



**Aviation
Ground
Equipment Corp.**

HOBART®
GROUND POWER

Illustrated Parts List for

POWERMASTER® ADV

Series 500048A



45, 60 and 90 kVA AC Solid State Frequency Converters

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Chapter 1 Illustrated Parts List

Section 1 Introduction

1) General

The Illustrated Parts List identifies, describes, and illustrates main assemblies, subassemblies, and detail parts of a 400 Hz. Solid State Converter manufactured by Hobart Brothers Company, Ground Power Division, Troy, Ohio.

2) Purpose

The purpose of this list is to provide parts identification and descriptive information to maintenance and provisioning personnel for use in provisioning, requisitioning, purchasing, storing, and issuing of spare parts.

3) Arrangement

Chapter 1 is arranged as follows:

Section 1 - Introduction

Section 2 - Parts List

Section 3 - Numerical index

4) Explanation of Parts List

a) Contents

The parts list contains a breakdown of the equipment into assemblies, subassemblies, and detail parts. All parts of the equipment are listed except:

- (1) Standard hardware items (attaching parts) such as nuts, screws, washers, etc., which are available commercially.
- (2) Bulk items such as wire, cable, sleeving, tubing, etc., which are also commercially available.
- (3) Permanently attached parts, which lose their identity by being welded, soldered, riveted, etc., to other parts, weldments, or assemblies.

b) Parts List Form

This form is divided into six columns. Beginning at the left side of the form and proceeding to the right, columns are identified as follows:

- (1) FIGURE-ITEM NO. Column

This column lists the figure number of the illustration applicable to a particular parts list and also identifies each part in the list by an item number. These item numbers also appear on the illustration. Each item number on an illustration is connected to the part to which it pertains by a leader line. Thus the figure and item numbering system ties the parts lists to the illustrations and

vice-versa. The figure and index numbers are also used in the numerical index to assist the user in finding the illustration of a part when the part number is known.

(2) HOBART PART NUMBER Column

All part numbers appearing in this column are Hobart numbers. In all instances where the part is a purchased item, the vendor's identifying five-digit code and his part number will appear in the "NOMENCLATURE" column. Vendor parts, which are modified by Hobart, will be identified as such in the "NOMENCLATURE" column. In case Hobart does not have an identifying part number for a purchased part, the "HOBART PART NUMBER" column will reflect "No Number" and the vendor's number will be shown in the "NOMENCLATURE" column. Parts manufactured by Hobart will reflect no vendor or part number in the "NOMENCLATURE" column.

(3) NOMENCLATURE Column

The item-identifying name appears in this column. The indenture method is used to indicate item relationship. Thus, components of an assembly are listed directly below the assembly and indented one space. Vendor codes and part numbers for purchased parts are also listed in this column when applicable. Hobart modification to vendor items is also noted in this column.

(4) EFF (Effective) Column

This column is used to indicate the applicability of parts to different models of equipment. When more than one model of equipment is covered by a parts list, there are some parts that are used on only one model. This column is used for insertion of a code letter A, B, etc., to indicate these parts and to identify the particular model they are used on.

Parts coded "A" are usable on Part Number 500048A-391 only.
Parts coded "B" are usable on Part Number 500048A-091 only.
Parts coded "C" are usable on Part Number 500048A-191 only.
Parts coded "D" are usable on Part Number 500048A-192 only.
Parts coded "E" are usable on Part Number 500048A-092 only.
Parts coded "F" are usable on Part Number 500048A-392 only.

(5) UNITS PER ASSEMBLY Column

This column indicates the quantity of parts required for an assembly or subassembly in which the part appears. This column does not necessarily reflect the total used in the complete end item.

Section 2 Illustrated Parts List

1) Explanation of Parts List Arrangement

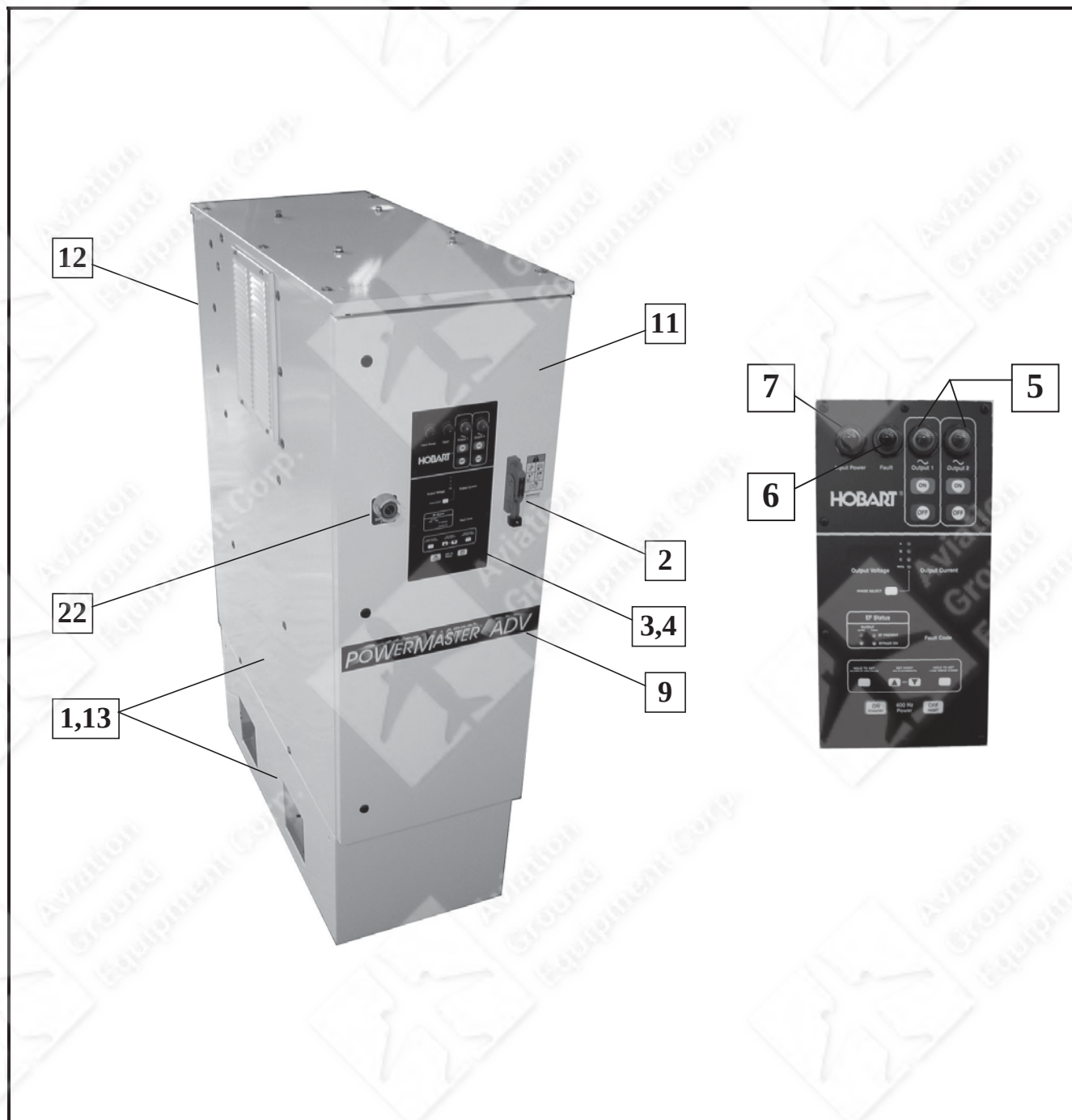
The parts list is arranged so that the illustration will appear on a left-hand page and the applicable parts list will appear on the opposite right-hand page. Unless the list is unusually long, the user will be able to look at the illustration and read the parts list without turning a page.

