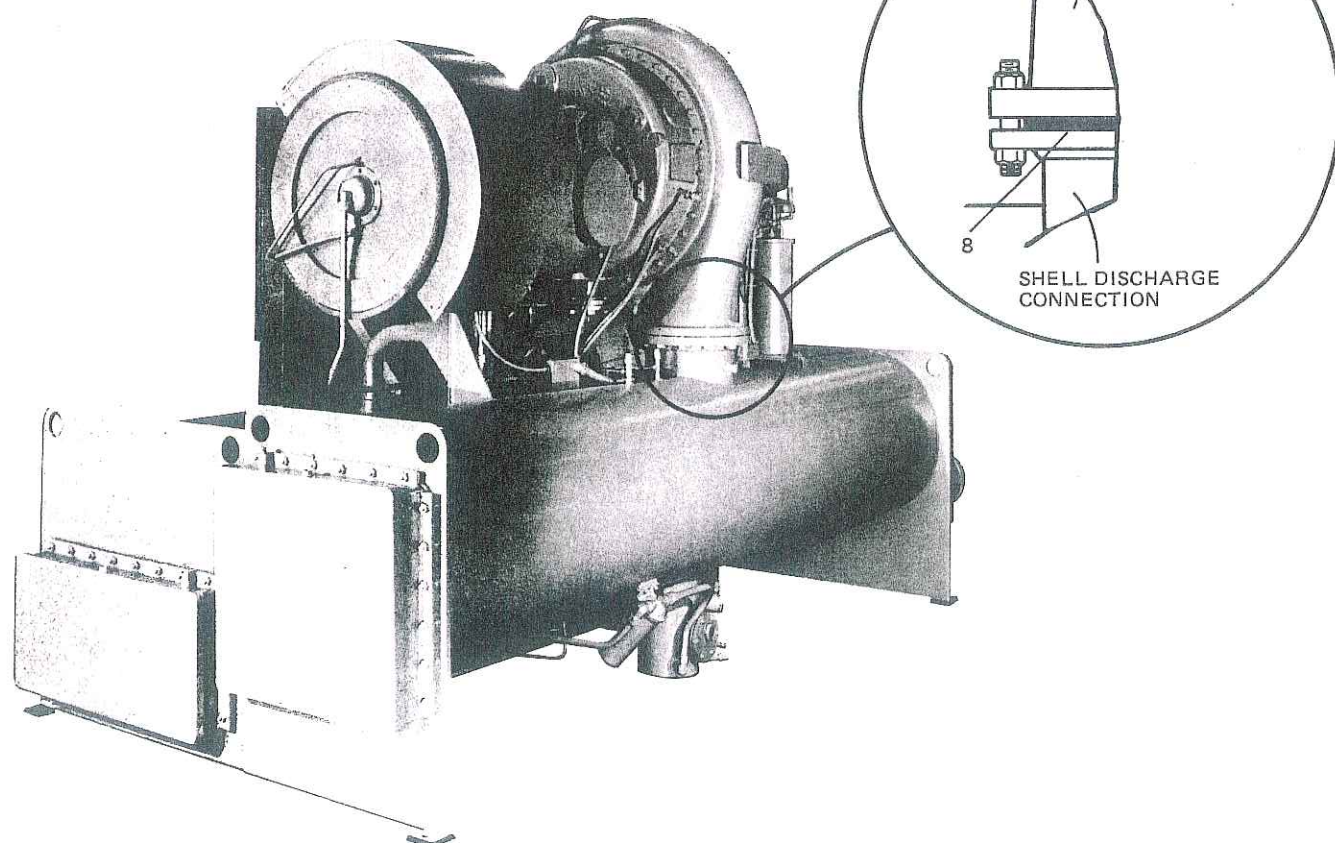
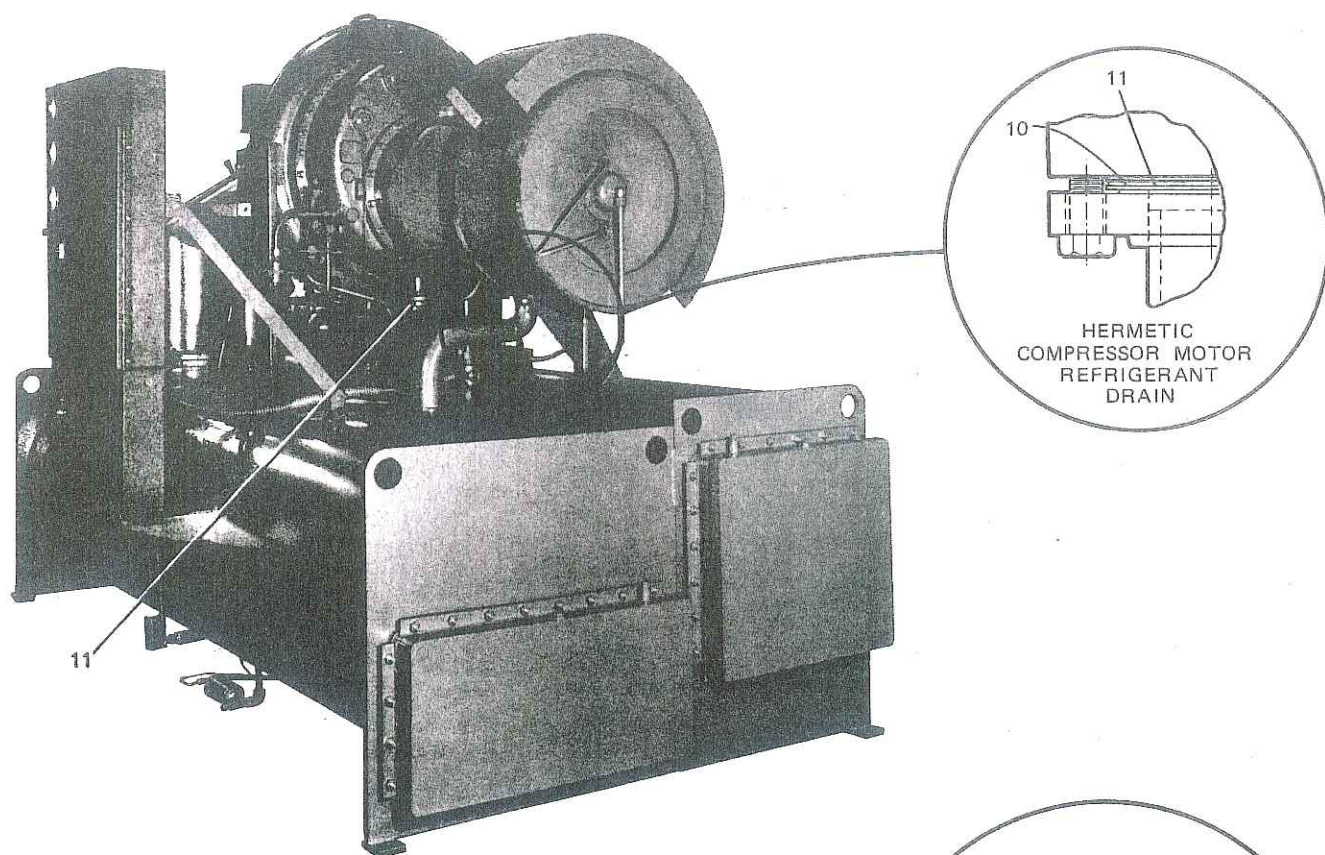
