ENERPAC
Hydraulic Technology Worldwide

Repair Parts Sheet

ET1280/FT1380/FT1390 Z-Class Hydraulic Pumps

L2696 Rev. B 11/07

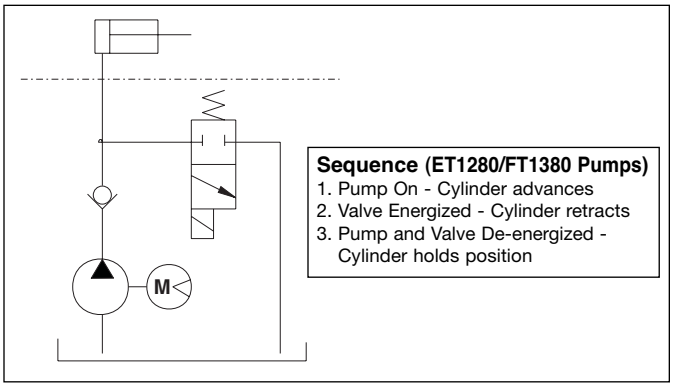
For Date Codes Beginning with the Letter "A"

ET1280P-001, FT1380-3-1-Z, FT1390-3-1-Z — 115V 60 Hz
FT1380-1-35-Z, FT1380-3-35-Z — 230V 60 Hz
FT1390-3-17-Z, FT1390-3-37-Z — 230V 60 Hz

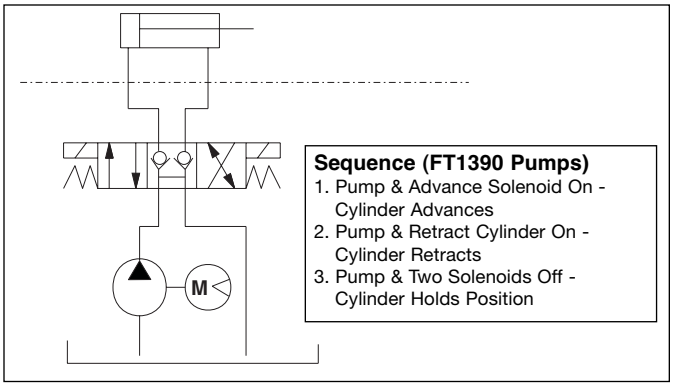
To Protect Your Warranty, Use Only ENERPAC Hydraulic Oil.

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





Sequence (ET1280/FT1380 Pumps)
1. Pump On - Cylinder advances
2. Valve Energized - Cylinder retracts
3. Pump and Valve De-energized - Cylinder holds position



Sequence (FT1390 Pumps)
1. Pump & Advance Solenoid On - Cylinder Advances
2. Pump & Retract Cylinder On - Cylinder Retracts
3. Pump & Two Solenoids Off - Cylinder Holds Position

Contents

Page

Figure 1 - Reservoir and Motor Assembly 2
Figure 2 - Pump Assembly 3
Figure 3 - Poppet Valve Subassembly (All Models Except FT1390-3-1-Z & FT1390-3-17-Z) 4
Figure 4 - Internal Components, Poppet Valve (All Models Except FT1390-3-1-Z & FT1390-3-17-Z) 5
Figure 5 - Valve Subassembly, 4-Way VE43N (Models FT1390-3-1-Z & FT1390-3-17-Z only) 6
Figure 6 - Main Pump Element Assembly 7
Figures 7A & 7B - Wiring Diagram & Electric Enclosure (Models FT1380-3-1-Z & ET1280P-001, 115 Volt) 8-9
Figures 8A & 8B - Wiring Diagram & Electric Enclosure (Model FT1380-1-35-Z, 230 Volt) 10-11
Figures 9A & 9B - Wiring Diagram & Electric Enclosure (Model FT1380-3-35-Z, 230 Volt) 12-13
Figures 10A & 10B - Wiring Diagram & Electric Enclosure (Model FT1390-3-1-Z, 115 Volt) 14-15
Figures 11A & 11B - Wiring Diagram & Electric Enclosure (Model FT1390-3-17-Z, 230 Volt) 16-17
Figures 12A & 12B - Wiring Diagram & Electric Enclosure (Model FT1390-3-37-Z, 230 Volt) 18-19

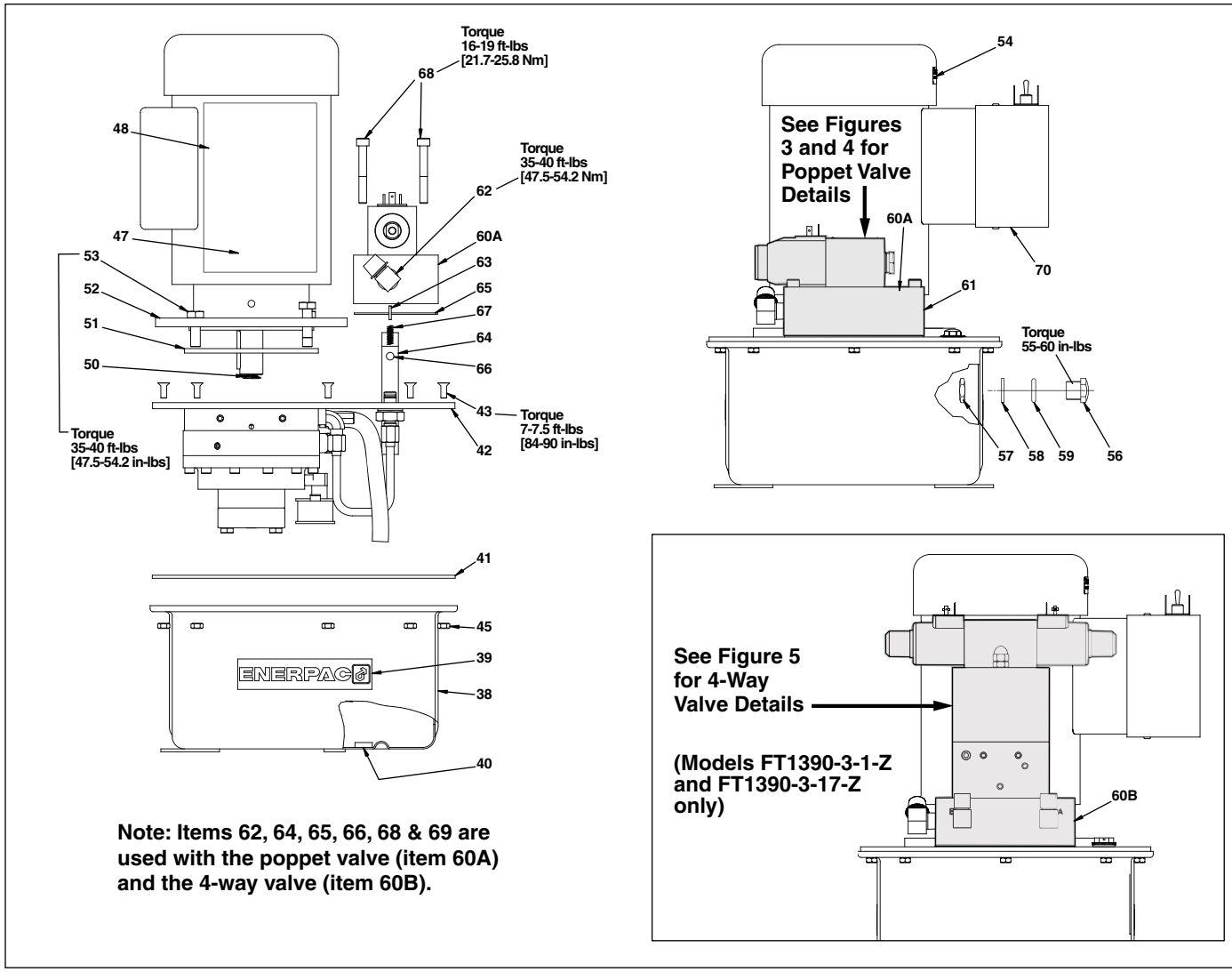


Figure 1, Reservoir and Motor Assembly

Repair Parts List for Figure 1

Item	Part Number	Qty.	Description		Item	Part Number	Qty.	Description
38	U052265.025	1	Reservoir		57	B1016123	1	Hex Jam Nut
39	CB562026	2	Decal		58	B1012503	1	O-Ring
40	C187018	1	Magnet		59	CR355167	1	Gasket
41	Y252167 ★	1	Gasket		60A	U052265905-1	1	Valve, 24V Poppet
42	(See Figure 3)	1	Pump Assy, Basic		60B	DC5155900	1	Valve, 24V 4-Way VE43N
43	CBA619028-1B	12	Screw, Hex Socket		61	A1009245	1	Flush Plug, 3/8"
45	BSS5632D	12	Lock Nut		62	DA12188095	1	Elbow
47	DA5039026	1	Decal, “For Service”		63	B1037057	1	Spring Pin
48	DA9853026	1	Nameplate, 20 Ser		64	DC2749768	1	Return Pipe, 3/8 NPT
50	BSS5509D	1	Spring		65	DC9356037 ★	1	Gasket, Valve
51	DC2748037	1	Motor Gasket		66	B1009016	1	Ball, 5/16" Dia.
52	DC9814259	1	Motor 115/230 Volts		67	S1183	1	Spring
53	CBE1025046-1B	4	Motor Screw		68	CCA837028-1A	4	Screw, SHCS M8x60
54	CH272026	1	Decal, Caution		70	(See Figures 7-12)	1	Electrical Enclosure
56	DA12288022	1	Sight Glass					

★ Items included in and available only as part of Repair Kit U052265K.

