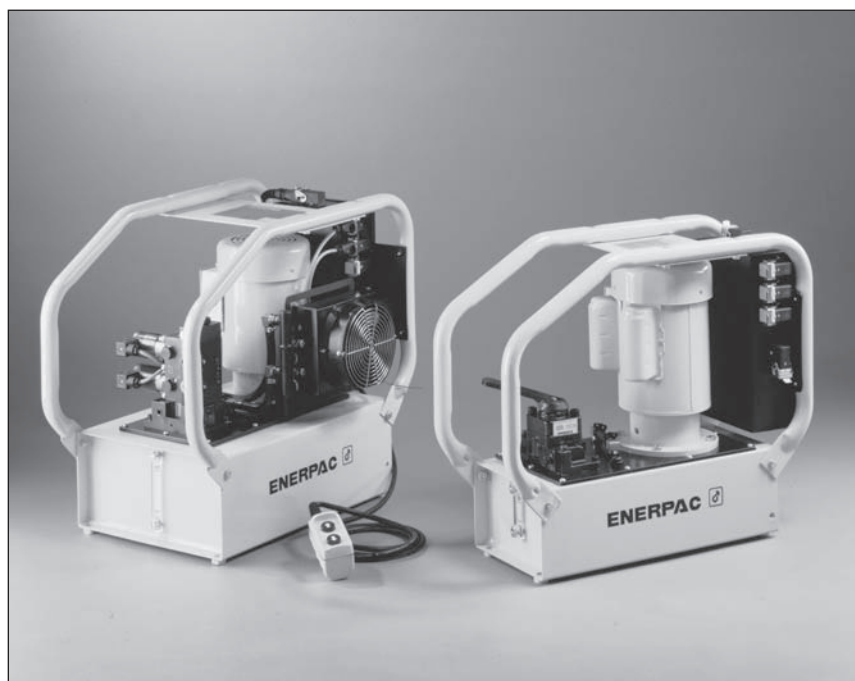


To Protect Your Warranty, Use Only ENERPAC Hydraulic Oil.

Enerpac recommends that all kit components be installed to insure optimum performance of the repaired pump.



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Notes:

- 1) Keep filter oriented within the perimeter of the geroter.
- 2) Torque to 42—46 in. lbs [4,7—5,2 Nm].
- 3) Apply Loctite 545 when Vibra seal is not applied.
- 4) Torque to 42—47 in. lbs [4,7—5,3 Nm].

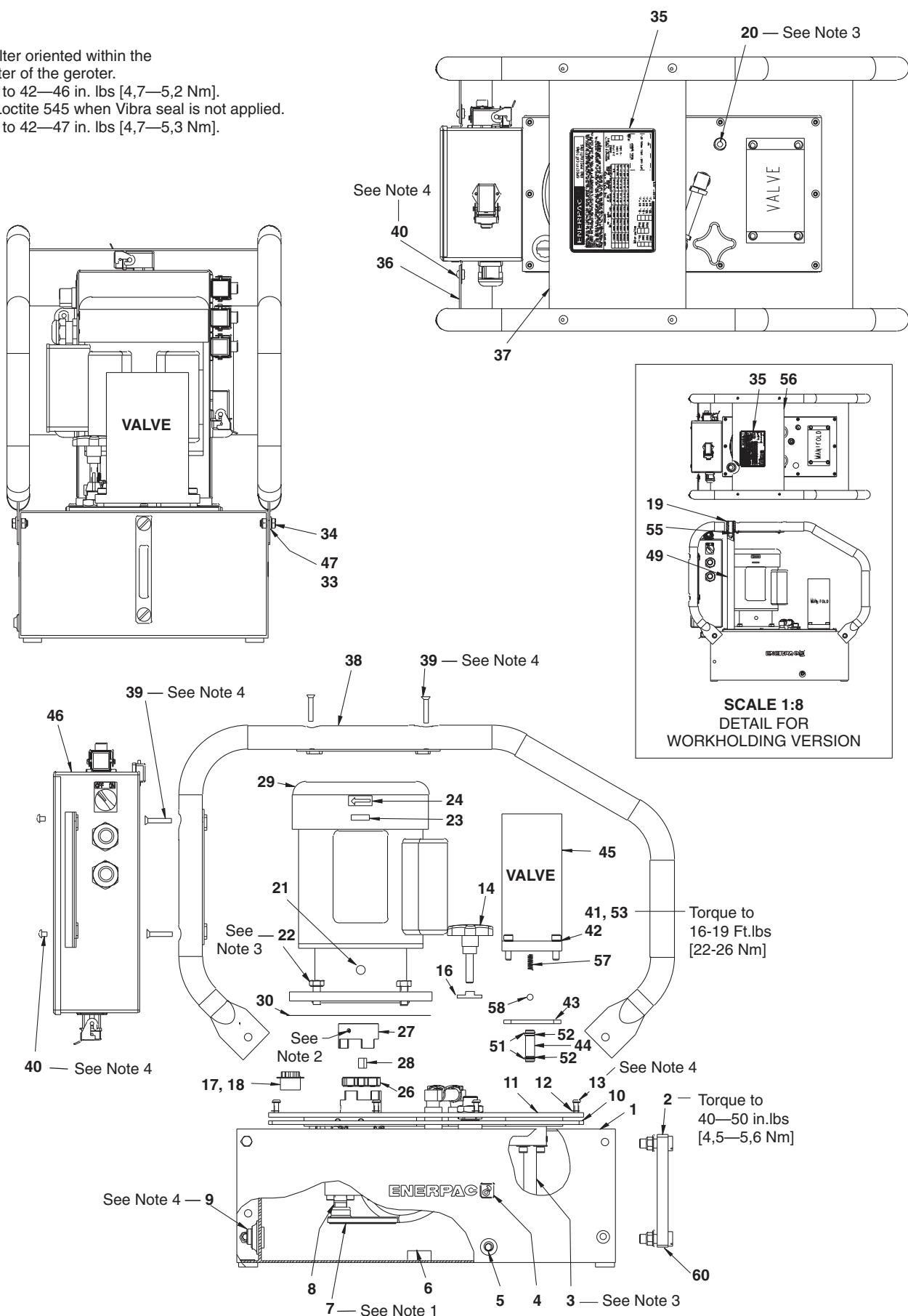


Figure 1, Pump and Reservoir Assembly

Repair Parts List for Figure 1

Item	Part Number	Qty.	Description	Item	Part Number	Qty.	Description
1	PA2601025SR	1	Reservoir, 2.5 Gal. (10 L)	29	DC2520259SR	1	Motor 440V, 2.5 HP, 50 Hz.
	PA2602025SR	1	Reservoir, 5 Gal. (20 L)		DC3243259SR	1	Motor 200V, 3 HP
	DC2711025SR	1	Reservoir, 10 Gal. (40 L)		DC2598259SR	1	Motor 3 HP, 230/380V, 3 Ph, 60Hz./50Hz.
2	DC2621223SR	1	Sight Glass, 2.5 Gal. Pumps (10 L)		DC2599259SR	1	Motor 3 HP, 575V, 3 Ph, 60Hz./50Hz.
	DC2622223SR	1	Sight Glass, 5 Gal. Pumps (20 L)		DC2798259SR	1	Motor, 575V, 1.5 HP
	DC2796223SR	1	Sight Glass, 10 Gal. Pumps (40 L)	30	★	1	Motor Gasket
3	DC2749768	1	Return Pipe 2.5 Gal. Pump (10 L)	33	CBE1080120-2A	4	M8 Loc Nut
	DC2750768	1	Return Pipe 5 Gal. Pump (20 L)	34	CBE819046-1B	4	Screw, M8 X 16
	DC2751768	1	Return Pipe 10 Gal. Pump (40 L)	35	DC3011026	1	Nameplate - Hushh 2000
4	G426026	2	Decal	36	DC2612101	2	Adapter Plate 5 & 10 Gal. (20, 40 L)
5	A8071006	1	Plug	37	PA2609101	1	Cover Plate, 2.5 Gal. Pump (10 L)
6	C187018	1	Magnet		DC2615101	1	Cover Plate, 5 & 10 Gal. Pumps (20, 40 L)
7	CV838950SR	1	Filter Assembly	38	DC2619201	2	Rollbar
8	DA12168431	1	Pipe 2.5 Gal. Pumps (10 L)	39	DC2646028	8	Screw, Flat Head Socket Cap
	CA118096	1	Pipe 5 Gal. Pumps (20 L)	40	DC2869628	4	M6x10 mm BHCS 5 & 10 Gal. (20, 40 L)
	DA2713768	1	Pipe 10 Gal. Pumps (40 L)	41	B1351028	3	.312-18 SHCS X 1.25 Lg.
9	A1010245	1	Plug	42	C846037	4	Copper Gasket
10	★	1	Gasket	43	★	1	Gasket
11	Pump, Basic	1	See Pump Section	44	DA9261096	1	Connector - Global
12	★	10	Gasket	45	Directional Valve	1	See Valve Parts Sheet
13	DC2666028	10	BHSCS M6X16 Zinc	45	WMK01	1	Manifold Kit (5,000 psi, 350 bar)
14	DC4341070	1	Knob		WMK02	1	
16	DC4307021	1	Lock Nut		WMK12	1	
17	PA2050245	1	Shipping Plug (.75 NPT)		WMK21	1	
18	CU939026	1	Breather Tag		WMK22	1	
19	PA2550234	1	Coupling		WMK41	1	
20	A8071006	1	Plug		WMK42	1	
21	DA3645009	1	Hole Plug - Global	46	Electrical Enclosure	1	See Electrical Section
22	CBE1025046-1B	4	Motor Screw, M10X30	47	CAE1080108-1A	4	Washer
23	CH272026	1	Caution Decal	49	DC3368268	1	Pipe
24	CJ193026	1	Decal, Rotation, .6" x 3.2"	51	★	2	O-ring
26	DC2379234	1	Spider	52	★	2	Back-up Ring
27	DC2380034	1	Coupler	53	B1359028	2	.3125-18 X 2.25 SHCS
28	DC2504251	1	Key	55	DC2088018	1	Filler Screen
29	DC2 799259SR	1	Motor 110/220 V, 1.5 hpm 50 Hz.	56	DC3369101	1	WH Cover Plate 2.5 gal. (10 L)
	DC2526259SR	1	Motor 1½ HP, 115/230V, 1 Ph., 60 Hz.		DC3367101	1	WH Cover Plate 5, 10 gal. (20, 40 L)
	DC3242259SR	1	Motor 200V, 1.5 HP	57	S1183	1	Spring
	DC2520259SR	1	Motor 1½ HP, 230/380/460V, 3 Ph, 60 Hz./50Hz. 1.0 HP motors	58	B1009016	1	5/16" Ball
				60	DC3371108	2	Washer ★ ★

★ Indicates Items Included in and Available Only as Part of Pump Repair Kit GPE304050K

★ Indicates Items Included in and Available Only as Part of Pump Repair Kit (Viton) GPE304050KV

★ Indicates Items Included in and Available Only as Part of Pump Repair Kit (EPR). GPE304050KE

★★ Used only on 40 liter reservoir

Notes:

1. To be installed using Koeing plug setting tool such that ball is [0,2-0,6] .008 - .024 below sleeve.
2. Apply Loctite #271 to threads.
3. Use Loctite Sealant #545 for pipe fittings.
4. Point item #36 tube at item #34 upper roller bearing.
5. Grease all needle bearings with Lithium grease.
6. Apply grease to screen to hold in place during assembly.