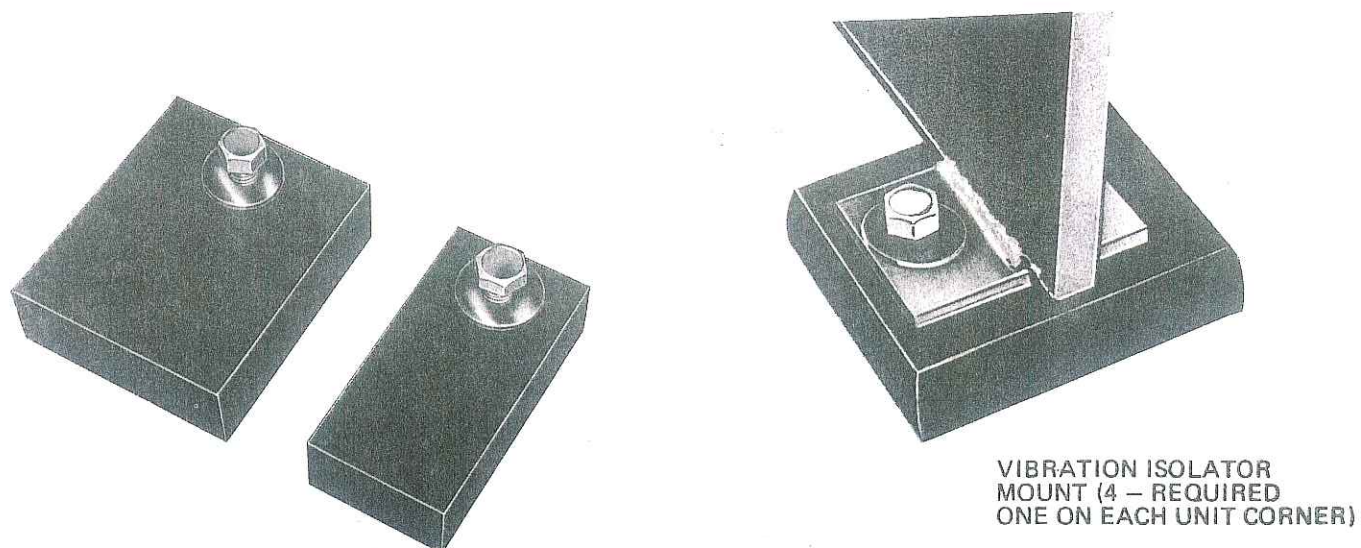