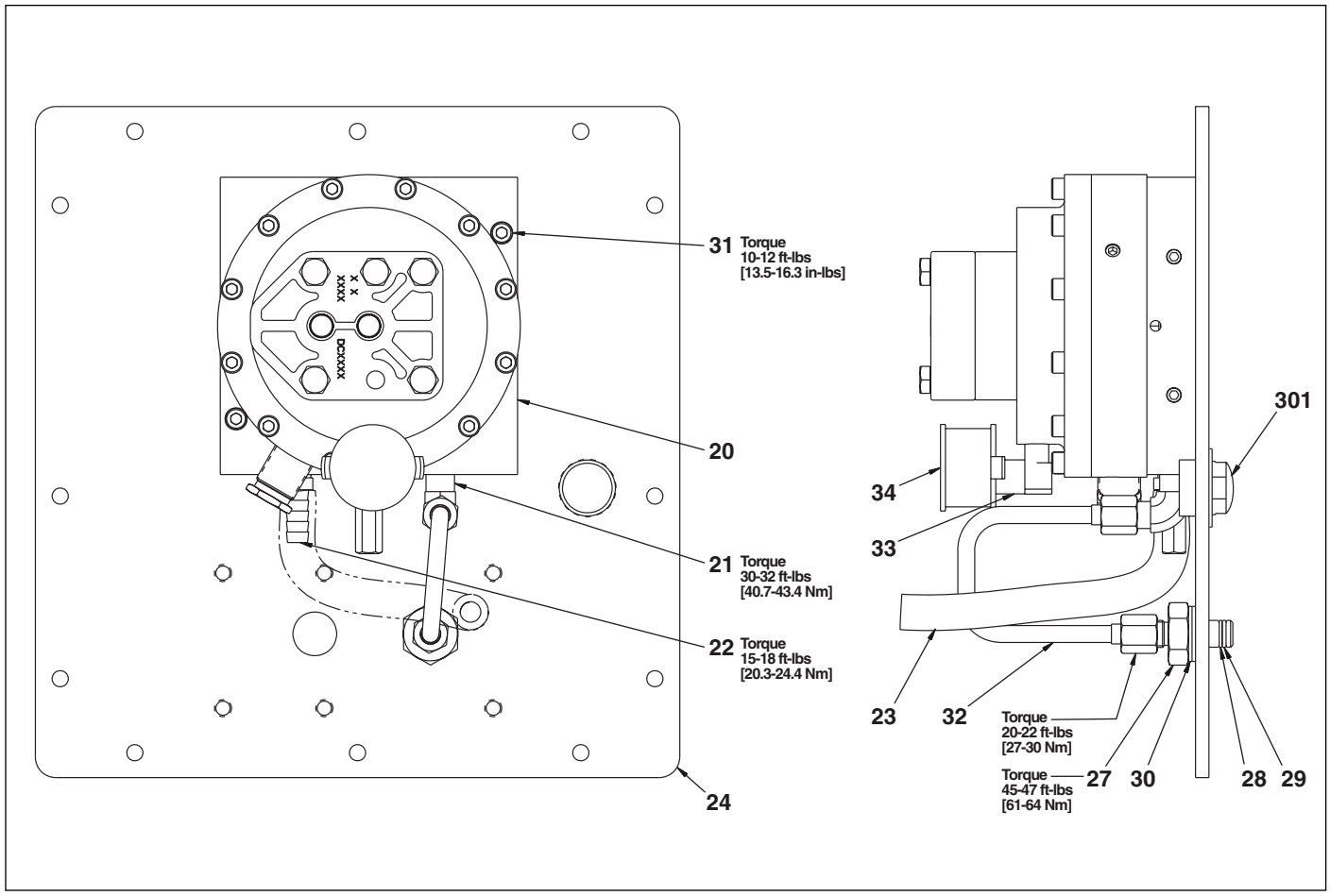


Figure 2, Pump Assembly

Repair Parts List for Figure 2								
Item	**Part Number**	**Qty.**	**Description**		**Item**	**Part Number**	**Qty.**	**Description**
20	Pump Element	1	(See Figure 6)		29	B1012203 ★	1	O-Ring, Viton
21	F100094-264	1	Fitting, 90 Deg		30	DC9271167	2	Gasket, Copper
22	F100097-16	1	Fitting, Hose Barb		31	CCA621028-1A	2	Screw, SHC
23	DC9335646	1	Hose Bypass		32	DC9315920	1	Tube Assembly
24	U052265101	1	Cover Plate		33	DC9330268	1	Tubing, Intake,1.38"
27	DC9173.690	1	Connector, Tube/Fitting		34	DC9178118	1	Intake Filter
28	BSS0368D	1	Back-up Ring ★		301	DC9558920	1	Breather Assy.
★ Items included in and available only as part of Repair Kit U052265K.								

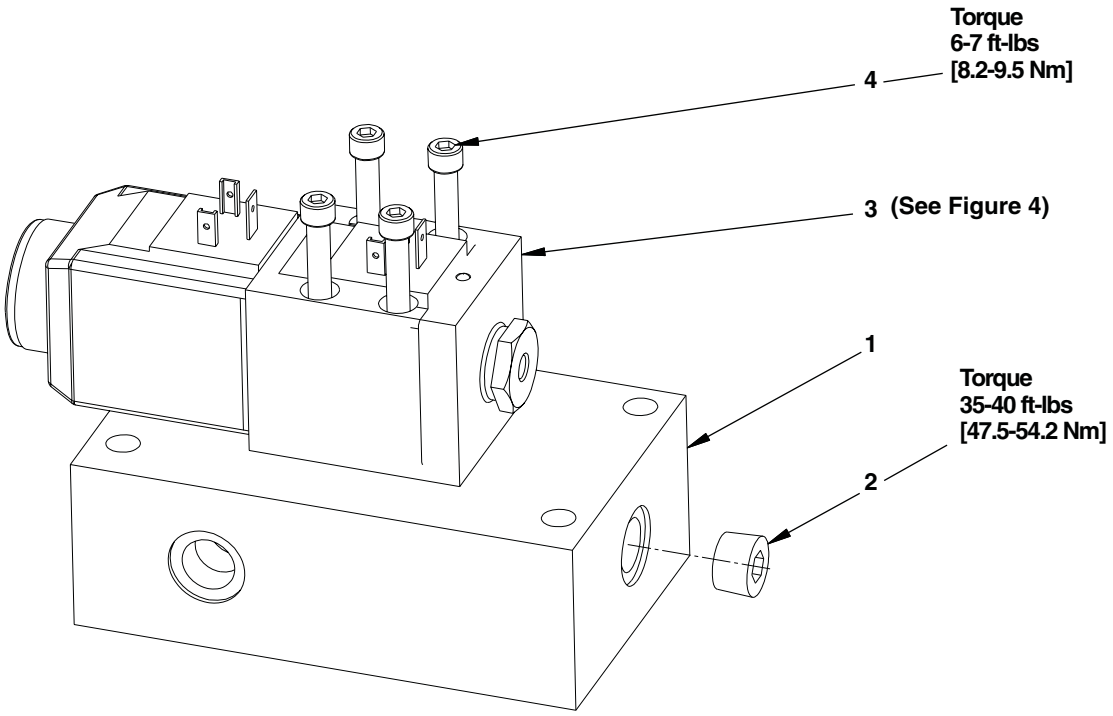
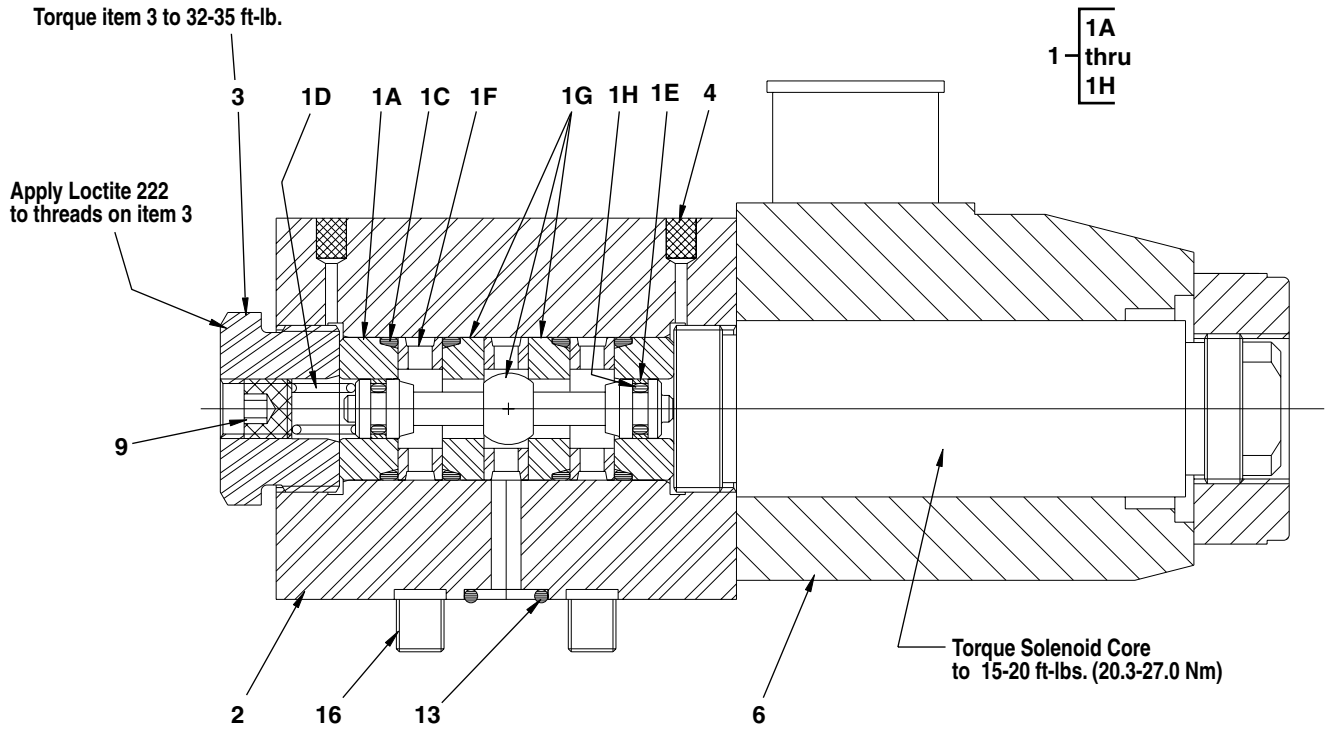


Figure 3, Poppet Valve Subassembly (All Models Except FT1390-3-1-Z & FT1390-3-17-Z)

Repair Parts List for Figure 3								
Item	**Part Number**	**Qty.**	**Description**		**Item**	**Part Number**	**Qty.**	**Description**
1	U052265690	1	Manifold		3	U052265905-2	1	Assy, Poppet Valve, 24V
2	A1009245	1	Plug, Shipping		4	B1020028	4	Screw, SHCS .25-28



NOTES:

Lubricate all seals prior to assembly.

Item 1 includes items 1A, 1C, 1D, 1E, 1F, 1G and 1H.

