



**Aviation
Ground
Equipment Corp.**

HOBART®
GROUND POWER

Illustrated Parts List for

POWERMASTER® ADV

Series 500048B



45, 60, and 90 kVA
Solid State Frequency Converters

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 the 400 Hz Solid State Converter manufactured by Hobart Ground Power Division, Troy, Ohio, USA..

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:

- Standard hardware items (attaching parts) such as nuts, screws, washers, etc., which are available commercially
- Bulk items such as wire, cable, sleeving, tubing, etc., which are commercially available
- 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 numbers 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 part 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 indented 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.

(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 500048B-21110 only (45 kVA, one output).
Parts coded "B" are usable on Part Number 500048B-21210 only (45 kVA, dual output).
Parts coded "C" are usable on Part Number 500048B-31110 only (60 kVA, one output).
Parts coded "C" are usable on Part Number 500048B-41110 only (90 kVA, one output).
Parts coded "D" are usable on Part Number 500048B-41210 only (90 kVA, dual output).

(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

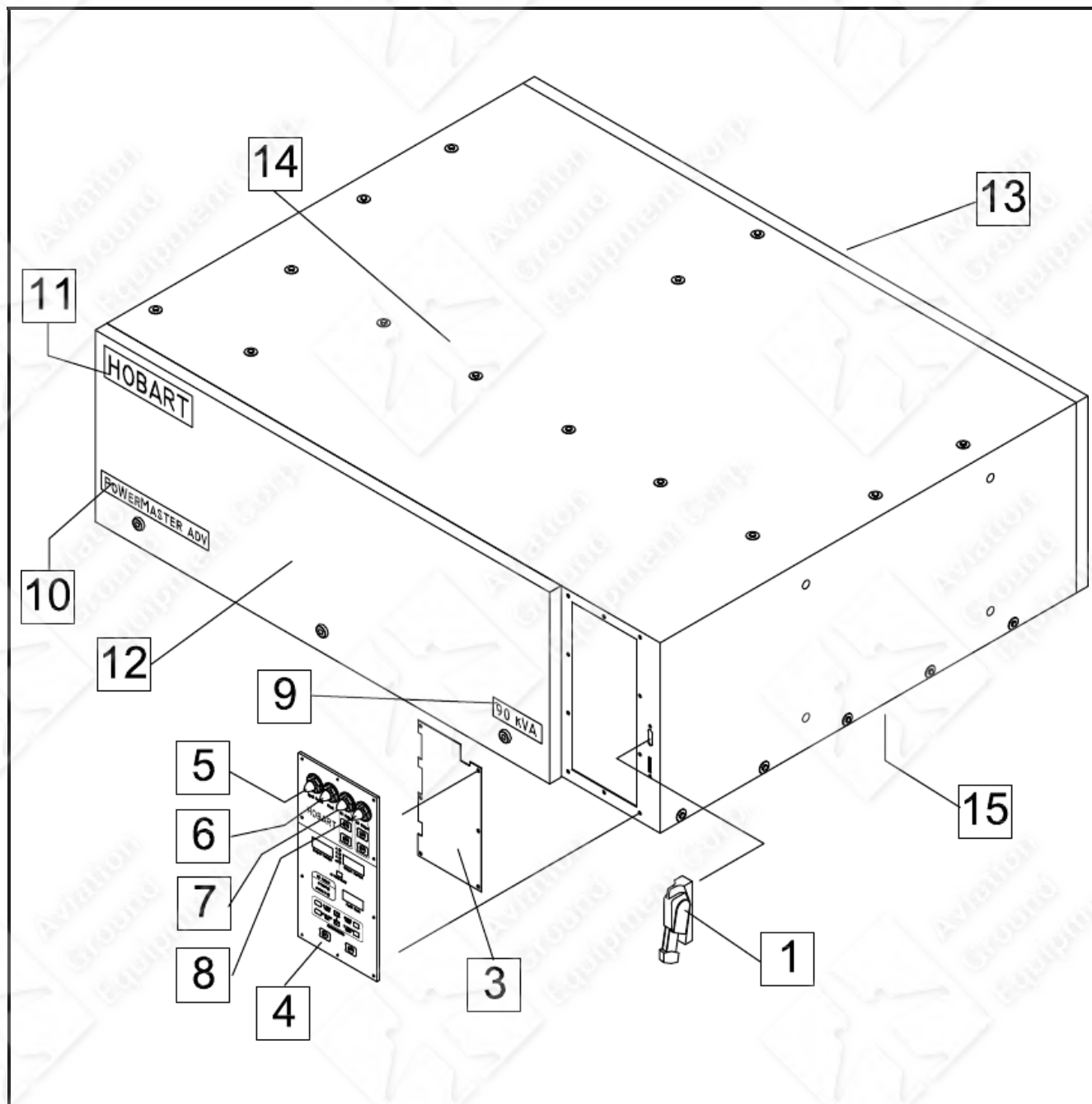
The parts list is arranged so that the illustration will appear on a left-hand page and the applicable parts list will appear on the opposite right-hand page. Unless the list is unusually long, the user will be able to look at the illustration and read the parts list without turning a page.

2) Symbols and Abbreviations

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

*	-	Item not illustrated
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

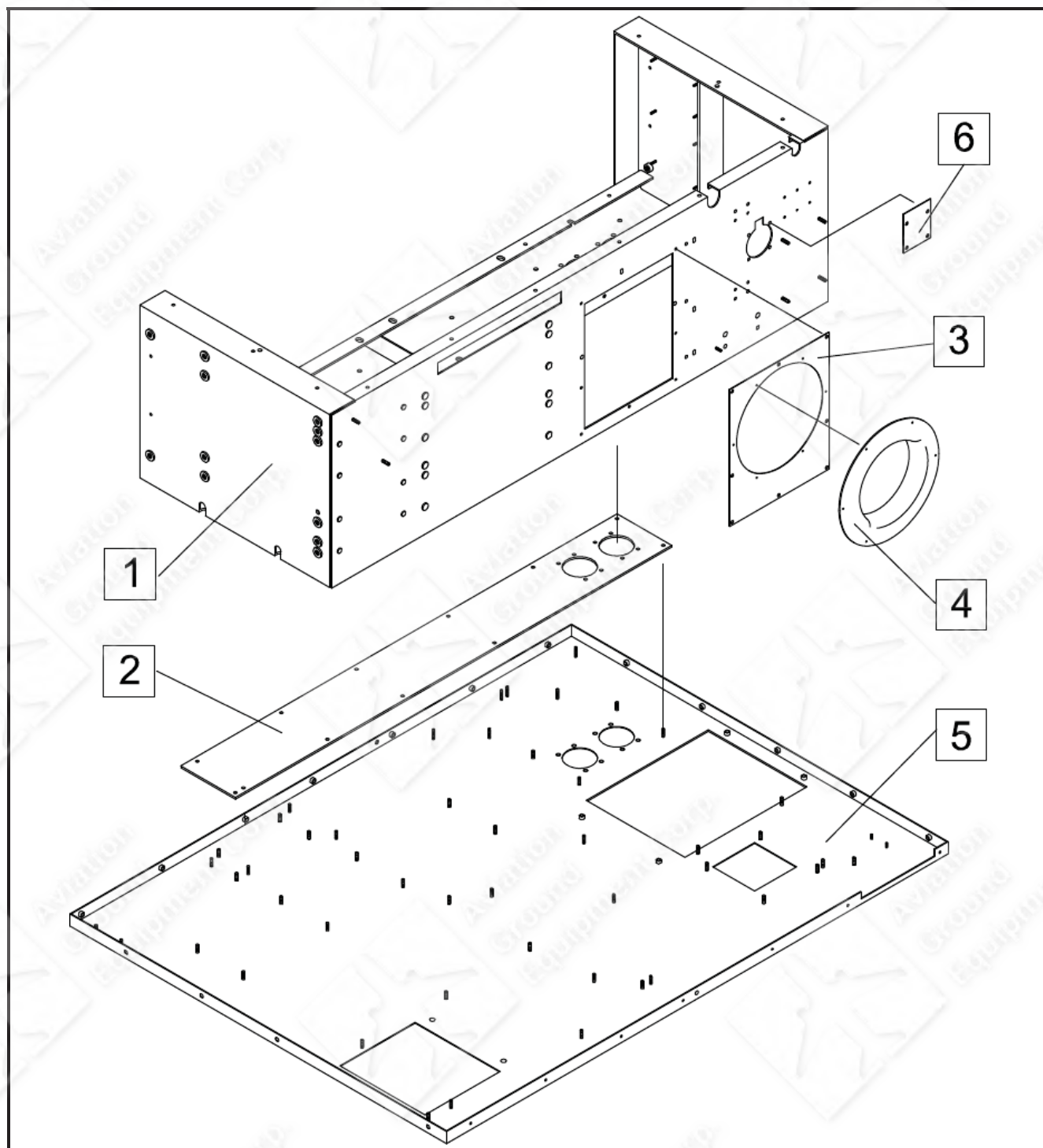
NOTE: An item which does not reflect an index number is an assembly which is not illustrated in its assembled state, or it is similar (right-hand, left-hand, top, etc.) to an item which is illustrated.