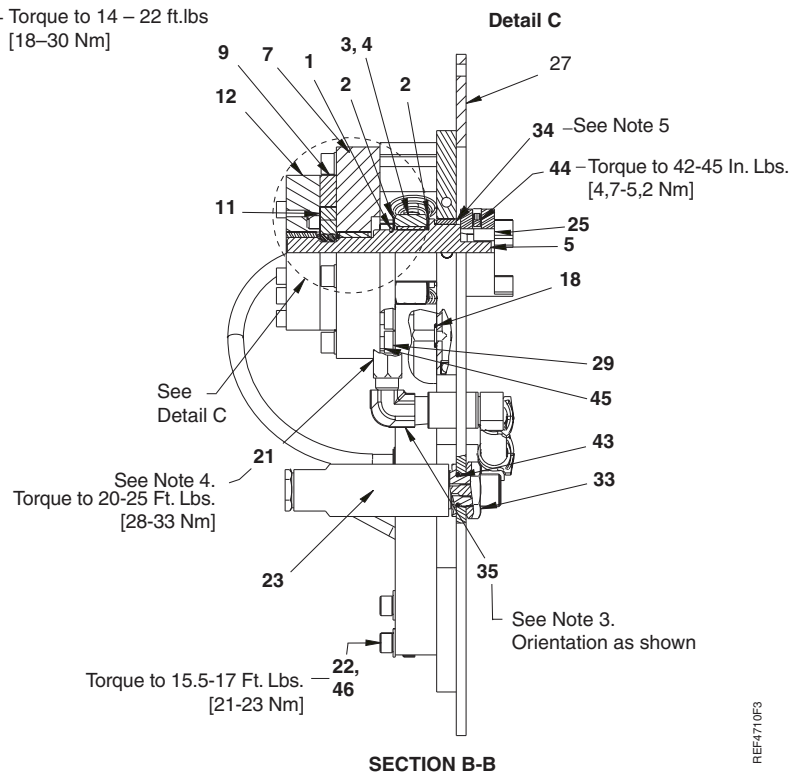
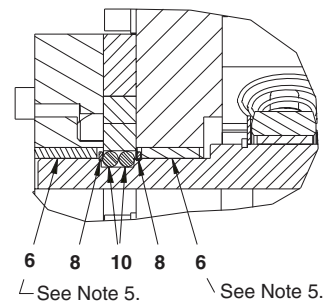
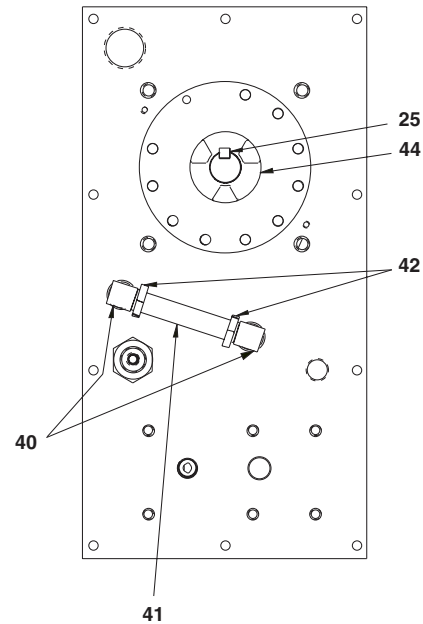
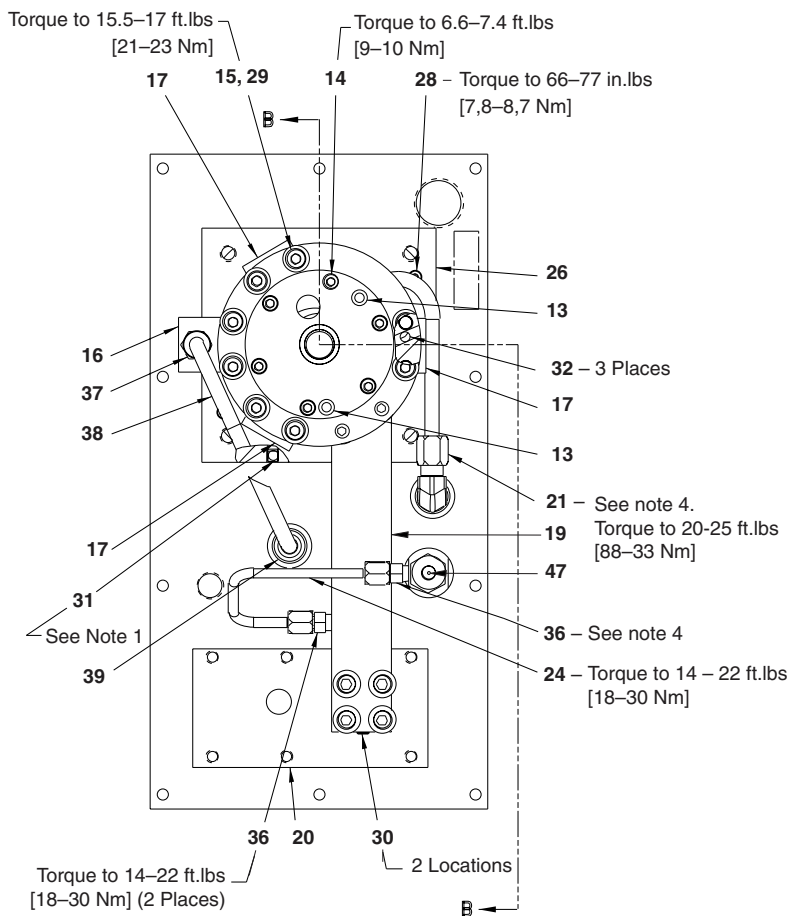
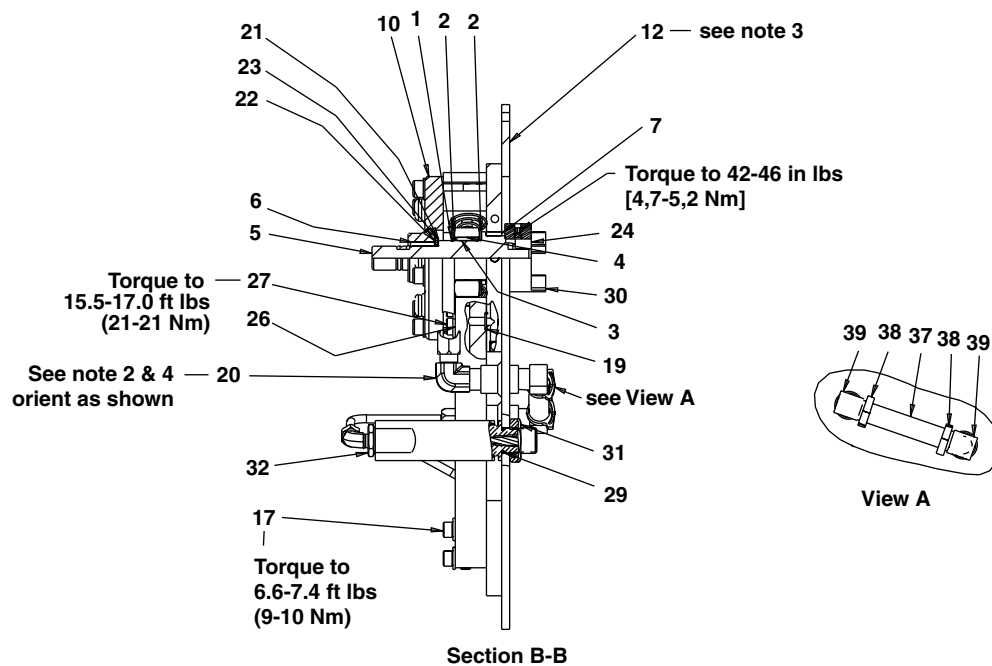
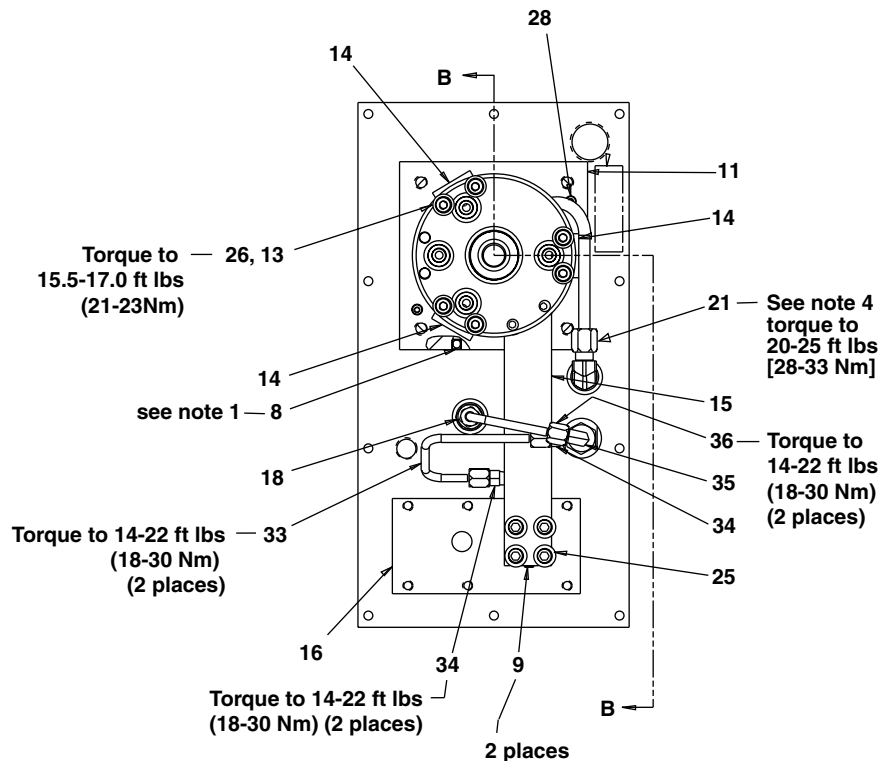