Figure 4, Internal Components, Poppet Valve (All Models Except FT1390-3-1-Z & FT1390-3-17-Z)

Repair Parts List for Figure 4

Item	Part Number	Qty.	Description		Item	Part Number	Qty.	Description
1	DA5792949	1	Valve Stack, Int. 3-Way		2	U052265190-2	1	Valve Block
1A	DA3697039	2	Bushing, Pump		3	DA5421009	1	Valve Plug
1C	B1016803 ★	4	O-Ring		4	DA4390118 ★	2	Filter
1D	DA5422110 ★	1	Spring, Comp Coil		6	DA4404900	1	Solenoid Assy, 24V
1E	CM279044 ★	2	Glyd Ring		9	PA1417027	1	Set Screw
1F	DA3698290	2	Seat Spacer, Pump		13	B1011803 ★	3	O-Ring
1G	DC862949	1	Poppet Set		16	B1020028	4	Screw
1H	B1002503 ★	1	O-Ring					

★ Items included in and available only as part of Seal Kit DA5792949K.

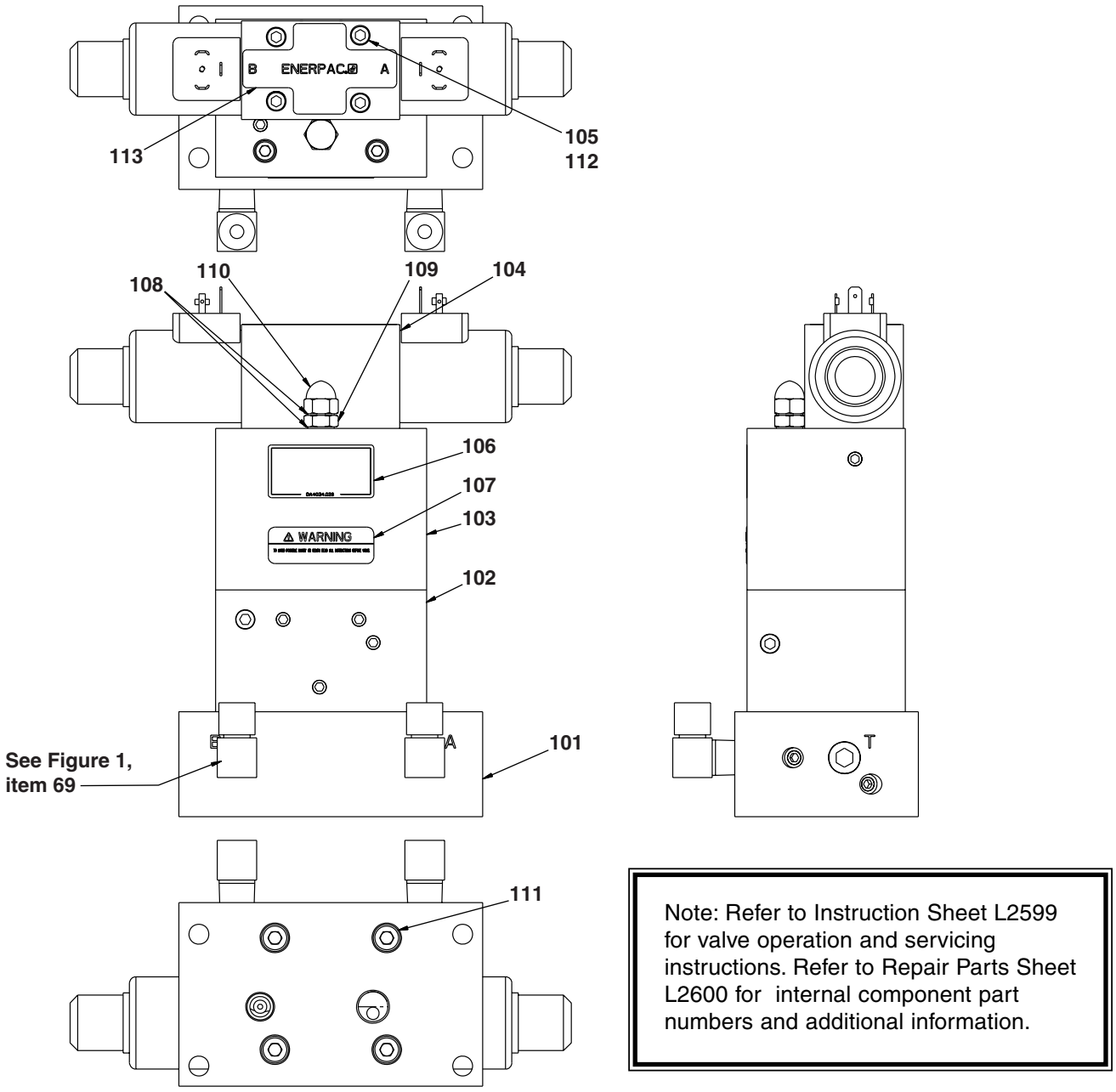


Figure 5, Valve Subassembly, 4-Way VE43N (Models FT1390-3-1-Z & FT1390-3-17-Z only)

Repair Parts List for Figure 5

Item	Part Number	Qty.	Description		Item	Part Number	Qty.	Description
101	DC5151900	1	Port Manifold		108	BL3015	2	Gasket
102	DC6368950	1	Body Assy		109	B1006124	1	Nut
103	DC5946950	1	Cover, Subassembly		110	L342055	1	Nut
104	DC5142660	1	Spool, Valve, 24VDC		111	CBE837028-1A	4	Screw, SHCS, M8 x 60
105	B1331028X	4	Screw, SHCS 10-24 x 1.25		112	B1086066	4	Lock Washer
106	DC6845026	1	Decal, Valve		113	DC6359226	1	Label, VE33/VE43
107	CH272026	1	Decal, Caution					

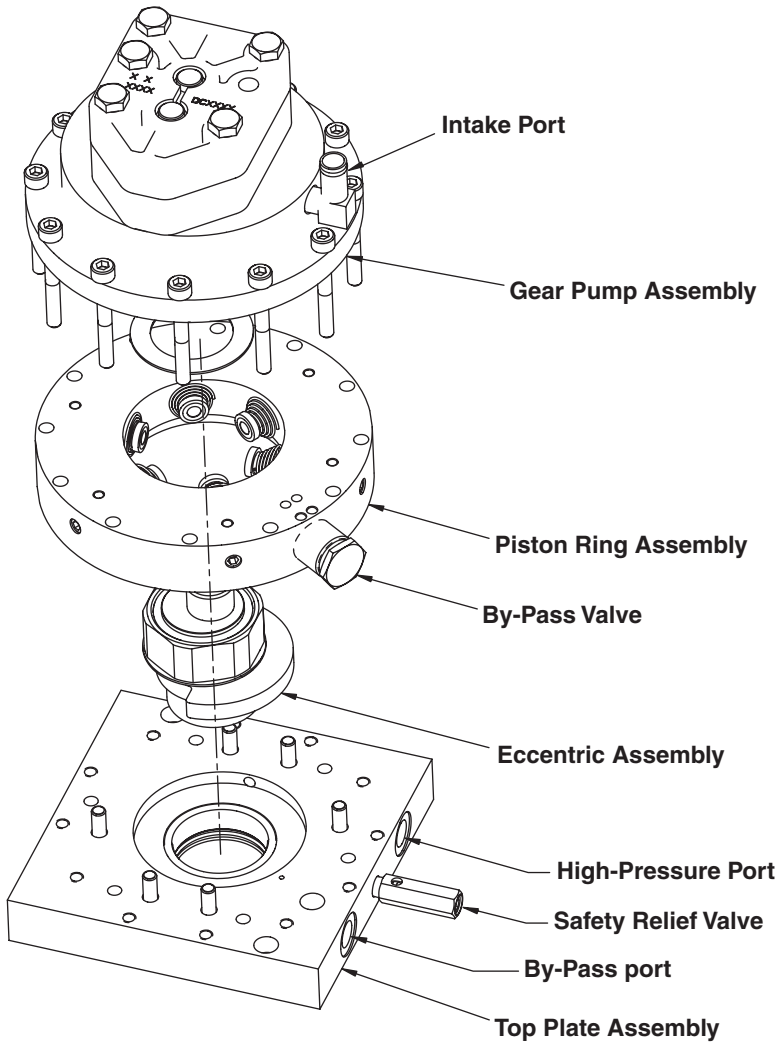


Figure 6, Main Pump Element Assembly

Note: Refer to Repair Parts Sheet L2596 for pump element repair parts lists and servicing instructions.