PoWerMaster ADV Converter
Figure 1

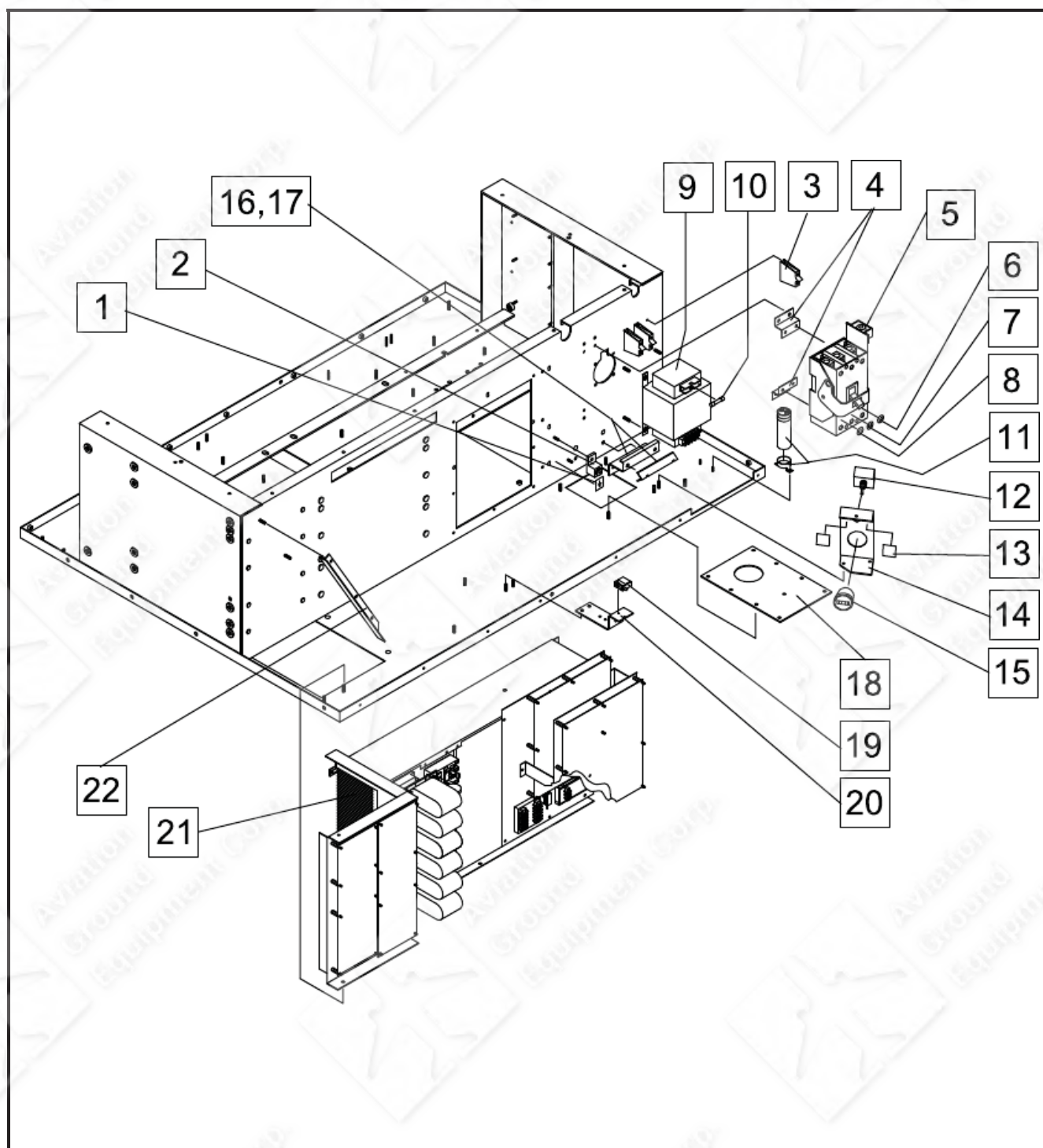
FIGURE ITEM NO.	HOBART PART NO.	NOMENCLATURE	EFF	UNIT PER ASSY.
1 -	1	286416-001	Circuit Breaker Actuator Handle (V14799 #9422A3)	1
*	2		Frame Assembly (See Figure 2)	Ref.
	3	286411	Control P.C. Board Assembly	1
	4	286398-002	Membrane Switch Panel Assembly	1
	5	82B1066-010	Green Pilot Light Ay., 12V (V14799 #9001-SKP-32G9)	1
		400613-004	...Bulb, 12v, Type 1815, Bayonet Base, Style T-3-1/4	1
	6	82B1066-001	Red Pilot Light Ay., 12V (V14799 #9001-SKP-32R9)	1
		400613-004	...Bulb, 12v, Type 1815, Bayonet Base, Style T-3-1/4	1
	7	82B1066-012	Amber Pilot Light Ay., 12v (V14799 #9001-SKP-32A9)	1
		400613-004	...Bulb, 12v, Type 1815, Bayonet Base, Style T-3-1/4	1
	8	82B1066-012	Amber Pilot Light Ay., 12v (V14799 #9001-SKP-32A9)	B,E 1
		400613-004	...Bulb, 12v, Type 1815, Bayonet Base, Style T-3-1/4	1
	9	283714-005	45 KVA Label	A,B 1
	9	283714-004	60 KVA Label	C 1
	9	283714-002	90 KVA Label	D,E 1
	10	286457	Label, Trademark (PoWerMaster)	1
	11	402987	Label, Hobart	2
	12		Front Interior Components (See Figure 3)	Ref.
	13		Rear Interior Components (See Figure 5)	Ref.
	14		Canopy Components (See Figure 10)	Ref.
*	15		Bottom Exterior Components (See Figure 11)	Ref.
			Wires and Cables	
*	16	287341	Wire Harness Assembly (used throughout)	1
*	17	286475-001	Cable Summary	1
*	18	286475-002	Dual Output Cable Summary	B,E 1
			Miscellaneous Labels (none are shown)	
*	19	286377	Fault Code Chart Label (inside front door)	1
*	20	283716	Label, ID	1
*	21	286441	Label, General	2
*	22	286442	Label, Rainproof	1
*	23	286474-009	Front Parts Location Label (inside front door)	1
*	24	286474-010	Rear Parts Location Label (inside rear door)	1
*	25	287460	Label, Danger, High Voltage	2
*	26	288510-001	Label, ETL/CSA	1
*	27	288505	Label, Warning, Clearance	2
*	28	288730	Fuse Chart Label (inside front door)	1
*	29	288918-002	ID Label (contains product information)	1

Note: The bulb information is for replacements. The bulbs are included as part of the purchased light assemblies.