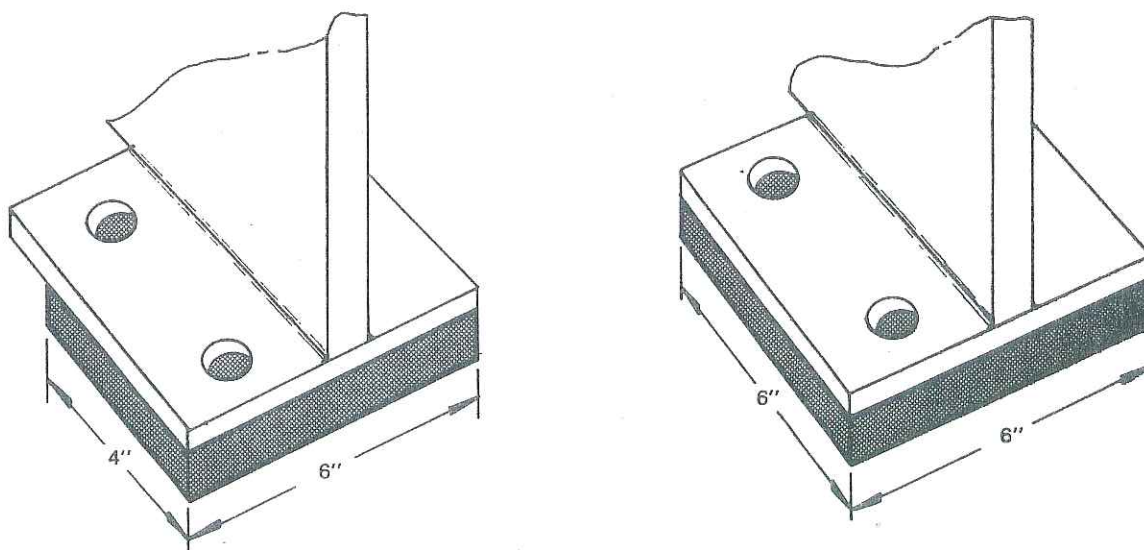
FIG. 7 — HT TURBOPAK — FRONT COMPRESSOR END AND REAR COMPRESSOR END

ISOLATORS NEOPRENE



TURBOPAK OPERATING WEIGHT	ISOLATOR PART NO.
UP TO 16,700 LBS.	028-09254
16,701 TO 33,455 LBS.	028-09253

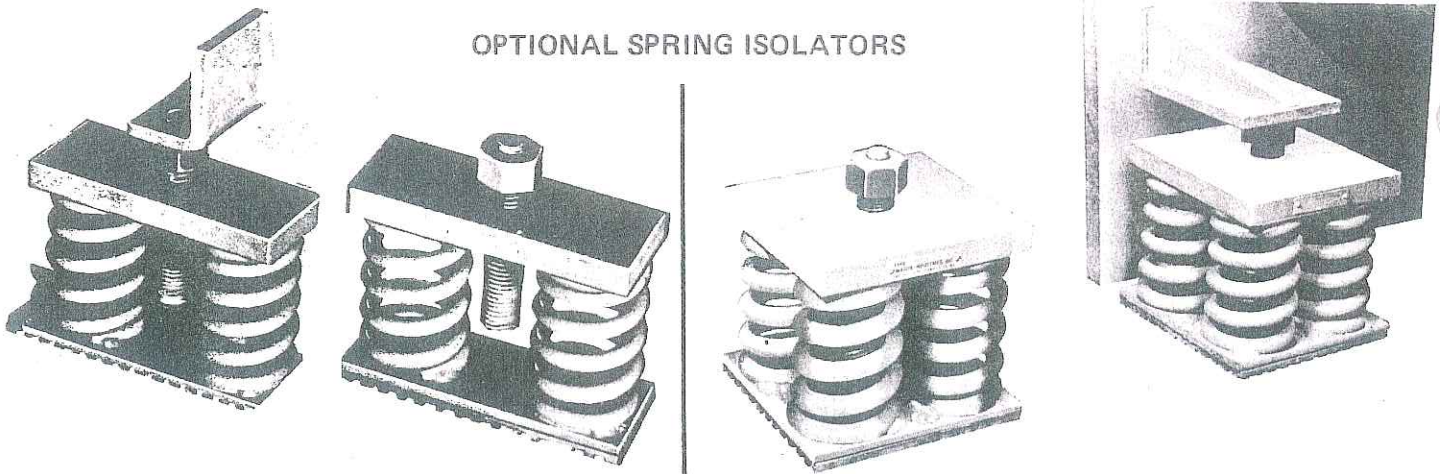
FIG. 8 — STANDARD VIBRATION ISOLATOR MOUNTS (MODELS HT/OT A1 A1 B1 THRU F3 S3 C2)



TURBOPAK OPERATING WEIGHT	ISOLATOR PART NO.
UP TO 28,835 LBS.	028-10518
28,836 TO 53,530 LBS.	028-10519

FIG. 9 — MODEL YT G1 G1 E1 THRU L3 X3 E3

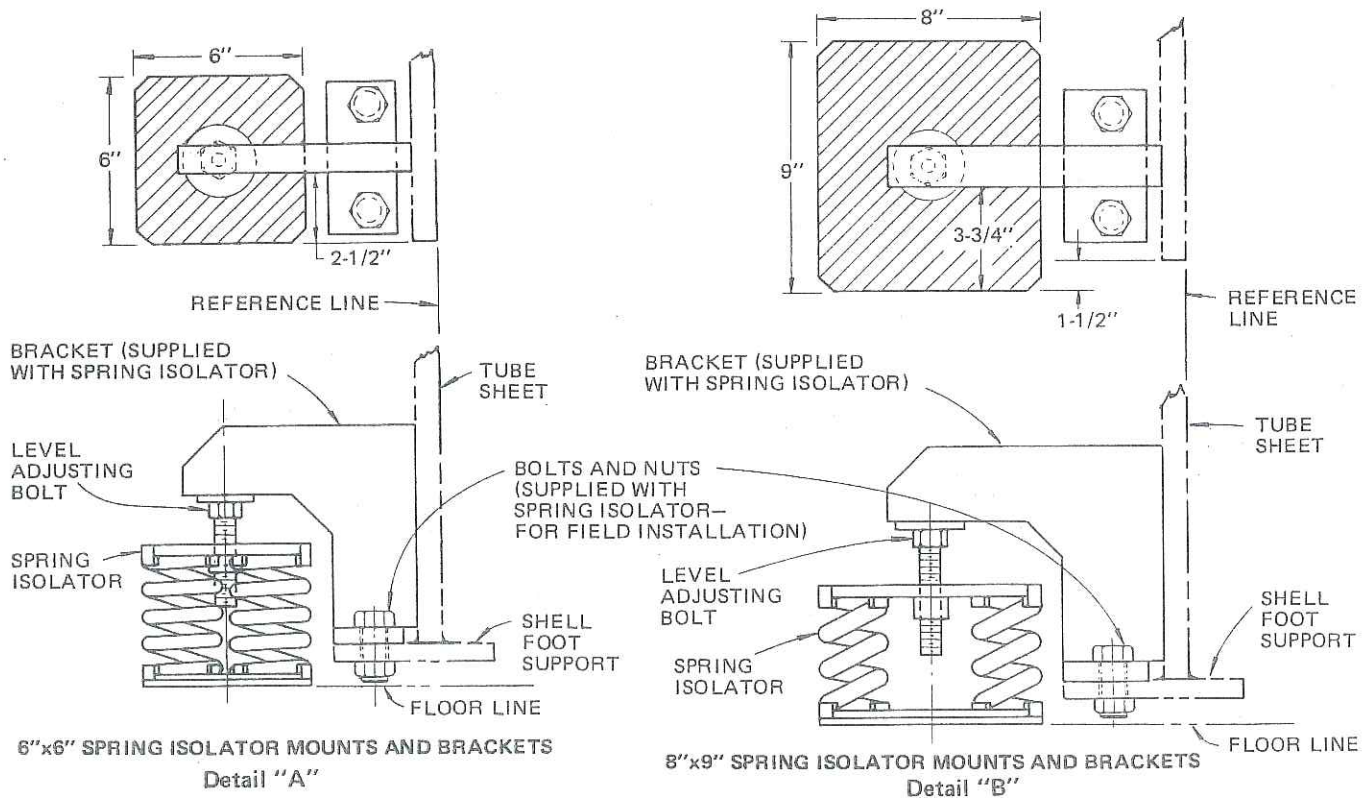
OPTIONAL SPRING ISOLATORS



SPRING ISOLATORS (4 PER UNIT)