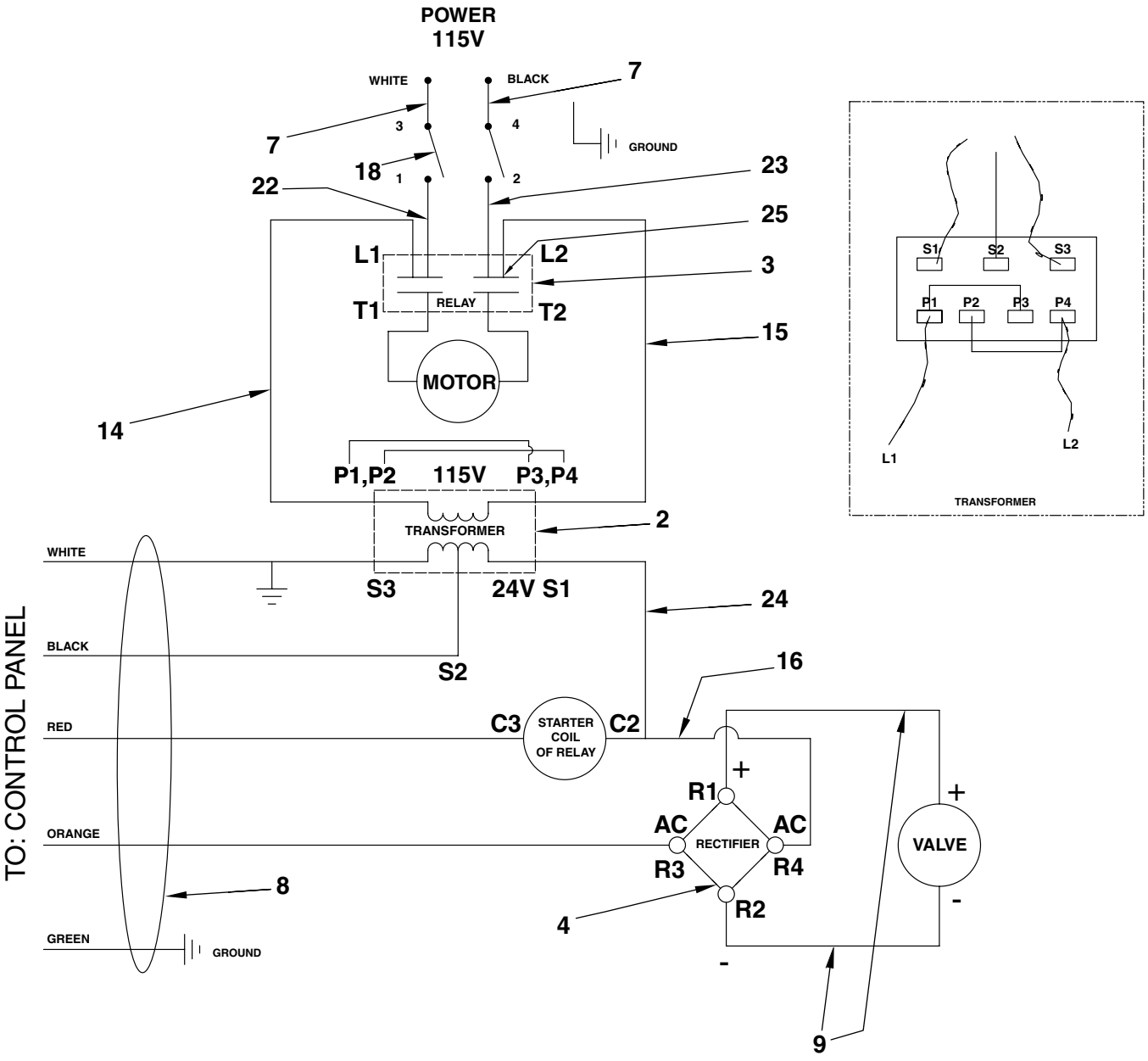
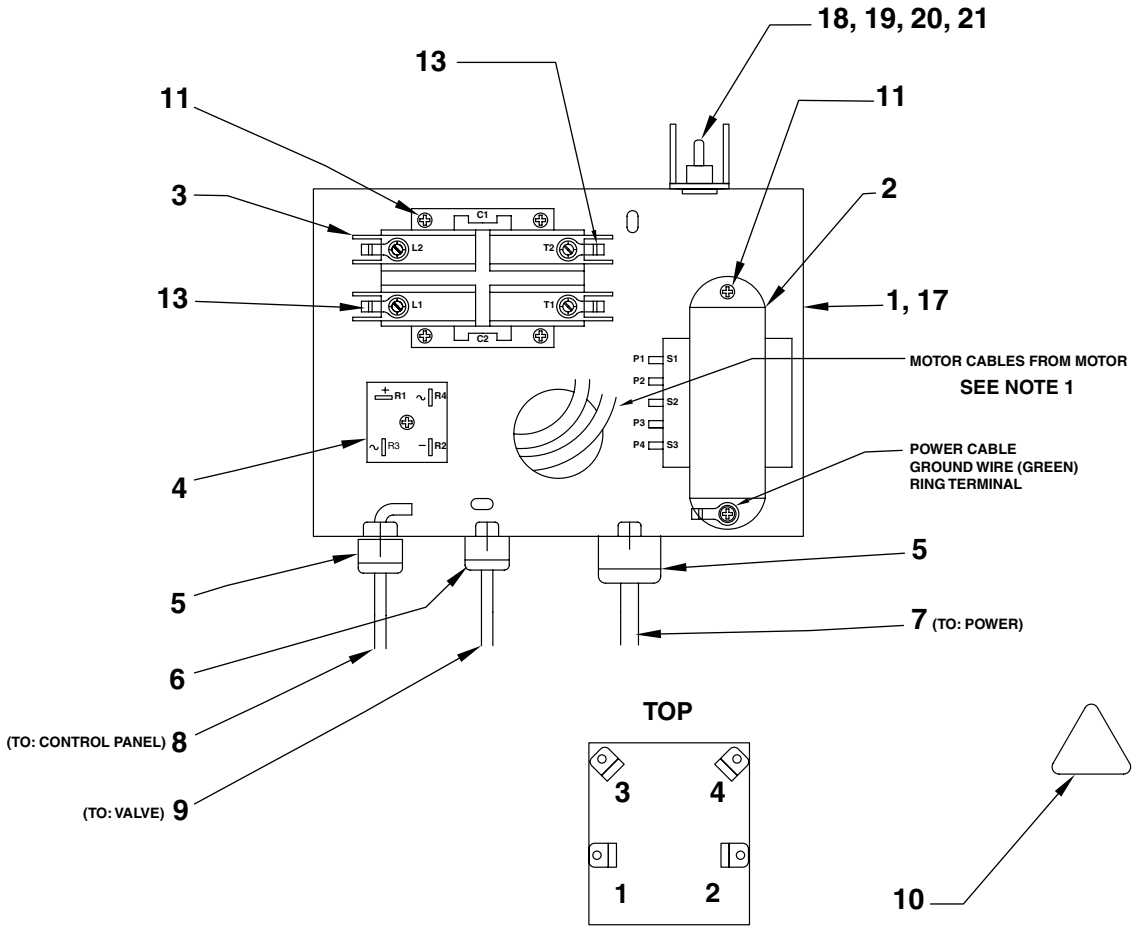


Figure 7A, Wiring Diagram (Models FT1380-3-1-Z & ET1280P-001, 115 Volt)



NOTE 1:

Twist motor wires 1, 3 & 5 and 2, 4 & 8 together and crimp on connector item 25. Connect to item 3 starter terminals T1 & T2.

Figure 7B, Electric Enclosure (Models FT1380-3-1-Z & ET1280P-001, 115 Volt)

Repair Parts List for Figures 7A AND 7B

Item	Part Number	Qty.	Description		Item	Part Number	Qty.	Description
1	U052265401-1	1	Box, Base Utility		14	DA4091900	1	Wire Assy
2	DA3567380	1	Transformer		15	DA4092900	1	Wire Assy
3	DA3568980	1	Relay		16	DA3936900	1	Wire Assy
4	DA3578380	1	Rectifier		17	U052265401	1	Lid, Utility Case
5	DA5692007	2	Strain Relief (CSA)		18	DA4030372	1	Switch
6	U052265007-1	1	Fitting, Liquid Tight		19	DA4110372	1	Switch Guard
7	U052265960	1	Power Cord Assy.		20	DA4251037	1	Gasket
8	U052265450	1	Electrical Cord		21	E1001018	4	Ring, Tongue Connect
9	U052265980	1	Valve Cable		22	DA4095900	1	Wire Assy, Black
10	DC9922026	1	Decal, High Voltage		23	DA4096900	1	Wire Assy, White
11	DA3639028	6	Screw, Self Tapping		24	DA3929900	1	Wire Assy
13	E1001044	4	Connector					

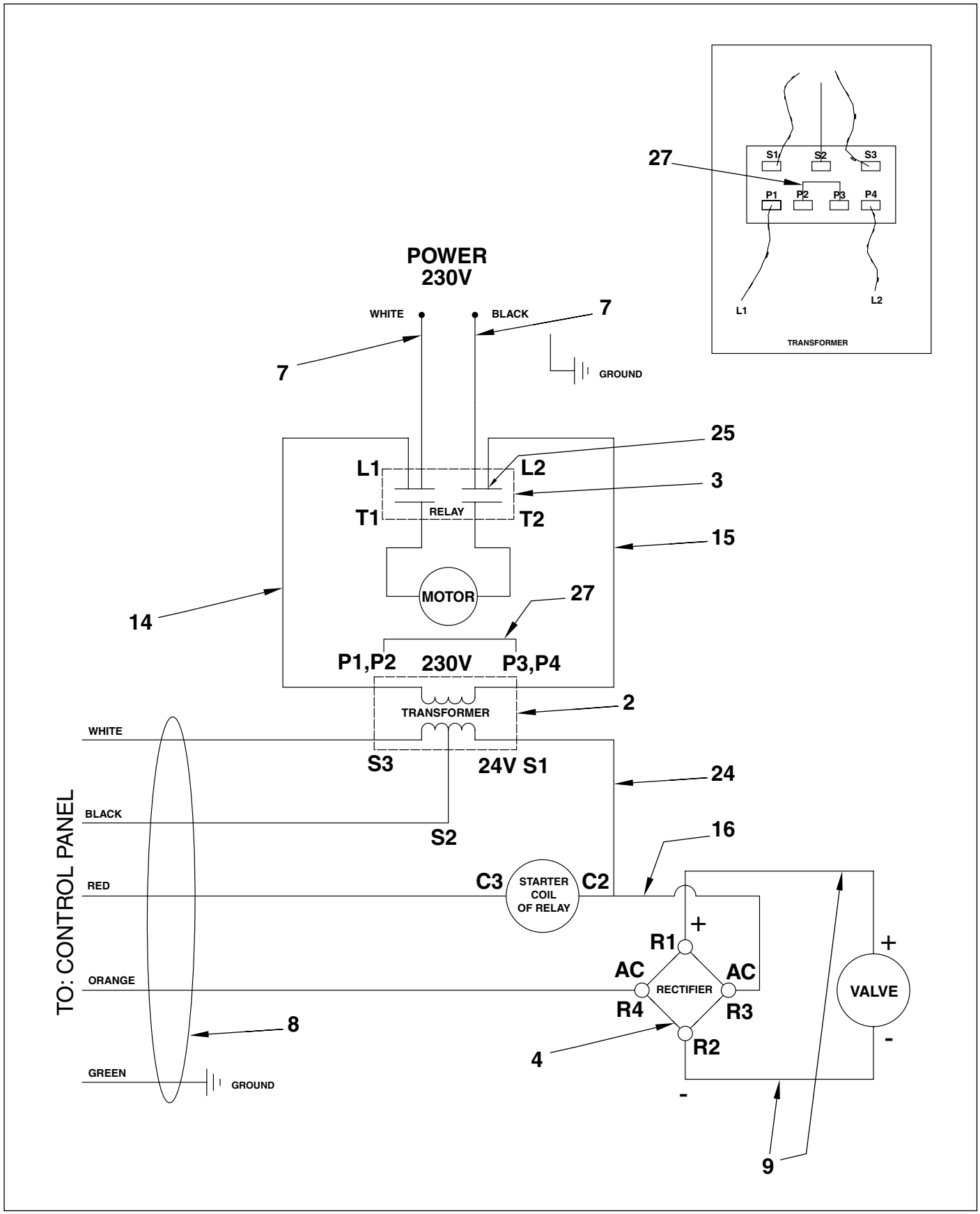


Figure 8A, Wiring Diagram (Model FT1380-1-35-Z 230 Volt)