2) Symbols and Abbreviations

The following is a list of symbols and abbreviations used in the parts list:

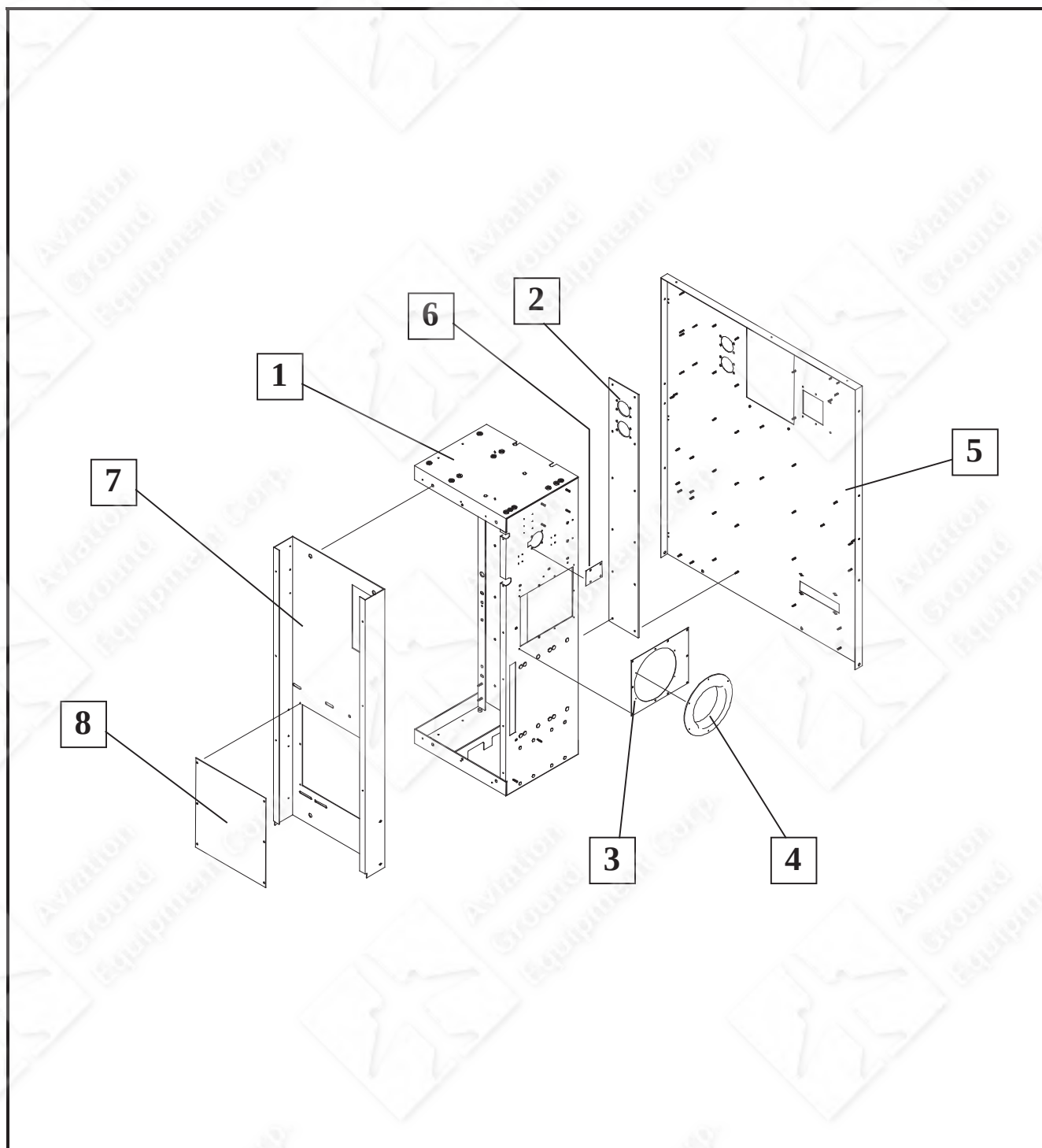
*	-	Item not illustrated
#	-	Number or Part Number
A, or AMP	-	Ampere
AC	-	Alternating current
AR	-	As required
DC	-	Direct current
Fig.	-	Figure
hd.	-	Head
hex	-	Hexagon
Hz	-	Hertz (cycles-per-second)
I.D.	-	Inside diameter
IN	-	Inch
KVA	-	Kilovolt-ampere
uF	-	Microfarad
No.	-	Number
NHA	-	Next higher assembly
PRV	-	Peak reverse voltage
PSI	-	Pounds per square inch
Ref	-	Reference (the item has been listed previously)
RH	-	Right Hand
LH	-	Left Hand
TM	-	Technical Manual
T-R	-	Transformer-rectifier
V	-	Volt or used as a prefix indicating vendor code

NOTE: An item which does not reflect an index number is an assembly which is not illustrated in it's assembled state, or it is similar (right-hand, left-hand, top, etc.) to an item which is illustrated.



