

Chapter 4 Illustrated Parts List

Section 1 Introduction

1) General

The Illustrated Parts List identifies, describes, and illustrates main assemblies, subassemblies, and detail parts of an Engine-Generator Set manufactured by ITW GSE.

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 4 is arranged as follows:

Section 1 - Introduction
Section 2 - Parts List

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 also 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 number of the illustration applicable to a particular parts list and 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) FACTORY PART NUMBER Column

All part numbers appearing in this column are ITW GSE 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 ITW GSE,

will be identified as such in the “NOMENCLATURE” column. In case ITW GSE does not have an identifying part number for a purchased part, the “FACTORY PART NUMBER” column will reflect “No Number” and the vendor’s number will be shown in the “NOMENCLATURE” column. Parts manufactured by ITW GSE 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. ITW GSE 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. Since this manual covers more than one generator set specification, this column is used as follows:

Model Code	Part & Dash Number	Mounting	AC Outputs	28.5 VDC Output	Fuel Tank
A	ACE140CUTT3	Trailer	2	--	Stainless
B	ACE140CUST3	Fixed/Truck	2	--	Stainless
A	ACE140CU28TT3	Trailer	2	Yes	Stainless
B	ACE140CU28ST3	Fixed/Truck	2	Yes	Stainless

Parts with no model code in the EFF column are used on all models.

(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.

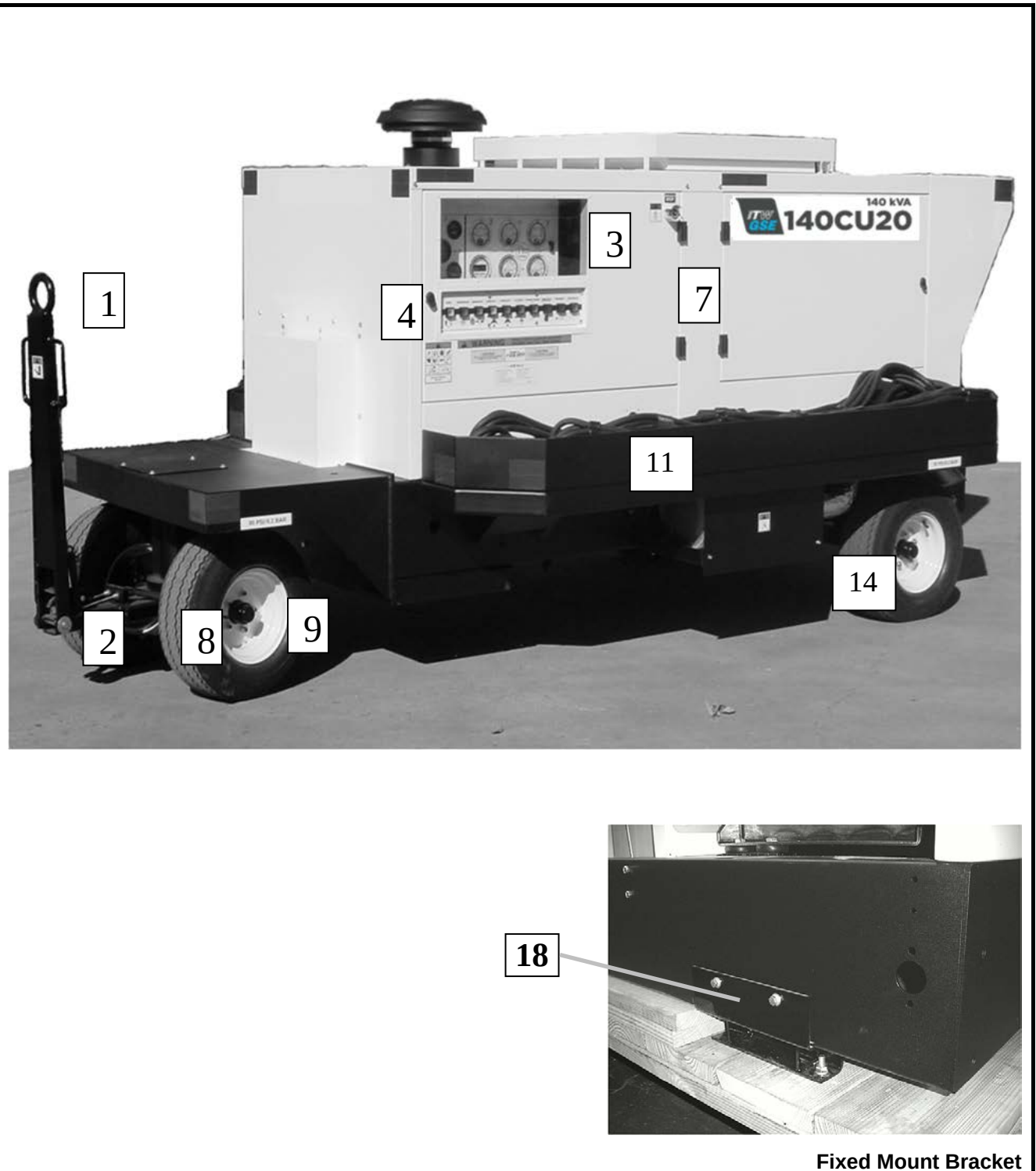


Figure 1 General Assembly

FIGURE ITEM NO.	ITW GSE PART NO.	NOMENCLATURE	EFF	UNITS PER ASSY.	
1-	1	286956	Draw Bar	A,	1
	2	282667	Bracket, 5 th Wheel Assembly	A,	1
		282727	...Plate, Cover, Pivot Arm	A,	1
*		280763	...Plate, Bearing	A,	1
*		408781-001	...Pin, Spring	A,	2
	3		Control Box Door (See Figure 7)		Ref.
	4	289012-002	Pushbutton Switches (See Figure 9)		Ref.
	5	285125	Guard, Mushroom Button (V14799 # K564M)		1
	6	77A1157	Switch, Maintained, Push-Pull (V14799 #KR-9R-H6)		1
	7		Canopy Assembly (See Figure 3)		Ref.
	8	289663	Axle with Brakes, Front	A,	1
	9	292197	Tire, 21.5" – Load = 2900 lbs @ 15 mph	A,	4
	10		Frame Assembly (See Figure 2)		Ref.
	11	288696	Tray, Cable, Left	A,	1
*		288695	...Cover, AC Cable	A,	1
*		288695	...Cover, AC Cable		2
	12	287376	Bumper, Side	A,	2
	13	287377	Support, Fender	A,	4
	14	289607	Axle, Rear	A,	1
*	15	288697	Tray, Cable, Right	A,	1
*		288698	...Cover, DC Cable	A,	1
*		288694	...Panel, Cable Guide	A,	1
*		288694	...Panel, Cable Guide		2
*	16	7J422-000	Clamp, Cable	A,B	4
			Clamp, Cable (when DC is supplied)	A,B	5
*	17	287491	Shield, Heat, Tray, Cable	A,	1
	18	287892	Mount, Stationary	A,B	4
*	19	100GH121	Bracket, Mounting, Cable Clamp	A,B	2
			Bracket, Mounting, Cable Clamp	A,B	3

Models A , are trailer-mount.
Models B , are fixed/truck mount.

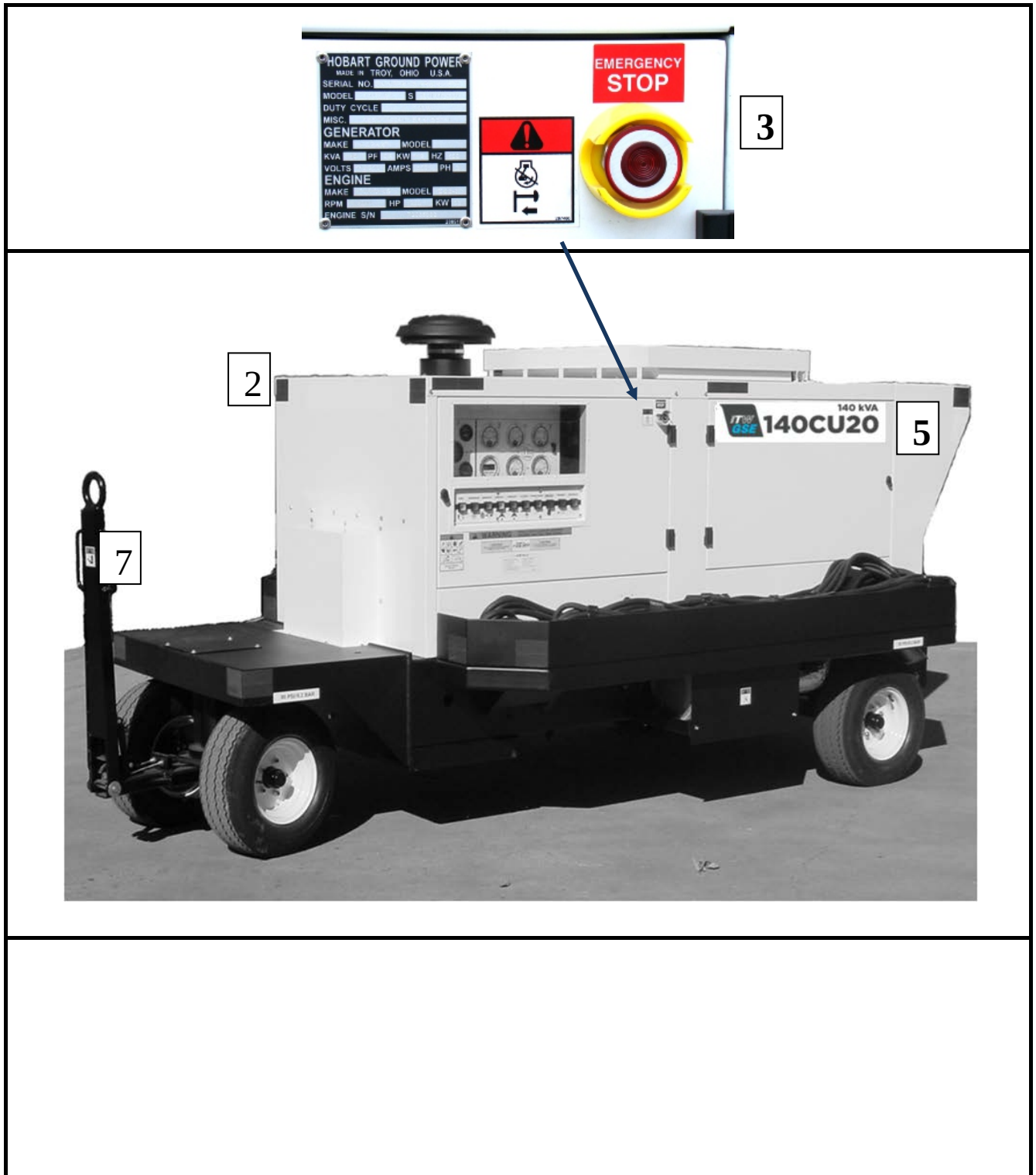
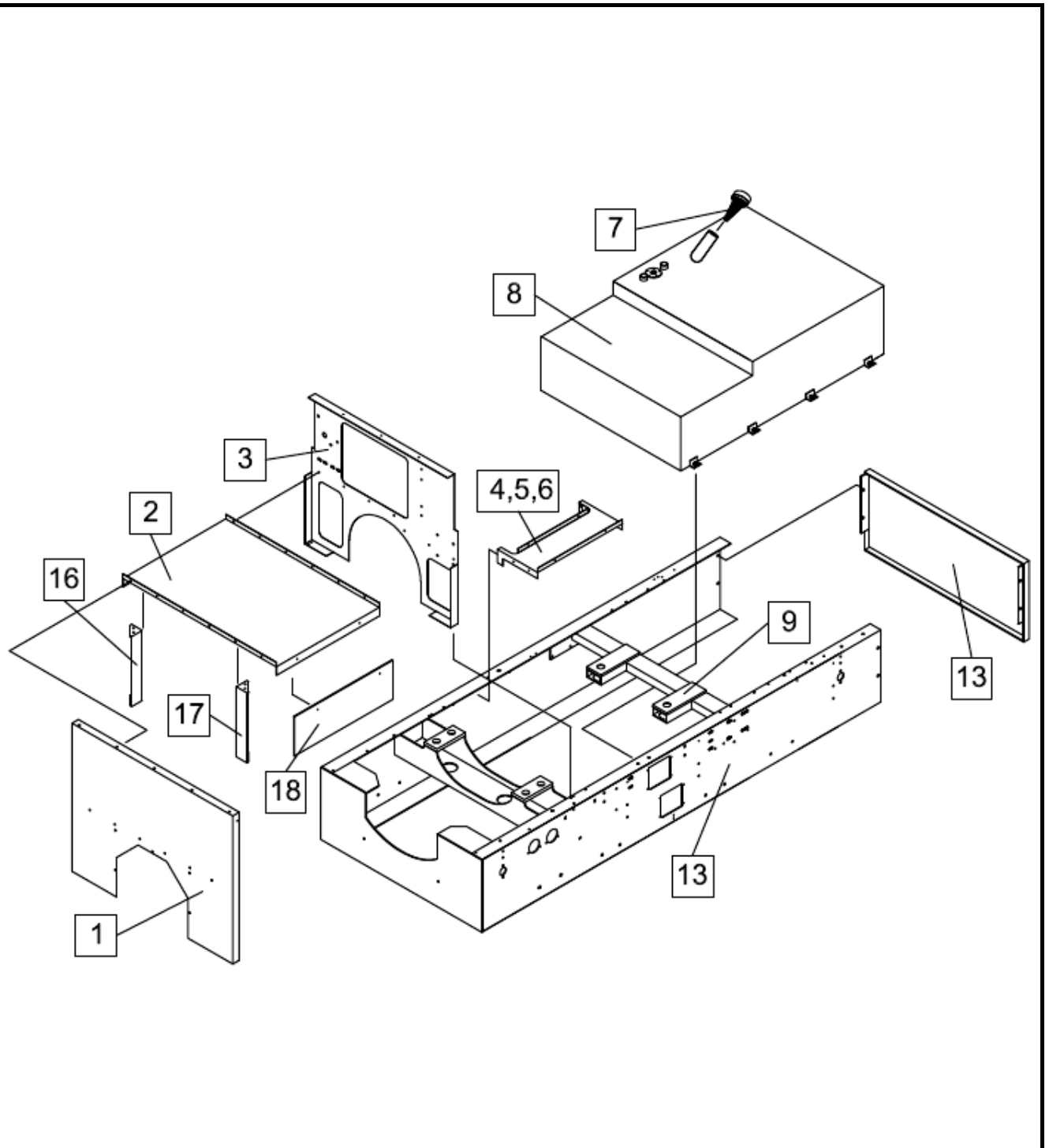