Figure 2, Two-stage Basic Pump Assembly

Repair Parts List for Figure 2

Item	Part Number	Qty.	Description	Item	Part Number	Qty.	Description
1	CCA1035044-1A	1	Retaining Ring	22	B1353028	4	.313-18 UNC Schs x 1.5 Lg
2	BSS4725D	2	Thrust Washer	23	DC2645900SR	1	User Adjustable Relief Valve (Nitrile)
3	BSS4599D	1	Needle Bearing		DC2729900SR	1	User Adjustable Relief Valve (Viton)
4	DA3837350SR	1	Hex Cam & Bearing Assy.		DC2728900SR	1	User Adjustable Relief Valve (EPR)
5	DC2334537	1	Eccentric	24	DC2604268	1	Tube Assemble, Relief
6	CW251107	2	Needle Bearing	25	DC2504251	1	Key
7	DC3580101SR	1	Upper Plate with Bearing	26	DA3832101	1	High Pressure Plate
8	DA1985044	2	Retaining Ring	27	DC2495101	1	Top Plate
9	BSS5484D	1	Middle Plate	28	CBA519028-1A	2	Socket Head Capscrew
10	★	2	3/16" Diameter Ball	29	CAE1080108	10	Washer (Packaging)
11	BSS5117DSR	1	Gerotor Set	30	A1006245	2	Pipe Plug
12	BSS5371DSR	1	Bottom Plate	31	BSS5409D	5	Plug
13	CAA1029061-2B	2	Dowel Pin	32	B1007016	3	1/4" Ball
14	CBA631028-1A	6	Screw	33	DA6884123	1	Jam Nut (Genesis)
15	BSS5974D	10	Screw	34	DA3831155	1	Bearing - Global Pump
16	DC2616900SR	1	By-Pass Valve Assy. (Urethane)	35	CA200096	1	Male Elbow
	DC2730900SR	1	By-Pass Valve Assy. (EPR)	36	F100094-72	2	Male Connector
	DC2731900SR	1	By-Pass Valve Assy. (Viton)	37	F100097-99	1	3/8 Tube x 1/8 NPT Male Pre
17	DA11976950SR	3	Piston Block, 3 Series, (Urethane)	38	DC2279268	1	Nylon 11 Tubing 3/8 x 11"
	DA11977950SR	3	Piston Block, 3 Series, (Viton)	39	DC2269096	1	Male Connector (Prestolok)
	DA11978950SR	3	Piston Block, 3 Series, (EPR)	40	PA2029097	2	Beaded Hose Barb Elbow
	DA3833900SR	3	Piston Block, 4, 5, Series (Urethane)	41	DC2631646	1	Hose Hydraulic
	DA4982900SR	3	Piston Block, 4, 5, Series (Viton)	42	PA2552299	2	Nylon Hose Clamp (Heyco)
	DA4983900SR	3	Piston Block, 4, 5, Series (EPR)	43	★	1	O-Ring
18	★	9	O-Ring	44	DC2380034	1	Coupler
19	DC2707690	1	Connector Block (Global)	45	CCA829028-1D	2	M8 x 40 HSHC
20	BSS5898D	1	Support Plate	46	B1022108	4	SAE F/W 5/16 PLN.
21	DC2605268	1	Tube Assembly	47	DC3803828	1	Oriface for Relief Valve
★ Indicates Items Included in and Available Only as Part of Pump Repair Kit GPE304050K ★ Indicates Items Included in and Available Only as Part of Pump Repair Kit (Viton) GPE304050KV ★ Indicates Items Included in and Available Only as Part of Pump Repair Kit (EPR). GPE304050KE							



Notes:

- 1.) To be installed using Koeing plug setting tool such that ball is [0,2 - 0,60] .008-.024 below sleeve.
- 2.) Use Loctite sealant #545 for pipe fittings.
- 3.) Grease all needle bearings prior to assembly.
- 4.) Point tube item #21 towards upper bearing item #7.

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Figure 3, Single Stage Basic Pump Assembly

Repair Parts List for Figure 3							
Item	Part Number	Qty.	Description	Item	Part Number	Qty.	Description
1	CCA1035044-1A	1	Retaining Ring-Controlled E	21	DC2605268	1	Tube Assembly
2	BSS4725D	2	Ring	22	DC2085155	2	Bearing Washer
3	BSS4599D	1	Needle Bearing	23	DC2084155	1	Thrust Bearing
4	DA3837350SR	1	Hex Cam and Bearing Assembly	24	DC2504251	1	Key
5	DC2334537	1	Eccentric	25	B1022108	4	SAE F/W 5/16 PLN
6	CW251107	1	Needle Bearing	26	CAE1080108-1A	8	Washer
7	DA3831155	1	Bearing - Global Pump	27	CCA0829028-1A	2	SHC Screw
8	BSS5409D	5	Plug		CCA829028-1D	2	M8 x 40 HSHC
9	A1006245	2	1/16 Flush Plug with Sealant	28	CBA519028-1A	2	Socket Head Capscrew
10	DC510101SR	1	Bottom Plate with Bearing	29	★	1	O-Ring
11	DC622101SR	1	High Press Plate with Bearing	30	DC2380034	1	Coupler
12	DC2495101	1	Top Plate	31	DA6884123	1	Jam Nut (Genesis)
13	CCA8370281A	6	SOC. HD. Capscrew (Atlas)	32	DC2645900SR	1	User Adj. Relief Valve 10,000
14	DA11976950SR	3	Piston Block Assy., 3 Series	33	DC2604268	1	Tube Assy., Relief
	DA3833900SR	3	Piston Block Assy., 4, 5 Series	34	F100094-72	2	Male Connector
15	DC2707690	1	Connector Block (Global)	35	F100094-83	1	Male Elbow
16	BSS5898D	1	Support Plate	36	DC2924268	1	Single Stage Relief Valve T
17	B1353028	4	.313-18 UNC SHCS x 1.5 LG	37	DC2631646	1	Hose Hydraulic
18	DC2927097	1	1/4" Tube x 3/8" NPT Straight	38	PA2552299	2	Nylon Hose Clamp (Heyco)
19	★	1	O-Ring Global	39	PA2029097	2	Beaded Hose Barb Elbow
20	CA2000096	1	Male Elbow				
★ Indicates Items Included in and Available Only as Part of Pump Repair Kit GPE304050K ★ Indicates Items Included in and Available Only as Part of Pump Repair Kit (Viton) GPE304050KV ★ Indicates Items Included in and Available Only as Part of Pump Repair Kit (EPR). GPE304050KE							

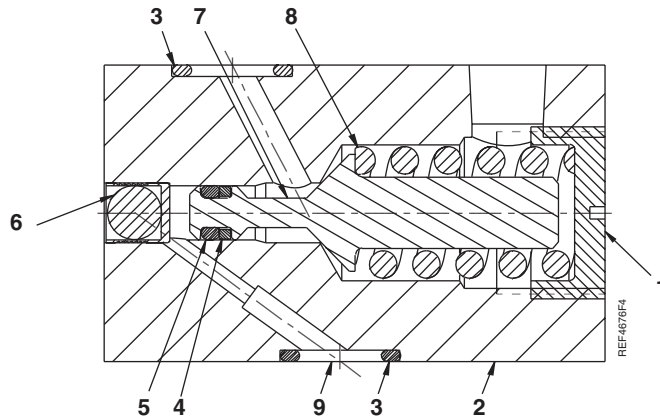


Figure 4, Bypass Valve Assembly

Repair Parts List for Figure 4

Item	Part Number	Qty.	Description	Item	Part Number	Qty.	Description
1	DC2596600	1	End Plug, By-pass	5	★	1	O-ring
2	DC2616900SR	1	By-pass Valve Assembly	6	BSS5409D	1	Plug
3	★	2	O-ring, Global	7	DC2398051	1	Piston, New Bypass
4	★	1	Back-up Ring	8	DC394110	1	Spring
				9	DC4618828	1	Orifice

★ Indicates Items Included in and available only as Part of Repair Kit DC2616900K.

★ Indicates Items Included in and available only as Part of Viton Repair Kit DC2616900KV.

★ Indicates Items Included in and available only as Part of EPR Repair Kit DC2616900KE.

NOTE: Starred items are also included in the Pump Repair Kit.

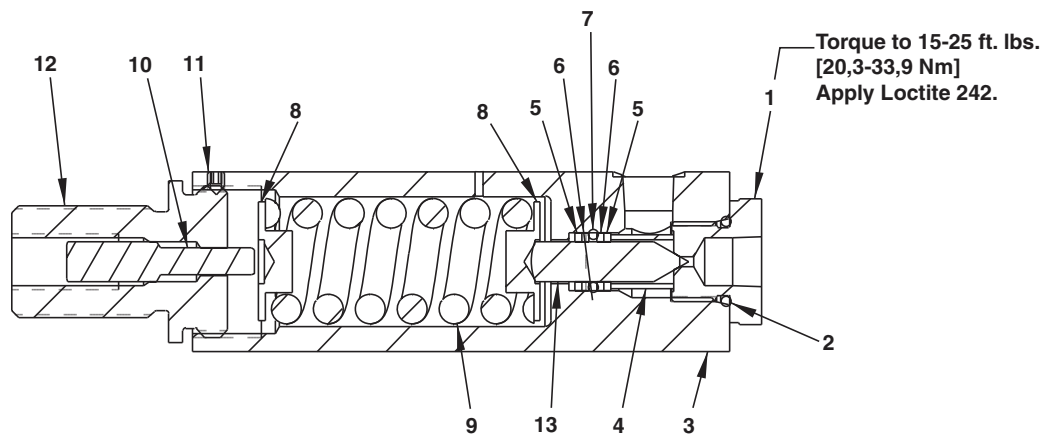


Figure 5, Relief Valve Assembly

Repair Parts List for Figure 5

Item	Part Number	Qty.	Description	Item	Part Number	Qty.	Description
1	DC2077290	1	Seat	8	DC2075013	2	Spring Guide
2	★	1	O-ring	9	CS357110	1	Spring
3	DC2645900SR	1	Relief Valve Assembly	10	DC2655404	1	Plunger
4	DC2076013	1	Piston Guide	11	CCA307028-5A	1	M3 X 4MM Set screw
5	★	2	Spacer	12	DC2923190	1	Threaded Body
6	★	2	Back-up Ring	13	DC2074051	1	Piston
7	★	1	O-ring				

★ Indicates Items Included in and available only as Part of Repair Kit DC2645900K.

★ Indicates Items Included in and available only as Part of Viton Repair Kit DC2645900KV.

★ Indicates Items Included in and available only as Part of EPR Repair Kit DC2645900KE.

NOTE: Starred items are also included in the Pump Repair Kit.