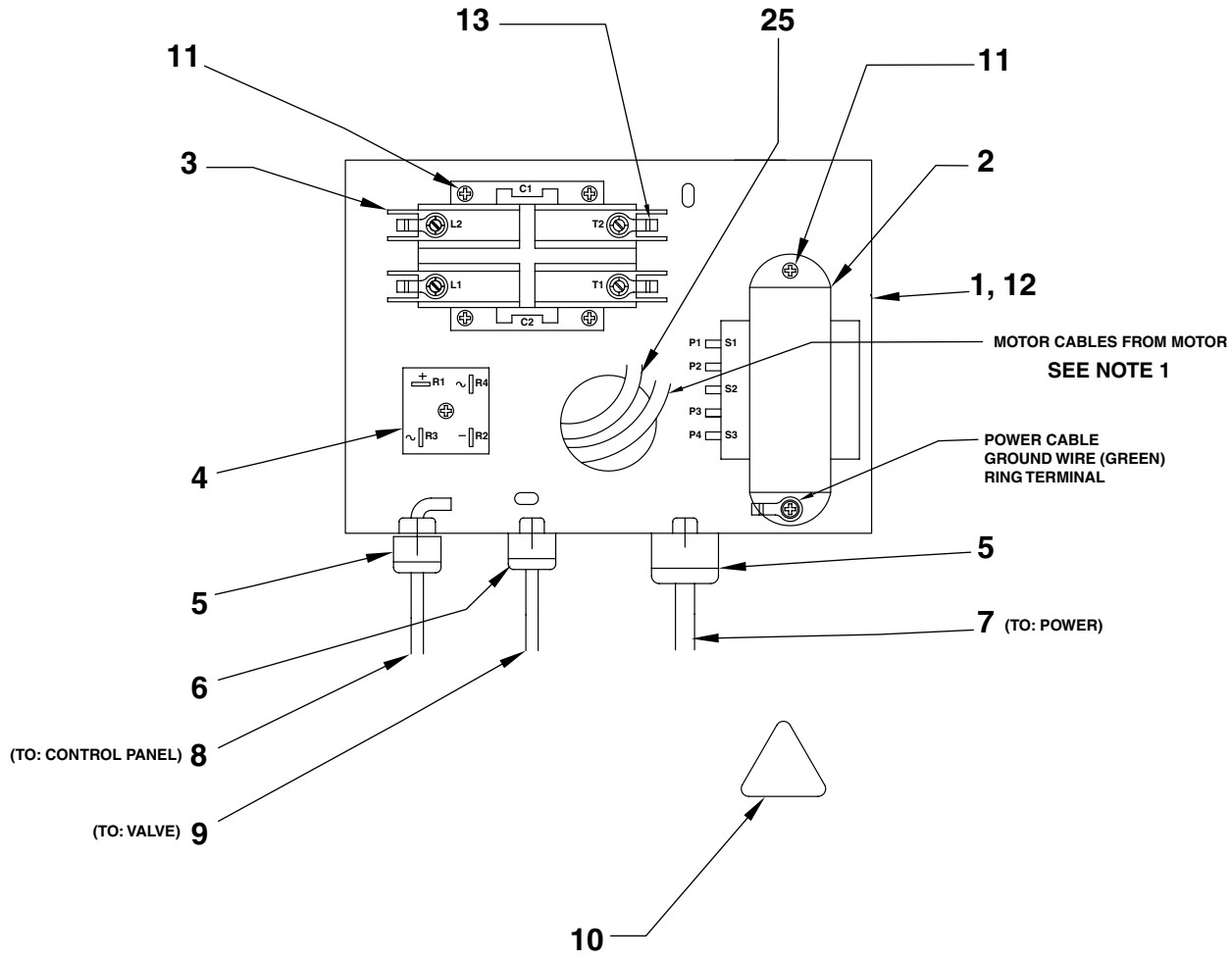


Figure 8B, Electric Enclosure (Model FT1380-1-35-Z, 230 Volt)

Repair Parts List for Figures 8A AND 8B								
Item	**Part Number**	**Qty.**	**Description**		**Item**	**Part Number**	**Qty.**	**Description**
1	U052265401	1	Utility Case		11	DA3639028	6	Screw, Self Tapping
2	DA3567380	1	Transformer		12	U052265401-2	1	Lid, Utility Case
3	DA35689	1	Relay		13	E1001044	4	Connector
4	DA3578380	1	Rectifier		14	DA4091900	1	Wire Assy
5	CA4007	2	Cord Connector		15	DA4092900	1	Wire Assy
6	CR759291	1	Cord Bushing		16	DA3936900	1	Wire Assy
7	U052265960	1	Power Cord Assy.		23	DA4096900	1	Wire Assy, White
8	DA12124450	1	Cord		24	DA3929900	1	Wire Assy
9	U052265980	1	Valve Cable		25	Y260270	2	Connector
10	DC9922026	1	Decal, High Voltage		27	DA3931900	1	Wire Assy

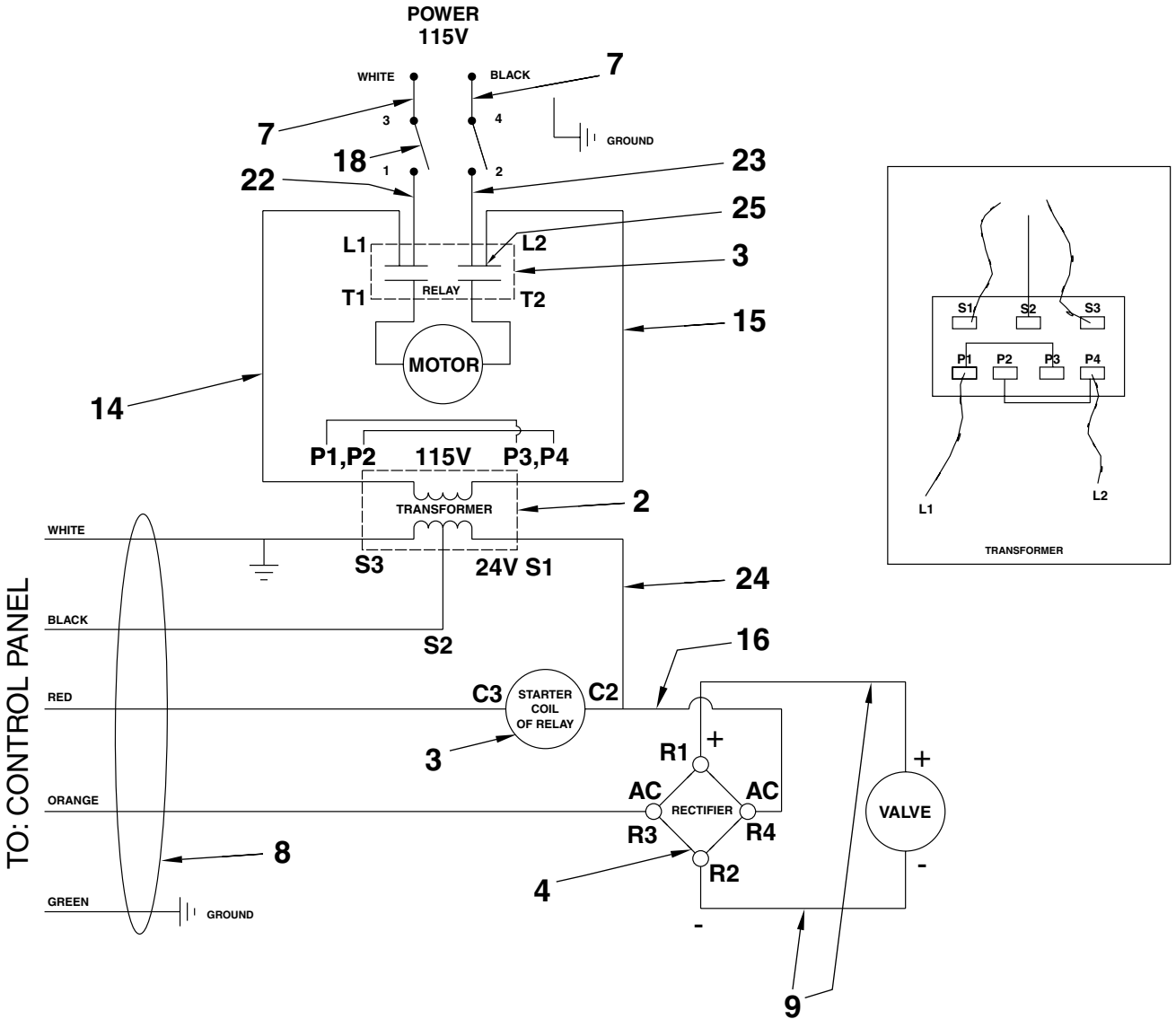
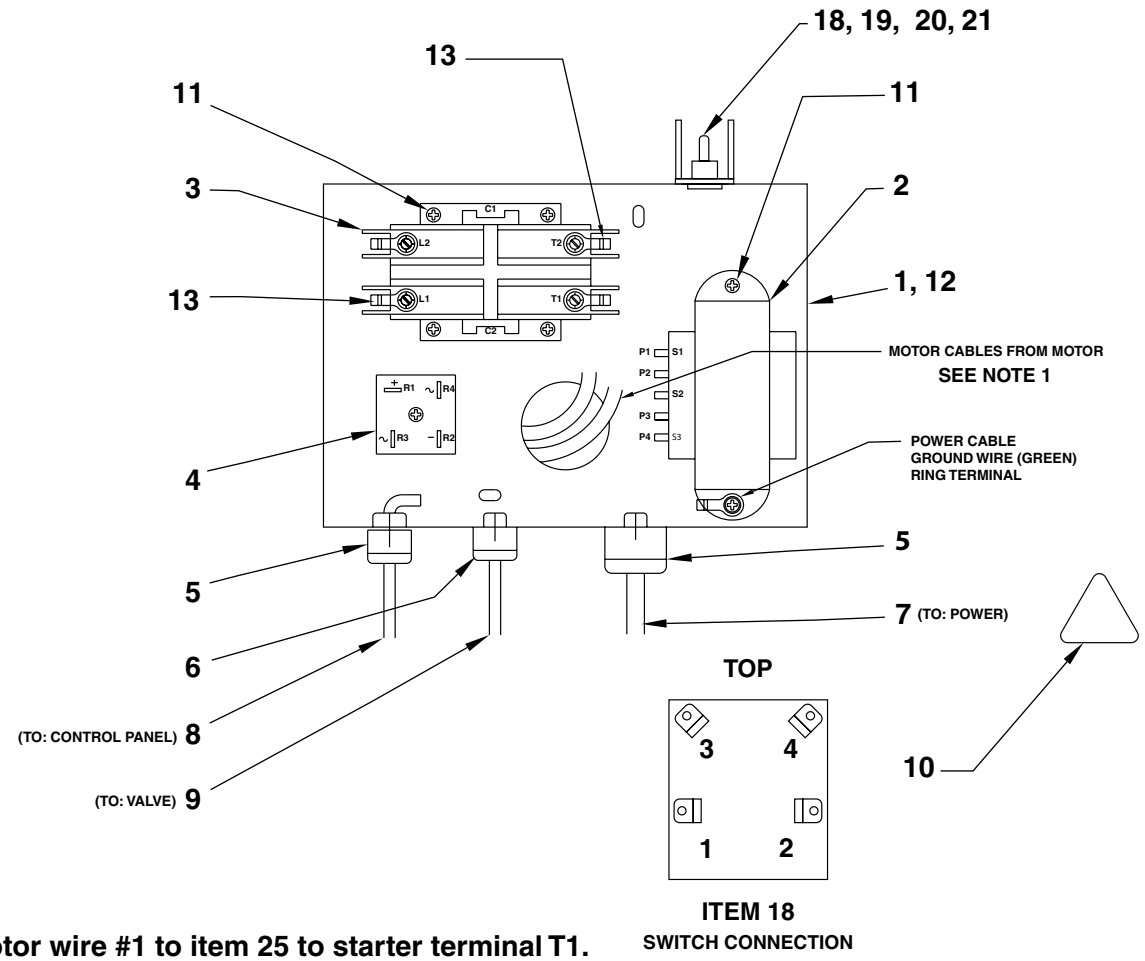