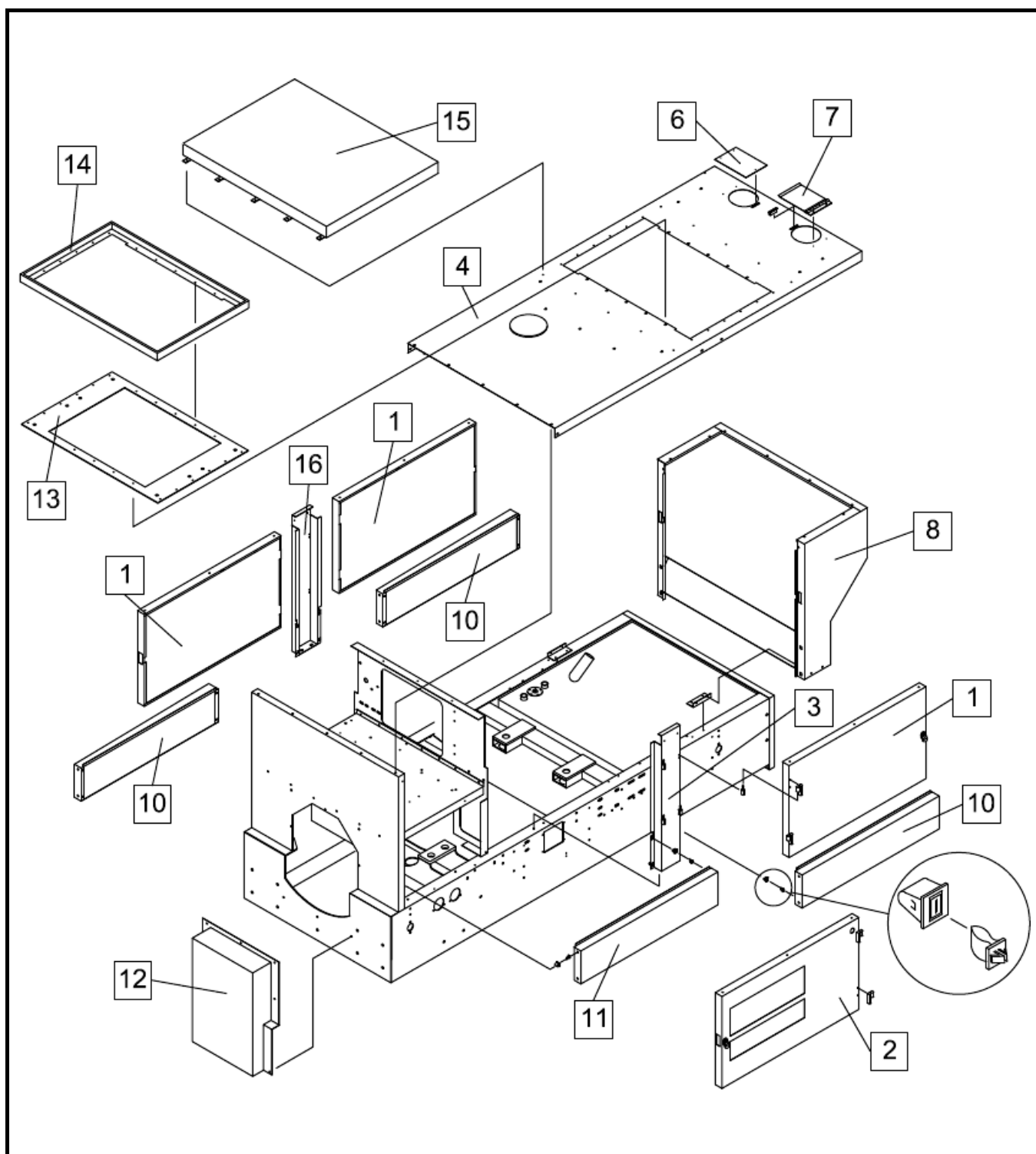
Figure 2 Labels and Reflectors

FIGURE ITEM NO.	ITW GSE PART NO.	NOMENCLATURE	EFF	UNITS PER ASSY.
2-	1	408665		20
	2	408665-002		32
	3	287466		1
	4	288300		1
	5	292279-001		3
*	6	292067		2



Frame Assembly
Figure 3

FIGURE ITEM NO.	ITW GSE PART NO.	NOMENCLATURE	EFF	UNITS PER ASSY.
3 -	1	288879	Panel, Front Canopy	1
	2	288691A	Support, Control Box	1
	3	288835A	Panel, Bulkhead, Center	1
	4	289224	Tray, Battery	1
	5	289223-001	Battery Tray, Bracket, Right Hand	1
*	6	289223-002	Battery Tray, Bracket, Left Hand	1
		289239	...Pad, Battery Tray	1
	7	282562	Cap, Fuel (V49234 #1275/0003)	1
	8		Tank, Fuel (see Figure 13)	Ref.
	9	289557	Support, Engine, Front (see also Figure 17)	1
*		480603-001	...Mount, Shock, Engine	1
*	10	290081	Panel, Bottom, Bellypan	1
*	11	289693	Cover, Bottom, Baffle	1
*	12	289690	Baffle, Bottom, Bellypan	1
	13	289479	Frame, Mounting	1
	14	289465	Frame, Mounting, Plate	1
	15	287506	Cover, Frame, Exhaust	2
	16	288692	Leg, Control Box Support, Left	1
	17	288693	Leg, Control Box Support, Right	1
	18	288882	Cover, Power Module	1



Canopy Assembly
Figure 4

FIGURE ITEM NO.	ITW GSE PART NO.	NOMENCLATURE	EFF	UNITS PER ASSY.
4 -	1	287701 Door, Assembly (see Figure 5)		3
*		292120-001 Insulation, Door, Left/Right Rear		2
*		292120-006 Insulation, Door, Right Front		1
	2	288880 Door, Control Box (see Figure 5)		1
*		292120-002 Insulation, Door, Left Front		1
	3	288544 Panel, Support Door		1
*		292120-003 Insulation, Support Door Panel		1
	4	289286 Top, Canopy Assembly		1
*	5	289287 Frame, Mount, CAC		1
	6	288919 Cover, Radiator Hole		
	7	283647 Door, Radiator Access		1
*		403127 ...Catch, Magnetic (V94222 #02-10-201-10)		1
	8	289672 Kit, Plenum, Reduction, Noise		Ref.
		289669 Plenum, Reduction, Noise		1
*		287805 ...Deflector, Radiator, Left		1
*		287806 ...Deflector, Radiator, Right		1
*		287793 ...Bracket, Mounting Plenum		2
*		287794 ...Door, Access, Fuel, Cap		1
*		403127 ...Catch, Magnetic		1
*	9	287800 Screen, Plenum		1
	10	287703 Panel, Side, RF, RR, LR		3
*		292120-003 Insulation, Side Panel, RF, RR, LR		3
		287785 ...Fastener, Panel, Access (VA5733 #7800-00 & #263-000006-00-0017)		12
	11	288878 Panel, Side, Left Front		1
*		292120-005 Insulation, Side Panel, LF		1
		403091-008 ...Plug, Hole, Plastic, 1.75		1
		287785 ...Fastener, Panel, Access (VA5733 #7800-00 & #263-000006-00-0017)		4
	12	290082 Cover, Opening, Front Canopy	B,D	1
*		289563 Cover, Opening, Front Canopy	A,C	1
	13	289480 Rubber, Mat		1
	14	289290 Hood, Bottom		1
	15	289568 Hood, Top		1
	16	291704 Panel, Support, Door, MD (see figure 15)		1
*		292120-003 Insulation, Support Door Panel		1

Models A are trailer-mount.
Models B are fixed/truck mount.

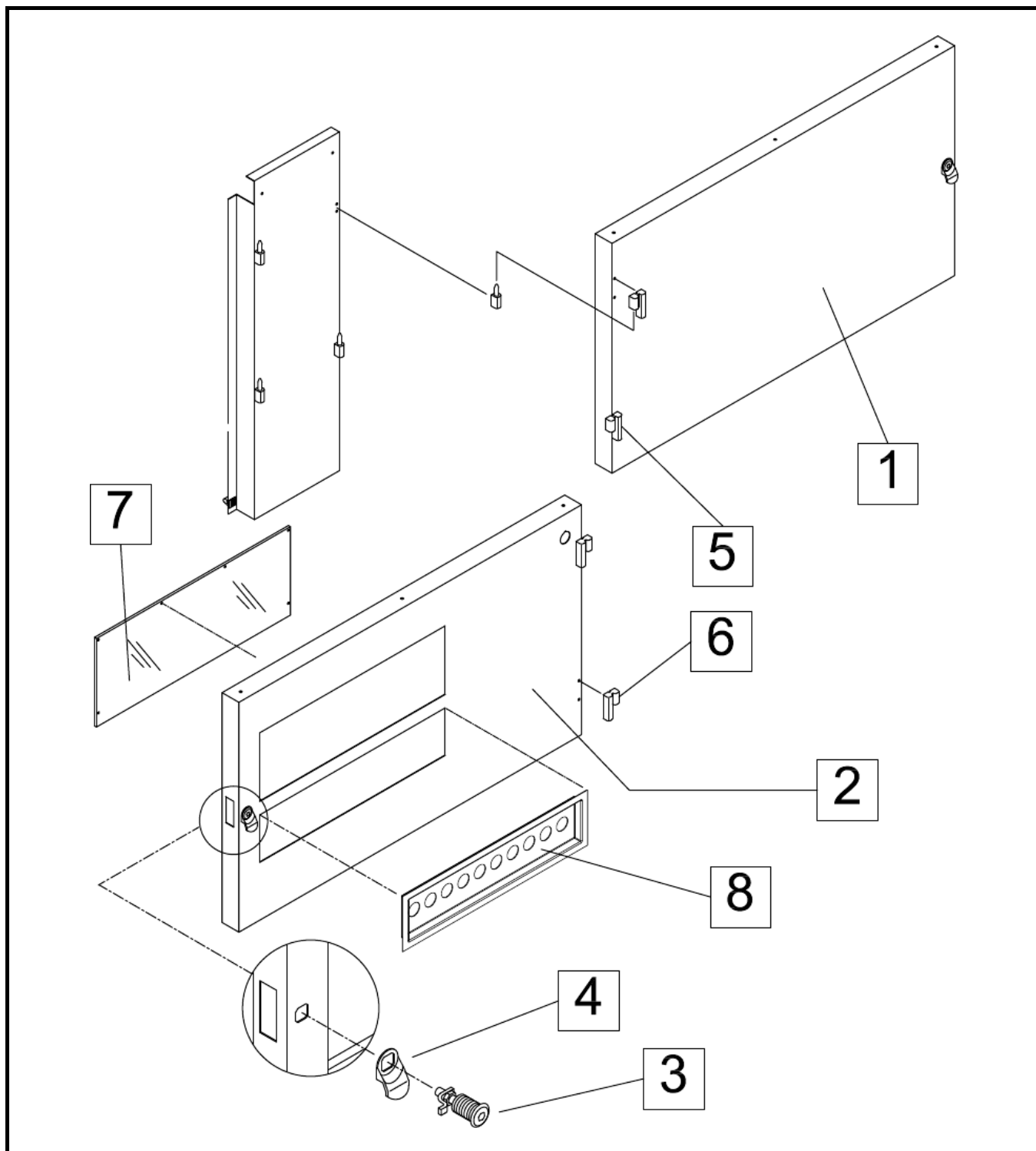


Figure 5 Canopy Doors

FIGURE ITEM NO.	ITW GSE PART NO.	NOMENCLATURE	EFF	UNITS PER ASSY.
5 -	1	287701 Door, Assembly		3
	2	288880 Door, Control Box		1
	3	287542-001 Latch, Door (V94222 #E3-16-15)		4
	4	287526-002 Tab, Pull, Door Latch (V94222 #E3-27-1)		4
	5	283824 Hinge, RH Access Door (V94222 #96-10-520-50)		4
	6	283597 Hinge, LH Access Door (V94222 #96-10-510-50)		4
	7	288881 Window, Control Side Door		1
	8	291679 Guard, Button		1
*	291681	...Channel, Bottom, Button Guard		1
*	291682	...Channel, Left, Button Guard		1
*	291683	...Channel, Right, Button Guard		1
*	291684	...Shim, Button Guard		1