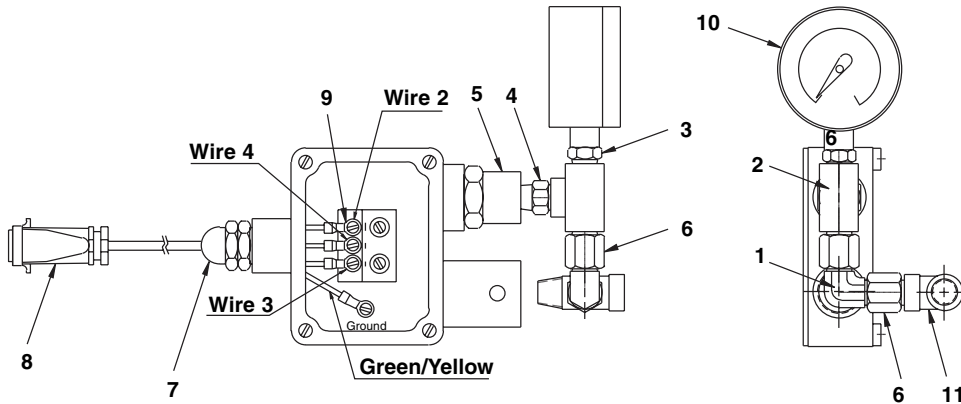
Mounting for VM2

Pin #

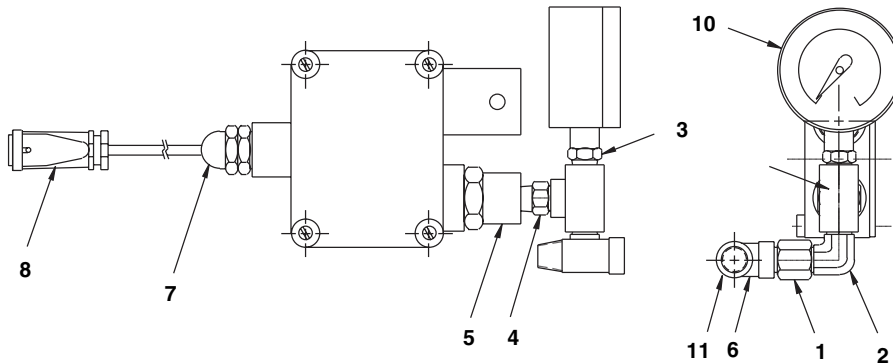
② Wire #2 Common

③ Wire #3 Closed

④ Wire #4 Normally Open



Mounting for VM3/VM4

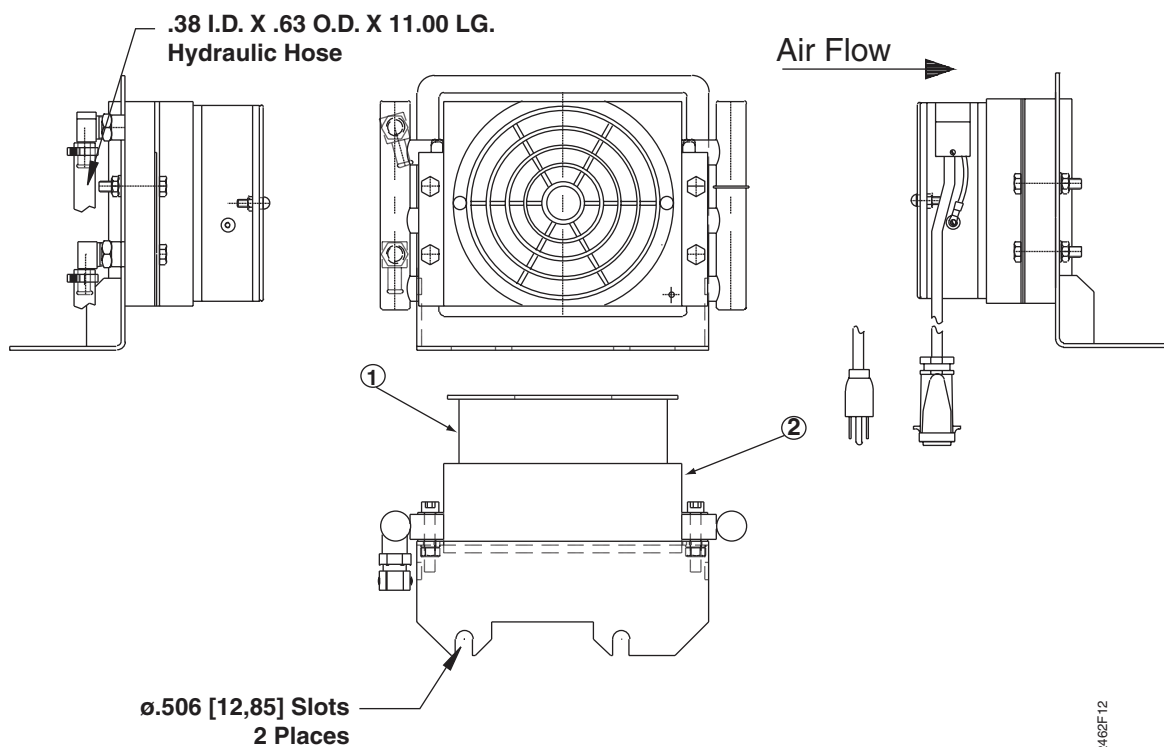


NOTE: Apply Loctite pipe sealant on all threads.

Figure 6, Pressure Switch Block

Repair Parts List for Figure 6, IC-7324

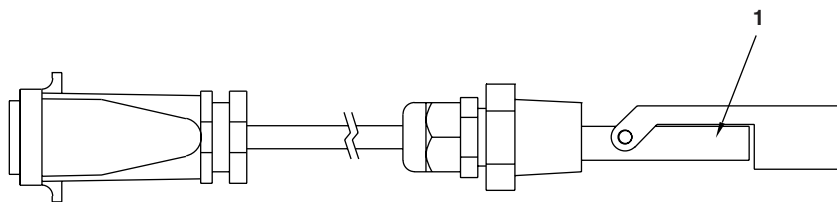
Item	Part Number	Qty.	Description	Item	Part Number	Qty.	Description
1	CJ456096	1	Male Elbow 90	7	DA5752007	1	Liquid Tight Connector
2	CJ652096	1	Pipe Tee	8	DC2862900SR	1	Cord Assembly
3	CJ657032	1	Reducer Bushing	9	E1001004	2	Connector, Global
4	CN443096	1	Pipe Nipple	10	G2536L	1	2½" Gauge 0-15,000 psi
5	DA2271372	1	Pressure Switch	11	Y803096	1	Street Tee
6	DA3031096	2	Fitting				



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Figure 7, Heat Exchanger

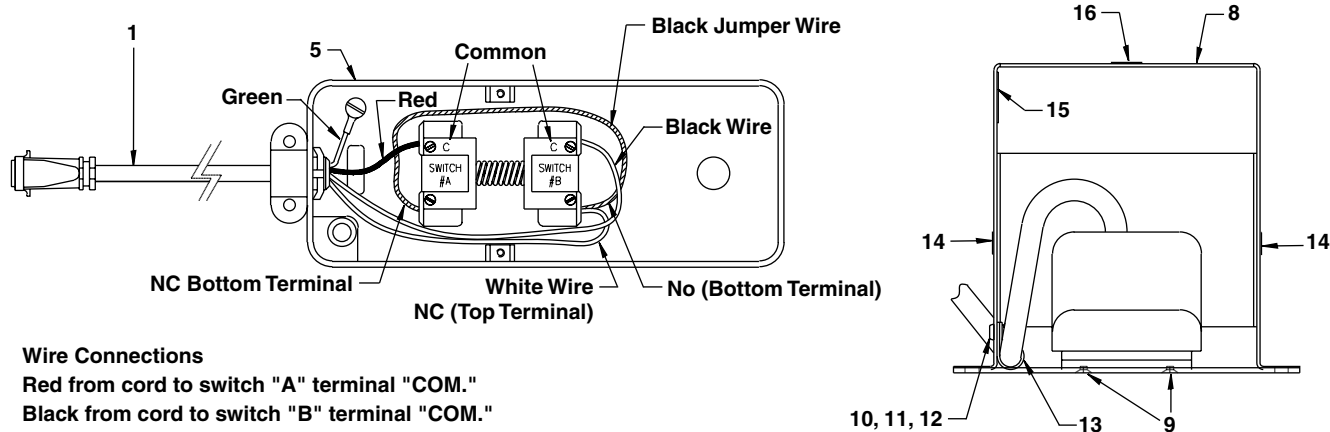
Repair Parts List for Figure 7				
Item	Part Number		Qty.	Description
	HE1 (24 VDC)	HE2 (115 VAC)		
1	DC2832470SR	DC2833470SR	1	Fan
2	PA2034471SR	PA2034471SR	1	Heat Exchanger Core



PA2615F14

Figure 8, Level / Temperature Switch

Repair Parts List for Figure 8			
Item	Part Number	Qty.	Description
1	LS1	1	Level Switch



Wire Connections
 Red from cord to switch "A" terminal "COM."
 Black from cord to switch "B" terminal "COM."
 White from cord to switch "B" terminal "NORMALLY CLOSED"
 Green from cord to ground screw.
 Black jumper wire from switch "A" terminal "NORMALLY CLOSED" to switch "B" terminal "NORMALLY OPEN."

Terminal designation are for wiring only, not true function of switch.

Figure 9, Foot Switch Assembly

Repair Parts List for Figure 9							
Item	Part Number	Qty.	Description	Item	Part Number	Qty.	Description
1	DC3056450	1	Cord Assy.	12	B1064066	1	Lock Washer
5	CH754372	1	Foot Switch	13	F100299-26	1	Loop Clamp
8	CA683900SR	1	Guard Assy.	14	G424026	2	Decal
9	M922028	2	Cap Screw	15	DA5255026	1	Blank Decal - Service
10	B2506028	1	Button Head Screw #10x.50	16	CH272026	1	Caution Decal
11	B1018121	1	Hex Nut				

Note: Terminal designations are for wiring only and do not reflect the true functions of the switch.

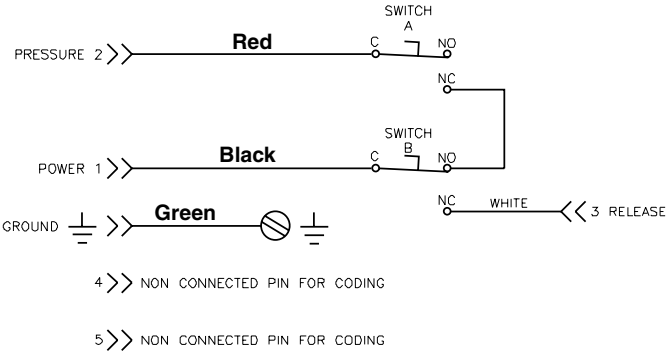


Figure 10, Wiring Diagram, Foot Switch

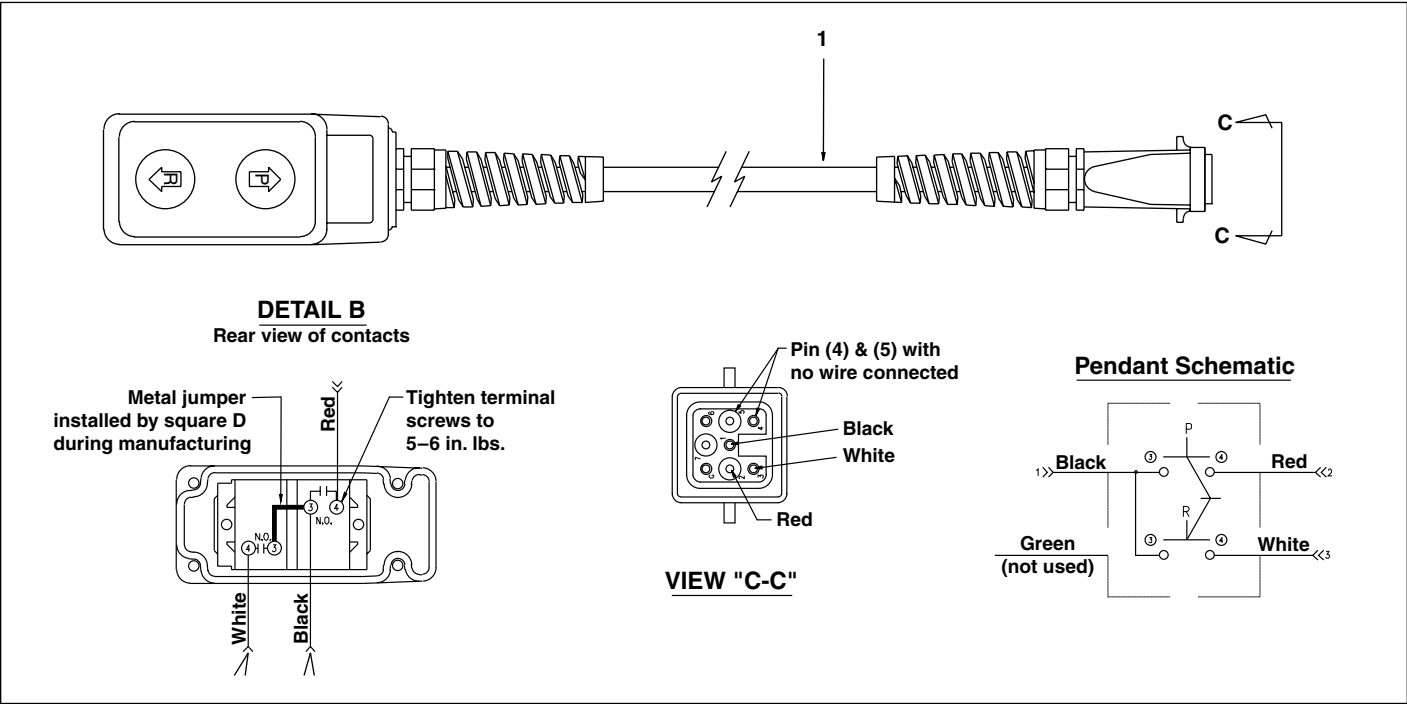


Figure 11, Two-button Pendant (IC43)