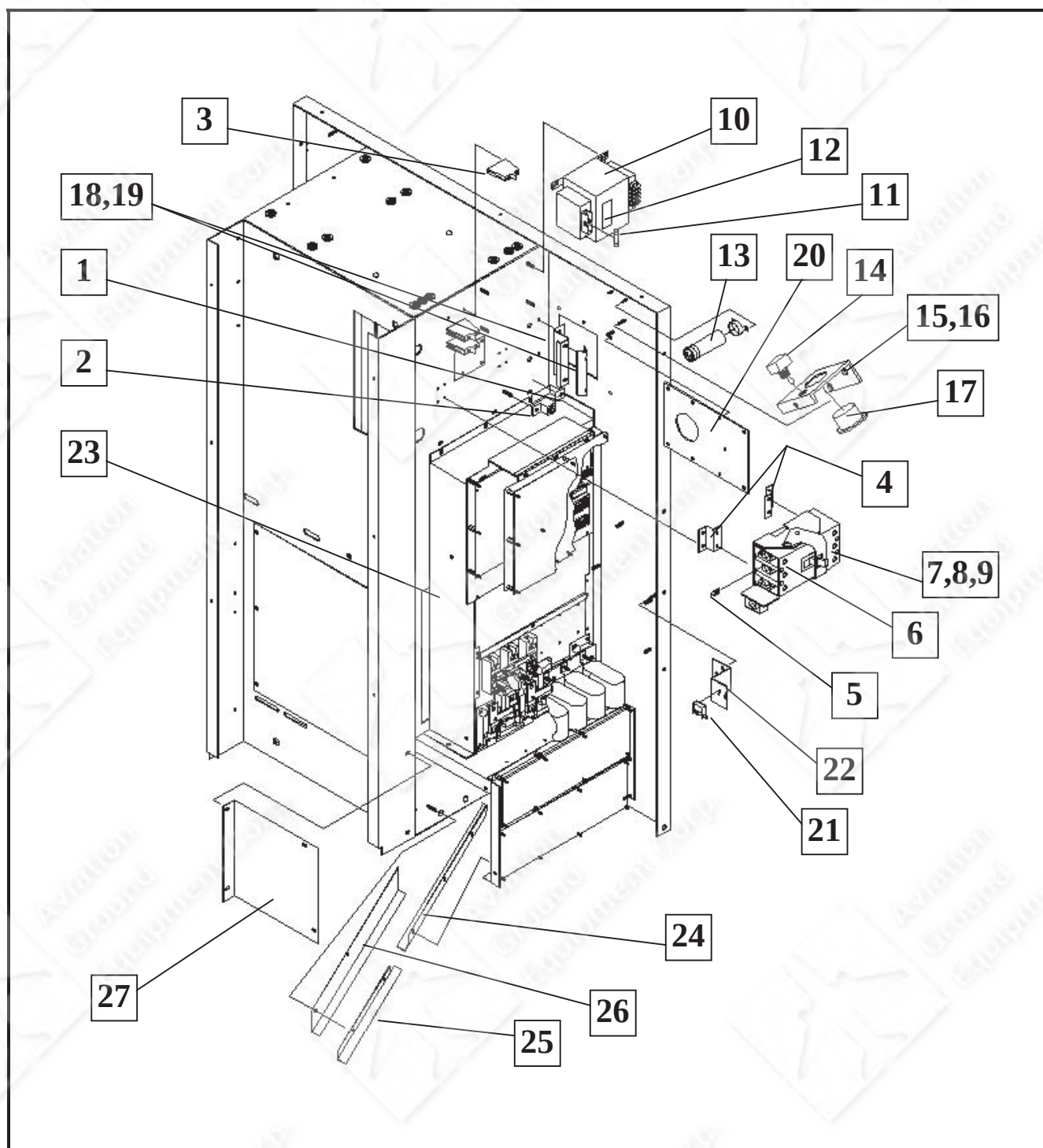
PoWerMaster ADV Converter
Figure 1

FIGURE ITEM NO.	HOBART PART NO.	NOMENCLATURE	EFF	UNIT PER ASSY.
1 -	500048A-391	PoWerMaster ADV Converter, 45 kVA, 1 Output	A	Ref.
	500048A-392	PoWerMaster ADV Converter, 45 kVA, 2 Output	F	Ref.
	500048A-091	PoWerMaster ADV Converter, 60 kVA, 1 Outputs	B	Ref.
	500048A-092	PoWerMaster ADV Converter, 60 kVA, 2 Outputs	E	Ref.
	500048A-191	PoWerMaster ADV Converter, 90 kVA, 1 Output	C	Ref.
	500048A-192	PoWerMaster ADV Converter, 90 kVA, 2 Outputs	D	Ref.
1		Frame Assembly (See Figure 2)		Ref.
2	286416-001	Circuit Breaker Actuator Handle (V56365 #9422A3)		1
3	286411	Control P.C. Board Assembly		1
4	286398-002	Membrane Switch Panel Assembly		1
	286580-001	...Lead Wire Ay.		1
5	82B1066-012	Amber Pilot Light Ay., 12v (V56365 #9001-SKP-32A9)	A,B,C	1
*	400613-004	...Bulb, 12v, Type 1815, Bayonet Base, Style T-3-1/4	A,B,C	1
	82B1066-012	...Amber Pilot Light, 12V (V56365 #9001-SKP-32A9)	D, E, F	2
*	400613-004	...Bulb, 12v, Type 1815, Bayonet Base, Style T-3-1/4	D, E, F	2
6	82B1066-001	Red Pilot Light Ay., 12V (V56365 #9001-SKP-32R9)		1
*	400613-004	...Bulb, 12v, Type 1815, Bayonet Base, Style T-3-1/4		1
7	82B1066-010	Green Pilot Light Ay., 12V (V56365 #9001-SKP-32G9)		1
*	400613-004	...Bulb, 12v, Type 1815, Bayonet Base, Style T-3-1/4		1
*	283714-005	Label, 45 KVA	A, F	1
	283714-004	Label, 60 KVA	B, E	1
	283714-002	Label, 90 KVA	C,D	1
9	286457	Label, Trademark		1
*	402987	Label, Hobart		1
11		Front Interior Components (See Figure 3)		Ref.
12		Rear Interior Components (See Figure 5)		Ref.
13		Canopy Components (See Figure 10)		Ref.
*	14 283716	Label, Id		1
*	15 287460	Label, Shock		2
*	16 286441	Label, General		2
*	17 287341	Wiring Harness Assembly		1
*	18 286377	Label, Fault Code		1
*	19 286442	Label, Rainproof		1
*	20 286475-005	Cable Summary, Standard		1
*	21 286475-002	Cable Summary, Dual Output	D, E, F	1
22		Emergency Stop Button		Ref.
	288300	...Label, Emergency Stop		1
*	77A1157	...Switch, Maintained, Push-Pull (V2B664 #KR9RH6)		1
	287850	...Harness, Wire Assembly		1
	285125	...Guard, Mushroom Button (V2B664 #K56YM)		1



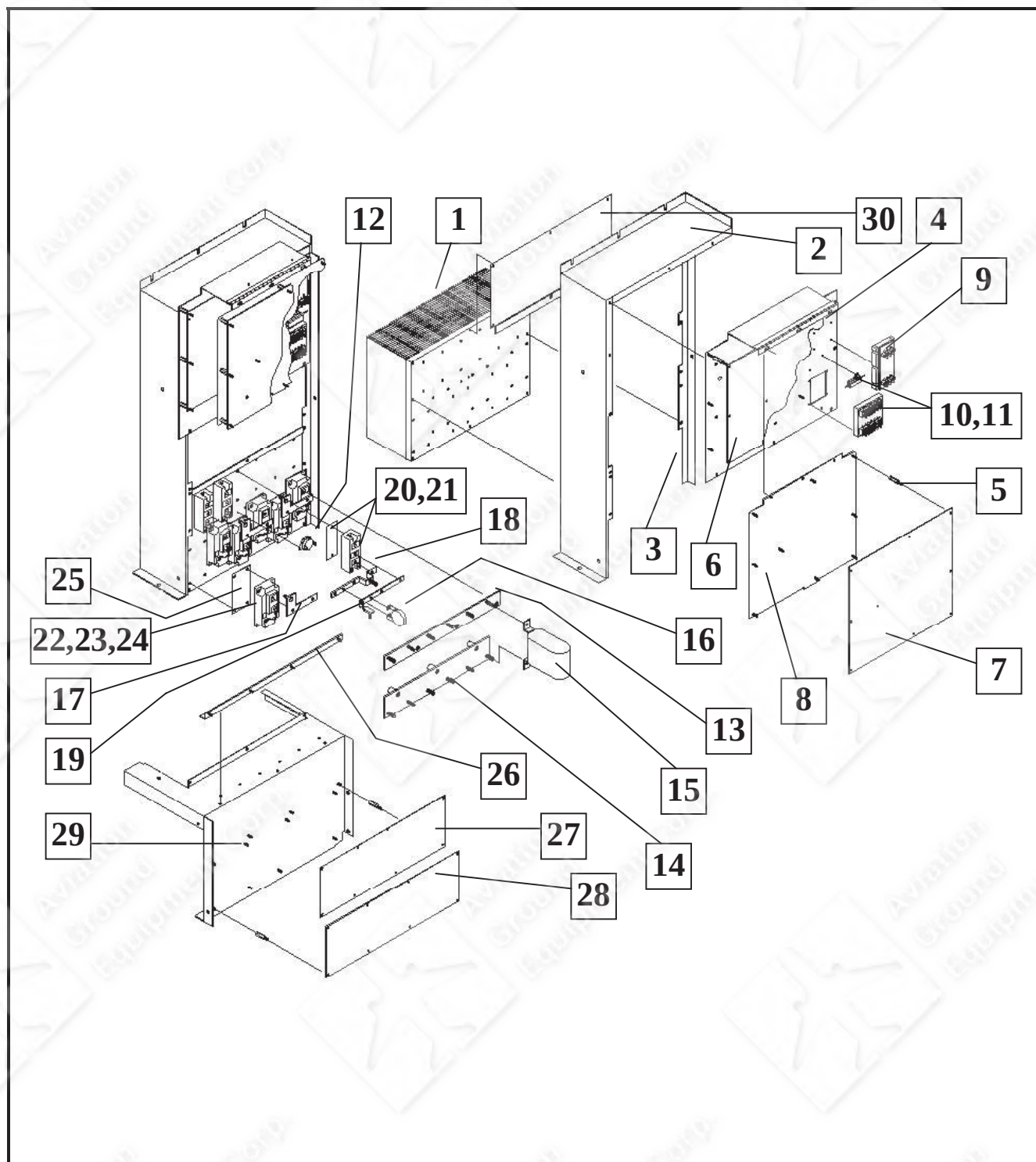
Frame Assembly
Figure 2

FIGURE ITEM NO.	HOBART PART NO.	NOMENCLATURE	EFF	UNIT PER ASSY.
2 -	1	286535	Frame	1
	2	286354	Bottom Frame Spacer	1
	3	287376	Inlet Ring Panel	1
	4	283157-003	Impeller Inlet Ring (V62292 #9621-2-4013)	1
	5	286563	Right Side Panel	1
	6	287836	Cover, Fan Hole	1
	7	286577	Frame Extension	1
	8	286555	Access Cover	1
		283171-002	...Receptacle, Captive Screw	4
		280936	...Rivet, 1/8 Open End	8