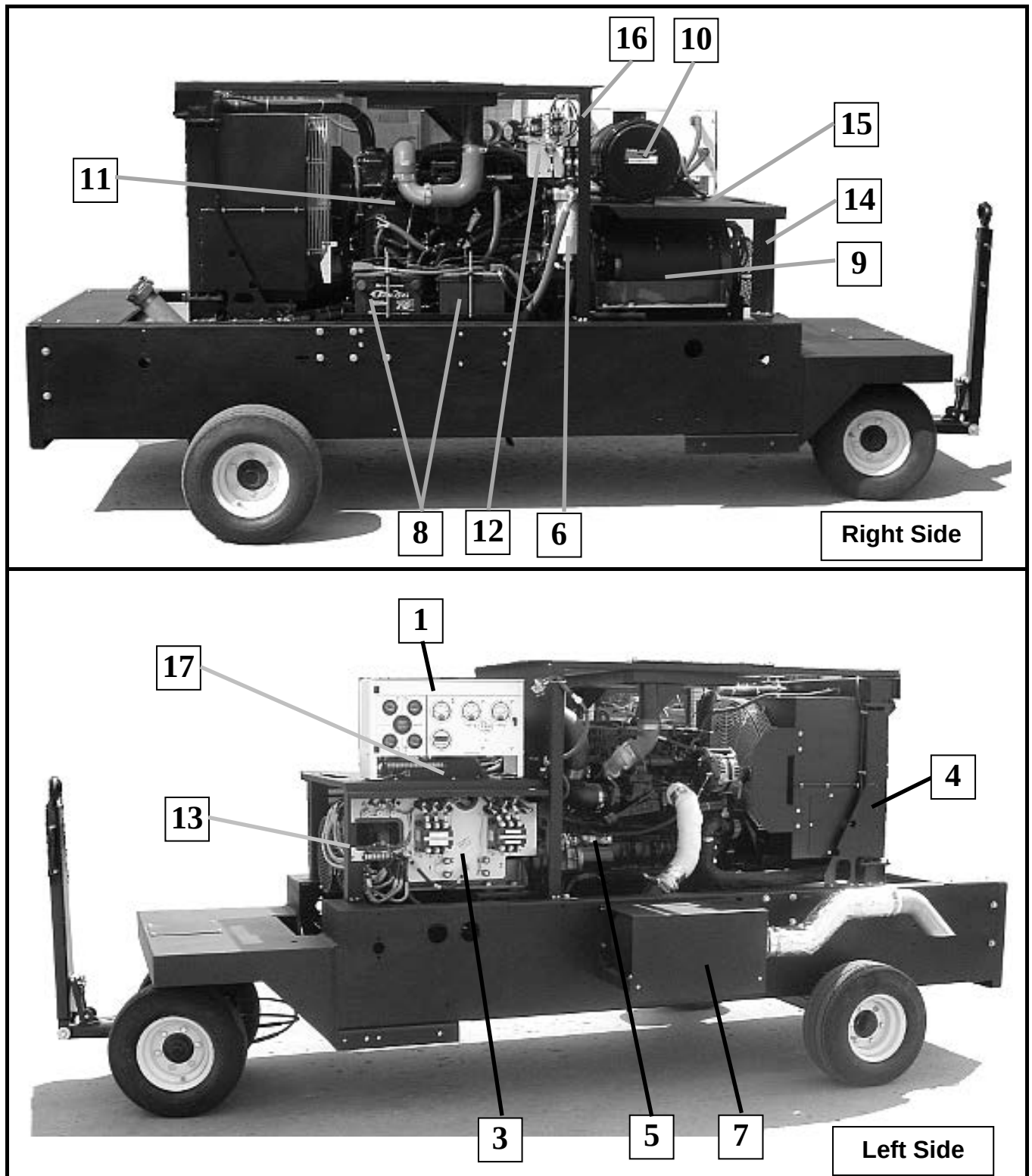


Figure 6 Internal Components

FIGURE ITEM NO.	ITW GSE PART NO.	NOMENCLATURE	EFF	UNITS PER ASSY.
6 -		Left Side		
1		Control Box Assembly (See Figures 7 & 8)		Ref.
*	289593-001	...Mount, Rubber (V5P059 #51225)		4
2		Control Switch Panel Assembly (See Figure 9)		Ref.
3	291626-002	400 Hz. Power Module Components (See Figure 10)		Ref.
*	288882	...Cover, Power Module		1
4		Cooling System Components (See Figure 11)		Ref.
5		Engine Ground Plate and Cables (See Figure 12)		Ref.
6		Fuel System Components (See Figure 13)		Ref.
7		Engine Exhaust Components (See Figure 14)		Ref.
		Right Side		
8		12 VDC Battery Components (See Figure 15)		Ref.
9	288460-001	Generator Assembly (See Figure 19)		Ref.
10		Air Cleaner Components (See Figure 16)		Ref.
11	291700	Engine, Cummins, QSB6.7, 240 HP (See Figure 17)		1
12		Engine Electronic Panel Components (See Figure 18)		Ref.
		Miscellaneous		
13	288692	Leg, Control Box Support, Left		1
14	288693	Leg, Control Box Support, Right		1
15	288691A	Support, Control, Box		1
16	288835A	Panel, Bulkhead, Center		1
17	288895	Support, Option Terminal Block		1

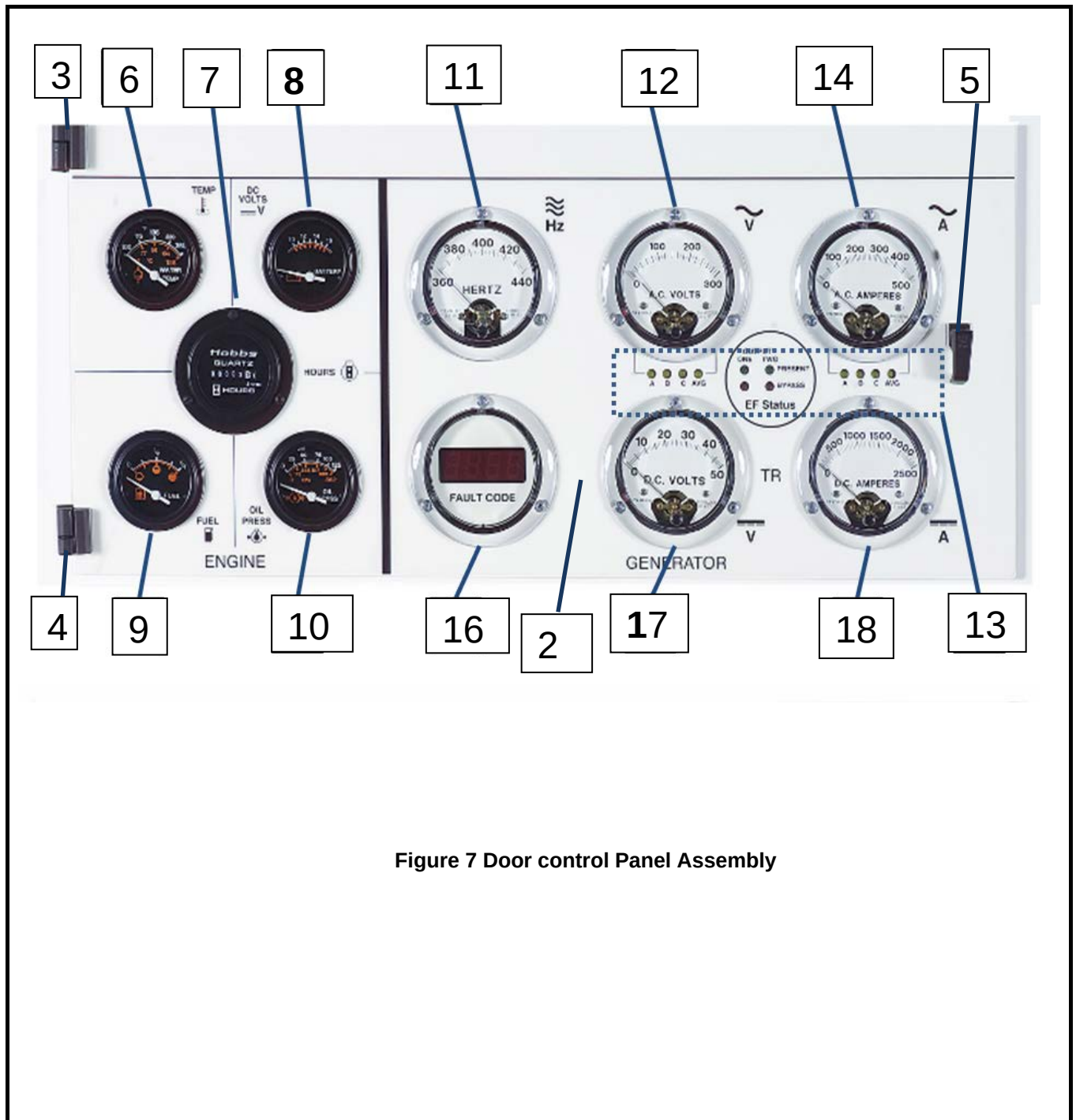
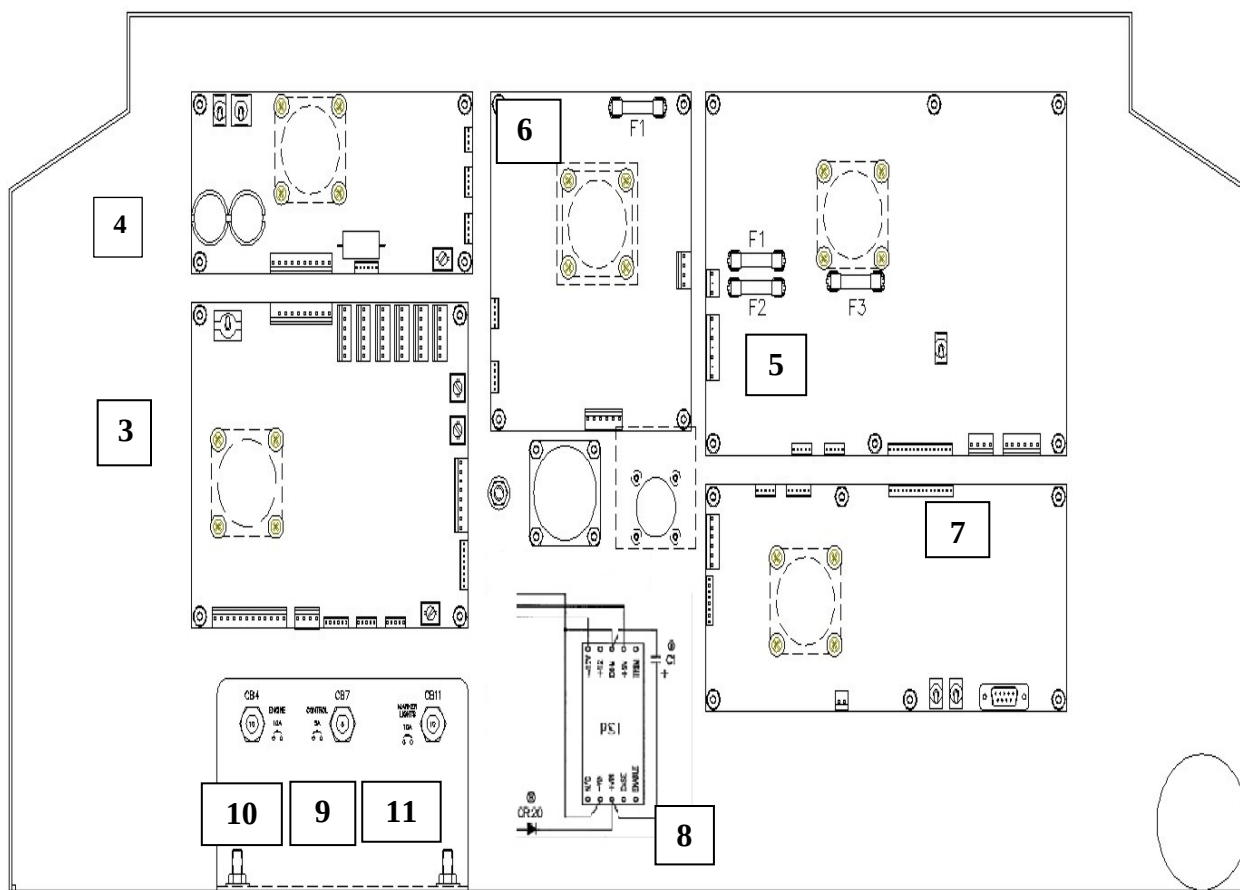


Figure 7 Door control Panel Assembly

FIGURE ITEM NO.	ITW GSE PART NO.	NOMENCLATURE	EFF	UNITS PER ASSY.
7 -	289018-002	Door, Control Panel, Assembly [No T-R]		1
	289018-004	Door, Control Panel, Assembly [With T-R]		1
	1 288995	Panel, Door, Control Box		1
	2 289017	Label, Control Box		1
	3 288836-002	Hinge, Offset, Bottom (V94222 # 96-142 Type B)		1
	4 288836-001	Hinge, Offset Top (V94222 # 96-141 Type A)		1
	5 288999-001	Latch, Control Box (V94222 #62-20-25)		1
	6 287908	Gauge, Water Temperature (V16476 #06347-01)		1
	7 181358	Meter, Running Time (6H359 #85101)		1
	8 286699-001	Voltmeter, Battery (V16476 #06351-01)		1
	9 494134-001	Gauge, Fuel Level (V16476 #06339-01)		1
	10 78A1117-002	Gauge, Oil Pressure (V16476 # 06395-01)		1
	11 283167	Meter, Frequency (V74542 #D-1255119311)		1
	12 W8105A-009	Voltmeter, AC (V74542 #D-1497222103)		1
	13 288806	Board, P.C., Front Panel, Led		1
	288820	...Gasket, LED PC Board		1
	14 288814-001	Ammeter, AC (V74542#D-1497322103)		1
*	15 285172	Light, Strip (not shown)		3
		Light, Strip (not shown)		5
	16 288858-004	Meter, Fault, Digital		1
	17 400642-008	Voltmeter, DC [See TR Manual]		1
	18 400641-015	Ammeter, DC [See TR Manual]		1