Repair Parts List for Figure 11			
Item	Part Number	Qty.	Description
1	DC3144900SR	1	Cord Assembly

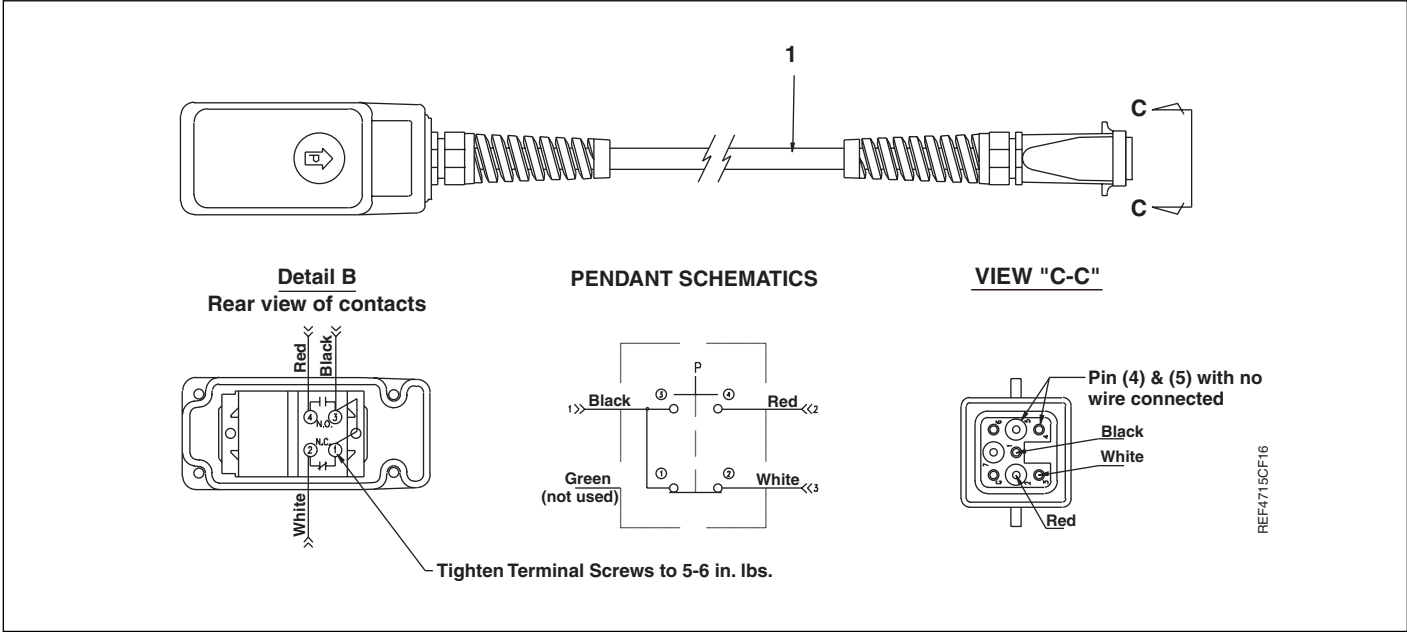


Figure 12, Single Button Pendant (IC32)

Repair Parts List for Figure 12			
Item	Part Number	Qty.	Description
1	DC3144900SR	1	Cord Assembly

NOTES:

1. Crimping of AMP PIDG terminals shall be done with a double crimp, ratchet type crimping tool for insulated terminals.
2. All wires, except ground wires, must have wire labels (Item 16) on both ends of wire. Wire numbers shall be per schematic.

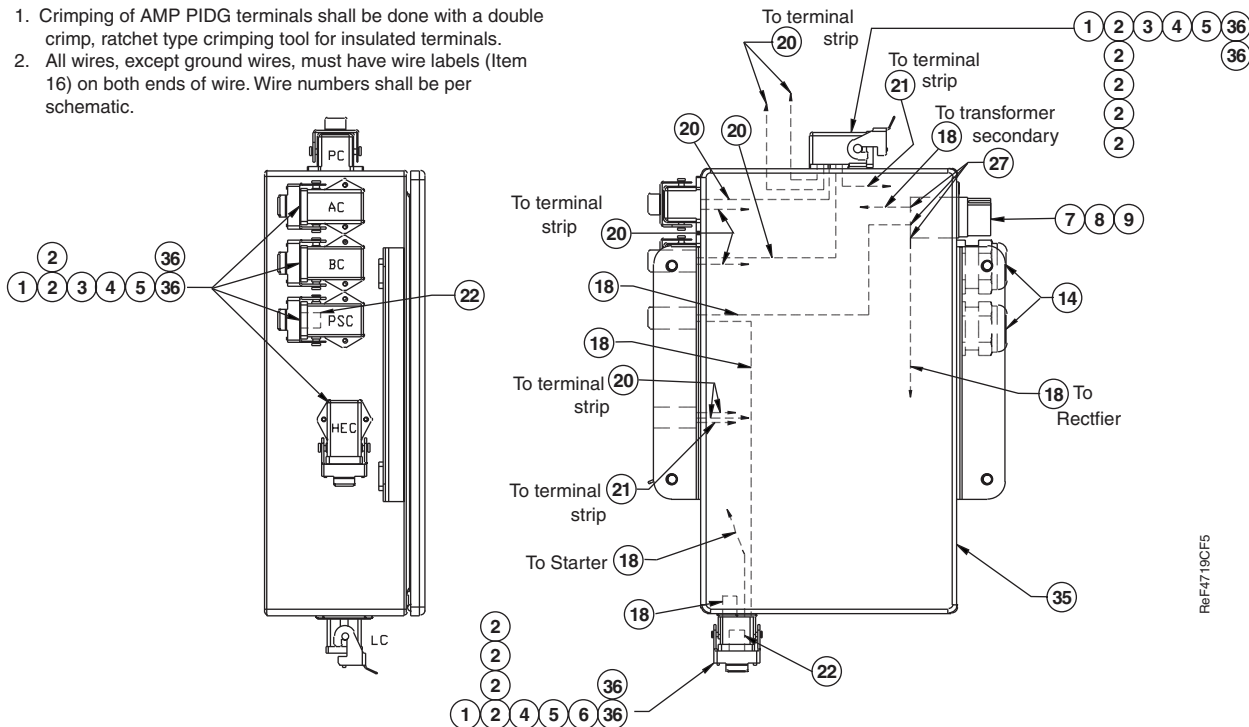


Figure 13, Electrical Enclosure

Complete Electrical Enclosure Assemblies

Part Number	Description	Part Number	Description
DC2767900SR	Enclosure 115V	DC2895900SR	Enclosure 230V, 3 PH
DC2870900SR	Enclosure 115V, 1PH, 20 Amp Plug	DC3524900SR	Enclosure 230 V, 3 PH Dump
DC3892900SR	Enclosure 115V Jog/Hold	DC2770900SR	Enclosure 380/400/440V
DC3522900SR	Enclosure 115V Dump	DC3525900SR	Enclosure 380/400/440 V Dump
DC3572900SR	Enclosure 115V Canada Dump	DC2772900SR	Enclosure 460V, 3 PH
DC3753900SR	Enclosure 200V Japan VSP	DC3526900SR	Enclosure 460V Dump
DC3752900SR	Enclosure 200V Japan Dump	DC2773900SR	Enclosure 575V, 3 PH
DC2768900SR	Enclosure 230V, 1PH	DC3527900SR	Enclosure 575V Dump
DC3523900SR	Enclosure 230 V, 1 PH Dump		

Repair Parts List for Figure 13

Item	Part No.	Qty.	Description	Item	Part No.	Qty.	Description
1	★	6	Female Insert, 7-Positions, 11251100	14	DA3643007	2	Cord Grip
2	★	17	Female Stamped Contact, 11236100	18	Std. Hardware	–	Wire 18 Awg. Strand Copper, Red
3	★	5	Angle Panel Base Mount, 10423100	20	Std. Hardware	–	Wire 18 Awg. Strand Copper, Blue
4	★	6	Coding Pins, 11162000	21	Std. Hardware	–	Wire 18 Awg. Strand Copper -, Gr/Yel
5	★	6	Protective Cover, 10430300	22	Std. Hardware		Wire 16 Awg. Strand Copper O, Yel
6	★	1	Panel Base, 10422200	27	Std. Hardware	2	AMP34541 PIDG Spade Tongue Terminal Nylon #22-16 #6 Screw 0.250" W
7	DC2952372	1	Selector Switch, 2-position	35	PA2576401		Enclosure Box
8	★	1	Mounting Collar (included in DC2952372)	36	Std. Hardware	12	#4-40 x 3/8" Self Tapping Machine Screw
9	–	1	Legend Plate (included in DC2952372)				

★ Indicates parts in Electrical enclosure repair kit EBRK-1. Kit contains (3) 90° housings, (1) straight housing, (20) female contacts, (4) coding pins, (4) female inserts, (2) protective covers, (4) hoods, (4) male inserts, (24) male contacts, (1) spiral spintop and (1) de-insertion tool.

Item	Part No.	Qty.	Description
–	DC 3159816	1	Connector Crimp Tool Amp Pro-Crimper II, # 58495-1