SYSTEM OPERATING WT. LBS.	PART NO.
UP TO 8000	029-11412
8001 - 9891	029-11413
9892 - 12182	029-11414
12183 - 15273	029-11415
15274 - 18273	029-11416
18274 - 22909	029-11451
22910 - 24364	029-11579
24365 - 30545	029-10801

FIG. 10 — SPRING ISOLATORS (MODELS HT/OT A1 A1 B1 THRU F3 S3 C2)

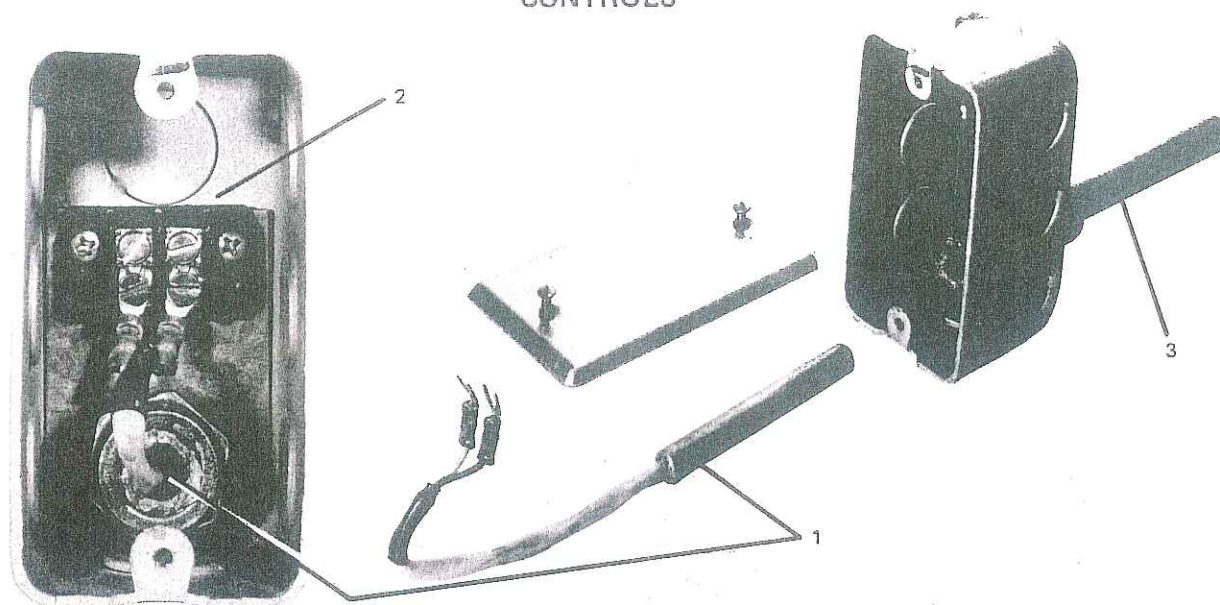


SPRING ISOLATORS (4 PER UNIT)

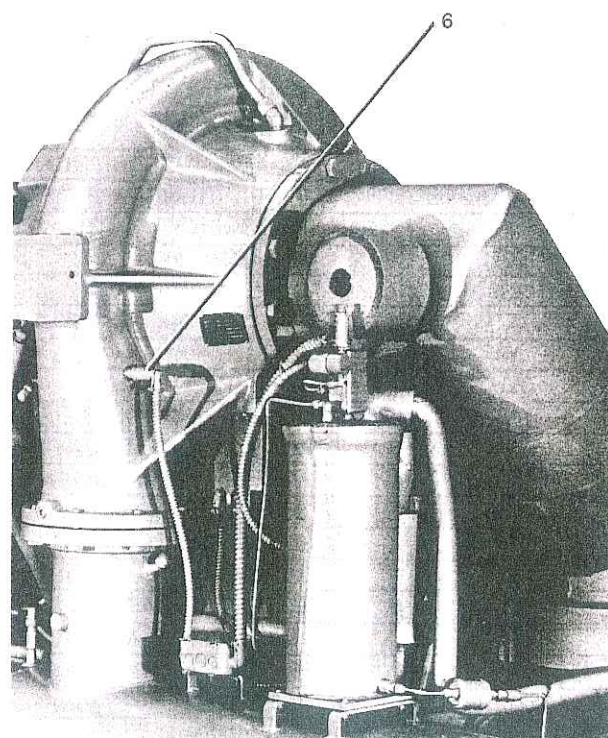
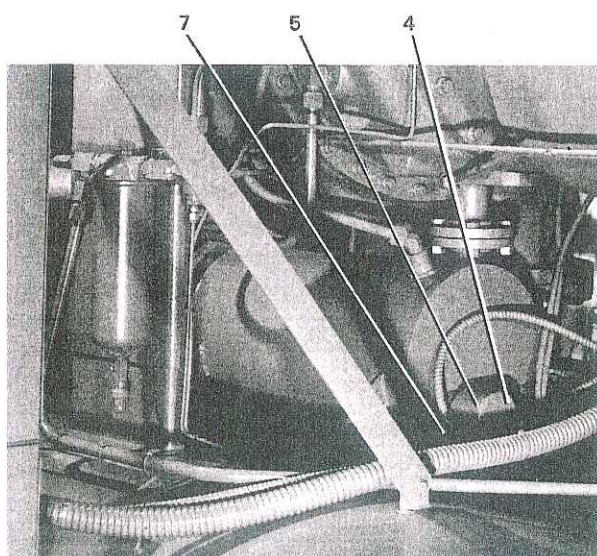
SYSTEM OPERATING WT. LBS.	PART NO.
UP TO 19636 — Detail "A"	029-18113-001
19637 - 24363 — Detail "A"	029-18113-002
24364 - 30545 — Detail "A"	029-18113-003
30546 - 36545 — Detail "B"	029-18114-001
36546 - 45818 — Detail "B"	029-18114-002