Figure 9A, Wiring Diagram (Model FT1380-3-35-Z, 230 Volt)



NOTE 1:

Connect motor wire #1 to item 25 to starter terminal T1.

Connect motor wires # 4 & 8 to item 25 to starter terminal T2.

Connect motor wires # 2, 3, & 5 together using item 26.

Figure 9B, Electric Enclosure (Model FT1380-3-35-Z, 230 Volt)

Repair Parts List for Figures 9A AND 9B								
Item	**Part Number**	**Qty.**	**Description**		**Item**	**Part Number**	**Qty.**	**Description**
1	U052265401-1	1	Box, Base Utility		14	DA3930900	1	Wire Assy
2	DA3567380	1	Transformer		15	DA3929900	1	Wire Assy
3	DA3568980	1	Relay		16	DA3936900	1	Wire Assy
4	DA3578380	1	Rectifier		18	DA4030372	1	Switch
5	DA5692007	2	Strain Relief (CSA)		19	DA4110372	1	Switch Guard
6	U052265007-1	1	Fitting, Liquid Tight		20	DA4251037	1	Gasket
7	U052265960	1	Power Cord Assy.		21	E1001018	4	Ring, Tongue Connect
8	DA12124450	1	Cord		22	DA4095900	1	Wire Assy, Black
9	U052265980	1	Valve Cable		23	DA4096900	1	Wire Assy, White
10	DC9922026	1	Decal, High Voltage		24	DA3929900	1	Wire Assy
11	DA3639028	6	Screw, Self Tapping		25	Y260270	2	Connector
12	U052265401-2	1	Lid, Utility Case		26	DC757055	1	Wire Nut (not shown)
13	E1001044	4	Connector					

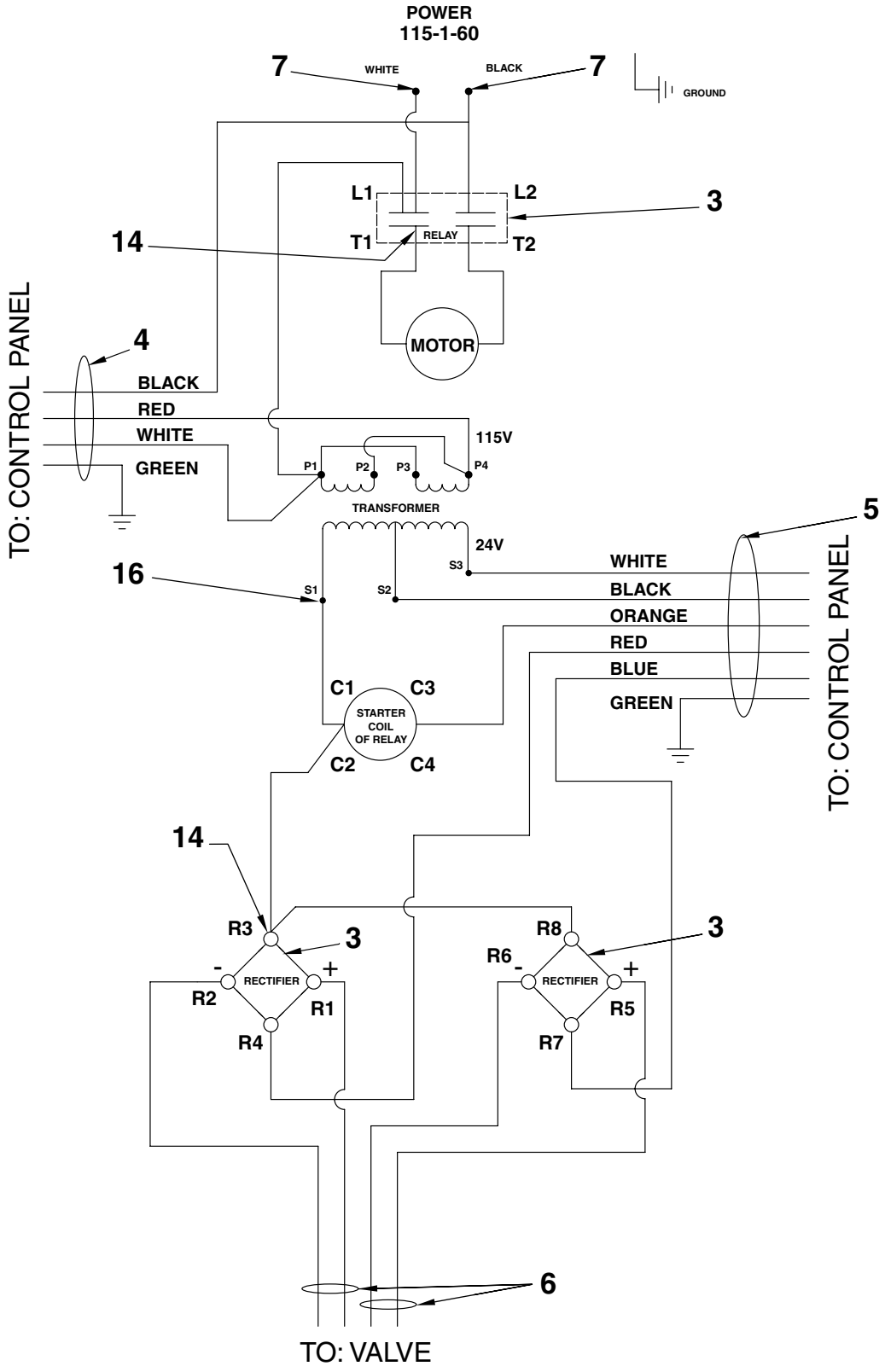


Figure 10A, Wiring Diagram (Model FT1390-3-1-Z, 115 Volt)