1. Control Box Wrapper
3. Engine Interface PC Board [EIB] (A2)
4. Engine Specific PC Board [ESB] (A1)
5. Voltage Regulator PC Board [REG] (A4)
6. Transformer-Rectifier PC Board [TRB] (A404)
{Optional}
7. Digital Control PC Board [CTL] (A3)
8. +5, -12 VDC Power Supply (PS1)
9. Marker Lights Circuit Breaker, 10 A (CB1)
10. Engine Circuit Breaker, 10 A (CB4)
11. Controls Circuit Breaker, 5 A (CB7)

Figure 8: Control Box Interior Components

FIGURE ITEM NO.	ITW GSE PART NO.	NOMENCLATURE	EFF	UNITS PER ASSY.
8 -	289019-001	Control Box Assembly – no DC	A,B	1
	289019-002	Control Box Assembly – with DC	C,D	1
1	288994	Side, Left, Control Box		1
2	288993	Side, Right, Control Box		1
3	288992	Wrapper, Control Box		1
4	288745	Board, PC, ESB		1
*	288813	...Label, ESB [Engine Control]		1
5	288937	Board, PC, EIB		1
*	288791	...Label, EIB [Starter Control]		1
6	288940B	Board, PC, Regulator		1
*	288876	...Label, Regulator [Generator Control]		1
	288896	...Label, Regulator [LDC & Voltage Control]		1
	W11166-009	...Fuse, 1 A, 250 V (V2B664)		2
	W11166-002	...Fuse, 5 A, 250 V (V2B664)		1
7	289026	Board, PC, Digital Controls		1
*	288875	...Label, Control [EF Bypass Control]		1
8	286367-001	Power Supply (V05YB3 # M30D1205-12TS)		1
	288605	...Support, Power Supply		1
9	289059	Support, Circuit Breakers		1
	289060	...Label, Circuit Breaker		1
	289061	...Insulator, Circuit Breaker		1
10	283978-002	Circuit Breaker, 10A (V77342 #W23-X1A16-10)		2
11	283978-001	Circuit Breaker, 5A (V77342 #W23-X1A16-5)		1
*	12	289073	Harness, Wire, Control Box Assembly	1
*	13	289072	Harness, Wire, DC [See TR Manual]	1
14	288914B	Board, PC, T-R [See TR Manual]		1
	W11166-009	...Fuse, 1 A, 250 V (V2B664)		1
*	15	286611	Label, Blank	1

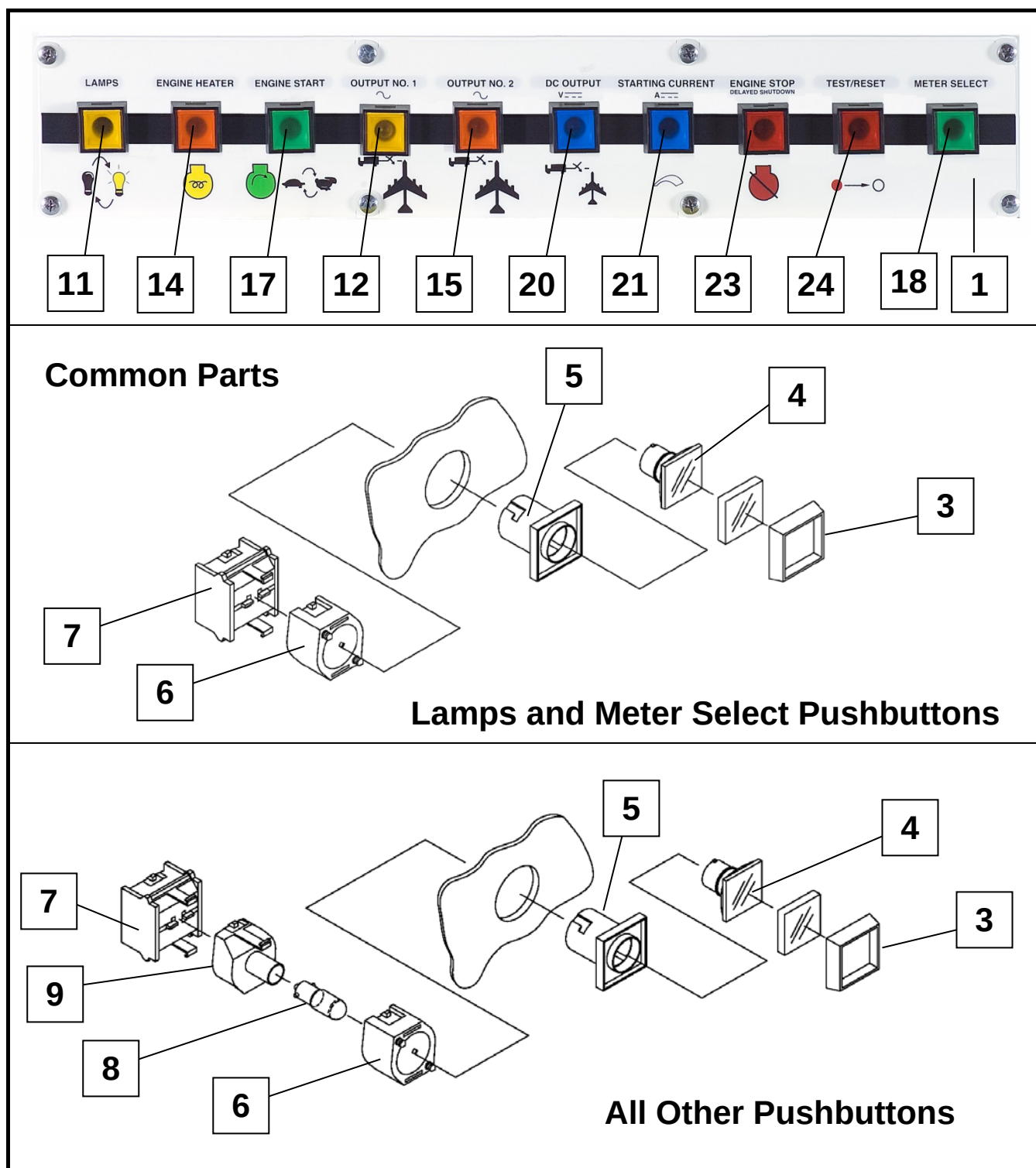


Figure 9 Push-button Switches

FIGURE ITEM NO.	PART NO.	DESCRIPTION	EFF	UNITS PER ASSY.
9 -	289012-002	Push-button Switch Box		1
	289012-004	Push-button Switch Box		1
1	289004	Panel, Switch Box		1
	289014	...Switch Panel Label		1
*	040201	...Strip, Gasket, Neoprene		66 in.
*	2	289015	Switch Panel Wire Harness	1
		Common Push-button Parts		
	3	285029-001	Bezel Frame(V61706 #704-701.0)	1
	4	285031-001	Lens Holder(V61706 #704-709.7)	1
	5	285032-001	Sleeve Actuator (V61706 #704-731.0)	1
	6	285033	Mounting Flange(V61706 #704-950.5)	1
	7	284475-001	Switch, Contact Block (V61706 #704-900.3)	1
	8	400613-004	Type 1815 Bulb (V02929)	1
	9	285034-001	Lamp Holder (V61706 #704-950.0)	1
*	10	290080	Contact Block Cover	1
	11	289601-001	Lamps Push-button	1
	12	289601-004	Output # 1 Push-button	1
	13	285030-002	Yellow Lens (V61706 #704-702.4)	1
	14	289601-005	Pre-heater Push-button	1
	15	289601-005	Output # 2 Push-button	1
	16	285030-004	Orange Lens (V61706 #704-702.3)	1
	17	289601-006	Engine Start Push-button	1
	18	289601-006	Meter Select Push-button	1
	19	285030-003	Green Lens (V61706 #704-702.5)	1
	20	289601-007	DC Output Push-button	1
	21	289601-007	Current Push-button	1
	22	285030-005	Blue Lens (V61706 #704-702.6)	1
	23	289601-003	Engine Stop Push-button	1
	24	289601-003	Test/Reset Push-button	1
	25	285030-001	Red Lens (V61706 #704-702.2)	1
		Other Parts		
	26	287038-001	Plug, Hole (when switch is not installed)	1
	27	288773	Panel, Switch Box	1
*	28	288772	Wrapper, Switch Box	1
*	29	288771	Top, Switch Box	2
*	30	289266-001	Connector, 90 Degrees, Conduit	1

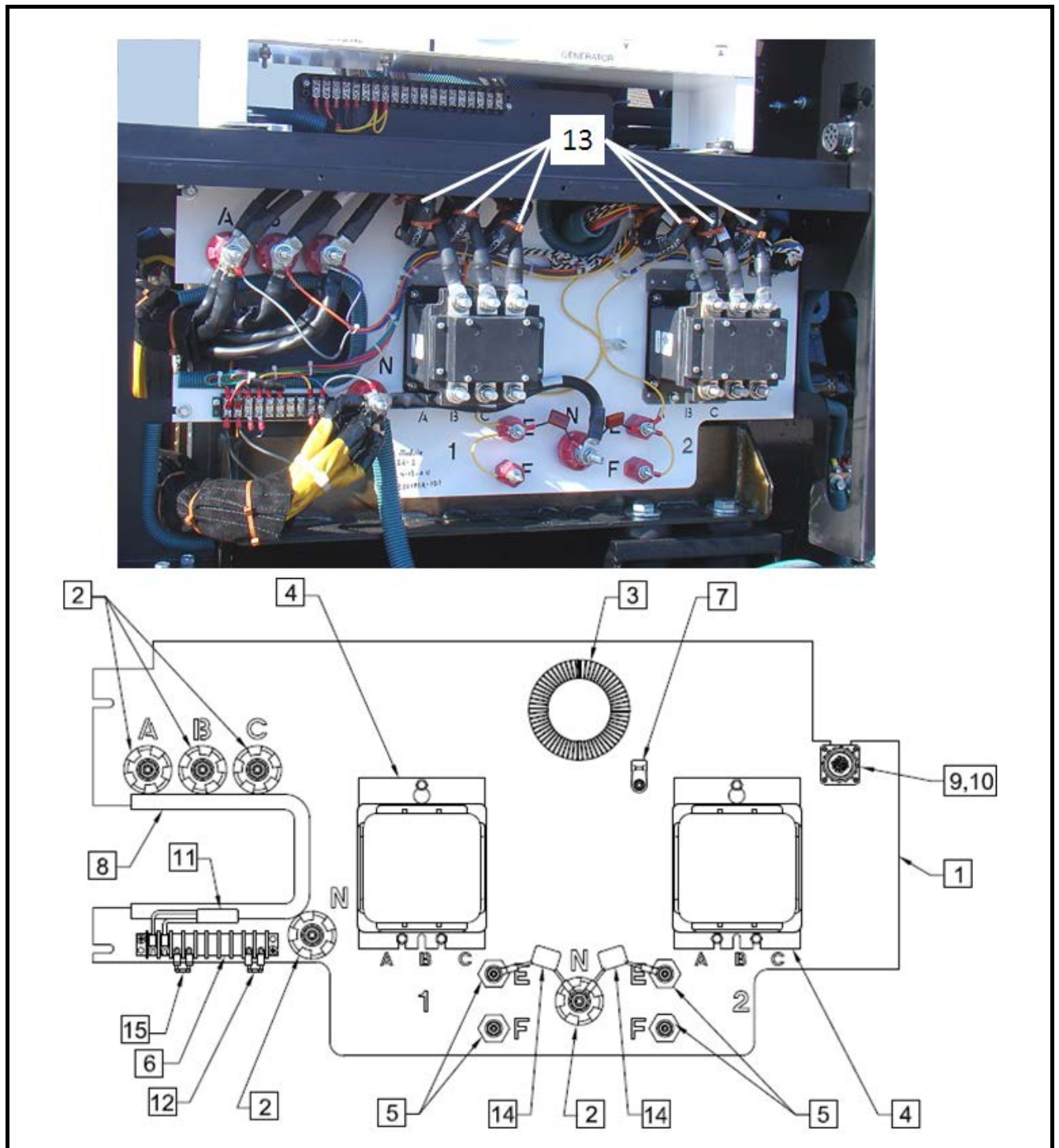


Figure 10 400 Hz. Power Module Assembly

FIGURE ITEM NO.	ITW GSE PART NO.	NOMENCLATURE	EFF	UNITS PER ASSY.
10 -	291626-002	Power Panel Module Assembly		Ref.
1	291625	Panel, Power Module		1
2	283154-001	Standoff, 3/8-16		5
3	76A1131	Tubing, Z-flex, 1/2		0.79 ft
4	282130-001	Contactor, Line, 3-Pole		2
5	286266	Standoff, Short [E-F]		4
6	401911-010	Block, Terminal		1
7	288078-001	Tie, Screw Mount		1
8	050988	Trim, .12, Black, Alum, Vinyl (PVC)		18 in.
9	288829	Harness, Wire, Power Module		1
		...(No. 101) "A" Stator Terminal to "K1", # 1 Output		1
		...(No. 102) "B" Stator Terminal to "K1", # 1 Output		1
		...(No. 103) "C" Stator Terminal to "K1", # 1 Output		1
		...(No. 110) "N" Stator Terminal to "N", Neutral		1
10	288832	Harness, Wire, 2nd Output		1
		...(No. 104) "A" Stator Terminal to "K201", # 2 Output		1
		...(No. 105) "B" Stator Terminal to "K201", # 2 Output		1
		...(No. 106) "C" Stator Terminal to "K201", # 2 Output		1
11	282089-011	Diode, Fly back, Assembly		1
12	288892-001	Resistor Assembly, ID, Power Module		1
13	285102-001	Current, Instrument Transformer (V05HB5 # 20130)		6
14	290227	Capacitor, Noise Suppression		2
15	288892-006	Resistor, ID, 140 KVA		1