FIG. 11 — MODEL YT G1 G1 E1 THRU L3 X3 C3

CONTROLS

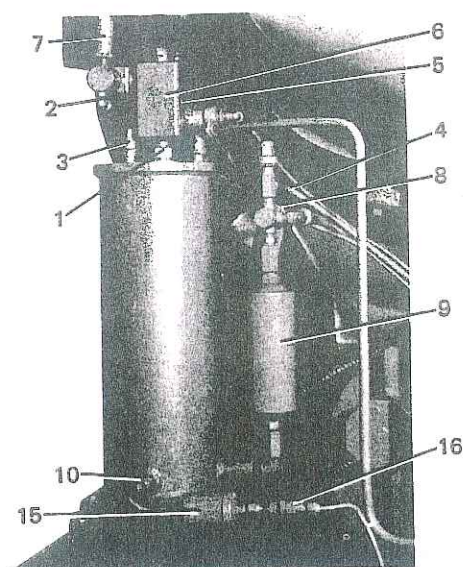


TEMPERATURE SENSOR

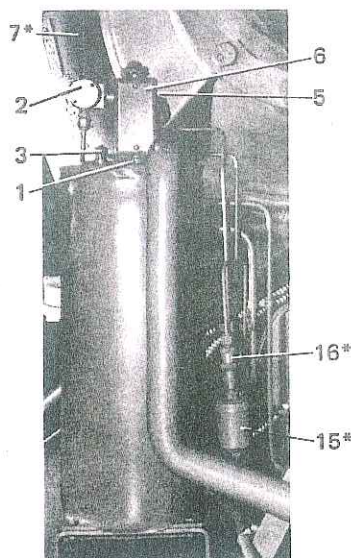


CONTROLS

ITEM	DESCRIPTION	PART NO.	QUAN. COOLING	QUAN. HEAT RECOVERY
1	Temperature Sensor	025-20798	2	3
2	Terminal Block	025-21124	2	3
3	Well Bulb (Including Item 2)	371-00366	2	3
4	HOT Temperature Control	025-15381-003	1	1
5	Oil Heater	025-09445	1	1
6	HDT Temperature Control	025-15381-002	1	1
7	Oil Heater, T-Stat	(See Page 13)	1	1



OLD UNIT



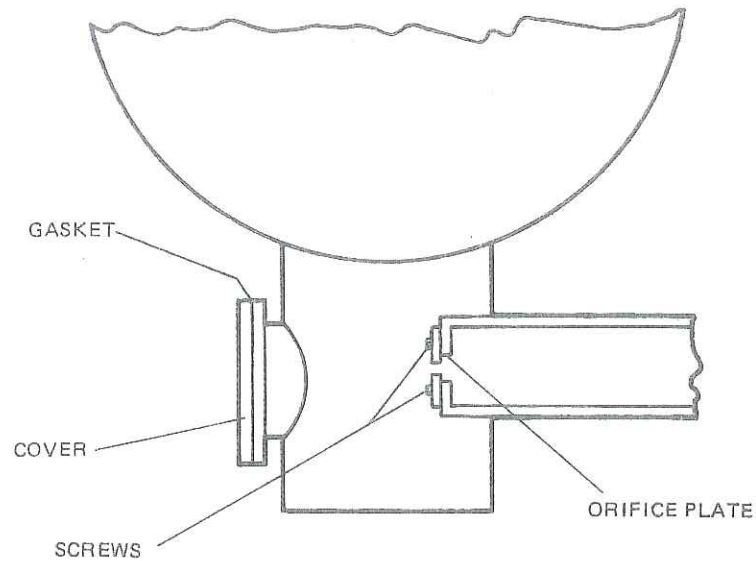
NEW UNIT

FIG. 12 — PURGE UNIT

ITEM	DESCRIPTION	PART NO.	QUAN.
	TURBO GUARD PURGE UNIT	366-81916*	
1	Float Switch	024-16306	1
2	Valve, Solenoid	025-16479	1
3	Cage, Float	366-82372	1
4	Valve Stop Angle 3/8 FLA x 1/4 NPT1	022-04158	1
5	Box, Conduit	025-01145	1
6	Cover, Conduit Box	025-01732	1
7	Valve Check (1/4 NPTE x 1/4 NPTE)	022-03571	1
7*	Valve Check (1/4 FLA x 1/4 FLA)	022-03902	1
8	Valve Solenoid 3-way - 1/4 NPT1	025-16988	1
9	Dehydrator	026-14777-007	1
10	Gas Distributor	366-82370	1
11	Not Shown—Liquid Line Orifice	066-82377	1
12*	Solid Conn. 1/4 FLA x 1/4 FLA	023-09040	1
13*	Half Union 1/4 NPT x 1/4 FLA	023-00927	1
14*	Foul Gas Filter Drier	026-28173	1
15*	Strainer	029-16764	1
16*	Check Valve	022-03902	1

NOTE: If it is necessary to replace the shell, order the complete unit which includes all parts.

*Due to a design change the following purge exhaust parts should be ordered. Check unit for proper arrangement.