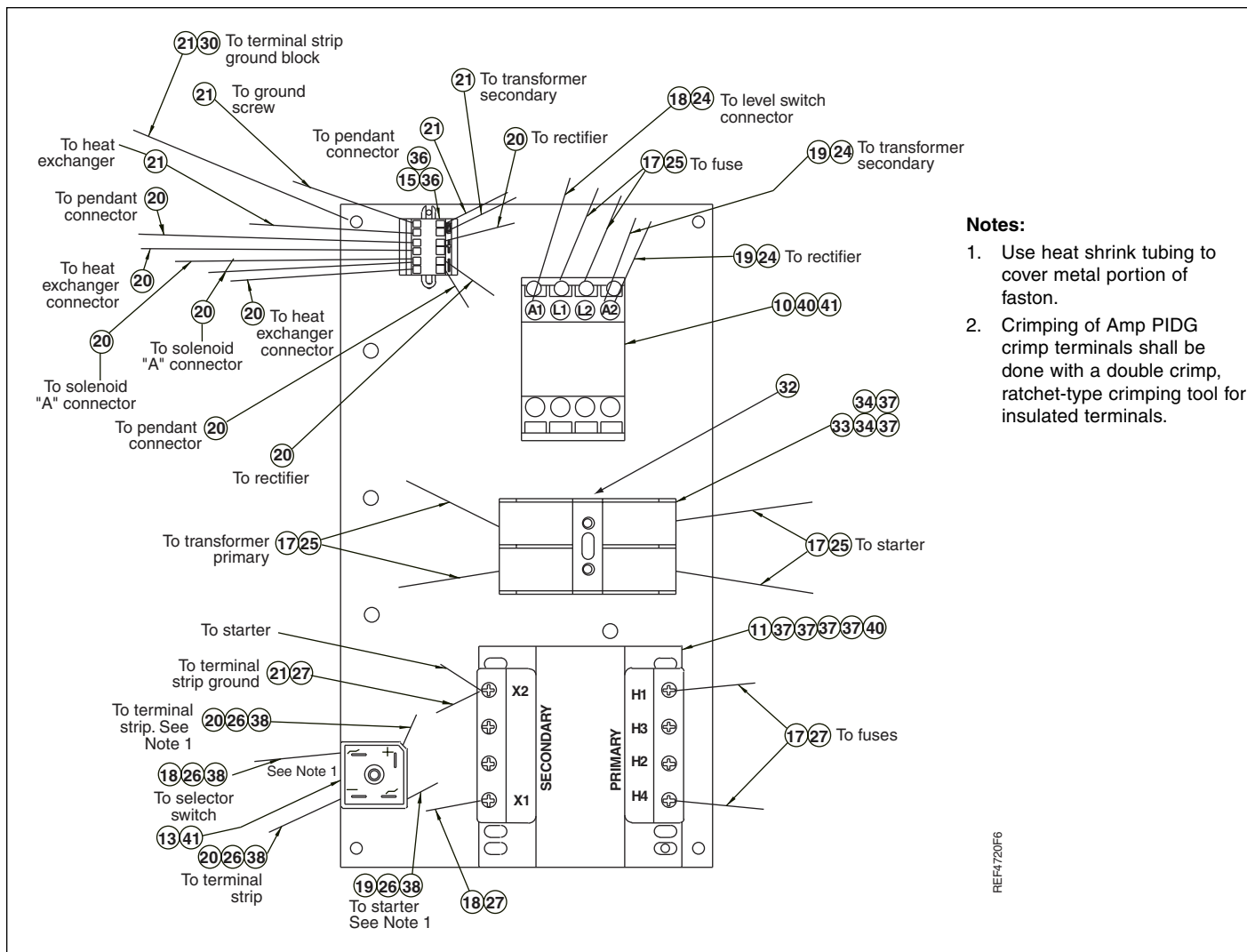


Figure 14, 115 & 230 Volt Back Panel

Repair Parts List for Figure 14							
Item	Part Number	Qty.	Description	Item	Part Number	Qty.	Description
10	DC2951389	1	D-line IEC Starter, 18 Amp 24 VAC 50/60 Hz. coil 1 N.O. Aux.	26	Std. Hardware	4	AMP 640903-1 PIDG Faston Recept. Nylon #22-18 #6 Screw 0.250" W
11	DC2949480	1	75 VA Transformer 115/230 PIRI. 27 Sec.	27	Std. Hardware	5	AMP 34541 PIDG Spade Tongue Terminal #22-16 #6 Screw 0.250" W
13	DA3578380	1	Rectifier 10 Amp	30	Std. Hardware	6	AMP 36154 PIDG Ring Tongue Terminal Nylon #22-16 #10 Screw 0.312" W
15	DC2948199	1	Terminal Strip	32	DC2774378	1	Fuse 115 V, FNQ-R-1.8
17	Std. Hardware	*	Wire #18 AWG Strand Copper, Black		DC2775378	1	Fuse 230 V, FNQ-R-0.8
18	Std. Hardware	*	Wire #18 AWG Strand Copper, Red	33	DC2947378	1	Fuse Holder 600 V
19	Std. Hardware	*	Wire #18 AWG Strand Copper, White	34	DC2946378	2	Fuse Cover 600 V for fuse size 13/32" x 15"
20	Std. Hardware	*	Wire #18 AWG Strand Copper, Blue	36	Std. Hardware	2	#4/40x3/8" Self-tapping Screw
21	Std. Hardware	*	Wire #18 AWG Strand Copper, Gr/Yel	37	Std. Hardware	8	#8/32x3/8" Self-tapping Screw
24	Std. Hardware	3	AMP326861 PIDG Spade Tongue Terminal #22-16 #6 Screw 0.297" W	38	Std. Hardware	4	3/8" Diameter Heat Shrink Tubing
25	Std. Hardware	6	AMP 32053 IDG Spade Tongue Terminal #22-16 #8 Screw 0.375" W	40	DC2495480	1	Finger-safe covers for Transformer
				41	Std. Hardware	3	#8 x 32 x 1/2" Self-tapping Screw

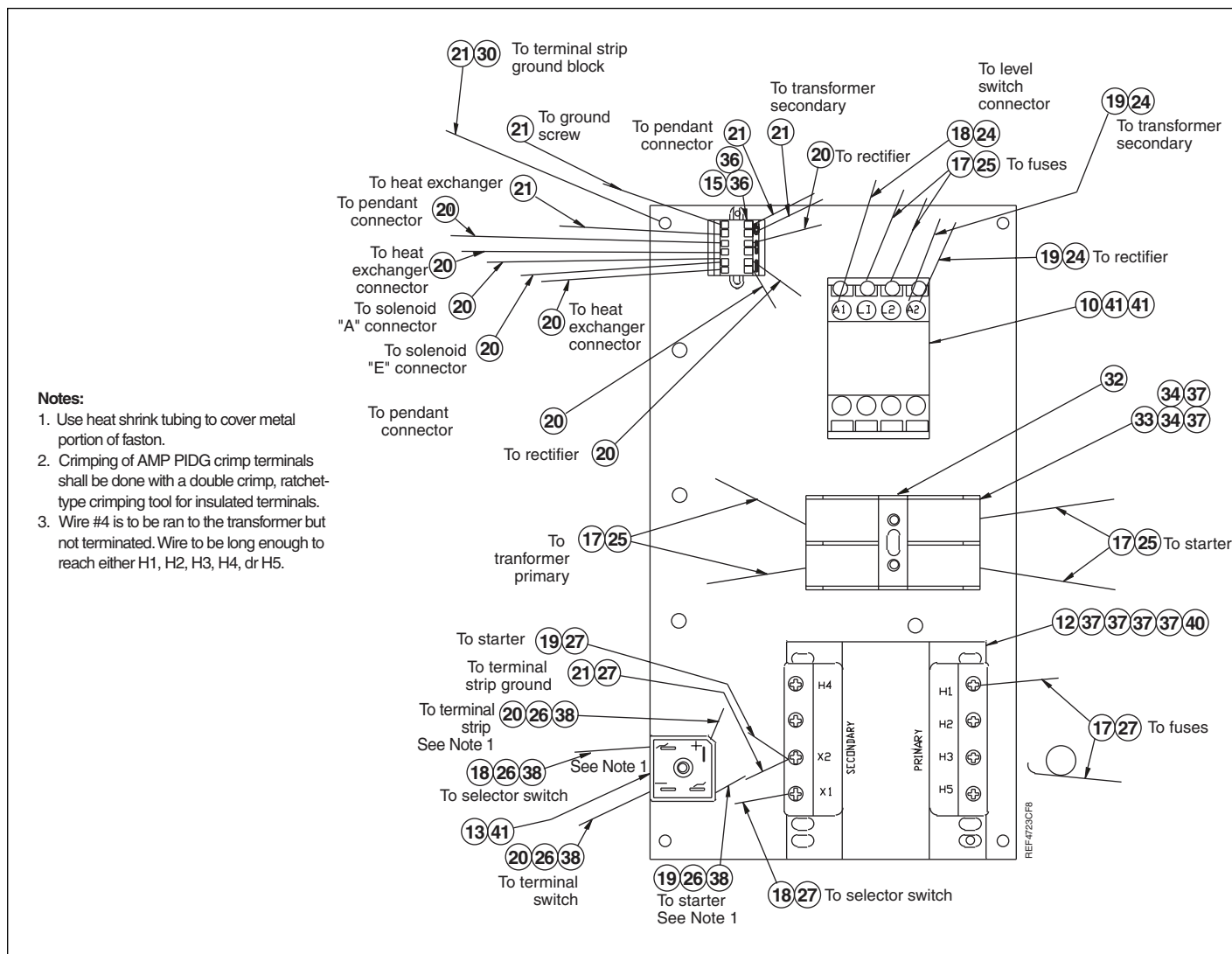


Figure 15, 380, 400, 440, 460, 575 Volt Back Panel

Repair Parts List for Figure 15

Item	Part Number	Qty.	Description	Item	Part Number	Qty.	Description
10	DC2951389	1	D-line IEC Starter 18 Amp 24 VAC 50/60 Hz. Coil	27	Std.Hardware	5	Nylon #22-18 #6 Screw 0.250" W AMP 34541 PIDG Spade Tongue Terminal #22-16 #6 Screw 0.250" W
12	DC2950480	1	75 VA Transformer 400, 440, 460, 575 Volt PRI, 27 Sec.	30	Std.Hardware	6	AMP 36154 PIDG Ring Tongue Terminal Nylon #22-16 #10 Screw 0.312" W
13	DA3578380	1	Rectifier	32	DC2776378	1	Fuse 380 V & 400 V, FNQ-R-0.5
15	DC2948199	1	Terminal Strip		DC2776378	1	Fuse 440 V, FNQ-R-0.5
17	Std.Hardware	*	Wire #18 AWG Strand Copper, Black		DC2777378	1	Fuse 460 V, FNQ-R-0.4
18	Std.Hardware	*	Wire #18 AWG Strand Copper, Red		DC2778378	1	Fuse 575 V, FNQ-R-0.25
19	Std.Hardware	*	Wire #18 AWG Strand Copper, White	33	DC2947378	1	Fuse Holder
20	Std.Hardware	*	Wire #18 AWG Strand Copper, Blue	34	DC2946378	2	Fuse Cover
21	Std.Hardware	*	Wire #18 AWG Strand Copper, Gr/Yel	36	Std.Hardware	2	#4/40 x 3/8" Self-Tapping Screw
24	Std.Hardware	3	AMP326861 PIDG Spade Tongue Terminal #22-16 #6 Screw 0.297" W	37	Std.Hardware	8	#8/32 x 3/8" Self-tapping Screw
25	Std.Hardware	6	AMP32053 PIDG Spade Tongue Terminal #22-16 #8 Screw 0.375" W	38	Std.Hardware	4	3/8" Diameter Tubing
26	Std.Hardware	4	AMP 640903-1 PIDG Faston Recept.	40	DC2495480	1	Transformer Covers
				41	Std.Hardware	3	#8/32 x 1/2" Self-Tapping Screw