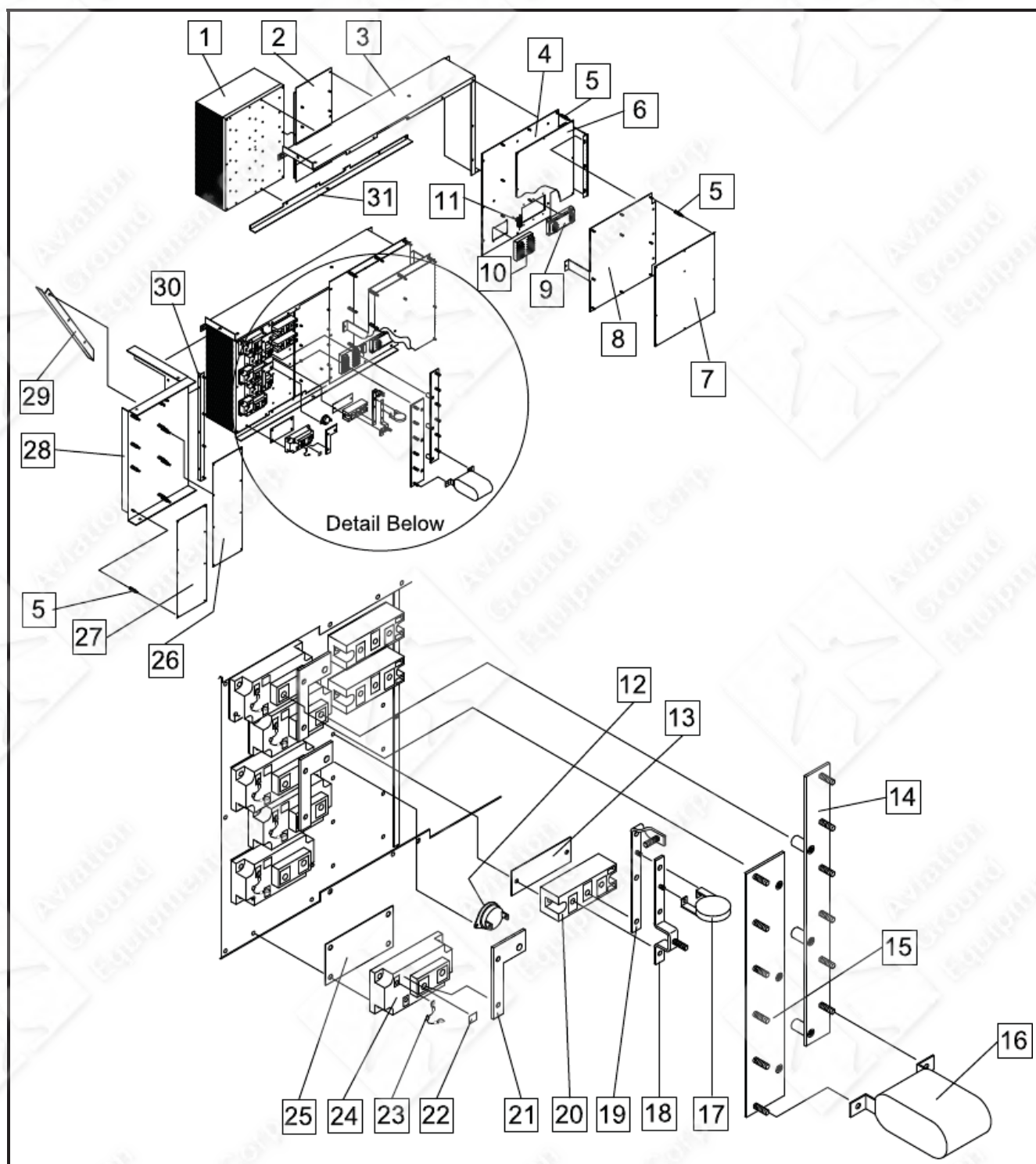
Frame Assembly
Figure 2

FIGURE ITEM NO.	HOBART PART NO.	NOMENCLATURE	EFF	UNIT PER ASSY.
2 -	1	286535		1
	2	286354		1
	3	286376		1
	4	283157-003		1
	5	287852		1
	6	287836		1