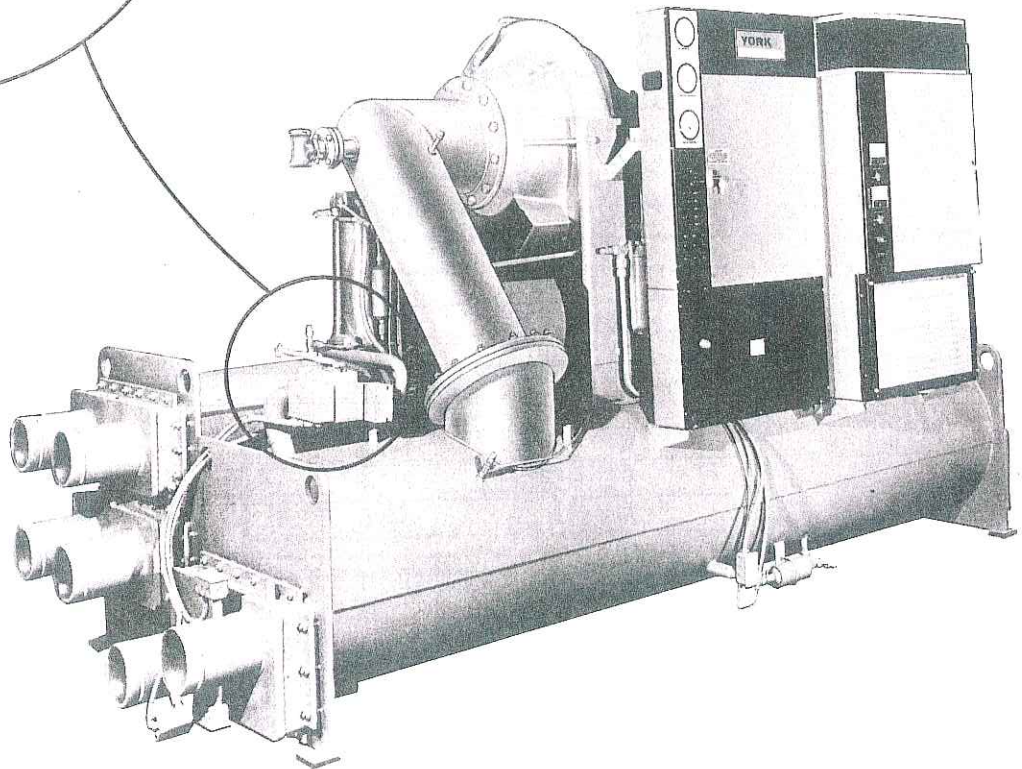
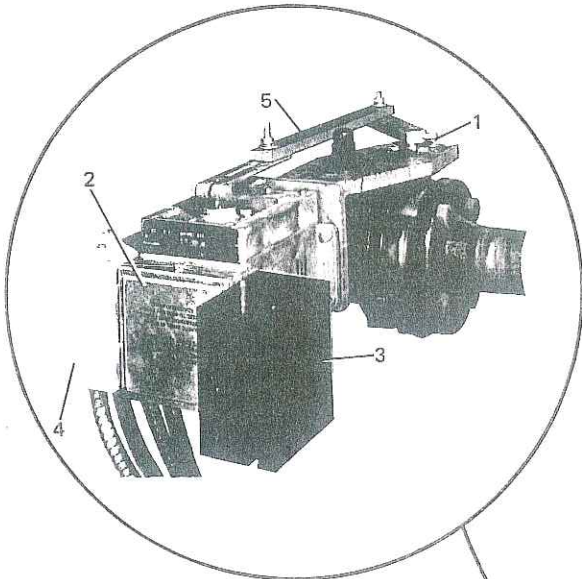
FLOW CONTROL CHAMBER

CODE	ORIFICE DIA.	PART NO.
A	19/32	066-81976-001
B	11/16	066-81976-002
C	25/32	066-81976-003
D	7/8	066-81976-004
E	1	066-81976-005
F	1-1/8	066-81976-006
G	1-1/4	066-81976-007
H	1-3/8	066-81976-008
I	1-1/2	066-87487-001
J	1-5/8	066-87487-002
K	1-7/8	066-87487-003
L	2-1/8	066-87487-004
M	2-3/8	066-87487-005
GASKET		066-81943

SWITCH FLOW CONTROL

DESCRIPTION	PART.NO
150DWP - Vapor Proof Model FS8V	024-15793
300 DWP - Vapor Proof Model FS7V	024-12144

HEAT RECOVERY



HOT GAS BY PASS CONTROL

ITEM	DESCRIPTION	PART NO.	QUAN.
1	Valve, Hot Gas By-Pass - 2-1/2" 3" (Model YT) 4"	022-05235	1
		022-05236	
		022-05237	
2	Motor, Actuator	025-17521	1
3	Control, Actuator Motor	025-20799	1
4	Control, Hot Gas	031-00239	1
5	Crank-Arm	025-17073	1

COMPOUNDS AND INSULATION TAPE

DESCRIPTION	QUAN.	PART NO.
Compound, Heat Conductive (For Thermometer Wells)	4 Oz. Can	013-00898
Thermal Insulation Tape — 1/8" x 2" (Insulating Motor Terminals)	30 Ft. Roll	025-14931

WATER STRAINER (STANDARD HEADS)

COOLER CODE	PASS	NOZZLE SIZE (IN)	PART NO.
A1, A2, B1, B2	1	8	029-12949
C1, C2, C3, G1, G3	1	10	029-12950
D1, D2, D3, H1, H3	1	12	029-12951
E1, E2, E3, F1, F2, F3, J1, J3, K3	1	14	029-14727
A1, A2, B1, B2	2	6	029-12948
C1, C2, C3, D1, D2, D3, G1, G3, H1, H3	2	8	029-12949
E1, E2, E3, F1, F2, F3, J1, J3, K1, K3	2	10	029-12950
A1, A2	3	4	029-13286
B1, B2, C1, C2, C3, D1, D2, D3, G1, G3, H1, H3	3	6	029-12948
E1, E2, E3, F1, F3, J1, J3, K1, K3	3	8	029-12949
L1, L3	1	16	029-14811
L1, L3	2	12	029-12951
L1, L3	3	10	029-12950

WATER STRAINER (MARINE WATER BOXES) (STANDARD TURBOPAK ONLY)

G1, G3, H1, H3, J1, J3, K1, K3	1	10	029-12950
L1, L2	1	12	029-12951
G1, G3, H1, H3	2	8	029-12949
J1, J3, K1, K3	2	10	029-12950
L1, L3	2	12	029-12951
G1, G3, H1, H3	3	6	029-12948
J1, J3, K1, K3	3	8	029-12949
L1, L3	3	10	029-12950

TOUCH-UP PAINTS — SPRAY CANS

DESCRIPTION	PART NO.
Caribbean Blue Enamel	013-01835
Black (Control Center)	Purchase Locally -
Silver (Control Center)	Purchase Locally -
Caribbean Blue (Water Base)	013

THERMOSTATIC SWITCH FOR IMMERSION HEATERS

(See Page 9)

York immersion heater part number 025-09445-000 has been sourced from as many as four different vendors. Each vendor utilized a different thermostatic switch in the heater. New part numbers have been created for the different types of replacement switches.

The part numbers and vendor information to determine which switch is required are as follows:

PART NUMBER	VENDOR	BULB SIZE
024-23990-000	Electro-Therm	3/8 inch bulb with 3-7/8 inch length
024-25291-000	Chromalox	1/4 inch bulb with 5-5/8 inch length
024-25292-000	Watlow	1/4 inch bulb with 3-1/4 inch length

Some Chromalox heaters were provided with a riveted switch and cannot be replaced. In these instances, new heaters will have to be purchased.