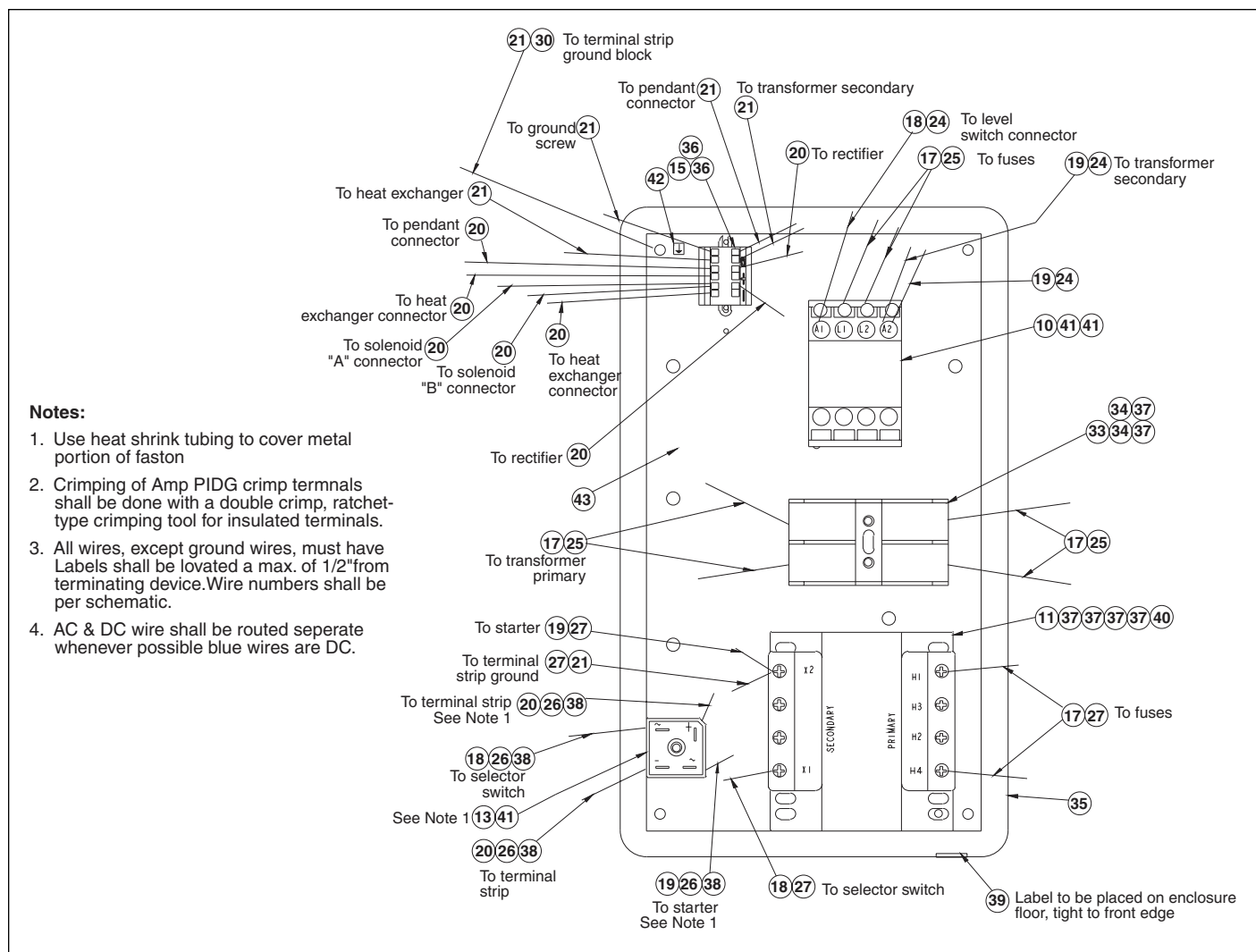
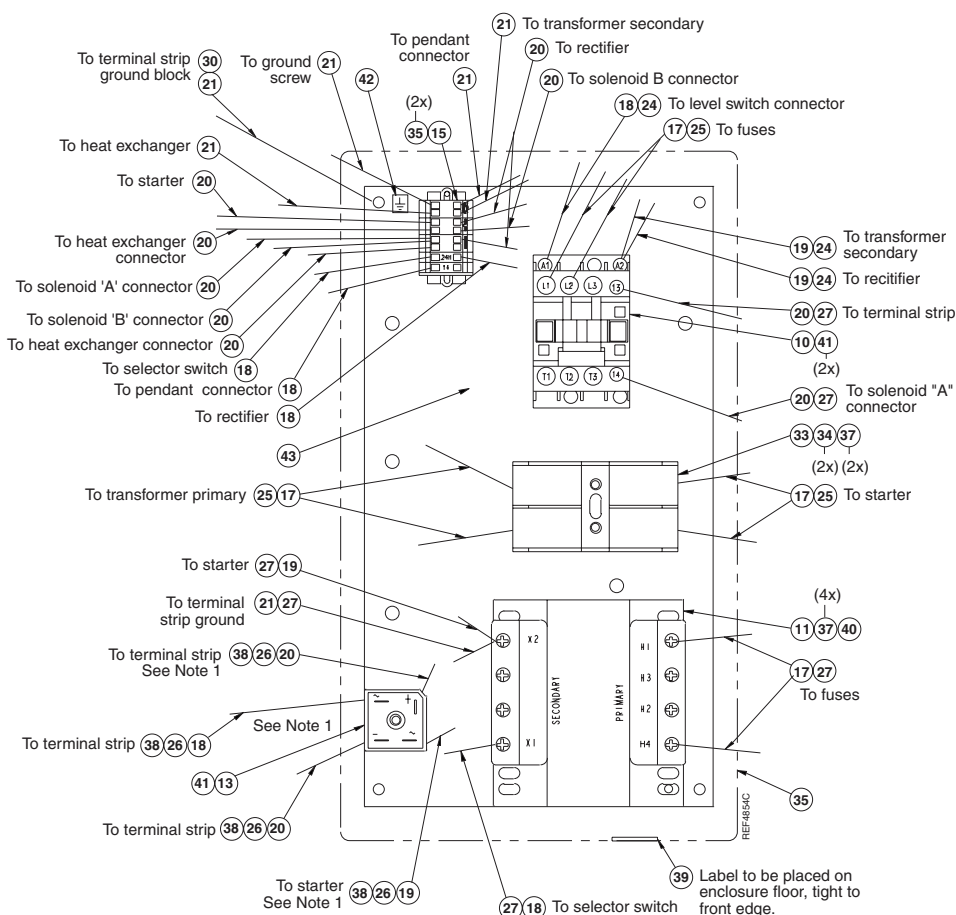


Figure 16, Japan VSP Sub-panel Assembly

Repair Parts List for Figure 16

Item	Part Number	Qty.	Description	Item	Part Number	Qty.	Description
10	DC2951389	1	D-Line IEC starter	27	Std.Hardware	5	AMP 34541 PIDG Spade Tongue Terminal #22-16 #6 Screw 0.250" W
11	DC3334480	1	Transformer, Hushh 2000 low	30	Std.Hardware	1	AMP 36154 PIDG Ring Tongue Terminal Nylon #22-16 #10 Screw 0.312" W
13	DA3578380	1	Rectifier-global pump	33	DC2947378	1	Fuse holder 600v
15	DC2948199	1	Terminal strip	34	DC2946378	2	Fuse cover 600v
16	Std.Hardware		Wire Markers	35	PA2576401	1	Electrical enclosure
17	Std.Hardware	*	Wire #18 AWG Strand Copper, Black	36	Std.Hardware	2	#4/40 x 3/8" Self-Tapping Screw
18	Std.Hardware	*	Wire #18 AWG Strand Copper, Red	37	Std.Hardware	8	#8/32 x 3/8" Self-tapping Screw
19	Std.Hardware	*	Wire #18 AWG Strand Copper, White	38	Std.Hardware	4	3/8" Diameter Tubing
20	Std.Hardware	*	Wire #18 AWG Strand Copper, Blue	39	DC3553226	1	Industrial label
21	Std.Hardware	*	Wire #18 AWG Strand Copper, Gr/Yel	40	DC2945480	1	Finger-safe covers for trans
24	Std.Hardware	3	AMP326861 PIDG Spade Tongue Terminal #22-16 #6 Screw 0.297" W	41	Std.Hardware	3	#8/32 x 1/2" Self-Tapping Screw
25	Std.Hardware	6	AMP32053 PIDG Spade Tongue Terminal #22-16 #8 Screw 0.375" W	42	DC3555226	1	Ground label
26	Std.Hardware	4	AMP 640903-1 PIDG Faston Recept. Nylon #22-18 #6 Screw 0.250" W	43	DC2835101	1	Sub-panel



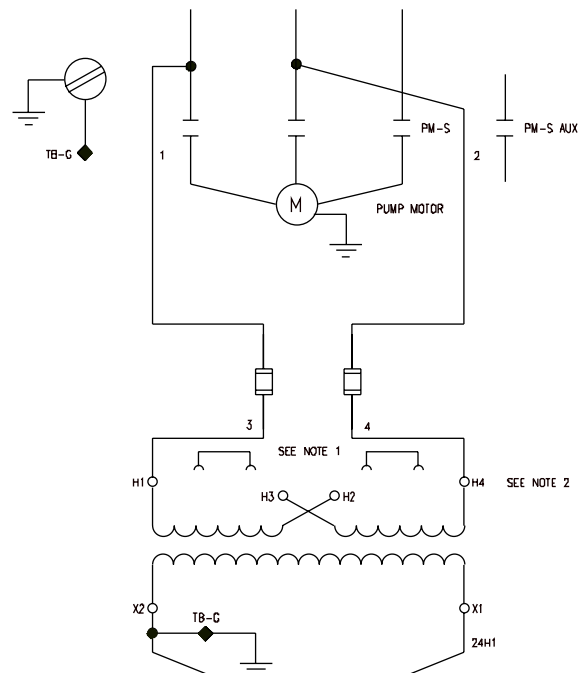
Notes:

1. Use heat shrink tubing to cover metal portion of Faston.
2. Crimping of Amp PIDG crimp terminals shall be done with a double crimp, ratchet-type crimping tool for insulated terminals.
3. All wires, except ground wires, must have wire labels (Item #16) on both ends of the wire. Labels shall be located a maximum of 1/2" from terminating device. Wire numbers shall be per schematic.
4. AC & DC wire shall be routed separate whenever possible, blue wires are DC.

Figure 17, Dump Japan Sub-panel Assembly

Repair Parts List for Figure 17

Item	Part Number	Qty.	Description	Item	Part Number	Qty.	Description
10	DC2951389	1	D-Line IEC starter	27	Std.Hardware	7	AMP 34541 PIDG Spade Tongue Terminal #22-16 #6 Screw 0.250" W
11	DC3334480	1	Transformer, Hushh 2000 low	30	Std.Hardware	1	AMP 36154 PIDG Ring Tongue Terminal Nylon #22-16 #10 Screw 0.312" W
13	DA3578380	1	Rectifier-global pump	33	DC2947378	1	Fuse holder 600v
15	DC3482199	1	Terminal strip	34	DC2946378	2	Fuse cover 600v
16	Std.Hardware		Wire Markers	35	PA2576401	1	Electrical enclosure
17	Std.Hardware	*	Wire #18 AWG Strand Copper, Black	36	Std.Hardware	2	#4/40 x 3/8" Self-Tapping Screw
18	Std.Hardware	*	Wire #18 AWG Strand Copper, Red	37	Std.Hardware	8	#8/32 x 3/8" Self-tapping Screw
19	Std.Hardware	*	Wire #18 AWG Strand Copper, White	38	Std.Hardware	4	3/8" Diameter Tubing
20	Std.Hardware	*	Wire #18 AWG Strand Copper, Blue	39	DC3553226	1	Industrial label
21	Std.Hardware	*	Wire #18 AWG Strand Copper, Gr/Yel	40	DC3945480	1	Finger-safe covers for trans
24	Std.Hardware	3	AMP326861 PIDG Spade Tongue Terminal #22-16 #6 Screw 0.297" W	41	Std.Hardware	3	#8/32 x 1/2" Self-Tapping Screw
25	Std.Hardware	6	AMP32053 PIDG Spade Tongue Terminal #22-16 #8 Screw 0.375" W	42	DC3555226	1	Ground label
26	Std.Hardware	4	AMP 640903-1 PIDG Faston Recept. Nylon #22-18 #6 Screw 0.250" W	43	DC2835101	1	Sub-panel



NOTES:

- Two jumpers connect to transformer. Initially terminate for 115 Volt.
- Transformer primary jumpers to be connected and fuses to be installed during pump assembly based on voltage.
115 volt – Jumper H1 & H3
Jumper H2 & H4
*Fuse FNQ-R-1.8
230 volt – Jumper H2 & H3
*Fuse FNQ-R-0.8
- Ground wiring to be #18 green with yellow stripe.
- 24VAC Control wiring to be #18 red.
- 24VAC Neutral wiring to be #18 white.
- All 24DC wiring to be #18 blue.
- Wire numbers 1-9 high AC voltage
Wire numbers 10-99 24 VAC
Wire numbers 100-199 24VDC
- LC - Level switch connector
PSC - Pressure switch connector
HEC - Heat exchanger connector
PC - Pendant connector
AC - Solenoid A connector
BC - Solenoid B connector
- NCP - Non-connected pin position for coding in male plug on cord.
CD - Coding pin position in female connector on enclosure.