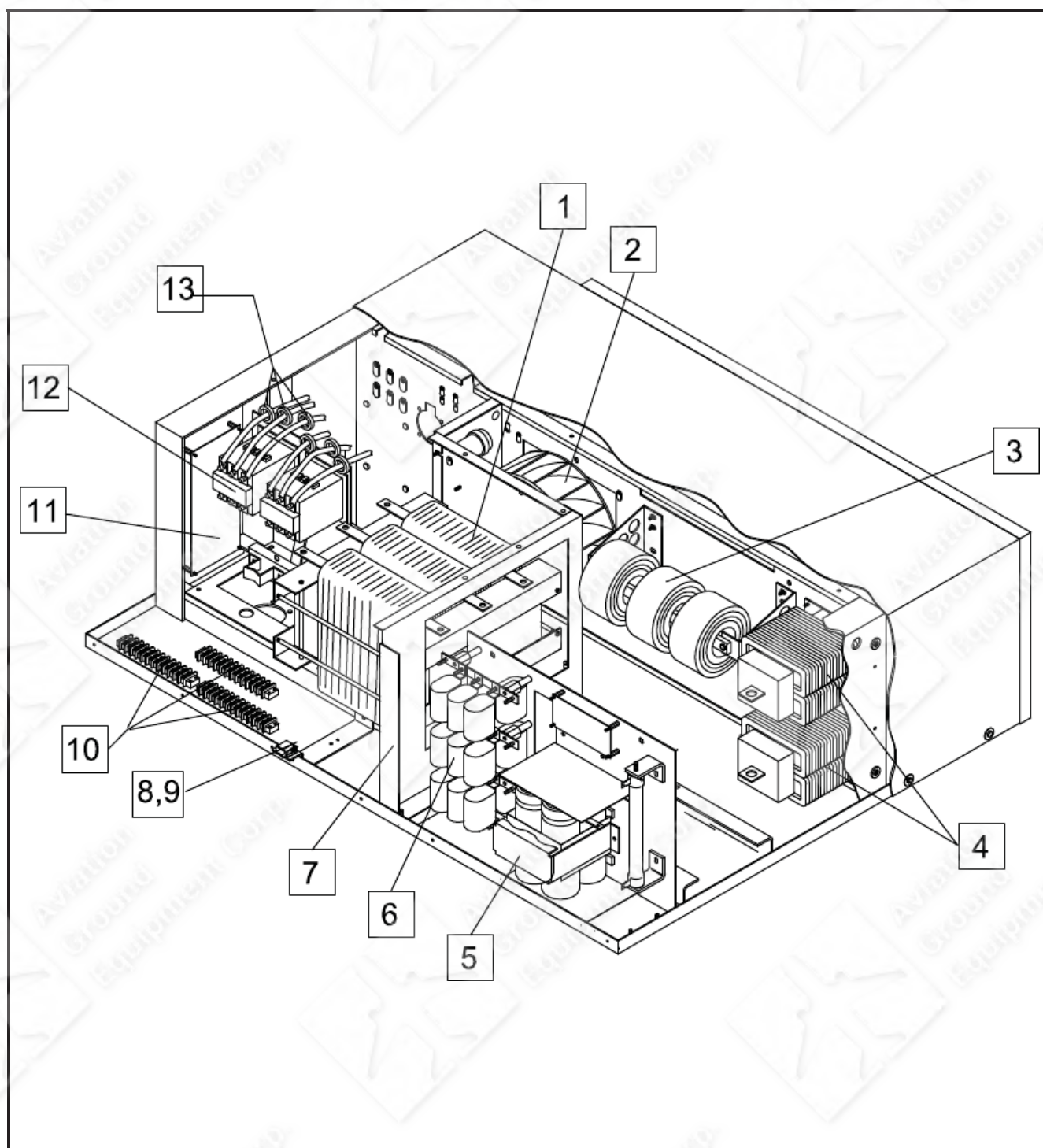
Front Interior Components
Figure 3

FIGURE ITEM NO.	HOBART PART NO.	NOMENCLATURE	EFF	UNIT PER ASSY.
3 -	1	280807		1
	2	285104-001		1
	3	285315-001		3
	4	291139		2
	5	291269-002		1
		291268-001		1
	6	83A1114		1
	7	83A1113		1
	8	83A1112		1
	9	404960-034		1
		...Actuator, Circuit Breaker (V14799 # 9422 CSF30)		
	10	W10502-031		1
	11	281848-002		1
	12	402682		1
	13	286447		1
	14	286448		1
	15	181358		1
	16	287856		1
	17	285568		1
	18	286423		1
	19	280673		1
		Door Interlock Switch (V1W134 #SSI2ET10-20Y3)		
	20	286445		1
	21			Ref.
	22	287841		1
		Heat Sink Panel Assembly, (See Figure 4)		
		LH Input Filter Guide		



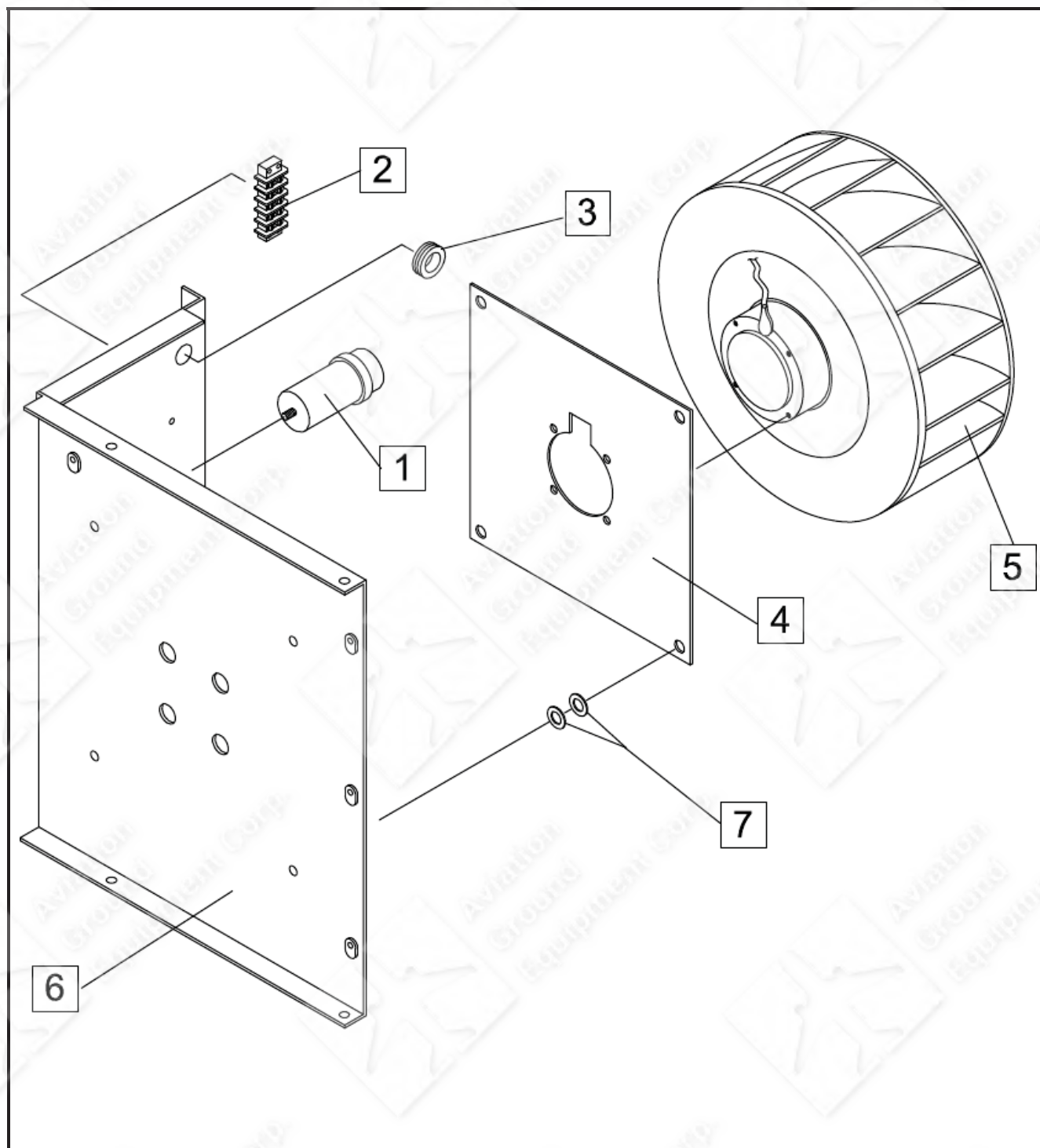
Heat Sink Panel Assembly
Figure 4

FIGURE ITEM NO.	HOBART PART NO.	NOMENCLATURE	EFF	UNIT PER ASSY.
4 -	1	287857	Bonded Fin Heat Sink	1
	2	286269	Heat Sink Spacer Panel	1
	3	287844	Heat Sink Wrapper	1
	4	287833	Heat Sink Cover	1
	5	284316-002	PC Board Metal Standoff	34
*	6	286246B	IPC PC Board Assembly	1
	7	286400A	Signal Conditioning PC Board Assembly	1
	192266-001	...Suppressor	1	1
	8	286443	SCB PC Board Support	1
	9	286528A	Input Step-Down Pwr Supply	1
	10	286367-001	Cntrl Logic Pwr Supply (V05YB3 # M30D1205-12TS)	1
	11	286482-001	Resistor, 50 W (V91637 #RH-50)	1
	12	404044-004	Overload Thermal Switch	1
	13	283196-003	SCR Thermal Pad (V0MR72 #AL-370-134)	6
	14	287825	IGBT DC Positive Bus Bar	1
*	402674-002	...Label, Positive	1	1
*	15	287826	IGBT DC Negative Bus Bar	1
	402674-001	...Negative Label	1	1
	16	286389-001	Capacitor, DC, 50 mFD	6
	17	403955-021	Semiconductor Suppressor (V24446 #V751HA40)	1
	18	287830	Bus Bar, SCR, Negative	1
	19	287831	Bus Bar, SCR, Positive	1
	20	286285-001	SCR Diode (V66844 #CD621615A)	6
	21	287824	AC Out Bus Bar	3
	22	407970	Static Sensitive Label	6
	23	285170	Suppressor	6
	24	283867-005	IGBT Transistor (V66844 #CM400HA-24H)	6
	25	283196-002	Thermal Transistor Pad (V0MR72 #AL-425-244)	6
	26	286144	Driver PC Board Assembly	1
	27	287353A	Modulator PC Board Assembly	1
	28	286533	Duct, Inlet Air	1
	29	286420	RH Input Filter Guide	1
	30	286274	Driver Board Support	1
	31	287843	Heat Sink Panel Angle	1
	32	77A1109	Label, "C"	1
*	33	77A1108	Label, "B"	1
*	34	77A1107	Label, "A"	1
*	35	286394	SCR Cable Barrier	2