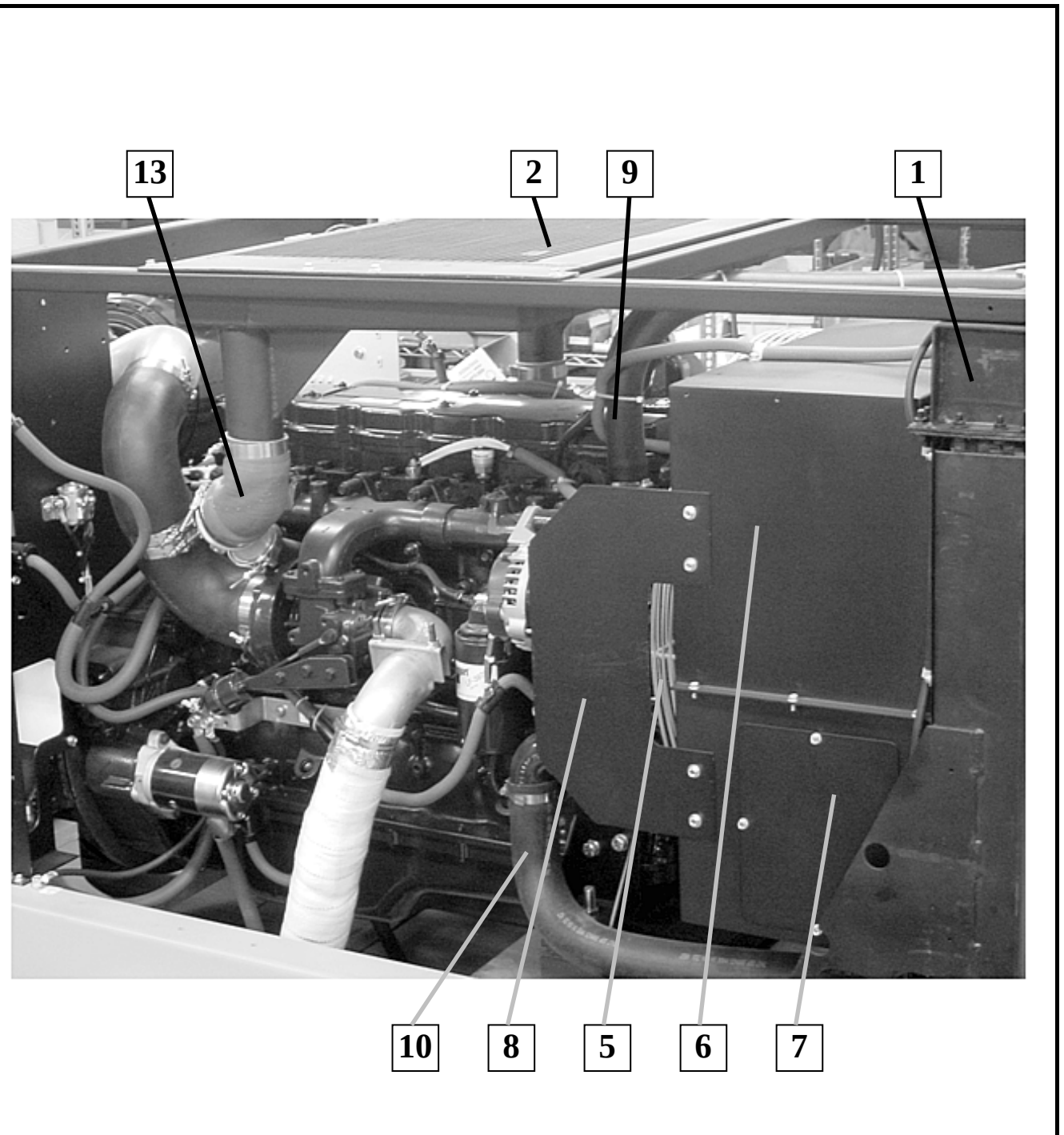


Figure 11 Cooling System Components

FIGURE ITEM NO.	ITW GSE PART NO.	NOMENCLATURE	EFF	UNITS PER ASSY.
11 -	289890	Radiator/Charge-Air-Cooler Assembly		Ref.
1	288240	...Radiator Assembly (V0HZP9)		1
2	289814	...Charge-Air-Cooler Assembly		1
*	3	290145	Sensor, Coolant Level	1
*	4	289844	Fan, Cooling, 26"	1
5	289559	Guard, Spiral, Fan		1
6	289560	Shroud, Fan, Top		1
7	289561	Shroud, Fan, Bottom		1
8	288328	Guard, Fan Belt & Pulley		1
9	287659	Hose, Radiator, Upper (V24161)		1
	W10869-003	...Clamp, Hose (1 ⁹ / ₁₆ " – 2 ¹ / ₂ ")		2
10	288309	Hose, Radiator, Lower (V24161)		1
	W10869-005	...Clamp, Hose (2 ⁵ / ₁₆ " – 3 ¹ / ₄ ")		2
*	11	Line, De-Aeration		Ref.
	288123-001	...Connector, Male, 1/4 NPT, 1/4 Tube		2
	056534	...Hose, 1/4", ID		40"
	W10051-007	...Clamp, Hose (⁷ / ₃₂ " – ⁵ / ₈ ")		2
*	12	283873	Valve, Drain, Radiator	2
	056535	...Hose, 3/8" ID, Low Pressure		60"
	W10051-007	...Clamp, Hose (⁷ / ₃₂ " – ⁵ / ₈ ")		2
13	289830	Hose, Reducer, 3.50" to 3.00", 55° Elbow		1
*	290597-001	...Clamp, T-Bolt, Floating Bridge		1
*	290597-002	...Clamp, T-Bolt, Floating Bridge		1
*	14	289542	Pipe, Elbow, CAC Intake	1
*	15	289827	Hose, 3.00" 4 Ply Silicone, 90 ° Elbow	1
*	290597-001	...Clamp, T-Bolt, Floating Bridge		2
*	16	289828	Hose, 3.00" 4 Ply Silicone, 90 ° Elbow	1
*	290597-001	...Clamp, T-Bolt, Floating Bridge		2

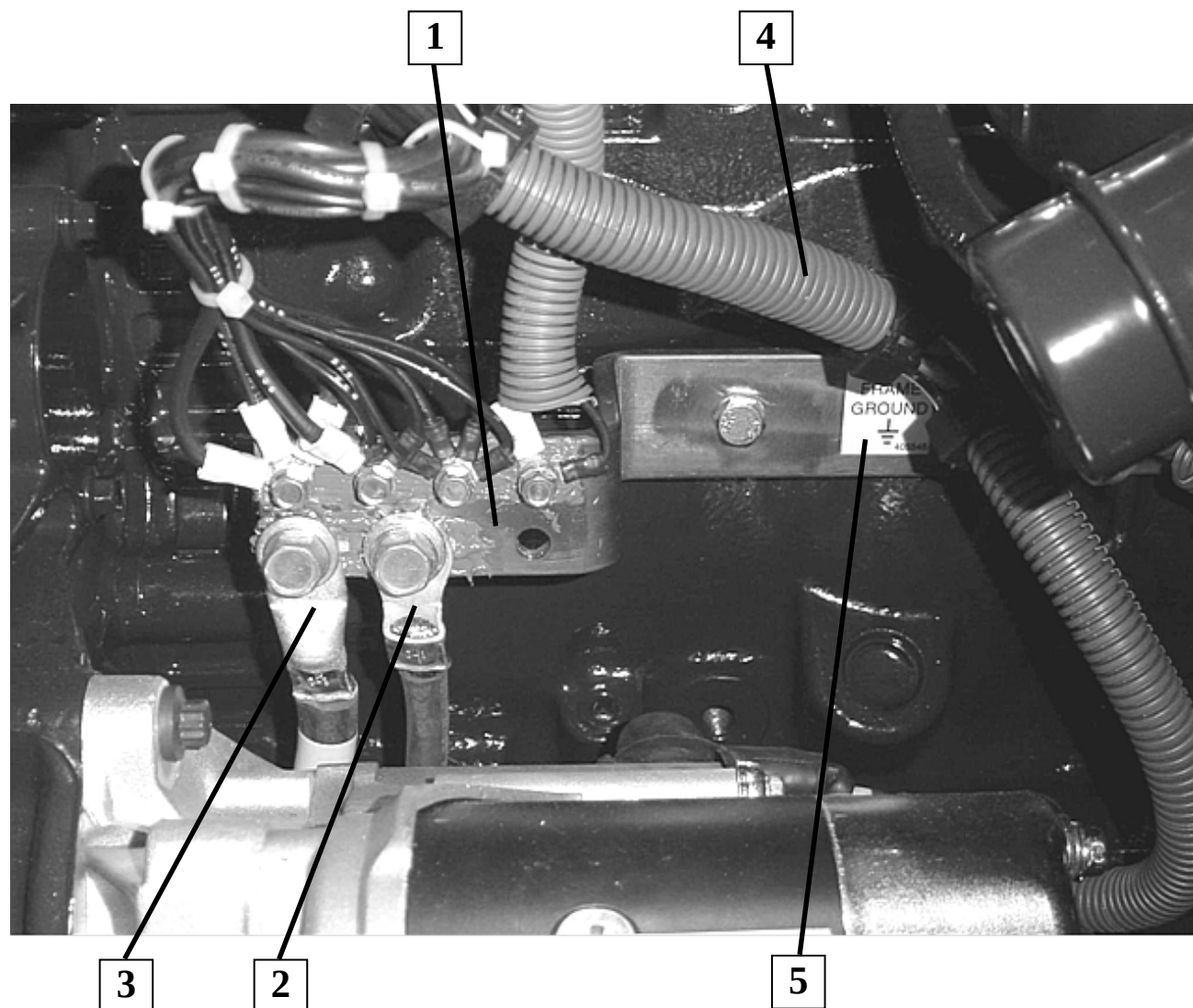


Figure 12 Engine Ground Plate and Cables

FIGURE ITEM NO.	ITW GSE PART NO.	NOMENCLATURE	EFF	UNITS PER ASSY.
12 -	1	288723		1
	2	W9407-446		1
	3	W9360-289		1
	4	291686		1
	5	405548		1
		Plate, Ground		
		Cable, Engine to Ground		
		Cable, #111, Power Mod. To Ground		
		Wire Harness, Engine		
		Label, Frame Ground		

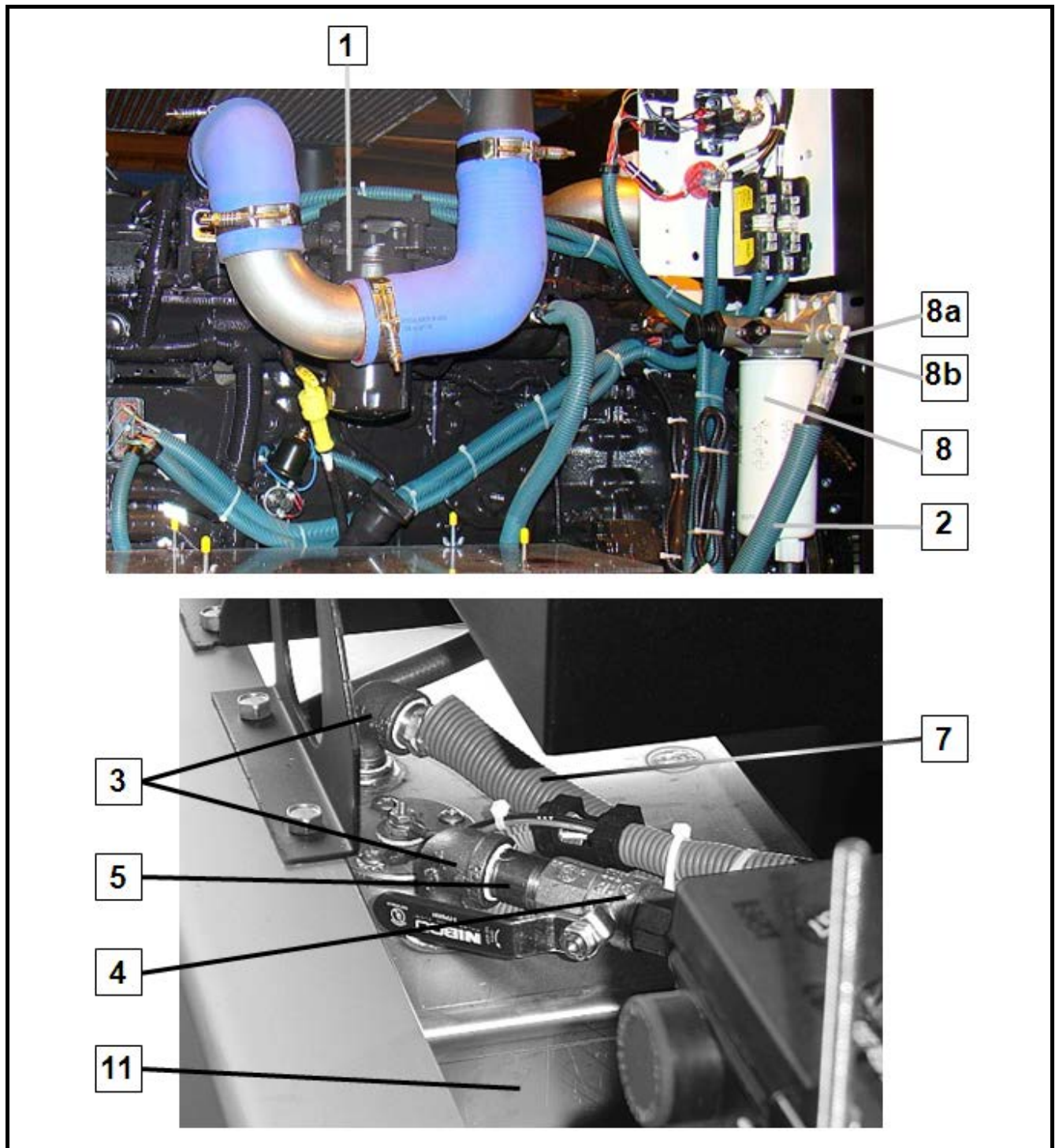


Figure 13 Fuel System Components

FIGURE ITEM NO.	ITW GSE PART NO.	NOMENCLATURE	EFF	UNITS PER ASSY.
13 -	1	286897-030	Filter, Fuel [Supplied by Cummins]	1
	2	287804	Line, Fuel, Tank to Filter	1
		76A1132	...Tubing, Z-Flex, 3/4" ID	58"
	3	12CW2077-003	Elbow, 1/2" NPT, ST., 90°	2
	4	400819-003	Valve, Ball, 1/2" NPT	1
*	5	W10760-003	Nipple, Pipe, 1/2"	1
	6		Line, Fuel, Filter to Pump [Supplied by Cummins]	1
	7	291258	Line, Fuel, Return	1
		76A1132	...Tubing, Z-Flex, 3/4" ID	72"
	8	286897-031	Filter, Lubricity Fuel	1
8a	290388	...Adapter, 12mm x 3/8 MJIC		1
	8b	290389	...Tube, Reducer JIC	1
	9		Lubricity Filter Fuel Lines [Supplied by Cummins]	1
	10	282562	Cap, Fuel Neck (V49234 #1275G/12T)	1
	11	289477	Tank, Fuel, 125 Gallon (Stainless Steel)	1
		486718-010	...Sender, Fuel Gauge	Ref.