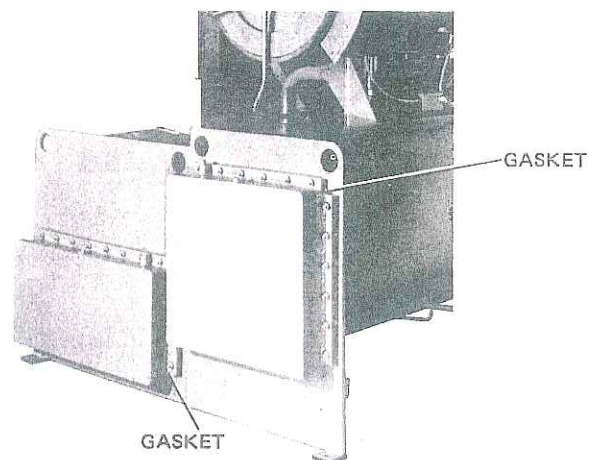


FIG. 13 — LOCATION WATER BOX GASKET

WATER BOX GASKET — PART NO. 028-09951 (CHANNEL GASKET)

COOLING UNITS

SHELL CODE	COOLER—PASS FT.			COOLING CONDENSER—PASS FT.		
	1	2	3	1	2	3
A1, A2	12.5	14.5	16.0	11.0	12.0	13.5
B1, B2	13.0	15.0	17.0	11.5	13.0	14.0
C1, C2, C3	15.5	18.0	20.5	13.5	15.0	16.5
D1, D2, D3	16.5	19.5	22.0	13.5	15.0	16.5
E1, E2, E3	18.5	22.0	24.5	16.5	18.5	20.0
F1, F2, F3	20.0	24.0	27.0	16.0	17.5	19.5
G1, G2, G3	15.5	18.0	20.5	13.5	15.0	16.5
H1, H2, H3	16.5	19.5	22.0	13.5	15.0	16.5
J1, J2, J3	18.5	22.0	24.5	16.5	18.5	20.0
K1, K2, K3	20.0	24.0	27.0	16.0	17.5	19.5
L1, L2, L3	22.5	27.0	29.0	19.0	21.0	21.0

HEAT RECOVERY UNITS

SHELL CODE	CONDENSER TOP—PASS—FT.			CONDENSER BOTTOM—PASS—FT.		
	1	2	3	1	2	3
M1, M2	11.0	12.0	12.5	11.0	12.0	12.5
N1, N2	11.5	12.5	13.0	11.5	12.5	13.0
P1, P2	13.5	14.5	15.5	13.5	14.5	15.5
Q1, Q2, Q3	15.0	16.0	17.0	15.0	16.0	17.0
R1, R2, R3	16.5	18.0	19.0	16.5	18.0	19.0
S1, S2, S3	18.5	19.5	21.0	18.5	19.5	21.0
T1, T2, T3	13.5	14.5	15.5	13.5	14.5	15.5
U1, U2, U3	15.0	16.0	17.0	15.0	16.0	17.0
V1, V2, V3	16.5	18.0	19.0	16.5	18.0	19.0
W1, W2, W3	18.5	19.5	21.0	18.5	19.5	21.0
X1, X2, X3	20.0	21.0	22.5	20.0	21.0	22.5

MARINE WATER BOXES

WATER BOX GASKET 028-03242 (BULB GASKET)
PASS BAFFLE GASKET 028-09951 (CHANNEL GASKET)

COOLING UNITS

SHELL CODE	COOLER—PASS FT.			COOLING CONDENSER—PASS FT.		
	1	2	3	1	2	3
A1, A2	(26)	10.5 (13)	8 (26)	(24)	8 (12)	6 (24)
B1, B2	(27)	11.5 (13.5)	9 (27)	(24)	9 (12)	6 (24)
C1, C2, C3	(32)	13 (16)	10 (32)	(28)	10 (14)	7 (28)
D1, D2, D3	(34)	14.8 (17)	11.5 (34)	(28)	10 (14)	7 (28)
E1, E2, E3	(38)	17 (19)	12 (38)	(34)	12 (17)	8 (34)
F1, F2, F3	(42)	17.5 (20)	13.5 (42)	(33)	12 (16.5)	7 (33)
G1, G2, G3	(32)	13 (16)	10 (32)	(28)	10 (14)	7 (28)
H1, H2, H3	(34)	14.8 (17)	11.5 (34)	(28)	10 (14)	7 (28)
J1, J2, J3	(38)	17 (19)	12 (38)	(34)	12 (17)	8 (34)
K1, K2, K3	(42)	17.5 (20)	13.5 (42)	(33)	12 (16.5)	7 (33)
L1, L2, L3	(46)	19 (23)	15 (46)	(40)	14.5 (20)	10 (40)

HEAT RECOVERY UNITS

SHELL CODE	CONDENSER TOP—PASS—FT.			CONDENSER BOTTOM—PASS—FT.		
	1	2	3	1	2	3
M1, M2	(23.5)	7.5 (12.0)	4 (23.5)	(24)	8 (12)	6 (24)
N1, N2	(24.5)	7.5 (12.5)	4 (24.5)	(24)	9 (12)	6 (24)
P1, P2	(29)	9 (14.5)	4.5 (29)	(28)	10 (14)	7 (28)
Q1, Q2, Q3	(31)	9.5 (15.5)	5 (31)	(28)	10 (14)	7 (28)
R1, R2, R3	(35)	11 (17.5)	5.5 (35)	(34)	12 (17)	8 (34)
S1, S2, S3	(38.5)	12 (19.5)	6 (38.5)	(33)	12 (16.5)	7 (33)
T1, T3	(29)	9 (14.5)	4.5 (29)	(28)	10 (14)	7 (28)
U1, U3	(31)	9.5 (15.5)	5 (31)	(28)	10 (14)	7 (28)
V1, V3	(35)	11 (17.5)	5.5 (35)	(34)	12 (17)	8 (34)
W1, W3	(38.5)	12 (19.5)	6 (38.5)	(33)	12 (16.5)	7 (33)
X1, X3	(40)	13 (20)	6 (40)	(40)	14.5 (20)	10 (40)

NOTE: () denotes gasket 028-03242, other dimension is gasket 028-09951.