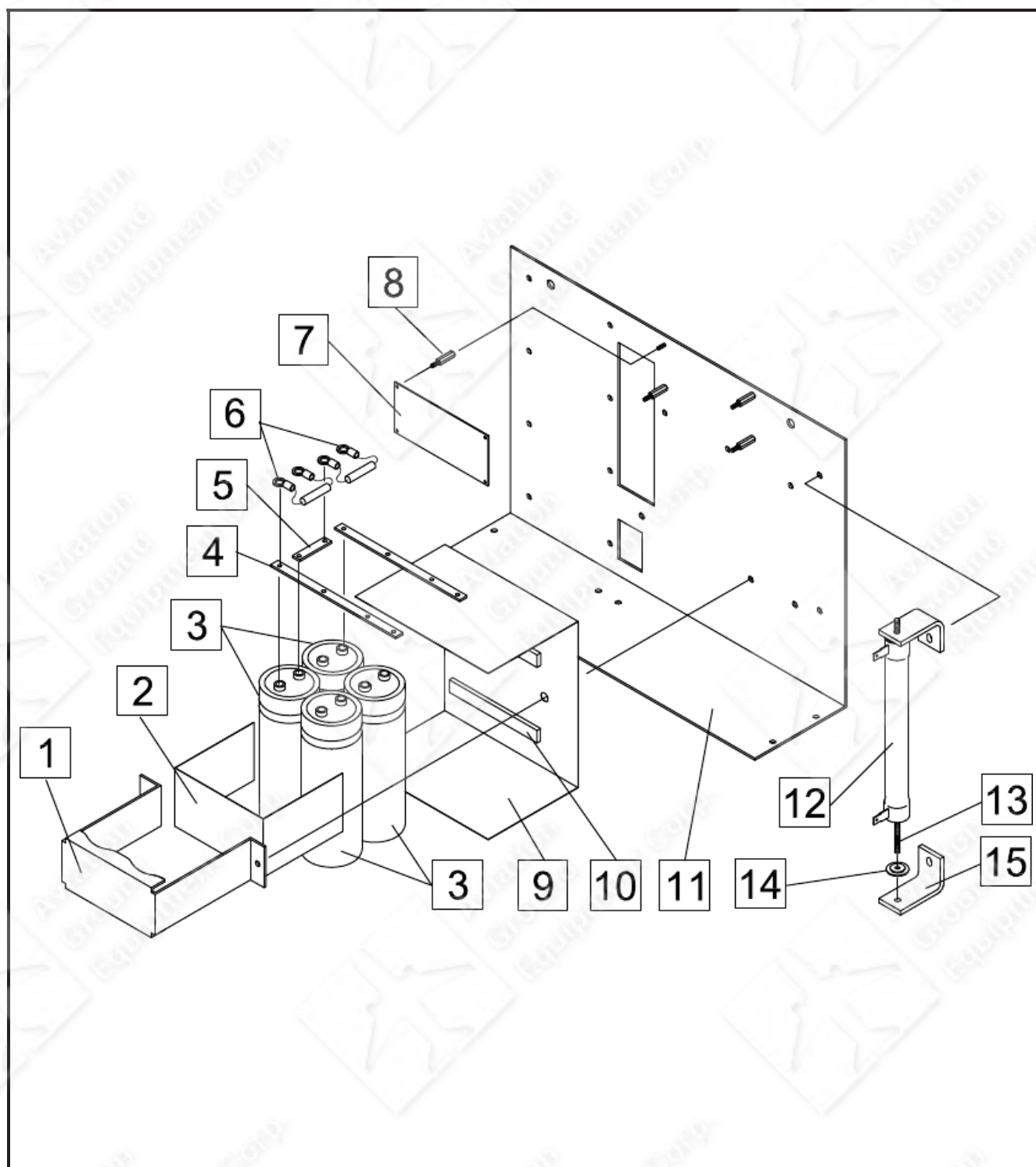
Rear Interior Components
Figure 5

FIGURE ITEM NO.	HOBART PART NO.	NOMENCLATURE	EFF	UNIT PER ASSY.
5 -	1	286480-001		1
*		281971-002	...Transformer Resistor Assembly, 90 kVA	D,E 1
*		281971-004	...Transformer Resistor Assembly, 60 kVA	C 1
*		281971-005	...Transformer Resistor Assembly, 45 kVA	A,B 1
*		286449	...Transformer Air Baffle	1
*		286438	...Transformer Stud	4
*		286316-001	...Universal Mount (V5P059 #60013)	4
	2		Fan Assembly Components (See Figure 6)	Ref.
	3	286492-001	3 Phase Air Core Inductor	1
	4	493712	Filter Reactor	2
		289751	...Insulator	2
	5		DC Electrolytic Capacitor Assembly (See Figure 7)	Ref.
	6		AC Capacitor Assembly (See Figure 8)	Ref.
	7	287847	Main Transformer Baffle	1
	8	286444	Rear Door Switch Support	1
	9	280673	Interlock Switch Door (V1W134 #SS12ET10-20Y3)	1
	10	283066-002	12 Station Terminal Block (V71400 #KUH12)	3
*		286380	...Label Terminal Block Connections	1
*		286382	...Label Terminal Block ID	1
*		286531-001	...Resistor Assembly	2
*		288974	...Capacitor Assembly	2
	11	286392-001	I/O PC Board Assembly	1
*		16DA4252-037	...Fuse, 1A, 250V, I/O Board	1
*		284316-002	...Metal Standoff	6
	12		Contactor Panel Assembly (See Figure 9)	Ref.
	13	285102-001	Current Transformer (V05HB5 #20130)	A,C,D 4
		285102-001	Current Transformer (V05HB5 #20130)	B,E 7