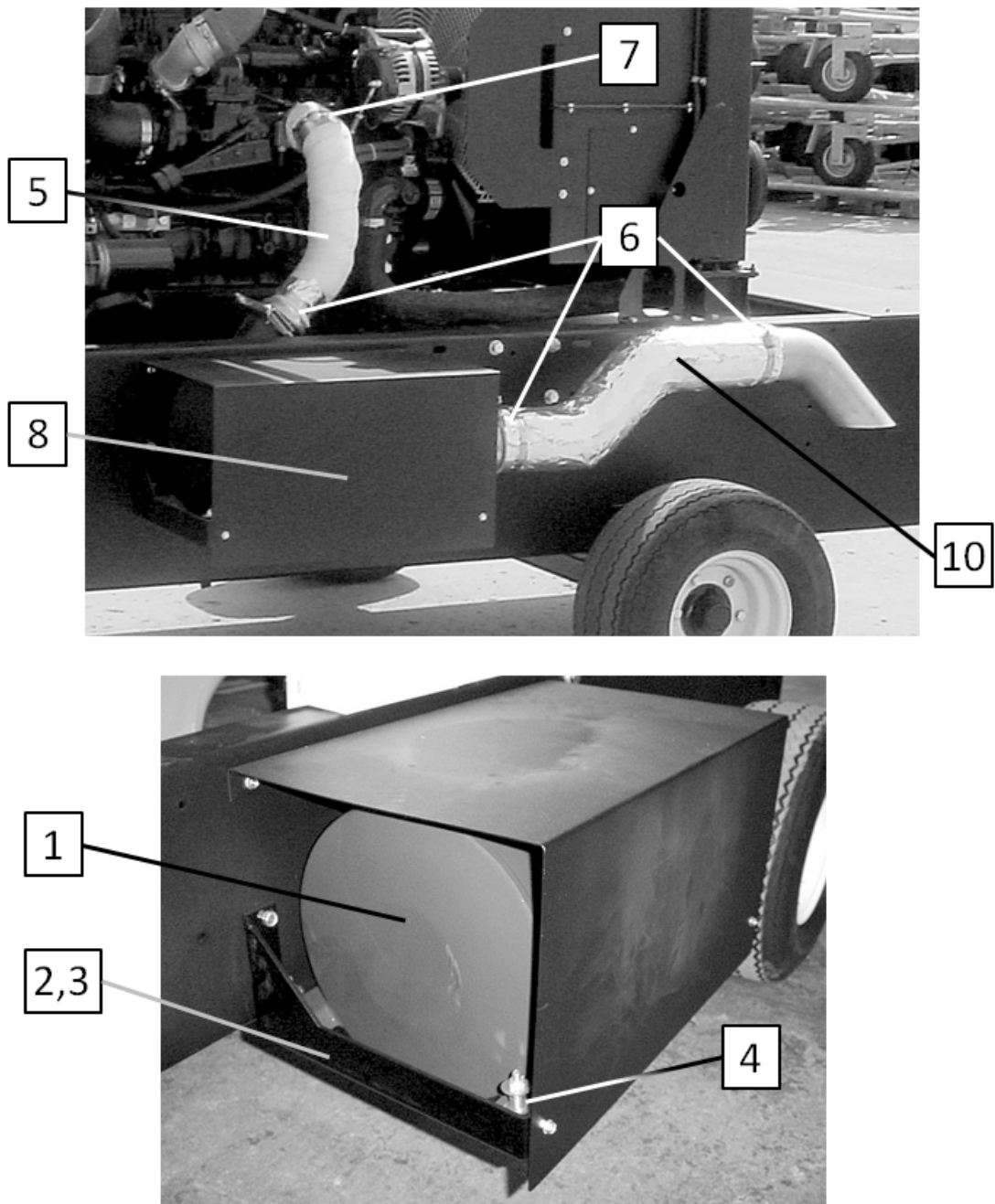


Figure 14 Engine Exhaust Components

FIGURE ITEM NO.	ITW GSE PART NO.	NOMENCLATURE	EFF	UNITS PER ASSY.
14 -	1	287405		1
	2	287431		1
		287431		2
	3	287432		1
	4	287691		8
	5	288311		1
	6	404154-016		4
	7	404154-013		1
	8	287406		1
*		287644		1
*		287647		1
*	9	287645		1
	10	291260		1
*		287643		1

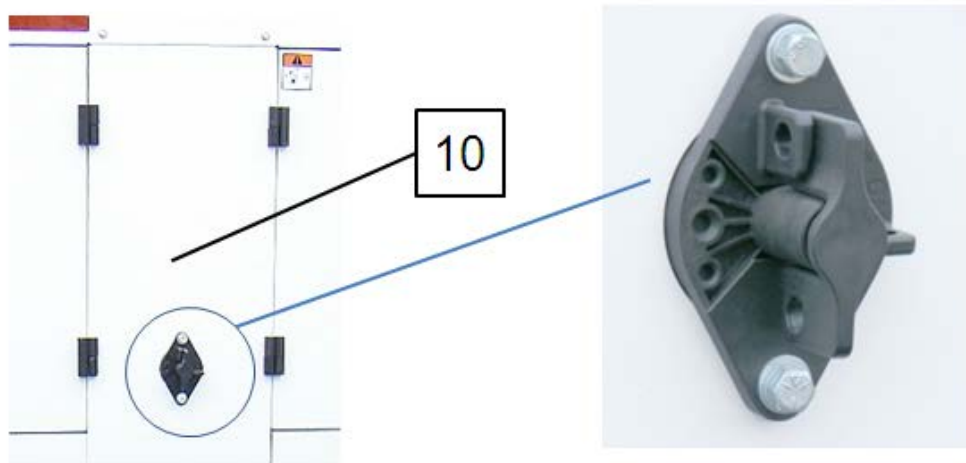
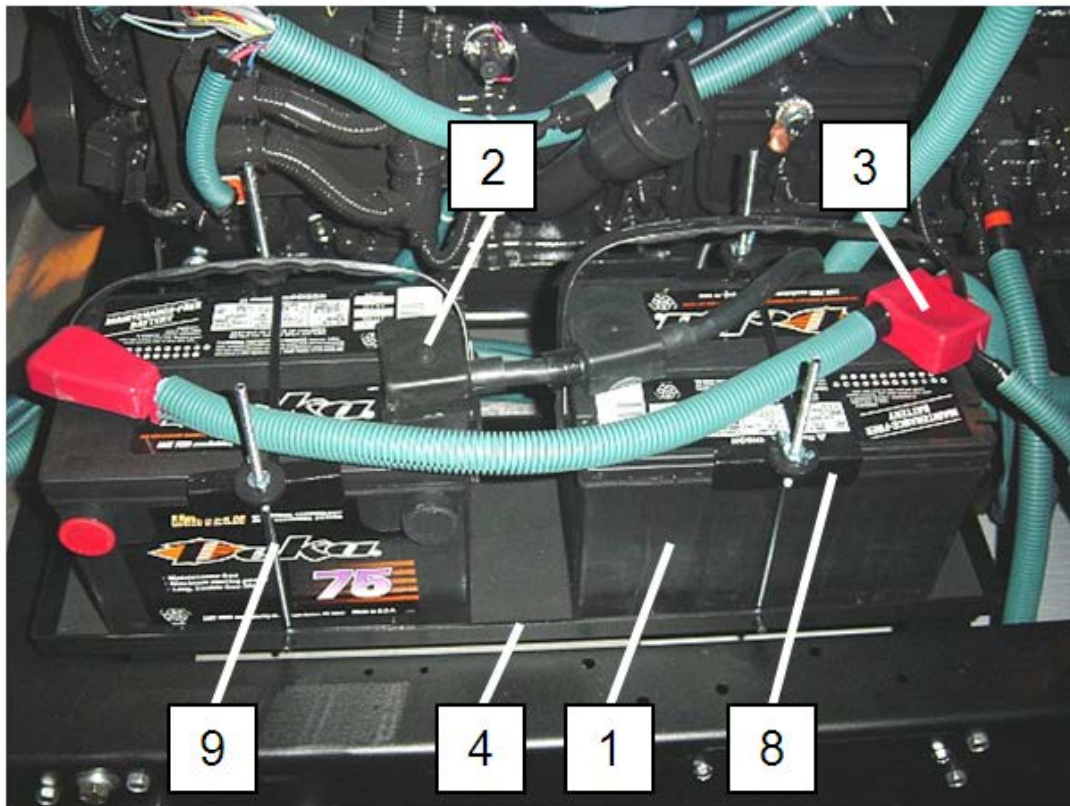


Figure 15, 12 VDC Battery System

FIGURE ITEM NO.	ITW GSE PART NO.	NOMENCLATURE	EFF	UNITS PER ASSY.
15 -	1	281881-001 Battery, 12 V (V25710 #1231-PMF)		2
	2	287797 Cable, Battery, Negative (V3Y208)		1
	3	291728 Cable, Battery, Positive (V3Y208)		1
		76A1132 ...Tubing, Z-Flex, 3/4" ID		46"
	4	289224 Tray, Battery		1
*	5	289223-001 Bracket, Battery Tray, RH		1
*	6	289223-002 Bracket, Battery Tray, LH		1
*	7	289239 Pad, Battery Tray		1
	8	287796 Hold Down, Battery (V3Y208)		2
	9	494295 Bolt, Hold Down, Battery (V3Y208)		2
	10	291704 Panel, Support, Door, MD (see Figure 4)		1
	*	292120-003 Insulation, Door Support Panel		1
		291611 ...Disconnect Switch, Master, Battery, 2000A		1
		291718 ...Cable, Disconnect Switch, Starter		1