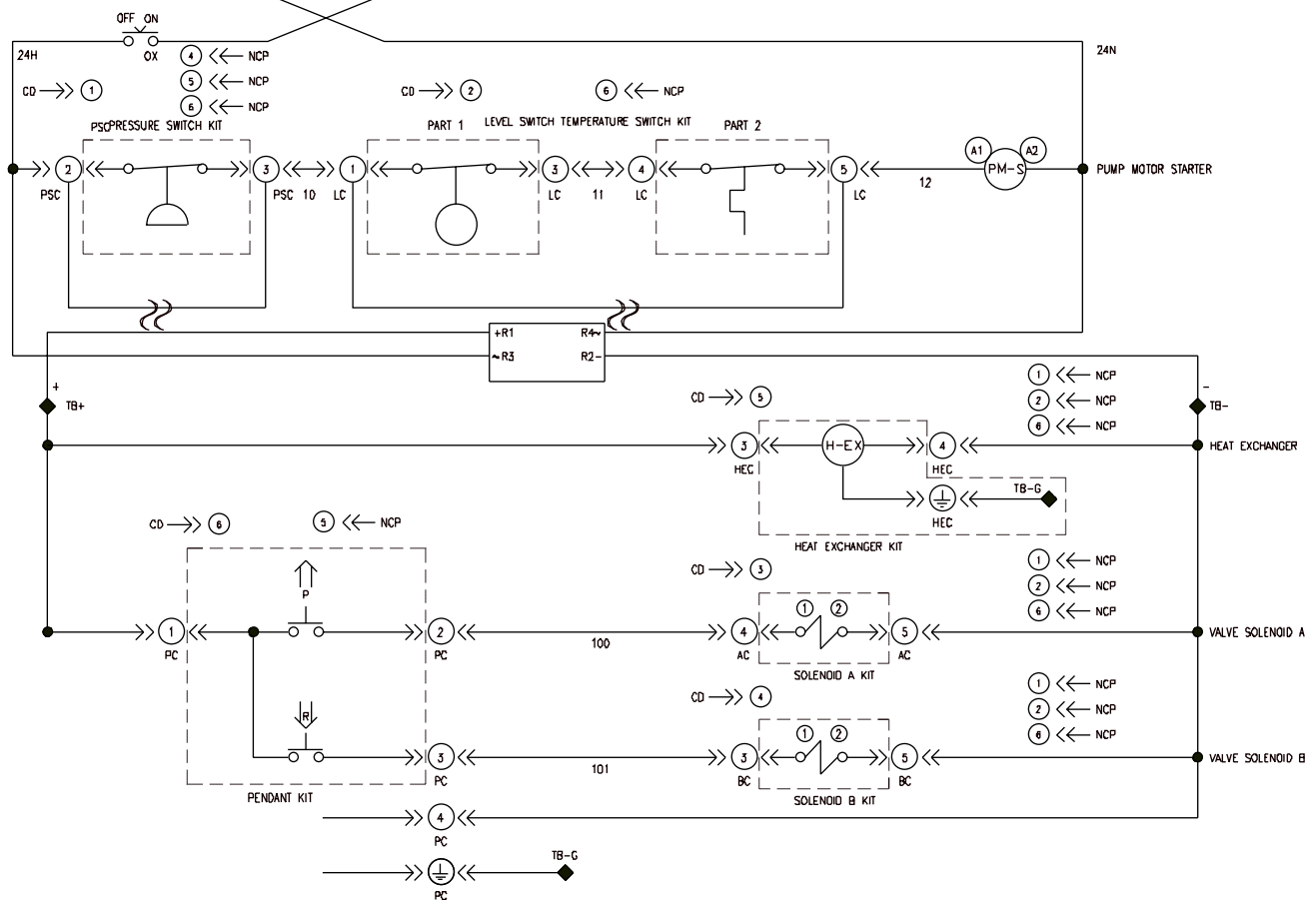
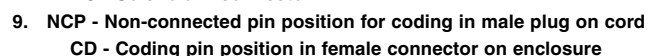


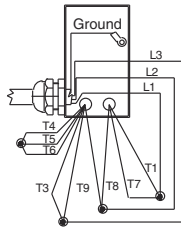
Figure 18, Electrical Diagram 110/230 Volt 1-phase



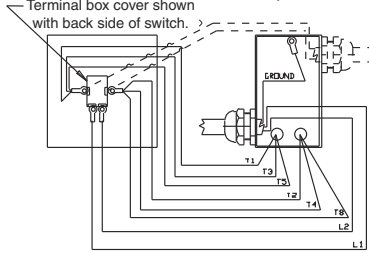
Motor Wiring

Short dash lines represent exchange wiring for pumps with no electric enclosures.

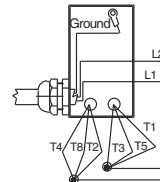
Motor terminal box wiring for electric valve version 190, 239 V / 3-phase.



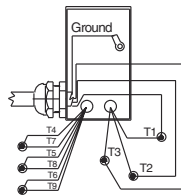
Motor terminal box wiring for manual valve version 110 V / 1-phase.



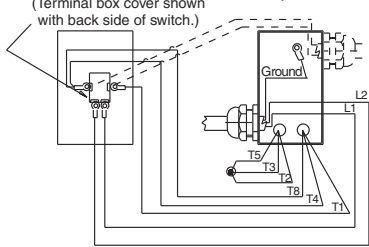
Motor terminal box wiring for electric valve version 110 V / 1-phase.



Motor terminal box wiring for electric valve version 380, 400, 415, 640, 480, 575 V / 3-phase.



Motor terminal box wiring for manual valve version 220 V / 1-phase.



Motor terminal box wiring for electric valve version 220 V / 1-phase.

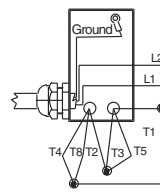


Figure 20

Enerpac Worldwide Locations

Africa

ENERPAC Middle East FZE
Office 423, JAFZA 15
P.O. Box 18004
Jebel Ali, Dubai
United Arab Emirates
Tel: +971 (0)4 8872686
Fax: +971 (0)4 8872687

Australia, New Zealand

Actuant Australia Ltd.
Block V Unit 3
Regents Park Estate
391 Park Road
Regents Park NSW 2143
(P.O. Box 261) Australia
Tel: +61 297 438 988
Fax: +61 297 438 648

Brazil

Power Packer do Brasil Ltda.
Rua dos Inocentes, 587
04764-050 - Sao Paulo (SP)
Tel: +55 11 5687 2211
Fax: +55 11 5686 5583
Toll Free in Brazil:
Tel: 0800 891 5770
vendabrasil@enerpac.com

Canada

Actuant Canada Corporation
6615 Ordan Drive, Unit 14-15
Mississauga, Ontario L5T 1X2
Tel: +1 905 564 5749
Fax: +1 905 564 0305
Toll Free:
Tel: +1 800 268 4987
Fax: +1 800 461 2456

Technical Inquiries:

techservices@enerpac.com

China

Actuant China Ltd.
1F, 269 Fute N. Road
Waigaoqiao Free Trade Zone
Pudong New District
Shanghai, 200 131 China
Tel: +86 21 5866 9099
Fax: +86 21 5866 7156

Actuant China Ltd. (Beijing)

709B Diyang Building
Xin No. 2
Dong San Huan North Rd.
Beijing City
100028 China
Tel: +86 10 845 36166
Fax: +86 10 845 36220

Central and Eastern Europe, Greece

ENERPAC GmbH
P.O. Box 300113
D-40401 Düsseldorf
Willstätterstrasse13
D-40549 Düsseldorf
Germany
Tel: +49 211 471 490
Fax: +49 211 471 49 28

France, Switzerland francophone

ENERPAC, Une division de ACTUANT
France S.A.
ZA de Courtaboeuf
32, avenue de la Baltique
91140 VILLEBON / YVETTE
France
Tel: +33 1 60 13 68 68
Fax: +33 1 69 20 37 50

✦ e-mail: info@enerpac.com

Germany, Austria and Switzerland

ENERPAC GmbH
P.O. Box 300113
D-40401 Düsseldorf
Willstätterstrasse13
D-40549 Düsseldorf
Germany
Tel: +49 211 471 490
Fax: +49 211 471 49 28

India

ENERPAC Hydraulics
(India) Pvt. Ltd.
Office No. 9, 10 & 11,
Plot No. 56, Monarch Plaza,
Sector 11, C.B.D. Belapur
Navi Mumbai 400614, India
Tel: +91 22 2756 6090
Tel: +91 22 2756 6091
Fax: +91 22 2756 6095

Italy

ENERPAC S.p.A.
Via Canova 4
20094 Corsico (Milano)
Tel: +39 02 4861 111
Fax: +39 02 4860 1288

Japan

Applied Power Japan Ltd.
Besshochou 85-7
Saitama-shi, Kita-ku,
Saitama 331-0821
Japan
Tel: +81 48 662 4911
Fax: +81 48 662 4955

Middle East, Turkey and Caspian Sea

ENERPAC Middle East FZE
Office 423, JAFZA 15
P.O. Box 18004
Jebel Ali, Dubai
United Arab Emirates
Tel: +971 (0)4 8872686
Fax: +971 (0)4 8872687

Russia and CIS (excl. Caspian Sea Countries)

Actuant LLC
Admiral Makarov Street 8
125212 Moscow, Russia
Tel: +7-495-9809091
Fax: +7-495-9809092

Singapore

Actuant Asia Pte. Ltd.
37C, Benoi Road Pioneer Lot,
Singapore 627796
Tel: +65 68 63 0611
Fax: +65 64 84 5669
Toll Free: +1800 363 7722
Technical Inquiries:
techsupport@enerpac.com.sg

South Korea

Actuant Korea Ltd.
3Ba 717,
Shihwa Industrial Complex
Jungwang-Dong, Shihung-Shi,
Kyunggi-Do
Republic of Korea 429-450
Tel: +82 31 434 4506
Fax: +82 31 434 4507

✦ internet: www.enerpac.com

Spain and Portugal

ENERPAC
C/San José Artesano 8
Pol. Ind.
28108 Alcobendas
(Madrid) Spain
Tel: +34 91 661 11 25
Fax: +34 91 661 47 89

The Netherlands, Belgium, Luxembourg, Sweden, Denmark, Norway, Finland and Baltic States

ENERPAC B.V.
Galvanistraat 115, 6716 AE Ede
P.O. Box 8097, 6710 AB Ede
The Netherlands
Tel: +31 318 535 911
Fax: +31 318 525 613
+31 318 535 848

Technical Inquiries Europe:

techsupport.europe@enerpac.com

United Kingdom, Ireland

Enerpac Ltd
Bentley Road South
Darlaston, West Midlands
WS10 8LQ, United Kingdom
Tel: +44 (0)121 50 50 787
Fax: +44 (0)121 50 50 799

USA, Latin America and Caribbean

ENERPAC
P.O. Box 3241
6100 N. Baker Road
Milwaukee, WI 53209 USA
Tel: +1 262 781 6600
Fax: +1 262 783 9562

User inquiries:

+1 800 433 2766

Inquiries/orders:

+1 800 558 0530

Technical Inquiries:

techservices@enerpac.com

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