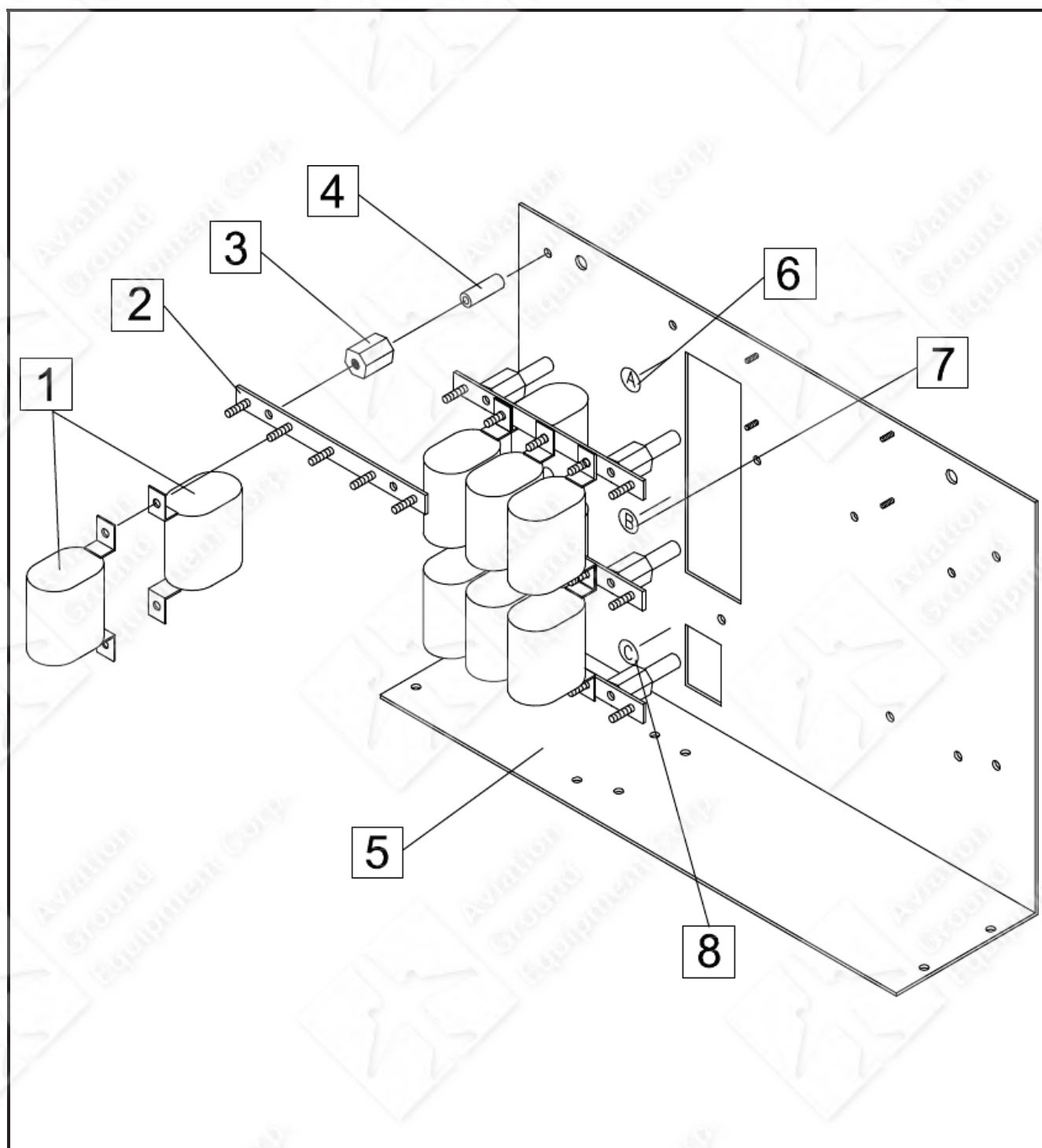
Fan Assembly Components
Figure 6

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



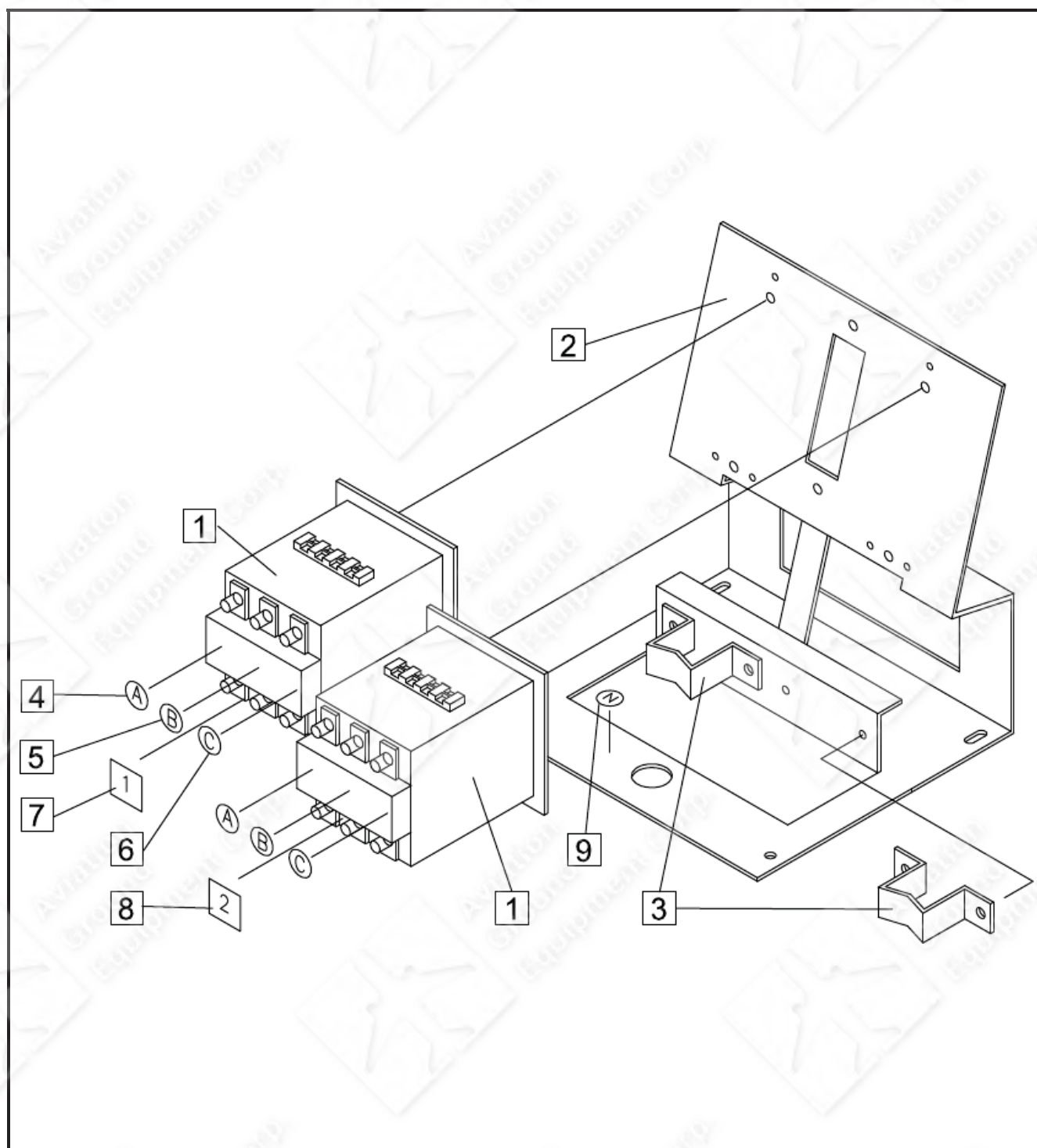
DC Electrolytic Capacitors Assembly
Figure 7

FIGURE ITEM NO.	HOBART PART NO.	NOMENCLATURE	EFF	UNIT PER ASSY.
7 -	1	286429		1
	2	286440-001		1
	3	281848-001		4
	4	286433		2
	5	286431		2
	6	281971-001		4
	7	286250A		1
	8	284316-002		4
	9	286434		1
	10	056210		1.5 ft.
	11	286534		1
	12	404249-003		1
	13	283387-002		1
	14	286489-001		2
	15	286468		2