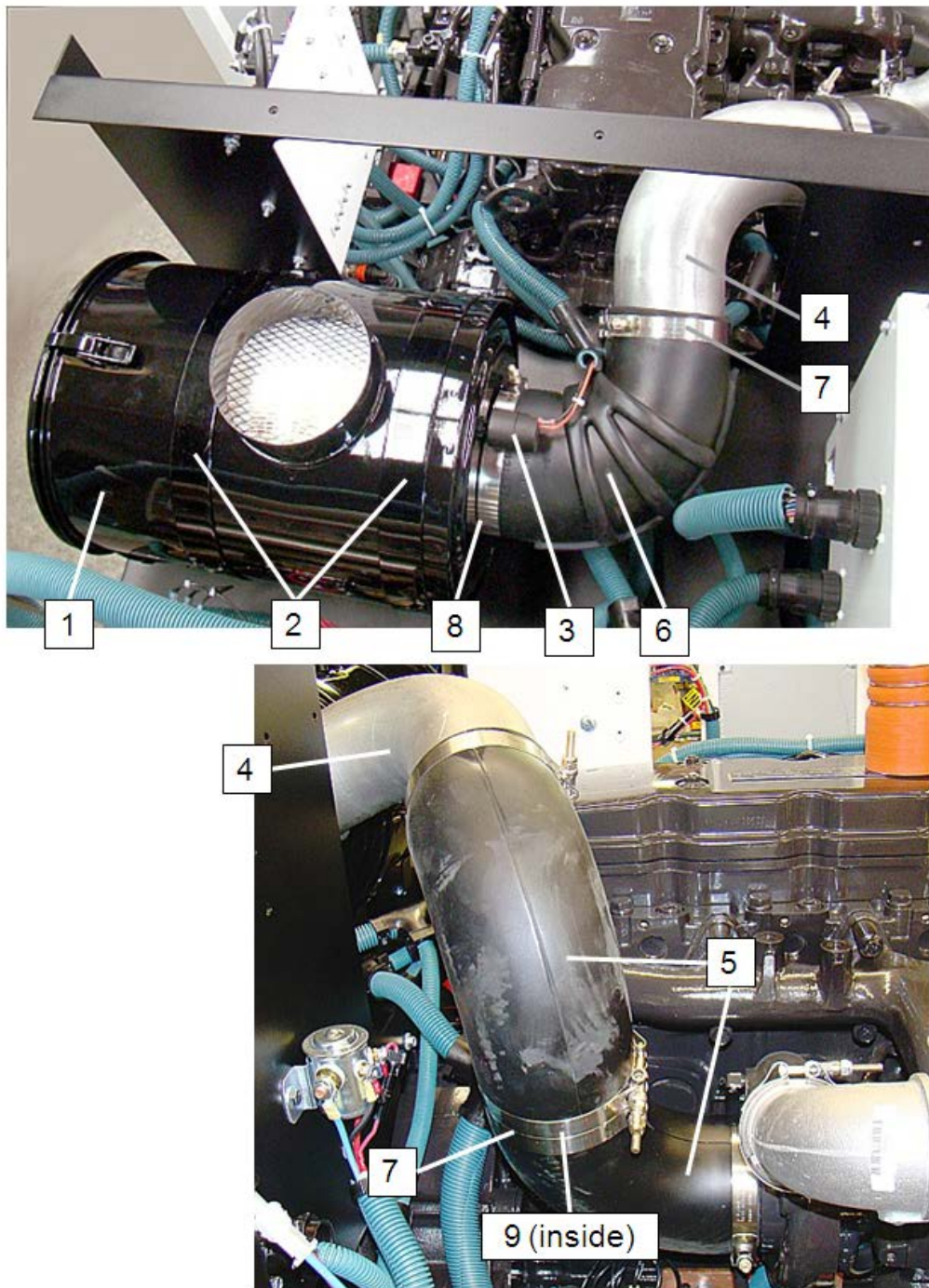


Figure 16 Air Cleaner Components

FIGURE ITEM NO.	ITW GSE PART NO.	NOMENCLATURE	EFF	UNITS PER ASSY.
16 -	1	286061 Air Cleaner (V18265 #EBB12-0271)		1
		287548 ...Replacement Element		Ref.
	2	284923 Mount, Band, Air Cleaner (V18265 #AAH00-0349)		2
	3	282918 Indicator, Restriction, Electric (V18265 #REX77-0062)		1
	4	288054-003 Elbow, Steel, 90°		1
	5	287371 Elbow, Rubber, 90° (V55752 # 4014-03002)		2
	6	284925 Reducer, Rubber, 90° Elbow (V18265 # P12-1482)		1
	7	280732-006 Clamp, T-Bolt (V18265 # P148343)		5
	8	280732-007 Clamp, T-Bolt (V18265 # P148345)		1
*	9	284461 Connector, Pipe, Short, Air Inlet		1
*	10	289688 Intake, Air Extension		1
*	11	289661 Adaptor, Hump Hose		1
*	12	289694 Clamp, Hump Hose		2
*	13	289662 Hood, Intake, Pipe		1
*	14	...Clamp, Hood, Intake, Pipe		Ref.

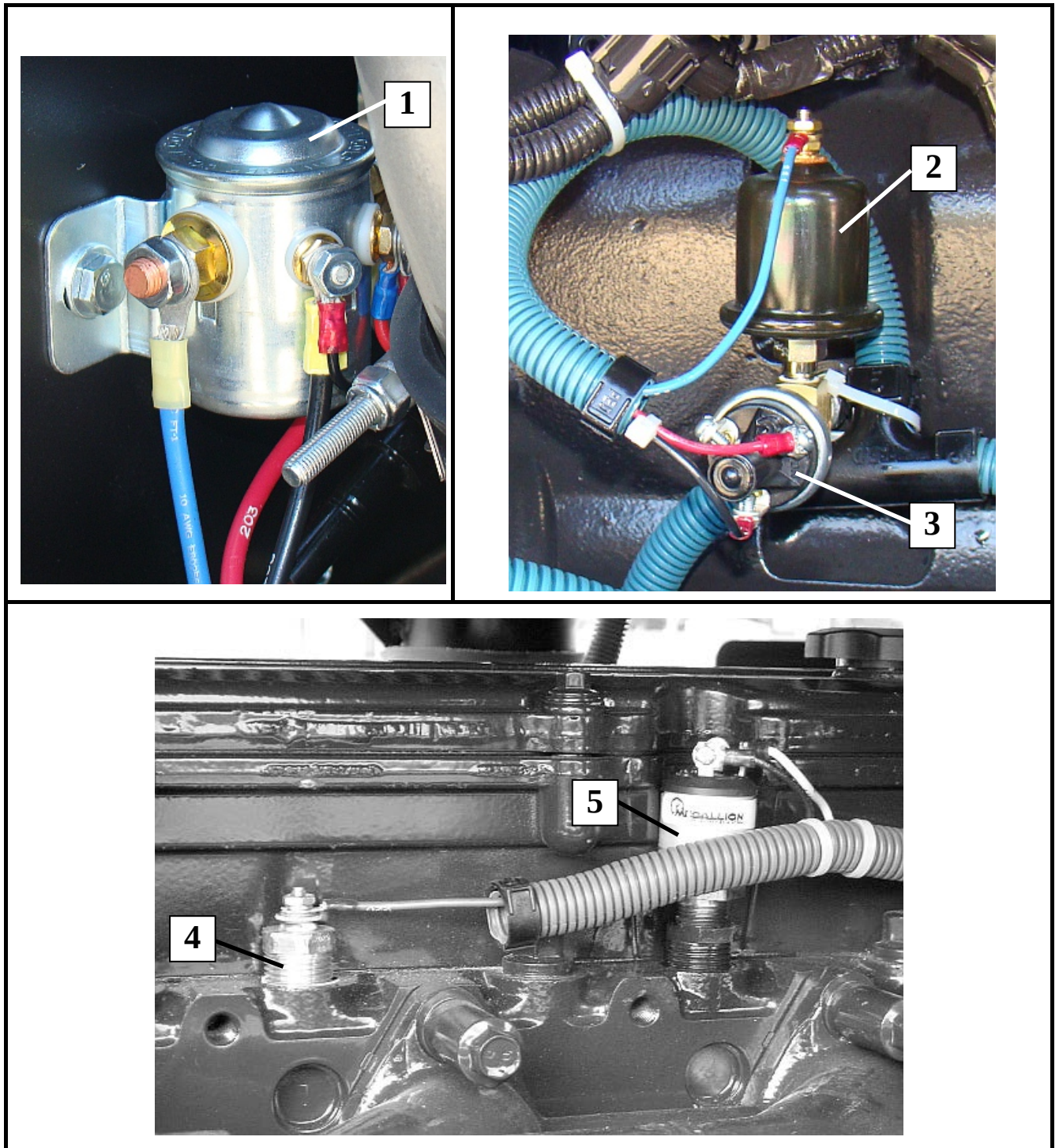


Figure 17 Engine Components

FIGURE ITEM NO.	ITW GSE PART NO.	NOMENCLATURE	EFF	UNITS PER ASSY.
17 - 1	291700	Engine, Cummins, QSB 6.7, 240 HP		1
*	286897-029	...Engine Oil Filter, Replacement		Ref.
*	289815	...Valve, Oil, Drain		1
*	289843	... Hose, 5/8", ID		12"
*	W10869-009	...Clamp, Hose		1
		Engine Electrical Components		
2	286850	Starter Solenoid (V13445 # 24059)		1
	288973-001	...Diode, Starter Solenoid		1
3	403809-001	Switch, Oil Pressure (V75419 #1042-08210-10)		1
4	78B1118-002	Sender, Oil Pressure (V16476 #16476)		1
	287419	...Adapter, M10-1.0 x 1/8 NPTF		1
	W10910-000	...Fitting, Tee		1
	W10750-001	...Nipple, Pipe, 1/8"		1
5	403782-002	Switch, Shutdown, 210° F (V75418 #1002-04880-36)		1
	W7814-004	...Adapter, 3/8" x 1/2" NPT		1
6	287909	Sender, Water Temperature (V16476 #02019)		1
	W7814-004	...Adapter, 3/8" x 1/2" NPT		1
		Engine Mounting Components		
*	7 480603-001	Mount, Shock, Generator		2
*	8 282852	Mount, Engine, Front, Assembly		1
*	9 289816	Mount, Engine, Front, Ay.		1
*	10 289557	Support, Engine, Front (see Figure 3)		1
*	11	Drain, Blow-by		Ref.
*	056535	...Hose, 3/4" ID (Rear Hose)		36 in.
*		...Clamp, Hose (Supplied by Cummins)		Ref.

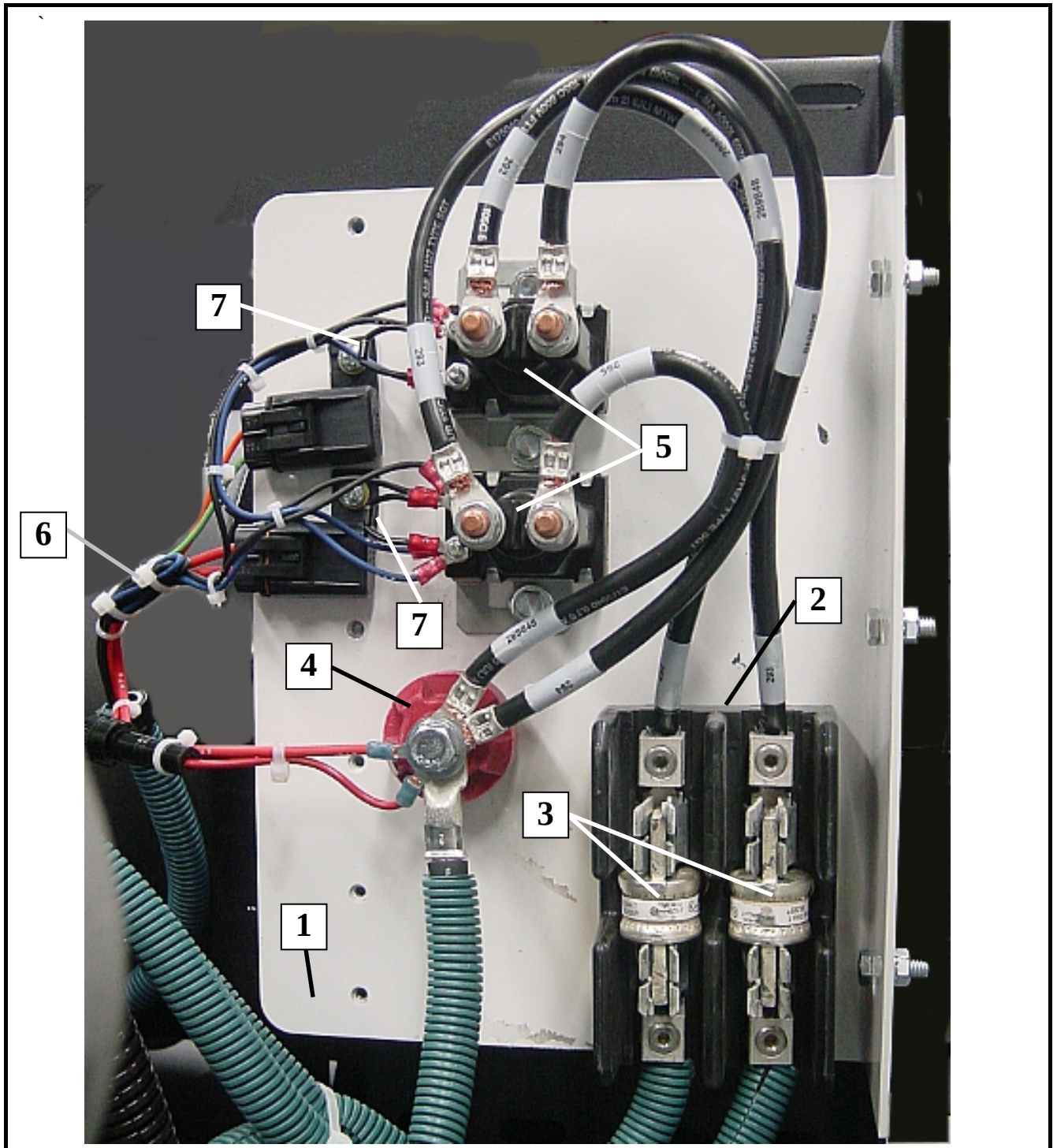


Figure 18 Engine Electronic Panel Components

FIGURE ITEM NO.	ITW GSE PART NO.	NOMENCLATURE	EFF	UNITS PER ASSY.	
18 -	1	288333		Panel, "E" Engine, Parts	1
	2	287145-002		Holder, Fuse (V17400 # T30100-1CR)	1
	3	287144-002		Fuse, Fast Acting (V17400 # JJN-125)	2
	4	283154-001		Insulator, Standoff	1
	5	288331		Relay, Grid Heater, Power (V1FQ83 50F3662)	2
	6	291717		Harness, Wire, Engine, Electronic	1
	7	489658-007		...Diode Assembly	2
	8	291686		Wire Harness, Engine	1