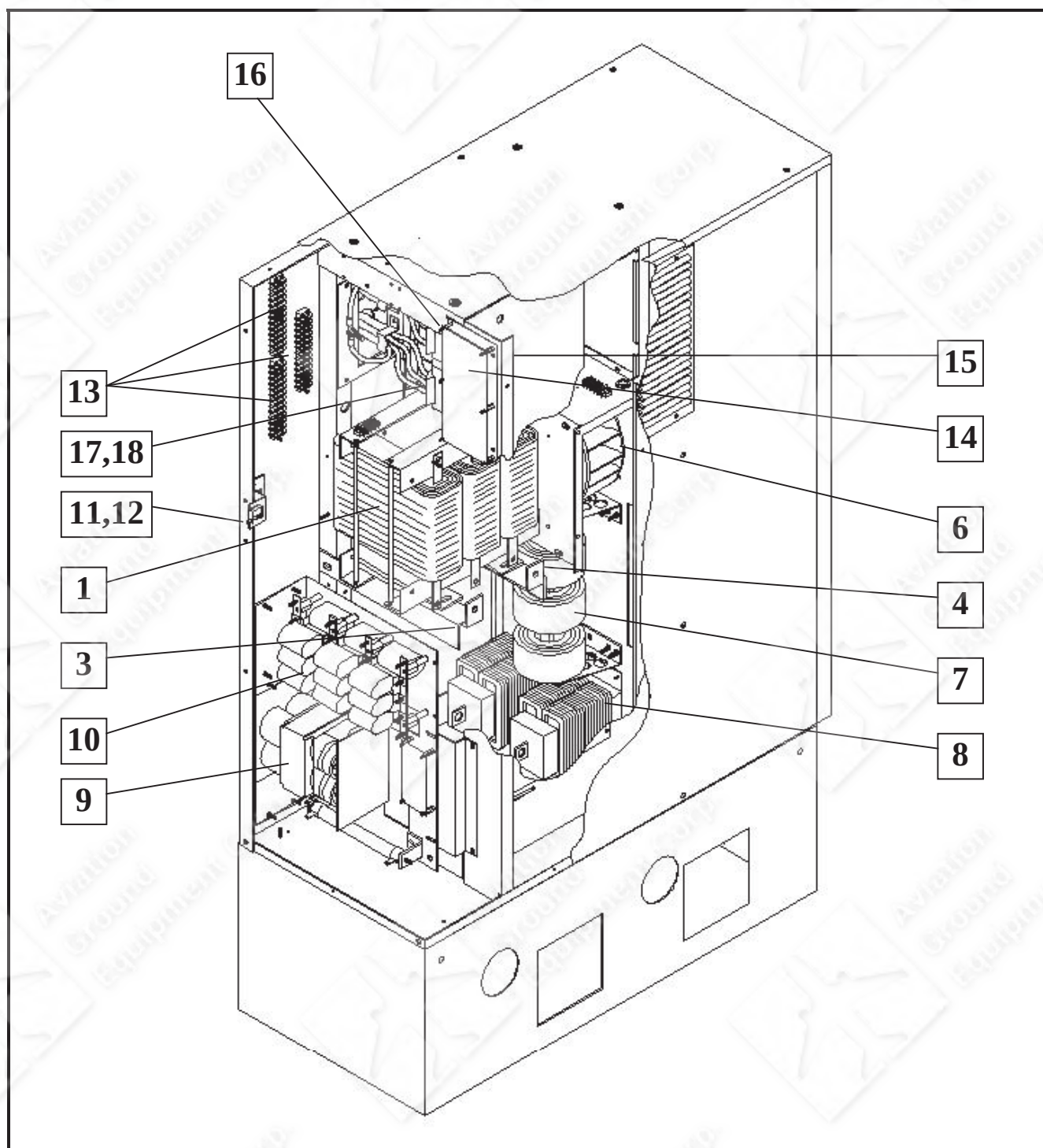
Front Interior Components
Figure 3

FIGURE ITEM NO.	HOBART PART NO.	NOMENCLATURE	EFF	UNIT PER ASSY.
3 -	1	280807	Label, Ground	1
	2	285104-001	Grounding Lug (V74829 #TA-250)	1
	3	285315-001	M.O.V. Suppressor (V27410 #V661DA40)	3
	4	287838	Circuit Breaker Support	2
	5	282653	Wire Terminal (V67529 #FA-T)	3
	6	280966	Circuit Breaker (V56365 #KAL-36150-26M-1021)	1
		286415-002	...Actuator, Circuit Breaker (V56365 #9422-CKA50)	1
	7	83A1114	Label, L3	1
	8	83A1113	Label, L2	1
	9	83A1112	Label, L1	1
	10	404960-034	Control Transformer, 115 V (V6Y440 #B750-1213-1)	1
	11	W10502-031	Fuse, 15 A (V2B664 #FNQ-15A)	1
	12	285968	Label, Fuse	1
	13	281848-002	Capacitor, 1800 UF, 250 VDC	1
	14	402682	Toggle Switch (V5U553 #HLA-271-78)	1
	15	286554	Voltage Selection Label	1
	16	286448	Meter Support Bracket	1
	17	181358	Hour Meter (V6H359 #80001)	1
	18	287856	Cable Clamp Support	1
	19	285568	Cable Clamp Bracket	1
	20	286423	Input Cable Plate	1
		286585	...Cable Inlet Gasket	1
	21	280673	Door Interlock Switch (V1W134 #SSI2ET10-20Y3)	1
	22	286602	Front Door Switch Support	1
	23		Heatsink Panel Assembly, (See Figure 4)	Ref.
	24	286420	Right Hand Input Filter Guide	1
	25	287841	Left Hand Input Filter Guide	1
	26	286566	Filter Guide	1
	27	286568	Inlet Duct Cover	1
	* 28	286557	SCD PCB Latch	1