AC Capacitor Assembly
Figure 8

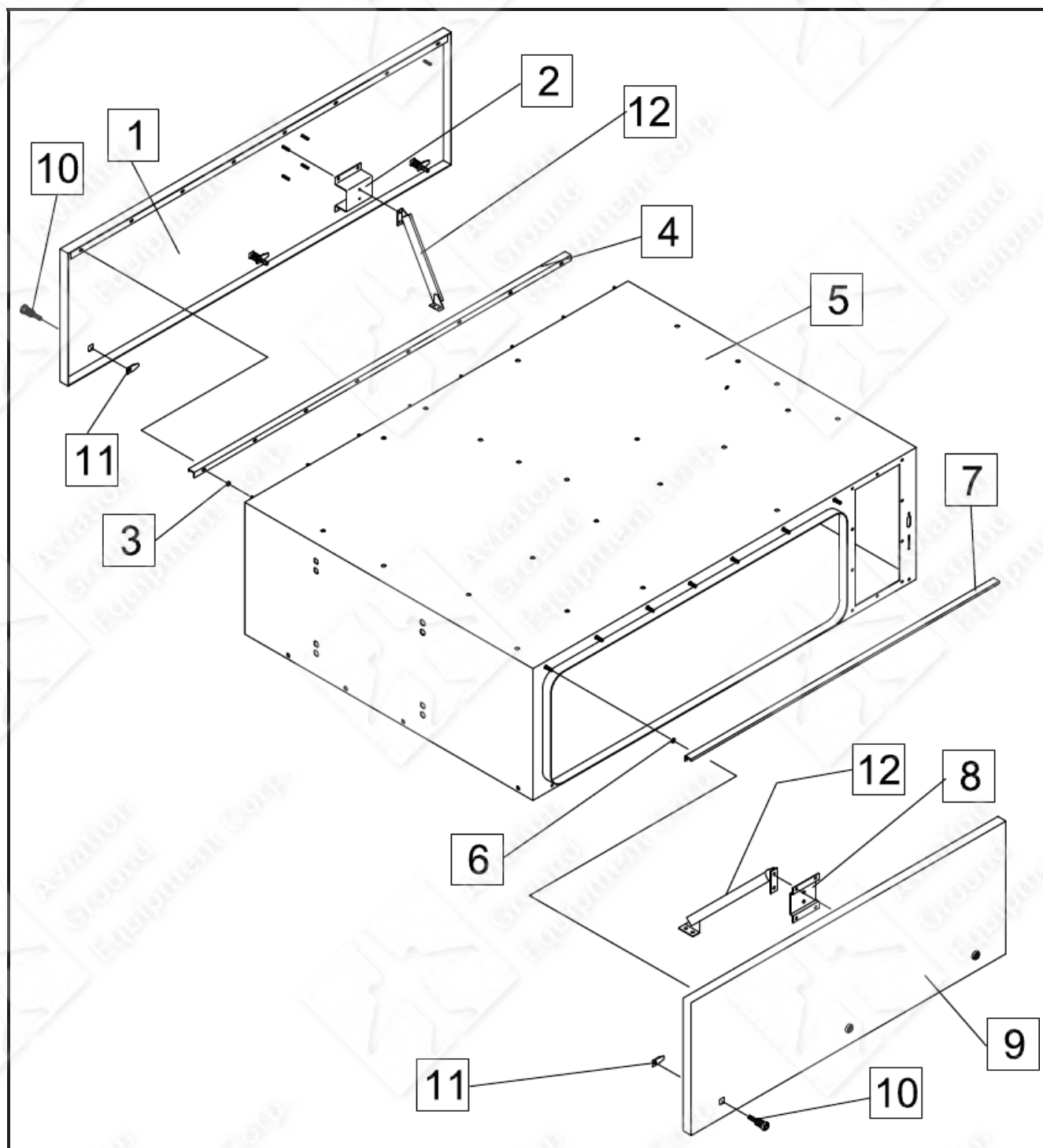
FIGURE ITEM NO.	HOBART PART NO.	NOMENCLATURE	EFF	UNIT PER ASSY.
8 -	1	286389-002	AC Capacitor	12
	2	286406	AC Capacitor Bus Bar	4
	3	404033	Standoff Insulator	8
	4	286386-001	Tubing Standoff Insulator	8
	5	286534	AC Capacitor Panel	1
	6	77A1107	Label "A"	1
	7	77A1108	Label "B"	1
	8	77A1109	Label "C"	1



Contactor Panel Assembly
Figure 9

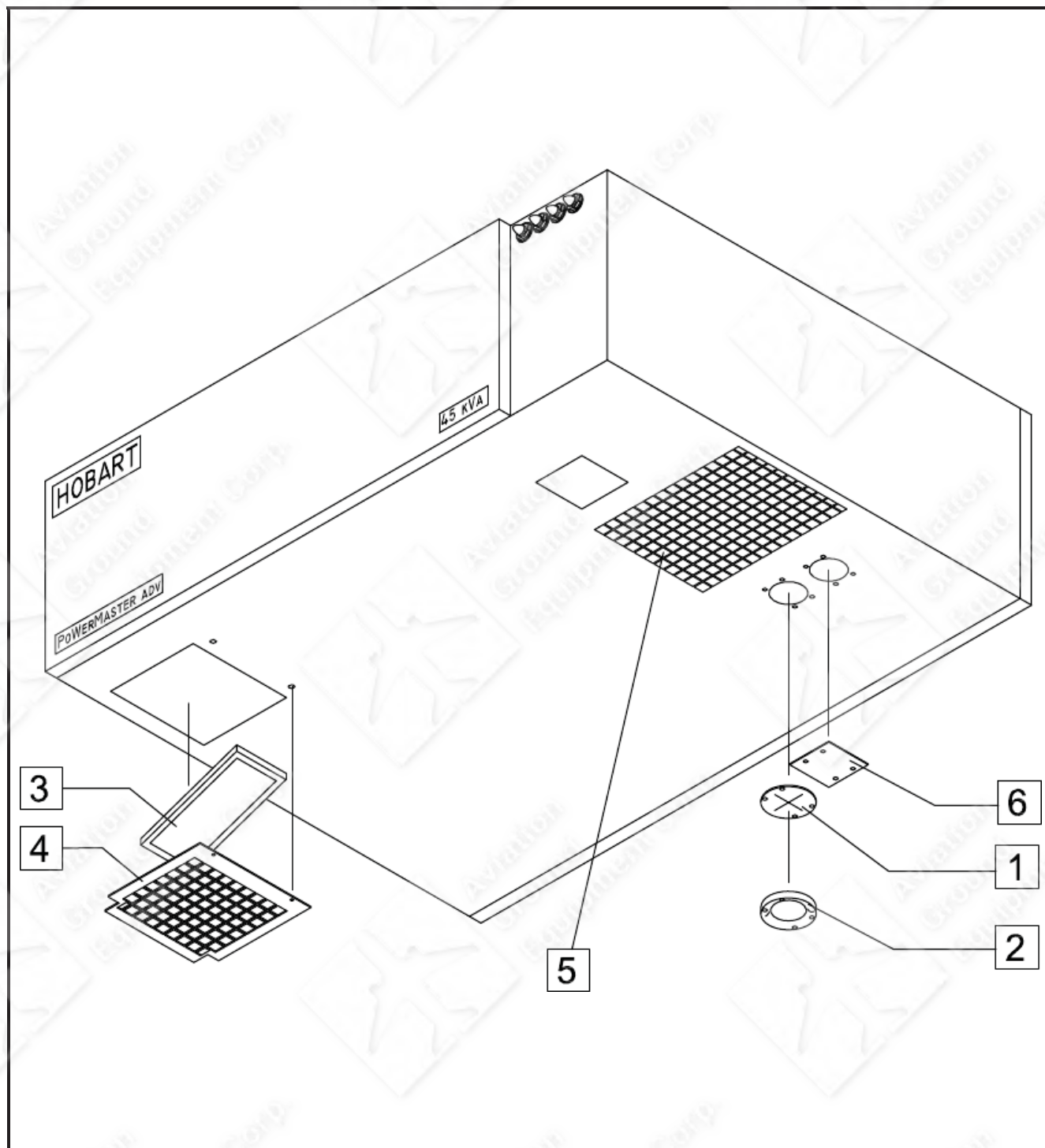
FIGURE ITEM NO.	HOBART PART NO.	NOMENCLATURE	EFF	UNIT PER ASSY.
9 -	1	282130-001 Contactor (V01XD4 #KT350E-1)	A,C,D	1
		282130-001 Contactor (V01XD4 #KT350E-1)	B,E	2
	2	286450 Output Panel Assembly		1
	3	284397 Strain Relief Clamp	A,C,D	1
		284397 Strain Relief Clamp	B,E	2
	3	284359 Strain Relief Clamp	A,C,D	1
		284359 Strain Relief Clamp	B,E	2
	4	77A1107 Label, "A"	A,C,D	1
		77A1107 Label, "A"	B,E	2
	5	77A1108 Label, "B"	A,C,D	1
		77A1108 Label, "B"	B,E	2
	6	77A1109 Label, "C"	A,C,D	1
		77A1109 Label, "C"	B,E	2
	7	402422-001 Label, "1"	B,E	1
	8	402422-002 Label, "2"	B,E	1
9	78A1035	Label, "N"		1