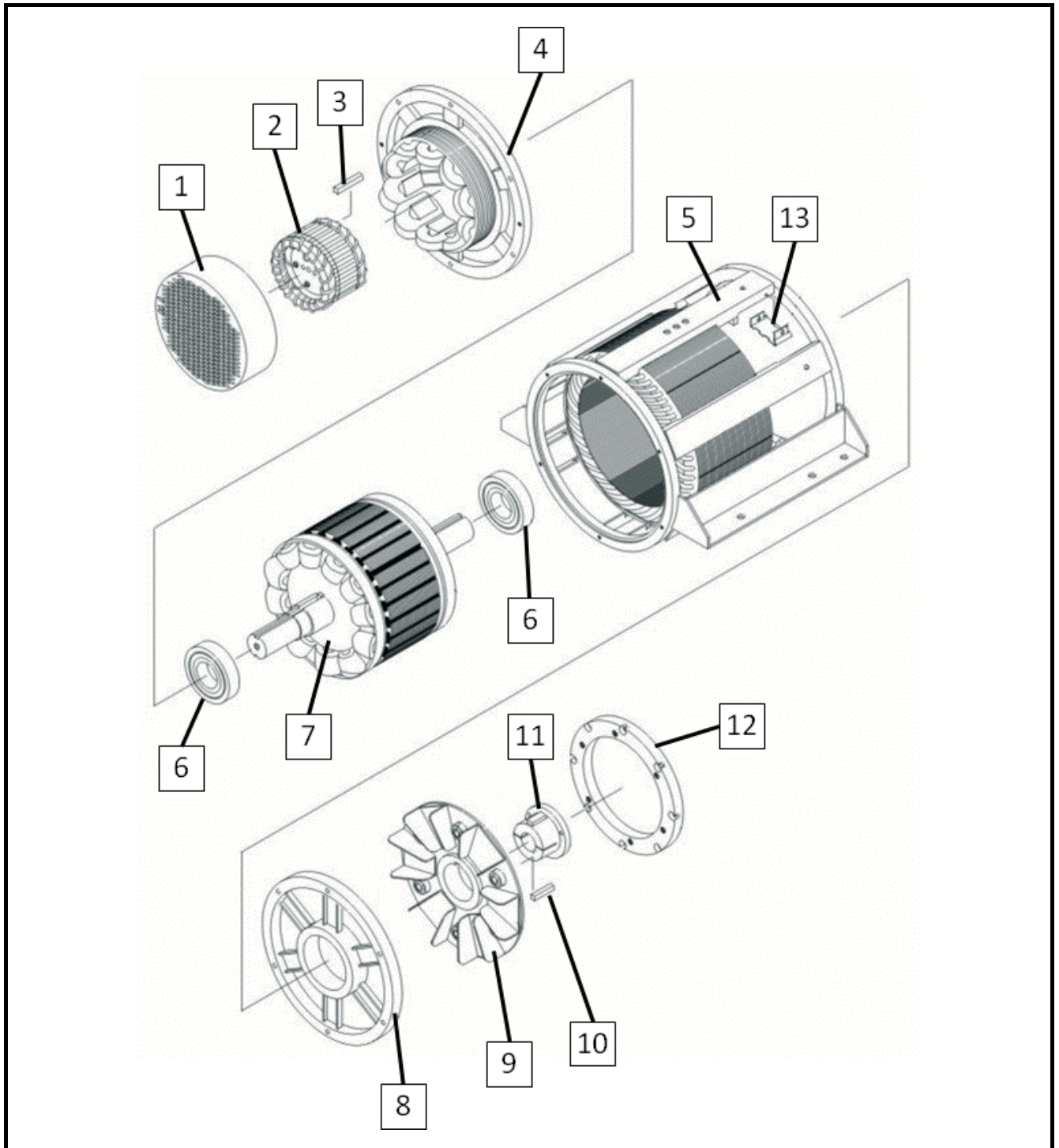


Figure 19 Generator Assembly

FIGURE ITEM NO.	ITW GSE PART NO.	NOMENCLATURE	EFF	UNITS PER ASSY.	
19 -	1	288486		Exciter Cover	1
	2	288494		Exciter Armature	1
	3	180696-003		Exciter Key	1
	4	288440		Exciter Housing and Coils Assembly	1
	5	288471		Generator Housing and Coils Assembly	1
	6	W10072-068		Bearing	2
	7	288447-001		Generator Rotor	1
	8	288461		Front Bearing Support	1
	9	288481		Flexible Coupling Kit	1
		480290		...Coupling Bushing	8
	10	85B1039		Coupling Key	1
	11	85C1004-001		Split Taper Bushing	1
	12	289305		Ring, Spacer, Flex Coupling	1
	13	288458		Generator Air Deflector	6
*	14	288478		Generator Cover	1
*	15	288491		Tab, Fastener, Exciter Key	1
*	16	480603-001		Mount, Shock, Generator	4

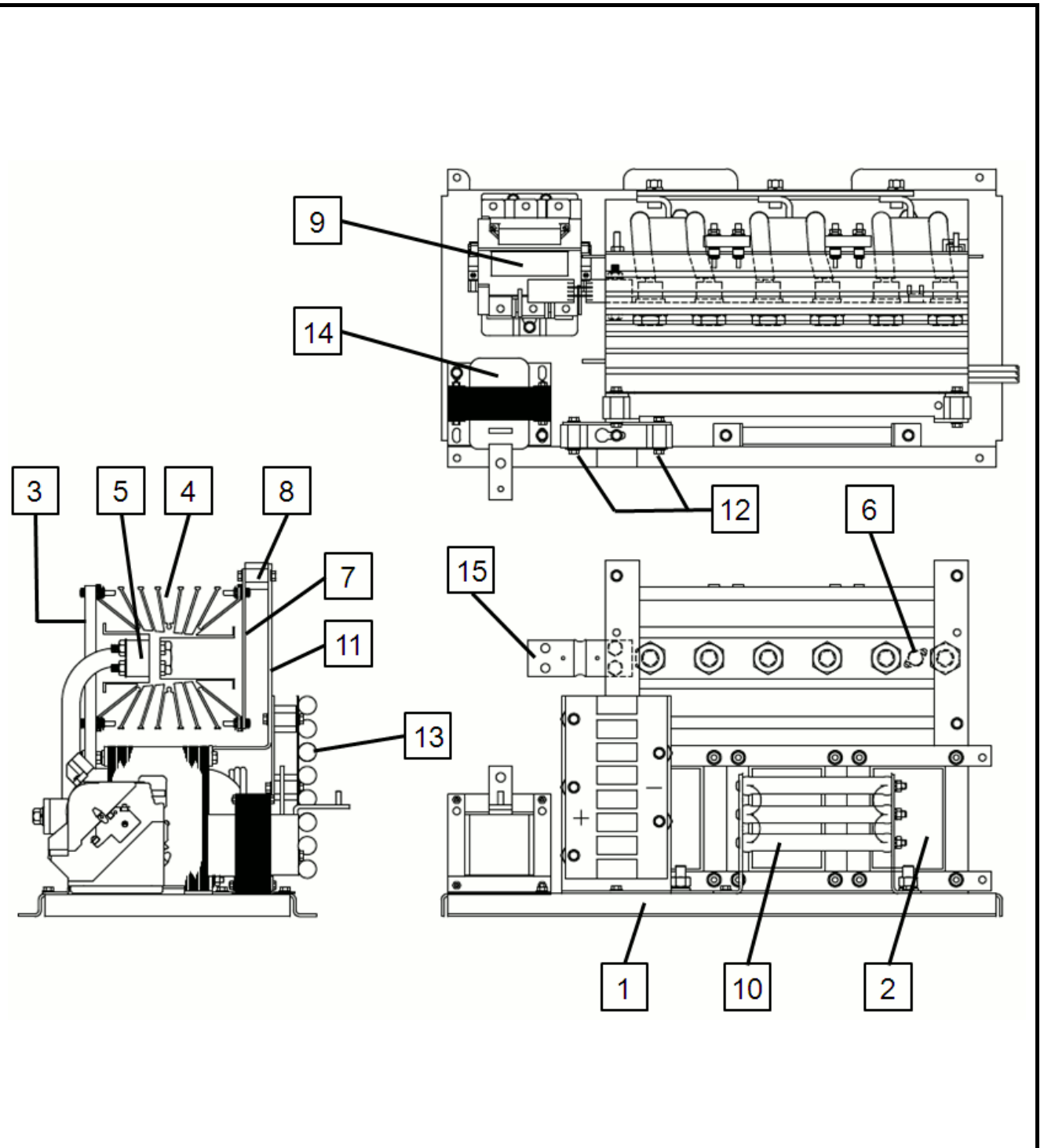


Figure 20 Transformer-Rectifier Assembly (DC Option)

FIGURE ITEM NO.	PART NO.	NOMENCLATURE	EFF	UNIT PER ASSY.
20 -	289008-001	Transformer-Rectifier Assembly		Ref.
1	289007	Support, Internal, Transformer-Rectifier		1
2	286604	Transformer, 28.5 VDC		1
	281971-002	Resistor Assembly, 1 K ohm, 1 W		1
3	288404	Support, Heat Sink		1
4	286603	Heat Sink, Extruded		1
5	DR11171	Diode, Silicon, 400 A, Positive Base		1
6	404044-004	Thermostat		1
7	288147	Bracket, Heat Sink		2
8	286266	Standoff, Short		2
9	282130-001	Contactor, Input		1
*	77A1107	...Label "A"		1
*	77A1108	...Label "B"		1
*	77A1109	...Label "C"		1
10	288095-001	Resistor, Preload, Ay.		1
11	289006	Support, PC Board		1
12	286266	Standoff, Short		5
13	288117	Capacitor, TR, PC Board		1
14	288092	Choke, DC		1
15	280022	Shunt, 800 A, 50 mV		1
*	16	289010	Harness, Wire and Cable	1
*	17	400435	Nameplate, 28 Volts	1

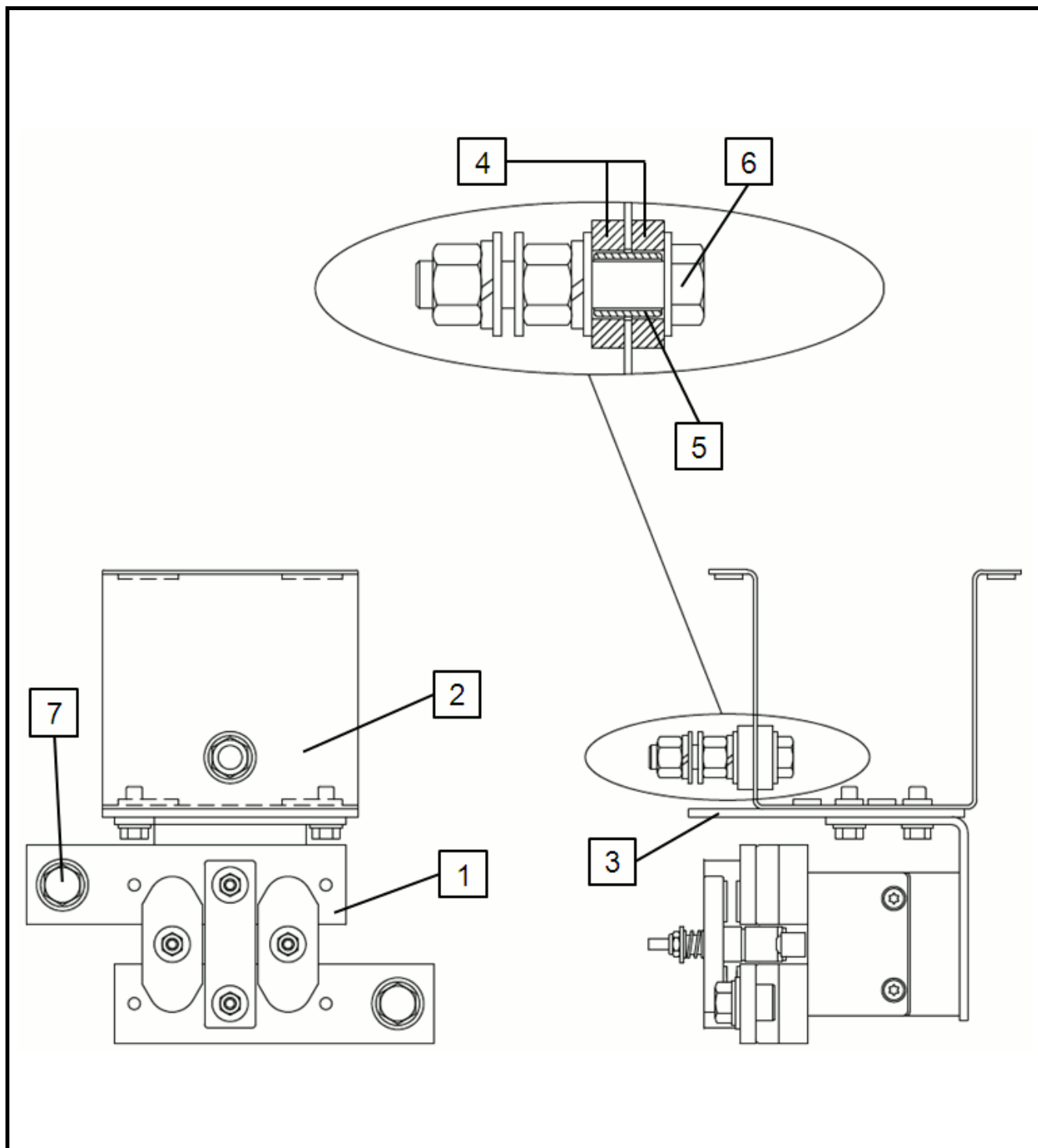


Figure 21 DC Output Contactor (DC Option)

FIGURE ITEM NO.	PART NO.	NOMENCLATURE	EFF	UNIT PER ASSY.
21 -	1	286810-001	Contactor, DC, 800 A, 24 VDC	1
		201673-004	...Diode Assembly	1
	2	289005	Bracket, Mtg., Contactor	1
	3	286849	Insulator, Contactor	1
	4	A25	Washer, Insulating	2
	5	288099	Bushing, Insulating	1
	6		Output Stud	Ref.
		W11097-008	...Screw, 3/8-16 X 2, HHC	1
		W11242-010	...Washer, 3/8, Flat	6
		W11254-006	...Washer, 3/8, Lock	2
		W11254-006	...Nut, 3/8-16, Hex	2
	7		Contactor Studs	Ref.
		W11097-002	...Screw, 3/8-16 X 1.0, HHC, ST.	2
		W11242-010	...Washer, 3/8, Flat	2
		W11254-006	...Washer, 3/8, Lock	2

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