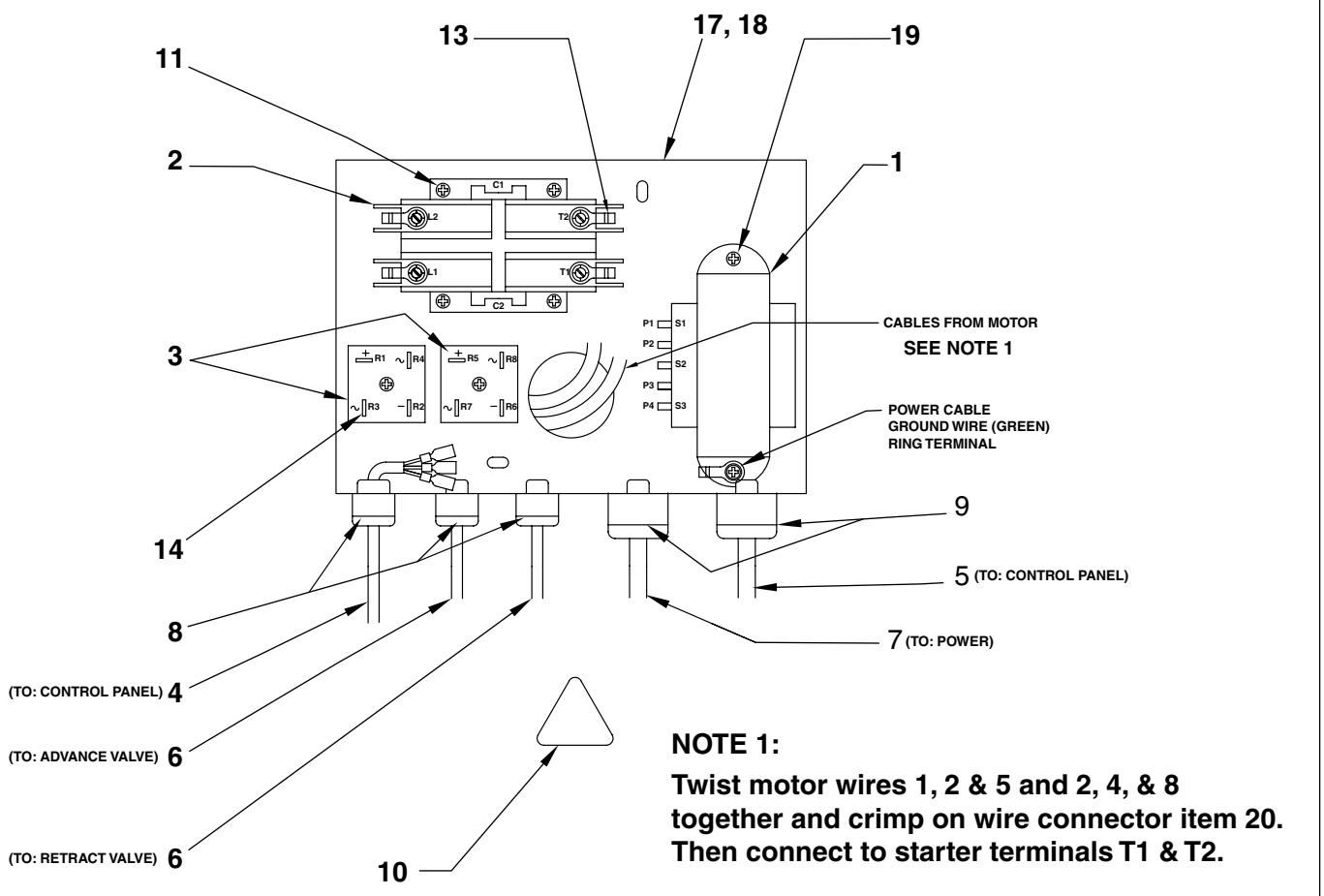


Figure 10B, Electric Enclosure (Model FT1390-3-1-Z, 115 Volt)

Repair Parts List for Figures 10A AND 10B								
Item	**Part Number**	**Qty.**	**Description**		**Item**	**Part Number**	**Qty.**	**Description**
1	DA3567380	1	Transformer		11	DA3639028	4	Screw, Self Tapping
2	DA3568980	1	Relay		13	E1002044	4	Connector
3	DA3578380	2	Rectifier		14	E1001108	15	Connector, Female
4	U962142052	1	Cord Assy, 4 Conductor		15	B1024454	1	Wire, Black, 2 Ft.
5	U952218052-1	1	Cord, 6 Conductor		16	E1001103	9	Connector, Fm Push-On
6	U062150900	2	Valve Cable		17	U062150401	1	Base, Utility Case
7	U052265960	1	Power Cord Assy.		18	U052265401-2	1	Lid, Utility Case
8	CR759291	3	Cord Bushing		19	DA3639028	2	Screw, Self Tapping
9	CA4007	2	Cord Connector		20	BL20187	1	Connector (not shown)
10	DC9922026	1	Decal, High Voltage					

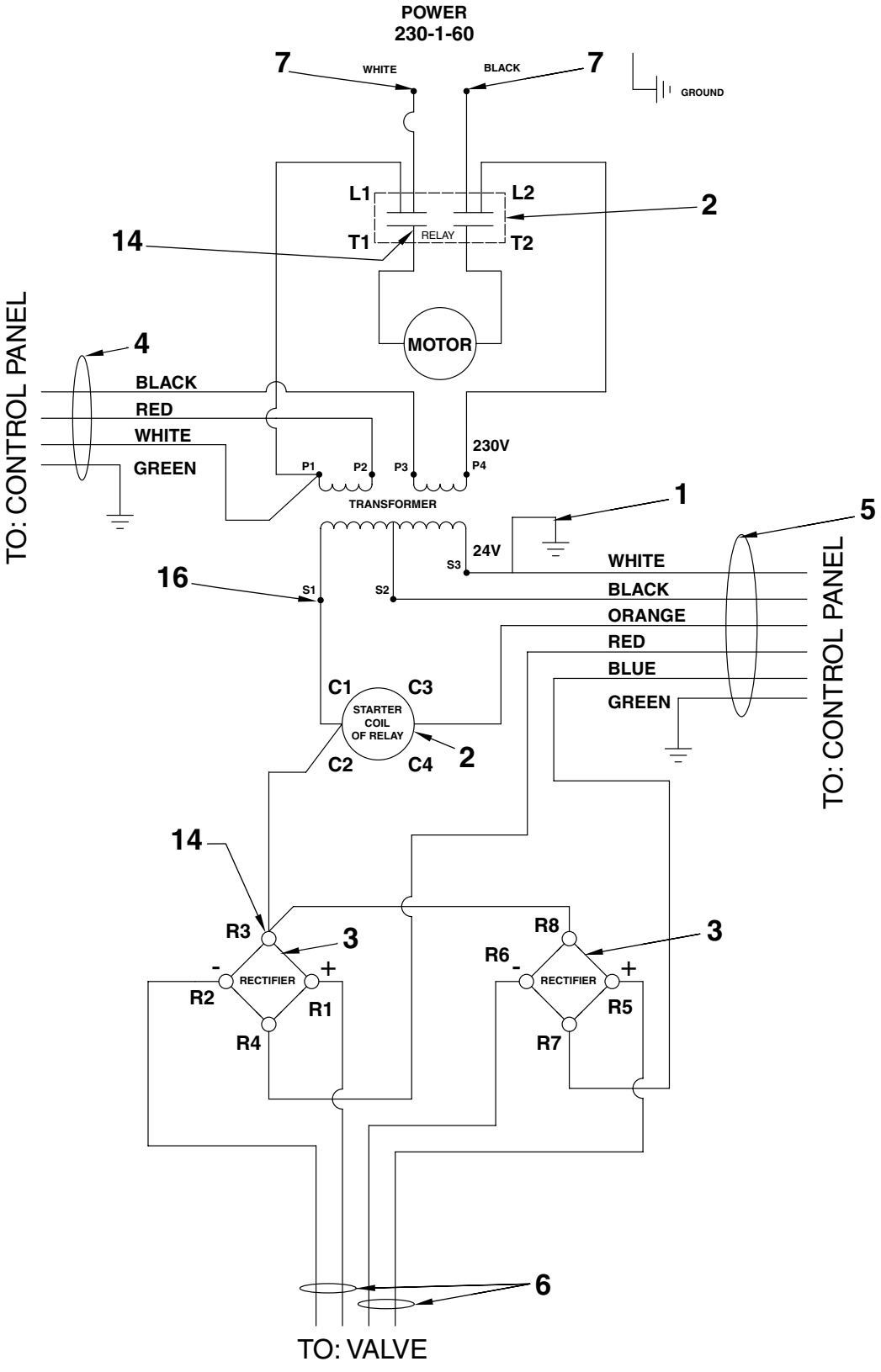


Figure 11A, Wiring Diagram (Model FT1390-3-17-Z, 230Volt)

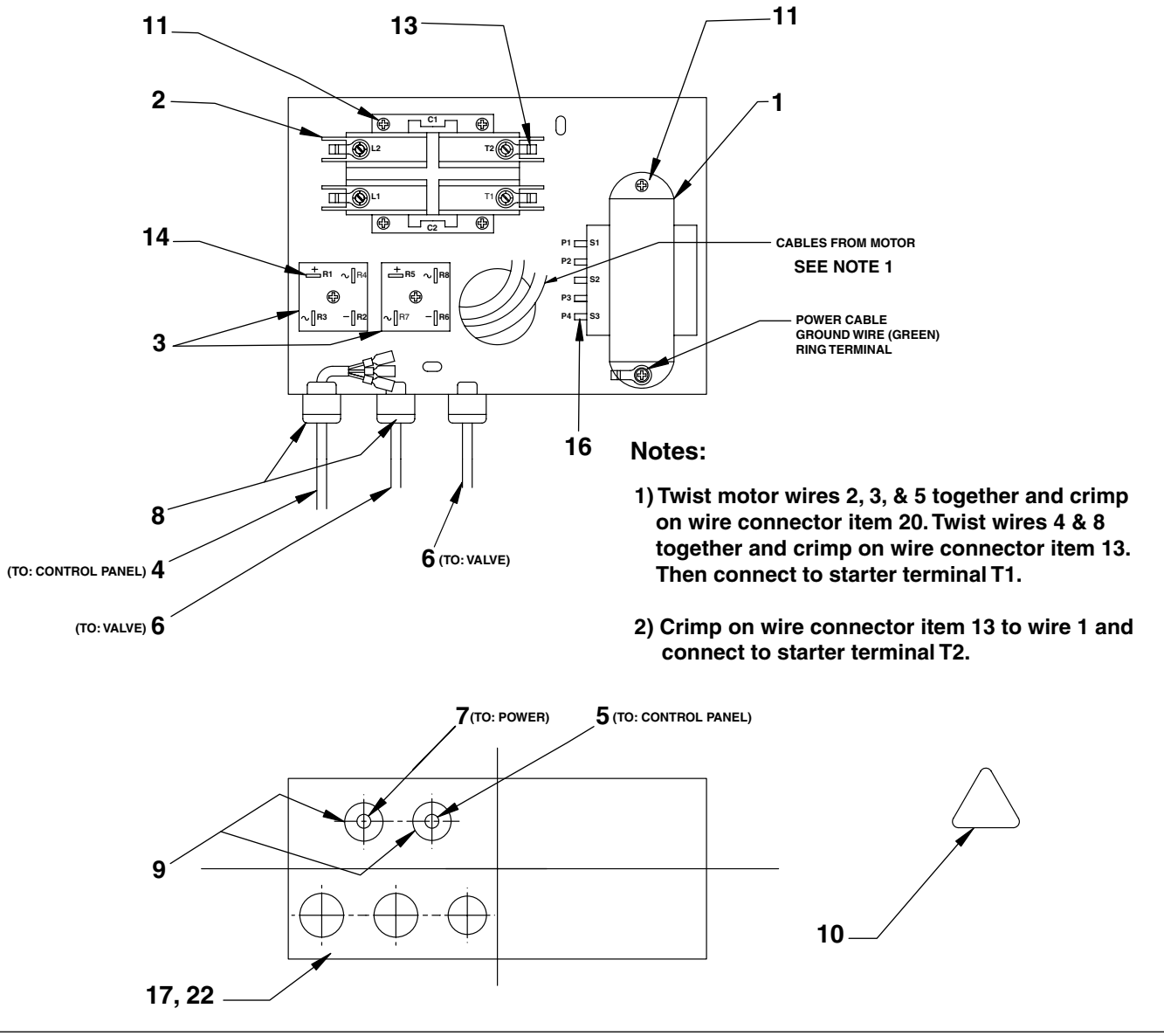


Figure 11B, Electric Enclosure (Model FT1390-3-17-Z, 230 Volt)