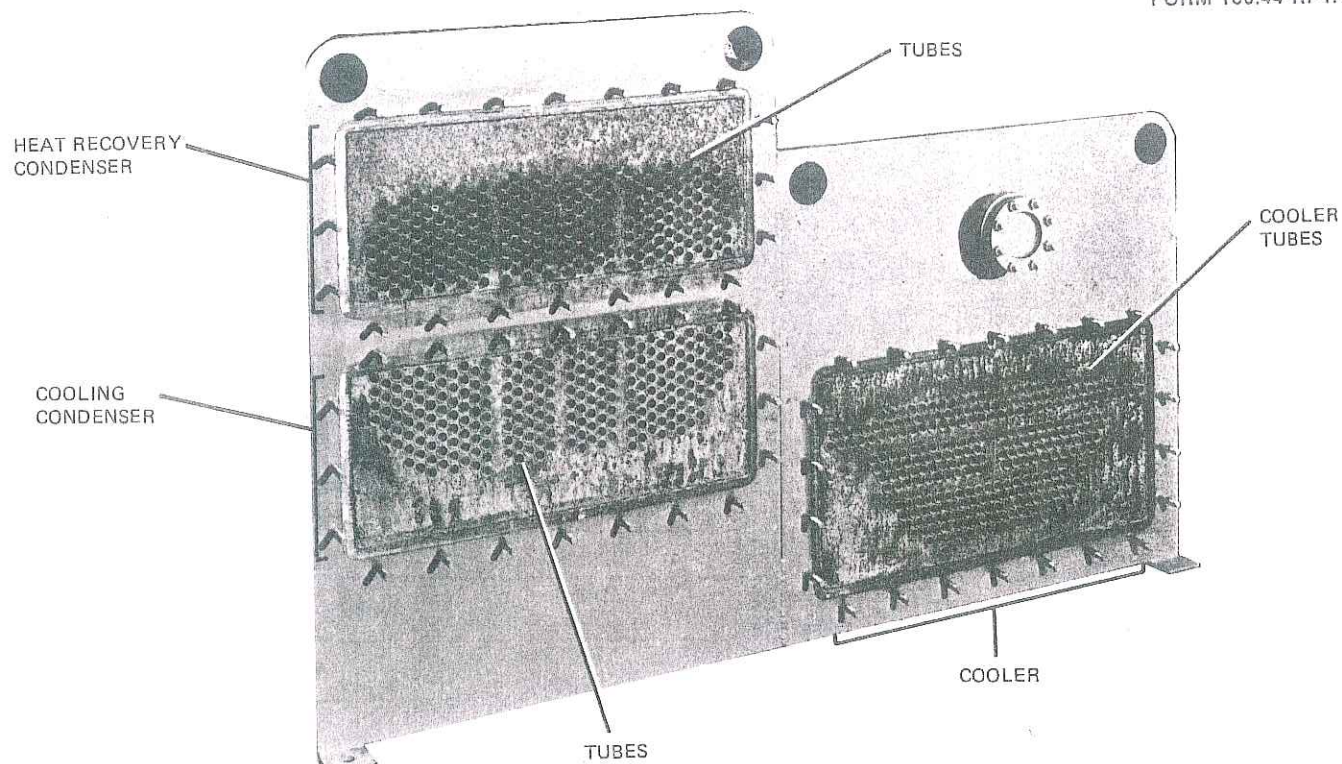


FIG. 14 — SHELL TUBES

MODEL HT/OT — A1A1B1 thru F3S3C2 COOLER & CONDENSER TUBES

SHELL CODE	COOLERS		CONDENSERS			
	TUBE PART NO. 007-06734		COOLING		HEAT RECOVERY	
	B1 & B2	C1 & C2	TUBE PT. NO. 007-06692	TUBE PT. NO. 007-06692	TUBE PT. NO. 007-06734	TUBE PT. NO. 007-06734
	B1 & B2	C1 & C2	B1 & B2	C1 & C2	B1 & B2	C1 & C2
A1	115	—	102	—	—	—
A2	145	—	130	—	—	—
B1	184	184	166	—	—	—
B2	206	206	186	—	—	—
C1	232	232	210	210	—	—
C2	264	264	238	238	—	—
C3	296	296	268	268	—	—
D1	321	321	290	290	—	—
D2	349	349	316	316	—	—
D3	377	377	342	342	—	—
E1	410	410	370	370	—	—
E2	446	446	402	402	—	—
E3	484	184	436	436	—	—
F1	—	524	—	472	—	—
F2	—	570	—	570	—	—
F3	—	618	—	55	—	—
M1	—	—	—	—	—	204
M2	—	—	—	—	—	260
N1	—	—	—	—	—	332
N2	—	—	—	—	—	372
P1	—	—	—	—	420	420
P2	—	—	—	—	476	476
P3	—	—	—	—	536	536
Q1	—	—	—	—	580	580
Q2	—	—	—	—	632	632
Q3	—	—	—	—	684	684
R1	—	—	—	—	740	740
R2	—	—	—	—	804	804
R3	—	—	—	—	872	872
S1	—	—	—	—	—	944
S2	—	—	—	—	—	1020
S3	—	—	—	—	—	1104

MODEL YT – C1T1E1 thru L3X3E3 COOLER & CONDENSER TUBES

SHELL CODE	COOLERS TUBE PART NO. 007-06722	CONDENSERS	
		COOLING	HEAT RECOVERY
		TUBE PART NO. 007-06721	TUBE PART NO. 007-06721
G1	232	210	—
G3	296	268	—
H1	321	290	—
H3	377	342	—
J1	410	370	—
J3	484	436	—
K1	524	472	—
K3	618	550	—
L1	670	598	—
L3	785	700	—
T1	—	210	210
T3	—	268	268
U1	—	290	290
U3	—	342	342
V1	—	370	370
V3	—	436	436
W1	—	472	472
W3	—	550	550
X1	—	598	598
X3	—	700	700