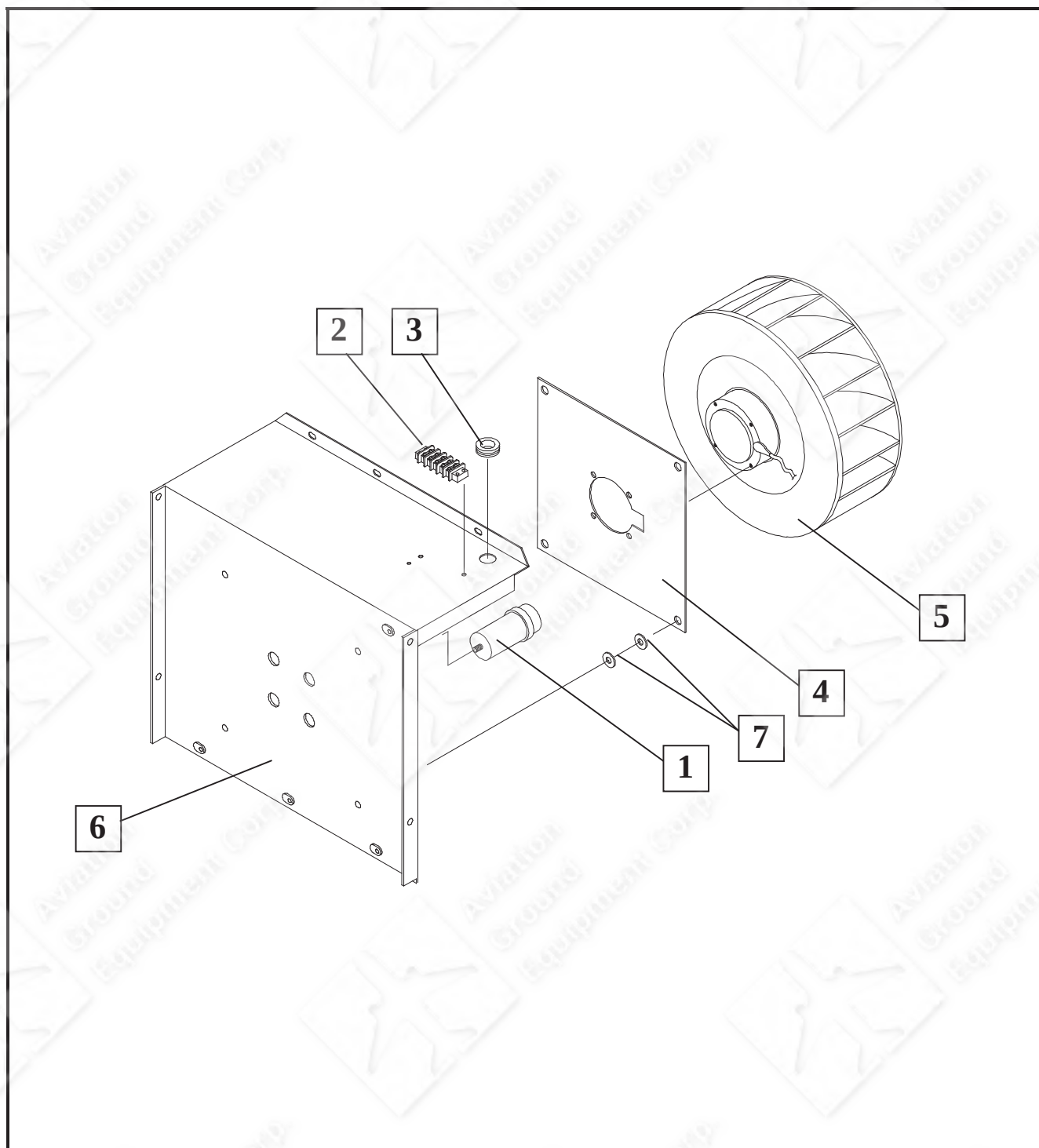
Heat Sink Panel Assembly
Figure 4

FIGURE ITEM NO.	HOBART PART NO.	NOMENCLATURE	EFF	UNIT PER ASSY.
4 -	1	287857 Bonded Fin Heatsink		1
	2	287844 Heatsink Wrapper		1
	3	287843 Angle, Heatsink Panel		1
	4	287833 Heatsink Cover		1
	5	284316-002 Metal Standoff		34
*	6	286246B IPC PC Board Assembly		1
	7	286400 Signal Conditioning PC Board Assembly		1
	192266-001	...Suppressor		1
	8	286443 SCB PC Board Support		1
	286528	Power Supply		1
	10	286367-001 Power Supply (V05YB3 # M30D1205-12TS)		1
	11	286482-001 Resistor, 50 W (V91637 #RH-50)		1
	12	404044-004 Overload Thermal Switch		1
	13	287825 Bus Bar, DC, Positive		1
	* 402674-002	...Label, Positive		1
*	14	287826 Bus Bar, DC, Negative, IGBT		1
	402674-001	...Label, Negative		1
	15	286389-001 Capacitor, DC, 50 MFD		6
	16	403955-021 Semiconductor Suppressor (V24446 #751HA40)		1
	17	287824 Bus Bar, AC Out		3
	18	287830 Bus Bar, Positive		1
	19	287831 Bus Bar, SCR, Negative		1
	20	286285-001 SCR Diode (V66844 #CD621615)		3
	286394	...Barrier, Diode Cables		1
	21	283196-003 SCR Thermal Pad (V0MR72 #AL-370-134)		3
	22	407970 Label, Static Sensitive		6
	23	285170 Suppressor		6
	24	283867-005 IGBT Transistor (V6Y481 #CM400HA-24H)		6
	25	283196-002 Thermal Transistor Pad (V0MR72 #AL-425-244)		6
	26	286274 Support, Driver Board		1
	27	286144 Driver PC Board Assembly		1
	28	287353A Modulator PC Board Assembly		1
	29	286533 Air Duct Assembly		1
	30	286269 Heat Sink Spacer Panel		1
	* 31	77A1109 Label, "C"		1
*	32	77A1108 Label, "B"		1
*	33	77A1107 Label, "A"		1