Note: Two clamps of different sizes are included for item 3. Use the size appropriate for your AC cable.



Canopy Components
Figure 10

FIGURE ITEM NO.	HOBART PART NO.	NOMENCLATURE	EFF	UNIT PER ASSY.
10 - 1	286518	Rear Door		1
	286485-001	...Door Seal		11 ft.
	286474-010	...Rear Parts Location Label		1
2	286515	Rear Door Stay Support		1
3	286279-001	Rear Door Hinge Spacer		8
4	286277	Rear Door Hinge		1
5	286519	Canopy Top		1
6	286279-001	Front Door Hinge Spacer		7
7	286278	Front Door Hinge		1
8	286498	Front Door Stay Support		1
9	286517	Front Door		1
	286485-001	...Door Seal		11 ft.
	286474-009	...Front Parts Location Label		1
10	287542-001	Door Latch (V94222 #E3-11-15)		6
*	288225	...Latch Gasket		6
11	287546-001	Latch Pawl (V94222 #E-28-203-12)		6
12	284606-001	Door Support (V1E045 #AE7/25621)		2
* 13	283691-001	Tool, Allen, 8 mm		Ref.



Bottom Panel Components
Figure 11

FIGURE ITEM NO.	HOBART PART NO.	NOMENCLATURE	EFF	UNIT PER ASSY.
11-	1	286469 Rubber Output Cover	A,C,D	1
		286469 Rubber Output Cover	B,E	2
	2	286478 Output Cable Guard	A,C,D	1
		286478 Output Cable Guard	B,E	2
	3	283159-003 Air Filter (V82866 #97129978)		1
	4	286455 Air Duct Inlet Cover		1
		283168-002 ...Captive Screw		2
		283171-002 ...Captive Screw Receptacle		2
		283172-001 ...Retainer		2
	5	287853 Air Output Grill		1
6	286479	Closed Output Hole Cover	A,C,D	1

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.
3-10	W10502-031	1-20	283716
7-10	056210	4-24	283867-005
5-	16DA4252-037	4-5	284316-002
3-15	181358	5-	284316-002
4-	192266-001	7-8	284316-002
3-19	280673	9-3	284359
5-9	280673	9-3	284397
3-1	280807	10-12	284606-001
7-3	281848-001	5-13	285102-001
3-11	281848-002	3-2	285104-001
6-7	281929-015	4-23	285170
7-6	281971-001	3-3	285315-001
5-	281971-002	3-17	285568
5-	281971-004	4-26	286144
5-	281971-005	4-6	286246B
9-1	282130-001	7-7	286250A
5-10	283066-002	4-2	286269
6-5	283155-003	4-30	286274
6-1	283156-003	10-4	286277
2-4	283157-003	10-7	286278
11-3	283159-003	10-3	286279-001
11-	283168-002	10-6	286279-001
11-	283171-002	4-20	286285-001
11-	283172-001	5-	286316-001
4-25	283196-002	2-2	286354
4-13	283196-003	4-10	286367-001
7-13	283387-002	2-3	286376
10-13	283691-001	1-19	286377
1-9	283714-002	5-	286380
1-9	283714-004	5-	286382
1-9	283714-005	8-4	286386-001

FIGURE ITEM NO.	HOBART PART NO.
4-16	286389-001
8-1	286389-002
5-11	286392-001
4-35	286394
1-4	286398-002
4-7	286400A
8-2	286406
1-3	286411
1-1	286416-001
4-29	286420
3-18	286423
7-1	286429
7-5	286431
7-4	286433
7-9	286434
5-	286438
7-2	286440-001
1-21	286441
1-22	286442
4-8	286443
5-8	286444
3-20	286445
3-13	286447
3-14	286448
5-	286449
9-2	286450
11-4	286455
1-10	286457
7-15	286468
11-1	286469
1-23	286474-009
10-	286474-009
1-24	286474-010
10-	286474-010
1-17	286475-001
1-18	286475-002
11-2	286478
11-6	286479
5-1	286480-001
4-11	286482-001
10-	286485-001

FIGURE ITEM NO.	HOBART PART NO.
6-	286486-001
7-14	286489-001
5-3	286492-001
10-8	286498
10-2	286515
10-9	286517
10-1	286518
10-5	286519
4-9	286528A
5-	286531-001
4-28	286533
7-11	286534
8-5	286534
2-1	286535
1-16	287341
4-27	287353A
1-25	287460
10-10	287542-001
10-11	287546-001
4-21	287824
4-14	287825
4-15	287826
4-18	287830
4-19	287831
4-4	287833
2-6	287836
3-22	287841
6-6	287842
4-31	287843
4-3	287844
6-4	287846
5-7	287847
2-5	287852
11-5	287853
3-16	287856
4-1	287857
10-	288225
1-27	288505
1-26	288510-001
1-28	288730
1-29	288918-002

FIGURE ITEM NO.	HOBART PART NO.
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5-	288974
5-	289751
3-4	291139
3-	291268-001
3-5	291269-002
1-	400613-004
6-	400792-001
6-2	401911-005
6-3	402037-006
9-7	402422-001
9-8	402422-002
4-	402674-001
4-	402674-002
3-12	402682
1-11	402987
4-17	403955-021
8-3	404033
4-12	404044-004
7-12	404249-003
3-9	404960-034
4-22	407970
5-4	493712
4-34	77A1107
8-6	77A1107
9-4	77A1107
4-33	77A1108
8-7	77A1108
9-5	77A1108
4-32	77A1109
8-8	77A1109
9-6	77A1109
9-9	78A1035
1-6	82B1066-001
1-5	82B1066-010
1-7	82B1066-012
1-8	82B1066-012
3-8	83A1112
3-7	83A1113
3-6	83A1114