Repair Parts List for Figures 11A AND 11B								
Item	**Part Number**	**Qty.**	**Description**		**Item**	**Part Number**	**Qty.**	**Description**
1	DA3567380	1	Transformer		10	DC9922026	1	Decal, High Voltage
2	DA3568980	1	Relay		11	DA3639028	6	Screw, Self Tapping
3	DA3578380	2	Rectifier		13	E1001044	4	Connector
4	U962142052	1	Cord Assy, 4 Conductor		14	E1001108	15	Connector, Female
5	U952218052-1	1	Cord, 6 Conductor		15	B1024454	1	Wire, Black, 2 Ft.
6	U062150900	2	Valve Cable		16	E1001103	9	Connector, Fm Push-On
7	U052265960	1	Power Cord Assy.		17	U062150401-1	1	Base, Utility Case
8	DA4032007	2	Fitting, Liquid Tight		20	BL20187	1	Connector (not shown)
9	DA5692007	2	Strain Relief (CSA)		22	U052265401-2	1	Lid, Utility Case

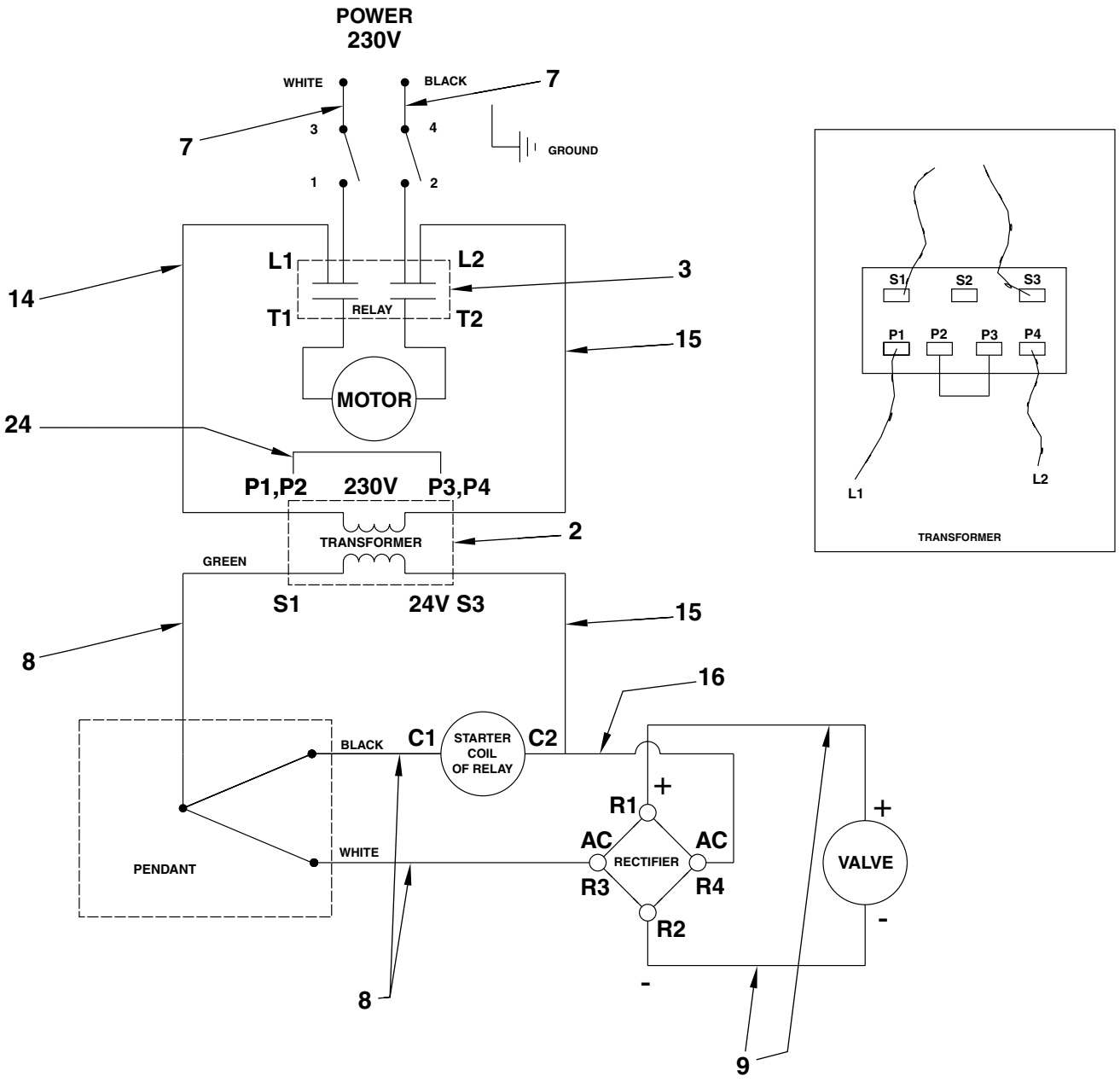
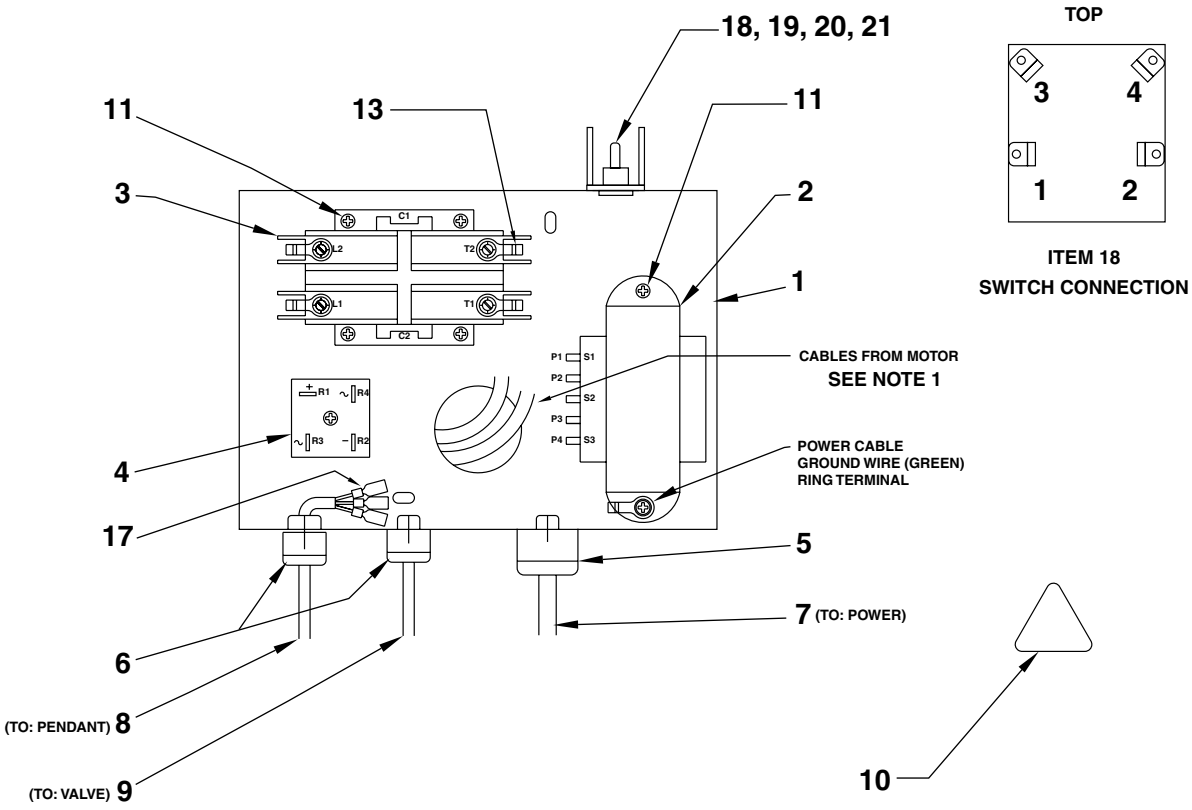


Figure 12A, Wiring Diagram (Model FT1390-3-37-Z, 230 Volt)



NOTES:

1) Twist motor wires 2, 3 & 5 together and twist on wire connector.

2) Crimp connector item 24 onto wire 1 and connect to starter terminal T1.

3) Twist together wires 4 & 8, crimp on connector item 24, and connect to starter terminal T2.

Figure 12B, Electric Enclosure (Model FT1390-3-37-Z, 230 Volt)

Repair Parts List for Figures 9A AND 9B

Item	Part Number	Qty.	Description		Item	Part Number	Qty.	Description
1	U05226501	1	Utility Case		13	E1001044	4	Connector
2	DA3567380	1	Transformer		14	DA3930900	1	Wire Assy
3	DA3568980	1	Relay		15	DA3929900	1	Wire Assy
4	DA3578380	1	Rectifier		16	DA3936900	1	Wire Assy
5	CA4007	1	Cord Connector		17	E1001108	3	Female Connector
6	CR75921	2	Cord Bushing		18	DA4030372	1	Switch
7	U052265960	1	Power Cord Assy.		19	DA4110372	1	Switch Guard
8	L376450	1	Cord Roll, 2.5 Ft.		20	DA4251037	1	Gasket
9	U062150900	1	Cable, Valve		21	E1001018	4	Ring, Tongue Connect
10	DC9922026	1	Decal, High Voltage		24	DA3931900	1	Wire Assy
11	DA3639028	6	Screw					

Enerpac Worldwide Locations

✦ **e-mail**: info@enerpac.com

✦ **internet**: www.enerpac.com

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
vendasbrasil@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
ACTUANT - ENERPAC
France S.A., ZA de Courtaboeuf
32, avenue de la Baltique
91140 Villebon / Yvettte
France
Tel: +33 1 60 13 68 68
Fax: +33 1 69 20 37 50

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 627795
Tel: +65 64 84 5108
+65 64 84 3737
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

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

All Enerpac products are guaranteed against defects in workmanship and materials for as long as you own them.
For your nearest authorized Enerpac Service Center, visit us at www.enerpac.com

11/12/07