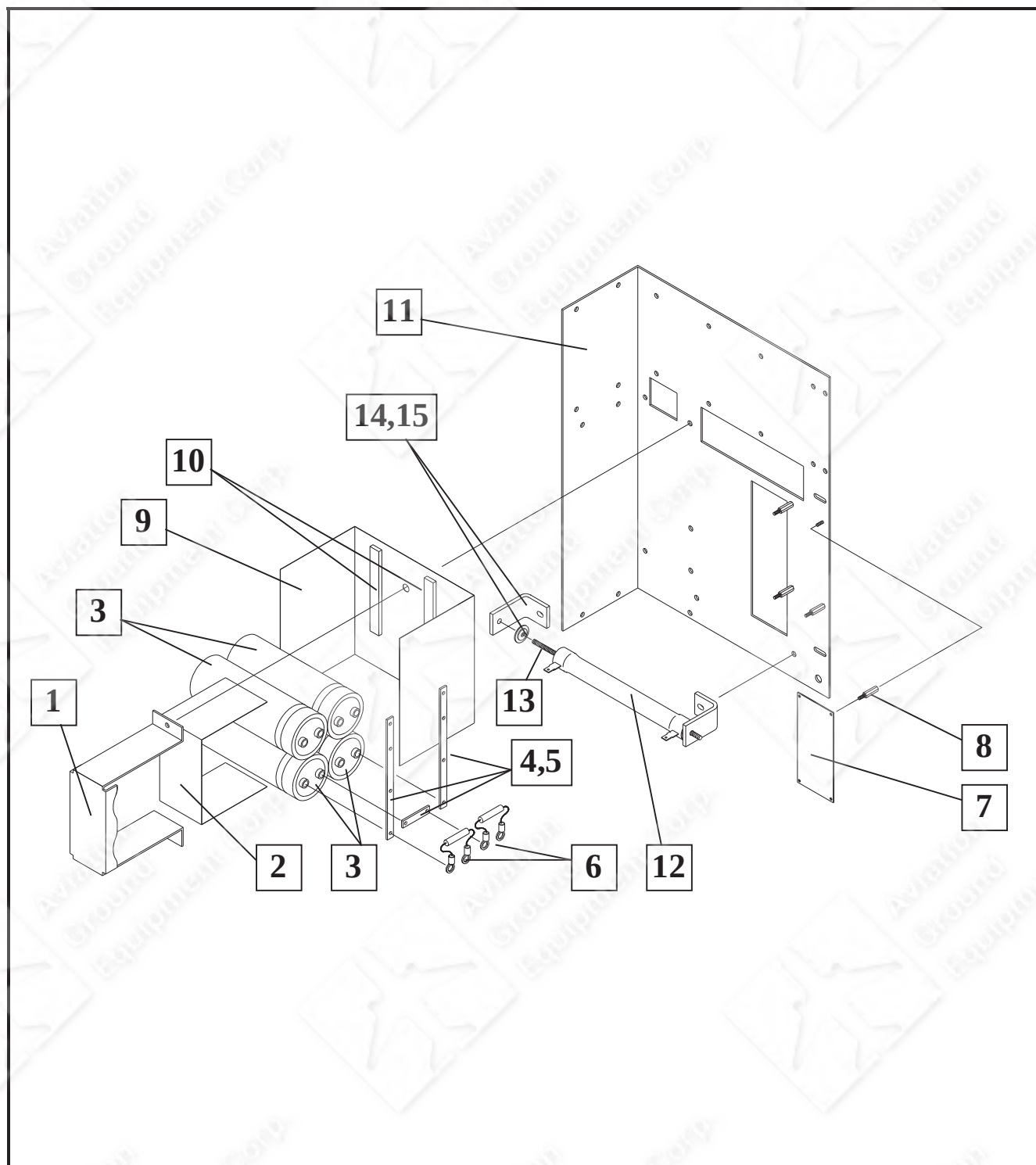
Rear Interior Components
Figure 5

FIGURE ITEM NO.	HOBART PART NO.	NOMENCLATURE	EFF	UNIT PER ASSY.
5 -	1	286480-001		1
*		281971-005	A,F	1
*		281971-004	B,E	1
*		281971-002	C,D	1
*		286449		1
*		286438		8
*		286316-001		8
*	2	1CZ129		2
	3	286570-1		1
	4	286570-2		1
*	5	286572		1
		286571		2
	6	Fan Assembly Components (See Figure 6)		Ref.
	7	286492-001		1
	8	493712		2
	9	DC Electrolytic Capacitor Assembly (See Figure 7)		Ref.
	10	AC Capacitor Assembly (See Figure 8)		Ref.
	11	286602		1
	12	280673		1
	13	283066-002		3
*		286380		1
*		286382		1
	14	286392-001		1
*		286383		1
*		16DA4252-037		1
	15	286547		1
	16	284316-002		6
	17	Contactor Panel Assembly (See Figure 9)		Ref.
	18	285102-001	A,B,C	4
		285102-001	D,E,F	7



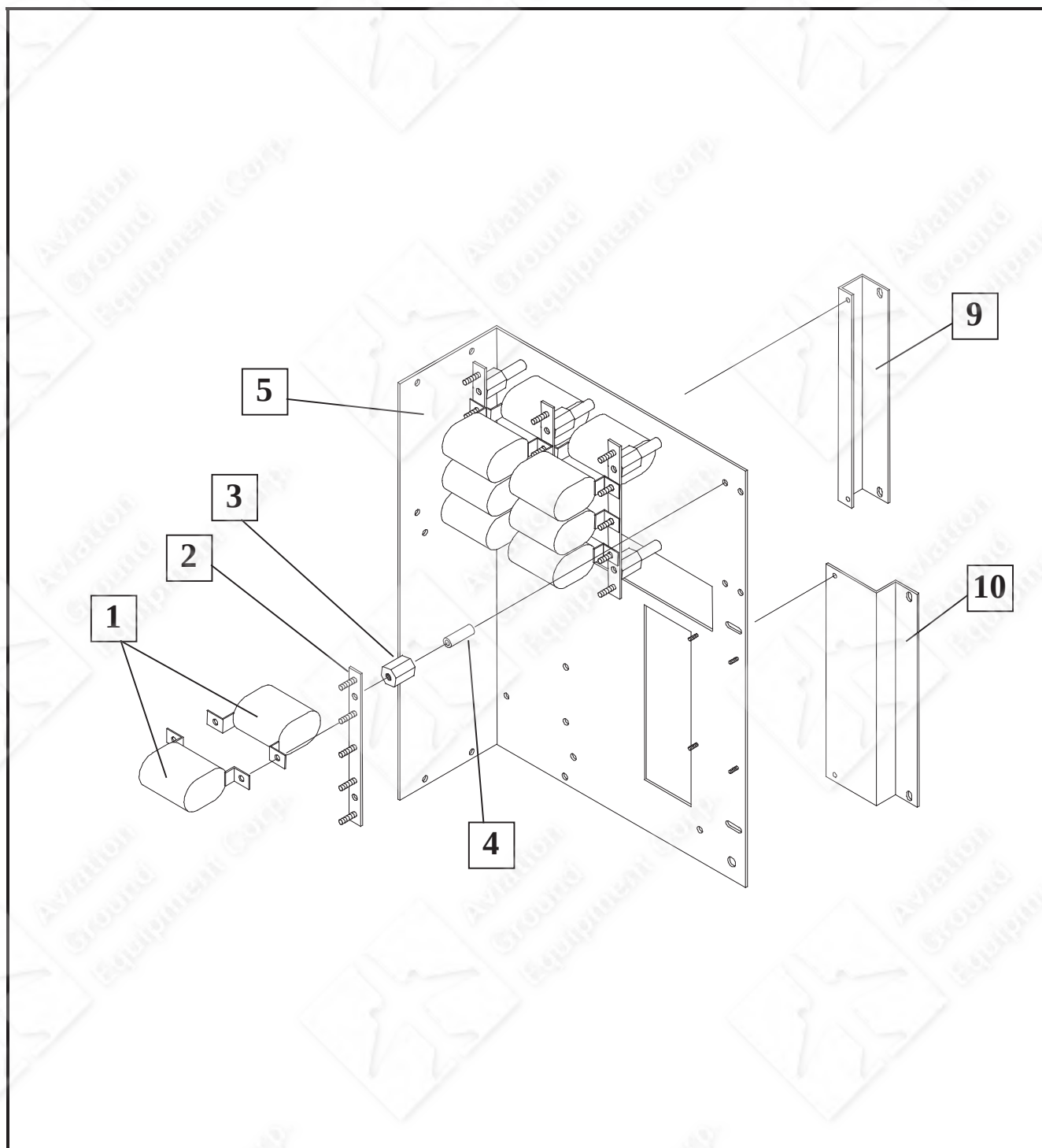
Fan Assembly Components
Figure 6

FIGURE ITEM NO.	HOBART PART NO.	NOMENCLATURE	EFF	UNIT PER ASSY.
6 -	1	283156-003		1
	2	401911-005		1
*		400792-001		6
*		286486-001		2
	3	402037-006		1
	4	287846		1
	5	283155-003		1
	6	287842		1
	7	281929-015		12



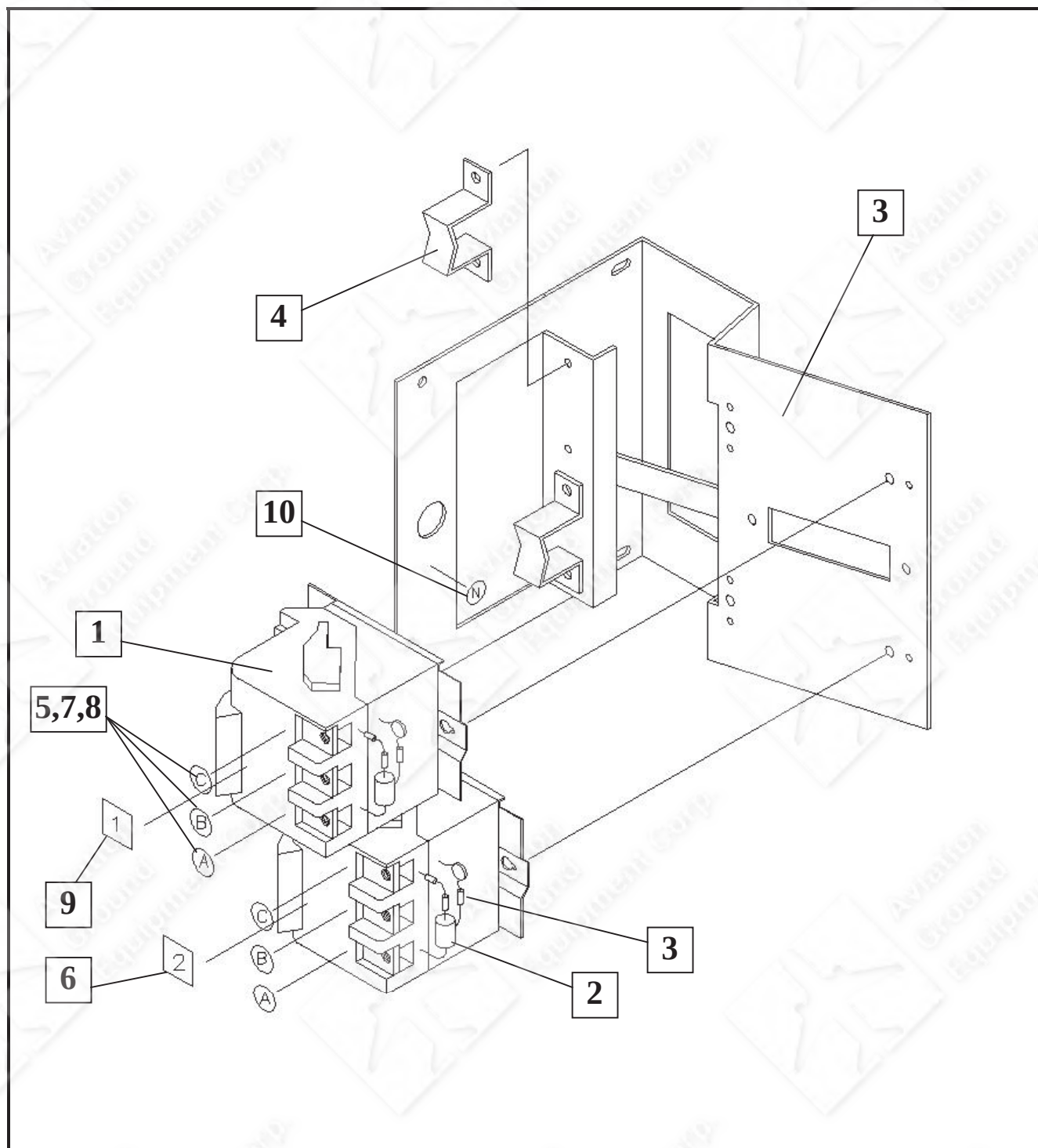
DC Electrolytic Capacitors Assembly
Figure 7

FIGURE ITEM NO.	HOBART PART NO.	NOMENCLATURE	EFF	UNIT PER ASSY.
7 -	1	286429	DC Capacitor Clamp	1
	2	286440-001	Side and Front Insulator	1
	3	281848-001	DC Capacitors, 6800 MFD	4
	4	286433	Long Bus Bar	2
	5	286431	Short Bus Bar	2
	6	281971-001	Resistor Assembly	4
	7	286250	Bus Discharge PC Board Assembly	1
	8	284316-002	Metal Standoff	4
	9	286434	Bottom and Back Insulator	1
	10	056210	Neoprene Rubber Strip	1.5 ft.
	11	286534	DC Capacitors Bracket	1
	12	404249-003	Resistor, 225 W, 50 ohm (V6Y481)	1
	13	283387-002	Threaded Rod	1
	14	286489-001	Centering Washer (V44655 #6003)	2
	15	286468	Resistor Bracket	2



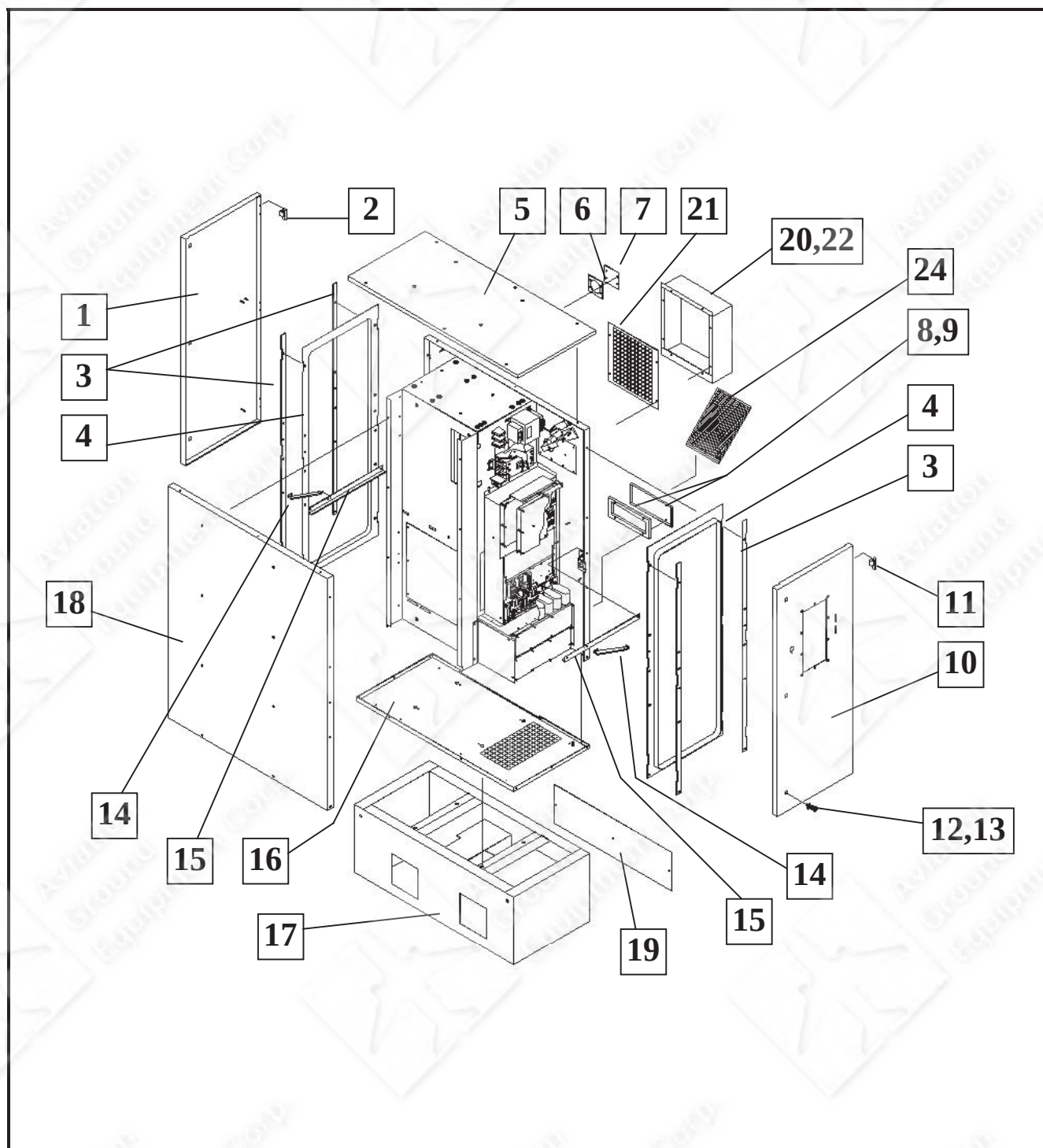
AC Capacitor Assembly
Figure 8

FIGURE ITEM NO.	HOBART PART NO.	NOMENCLATURE	EFF	UNIT PER ASSY.
8 -	1	286389-002		12
	2	286406		4
	3	404033		8
	4	286386-001		8
	5	286534		1
*	6	77A1107		1
*	7	77A1108		1
*	8	77A1109		1
	9	286576		1
	10	286575		1



Contactor Panel Assembly
Figure 9

FIGURE ITEM NO.	HOBART PART NO.	NOMENCLATURE	EFF	UNIT PER ASSY.
9 -	1 282130-001	Contactor (V1E222 #MAIN 42IF109137R)	A,B,C	1
	282130-001	Contactor (V1E222 #MAIN 42IF109137R)	D,E,F	2
	2 288428	Capacitor/Varistor Assembly	A,B,C	1
	288428	Capacitor/Varistor Assembly	D,E,F	2
	3 286450	Output Panel Assembly		1
	4 284397	Cable Clamp	A,B,C	1
	284397	Cable Clamp	D,E,F	2
	284359	Cable Clamp	A,B,C	1
	284359	Cable Clamp	D,E,F	2
	5 77A1109	Label "C"	A,B,C	1
	77A1109	Label "C"	D,E,F	2
6	402422-002	Label "2"	D,E,F	1
7	77A1108	Label, "B"	A,B,C	1
	77A1108	Label, "B"	D,E,F	2
8	77A1107	Label, "A"	A,B,C	1
	77A1107	Label, "A"	D,E,F	2
9	402422-001	Label, "1"		1
10	78A1035	Label, "N"		1



Canopy Components
Figure 10

FIGURE ITEM NO.	HOBART PART NO.	NOMENCLATURE	EFF	UNIT PER ASSY.
10 - 1	286561	Rear Door Assembly		1
	286485-001	...Door Seal		12 ft.
	286474-013	...Rear Parts Location Label		1
2	283824	Hinge, Door		3
3	286582	Panel Spacer		4
4	286564	Inner Door Panel		2
	286485-003	...Door Seal		20 ft.
	286559	Canopy Top		1
6	286584	Cable Outlet Gasket		2
7	286479	Output Hole Cover		2
8	286583	Gasket		1
9	286567	Filter Access Cover		1
	283168-003	...Captive Screw Assembly		4
	283172-001	...Retainer		4
10	286560	Front Door Assembly		1
	286474-014	...Rear Parts Location Label		1
	286485-001	...Door Seal		12 ft.
11	283597	Hinge, Door		3
12	287542-001	Door, Latch (V94222 #E-16-15)		6
13	287546-001	Latch Pawl V94222 #E-28-203-12)		6
	288225	...Latch Gasket		6
14	284606-001	Door Support (V1E045 #AE7/25621)		2
15	286601	Door Stay Bracket		2
16	286565	Base		1
17	286578	Converter Floor Stand		1
18	288243	Left Side Panel		1
19	288239	Pedestal Cover Plate		1
20	288218	Right Side Air Outlet Cover		1
21	288216	Right Side Air Outlet Grill		1
22	288220	Rubber, Strip, EPDM, 1/8 x 1		5.3 ft.
*	23	W10088-008 Box Connector, 90°	A,B,C	1
		W10088-008 Box Connector, 90°	D,E,F	2
	24	283159-003 Air Filter (V82866 #97129978)		1

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Section 3 Numerical Index

1) Explanation of Numerical Index

The purpose of this index is to assist the user in finding the illustration and description of a part when the part number is known. Part numbers are arranged in alphanumerical sequence. Thus, any part number beginning with the letter "A" would be located at or near the top of the index list. Likewise, a part number "9" would be listed near the end of the list and far below a part number "1000". The figure number and item number location of the part is directly opposite the part. If the part is used in more than one place, each location is listed commencing with the first location the part is listed.

FIGURE ITEM NO.	HOBART PART NO.	FIGURE ITEM NO.	HOBART PART NO.
3-11	W10502-031	1-14	283716
10-23	W10088-008	10-2	283824
10-	W10088-008	4-24	283867-005
7-10	056210	4-5	284316-002
5-2	1CZ129	5-16	284316-002
5-14	16DA4252-037	7-8	284316-002
3-17	181358	9-	284359
4-	192266-001	9-	284359
3-21	280673	9-4	284397
5-12	280673	9-	284397
3-1	280807	10-14	284606-001
2-	280936	5-18	285102-001
3-6	280966	5-	285102-001
3-13	281848-002	3-2	285104-001
7-3	281848-001	1-	285125
6-7	281929-015	4-23	285170
5-	281971-005	3-3	285315-001
5-	281971-004	3-19	285568
5-	281971-002	3-12	285968
7-6	281971-001	4-27	286144
9-1	282130-001	4-6	286246A
9-	282130-001	7-7	286250
3-5	282653	4-30	286269
5-13	283066-002	4-26	286274
6-5	283155-003	4-20	286285-001
6-1	283156-003	5-	286316-001
2-4	283157-003	2-2	286354
10-24	283159-003	4-10	286367-001
10-	283168-003	1-18	286377
2-	283171-002	5-	286380
10-	283172-001	5-	286382
4-21	283196-003	5-	286383
4-25	283196-002	8-4	286386-001
7-13	283387-002	8-1	286389-002
10-11	283597	4-15	286389-001
1-8	283714-005	5-14	286392-001
1-	283714-004	4-	286394
1-	283714-002	1-4	286398-002

FIGURE ITEM NO.	HOBART PART NO.	FIGURE ITEM NO.	HOBART PART NO.
4-7	286400	3-27	286568
8-2	286406	5-4	286570-2
1-3	286411	5-3	286570-1
3-	286415-002	5-	286571
1-2	286416-001	5-5	286572
3-24	286420	8-10	286575
3-20	286423	8-9	286576
7-1	286429	2-7	286577
7-5	286431	10-17	286578
7-4	286433	1-	286580-001
7-9	286434	10-3	286582
5-	286438	10-8	286583
7-2	286440-001	10-6	286584
1-16	286441	3-	286585
1-19	286442	10-15	286601
4-8	286443	3-22	286602
3-16	286448	5-11	286602
5-	286449	1-17	287341
9-3	286450	4-28	287353A
1-9	286457	2-3	287376
10-	286474-014	1-15	287460
10-	286474-013	10-12	287542-001
7-15	286468	10-13	287546-001
1-20	286475-005	4-17	287824
1-21	286475-002	4-13	287825
5-1	286480-001	4-14	287826
10-7	286479	4-18	287830
4-11	286482-001	4-19	287831
10-	286485-003	4-4	287833
10-	286485-001	2-6	287836
10-	286485-001	3-4	287838
6-	286486-001	3-25	287841
7-14	286489-001	6-6	287842
5-7	286492-001	4-3	287843
4-9	286528	4-2	287844
4-29	286533	6-4	287846
7-11	286534	1-	287850
8-5	286534	3-18	287856
2-1	286535	4-1	287857
5-15	286547	10-21	288216
3-15	286554	10-20	288218
2-8	286555	10-22	288220
3-28	286557	10-	288225
10-5	286559	10-19	288239
10-10	286560	10-18	288243
10-1	286561	1-	288300
2-5	286563	9-2	288428
10-4	286564	9-	288428
10-16	286565	1-	400613-004
3-26	286566	1-	400613-004
10-9	286567	1-	400613-004

FIGURE ITEM NO.	HOBART PART NO.	FIGURE ITEM NO.	HOBART PART NO.
1-	400613-004		
6-	400792-001		
6-2	401911-005		
6-3	402037-006		
9-6	402422-002		
9-9	402422-001		
4-	402674-002		
4-	402674-001		
3-14	402682		
1-10	402987		
4-16	403955-021		
8-3	404033		
4-12	404044-004		
7-12	404249-003		
3-10	404960-034		
4-22	407970		
5-8	493712		
1-	77A1157		
4-31	77A1109		
4-32	77A1108		
4-33	77A1107		
8-6	77A1107		
8-7	77A1108		
8-8	77A1109		
9-5	77A1109		
9-	77A1109		
9-7	77A1108		
9-	77A1108		
9-8	77A1107		
9-	77A1107		
9-10	78A1035		
1-6	82B1066-001		
1-7	82B1066-010		
1-5	82B1066-012		
1-	82B1066-012		
3-7	83A1114		
3-8	83A1113		
3-9	83A1112		