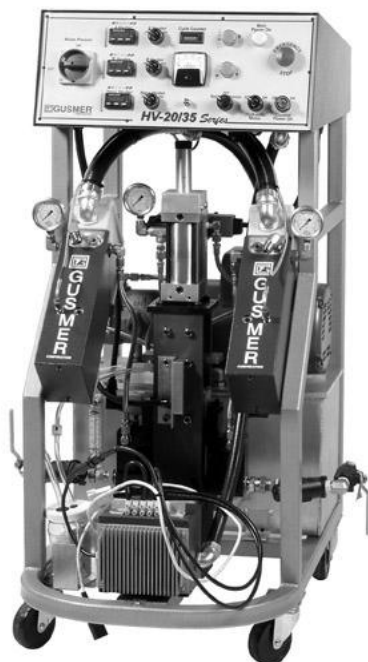


GUSMER[®] CORPORATION

"Success through Unity"



HV-20/35 Series Proportioning Unit

Parts Identification Manual 63942-ID

June 30, 2003

Issue 1

GUSMER CORPORATION[®]

A Subsidiary of Gusmer Machinery Group, Inc.
One Gusmer Drive
Lakewood, New Jersey, USA 08701-8055

Toll Free 1-800-367-4767 (USA & Canada)

Phone: (732) 370-9000

Fax: (732) 905-8968

Copyright 2003, GUSMER CORPORATION[®]
<http://www.gusmer.com>

NOTICE: This manual contains important information about your GUSMER equipment. Read and retain for future reference.

NOTICE: *The equipment described in this technical manual must only be operated or serviced by properly trained individuals, thoroughly familiar with the operating instructions and limitations of the equipment. For technical service, call your local distributor. Call: 1-800-FOR-GSMR (1-800-367-4767) for the name and telephone number of your local distributor.*

NOTICE: *All statements, information, and data given herein are believed to be accurate and reliable but are presented without guarantee, warranty, or responsibility of any kind expressed or implied. Statements or suggestions concerning possible use of GUSMER equipment are made without representation or warranty that any such use is free of patent infringement, and are not recommendations to infringe any patent. The user should not assume that all safety measures are indicated or that other measures may not be required for a particular circumstance or application.*

CONTENTS

LIST OF FIGURES	4
LIST OF TABLES	6
LIST OF TABLES	6
WARRANTY	7
PROPORTIONING UNIT ASSEMBLIES	8
FINAL ASSEMBLY	8
HYDRAULIC MOTOR ASSEMBLY	10
HYDRAULIC CYLINDER ASSEMBLY	12
PROPORTIONING PUMP ASSEMBLIES	14
<i>Resin Proportioning Pump</i>	14
<i>Iso Proportioning Pump</i>	16
LUBE PUMP ASSEMBLY	18
PRIMARY HEATER ASSEMBLIES	20
<i>Resin Primary Heater</i>	20
<i>Iso Primary Heater</i>	22
REVERSING SWITCH ASSEMBLY	24
LUBE RESERVOIR HOSE ASSEMBLY	25
HOSE HEAT POWER PACK ASSEMBLY	26
ELECTRICAL COMPONENTS	28
ELECTRICAL SCHEMATICS	30
<i>HV-20: 220 Volt, 1-Phase, 6KW</i>	30
<i>HV-20: 220 Volt, 3-Phase, 6KW</i>	36
<i>HV-20: 220 Volt, 3-Phase, 9KW</i>	42
<i>HV-20: 380 Volt, 3-Phase, 6KW; HV-30: 220 Volt, 1-Phase, 6KW; HV-30: 220 Volt, 3-Phase, 6KW</i>	48
<i>HV-30: 220 Volt, 3-Phase, 9KW</i>	54
<i>HV-20: 380 Volt, 3-Phase, 9KW; HV-30: 380 Volt, 3-Phase, 9KW</i>	60
INSTRUCTION MANUAL DISCREPANCY REPORT	69

LIST OF FIGURES

FIGURE 1. HV-20/35 FINAL ASSEMBLY	8
FIGURE 2. HYDRAULIC MOTOR ASSEMBLY (PART NO. 63745), EXPLODED VIEW	10
FIGURE 3. HYDRAULIC CYLINDER (PART NO. 63511), EXPLODED VIEW	12
FIGURE 4. R-PROPORTIONING PUMP ASSEMBLY (PART NO. 63400-80), EXPLODED VIEW	14
FIGURE 5. A-PROPORTIONING PUMP ASSEMBLY (PART NO. 63450-80), EXPLODED VIEW	16
FIGURE 6. LUBE PUMP ASSEMBLY (PART NO. 63491-80), EXPLODED VIEW	18
FIGURE 7. R-PRIMARY HEATER ASSEMBLY (PART NO. 63310-240 AND 63310-240-9KW), EXPLODED VIEW.....	20
FIGURE 8. A-PRIMARY HEATER ASSEMBLY (PART NO. 63360-240 AND 63360-240-9KW), EXPLODED VIEW	22
FIGURE 9. REVERSING SWITCH ASSEMBLY (PART NO. 18745-10-1), EXPLODED VIEW	24
FIGURE 10. LUBE RESERVOIR HOSE ASSEMBLY (PART NO. 17585), EXPLODED VIEW	25
FIGURE 11. 70V AUTO POWER PACK (PART NO 63277), EXPLODED VIEW.....	26
FIGURE 12. ELECTRICAL COMPONENTS (SHEET 1 OF 2)	28
FIGURE 13. ELECTRICAL COMPONENTS (SHEET 2 OF 2)	29
FIGURE 14. ELECTRICAL SCHEMATIC, SD63000-SIZE, SHEET 1A	30
FIGURE 15. ELECTRICAL SCHEMATIC, SD63000-SIZE, SHEET 1A CONTINUED.....	31
FIGURE 16. ELECTRICAL SCHEMATIC, SD63000-SIZE, SHEET 2A	32
FIGURE 17. ELECTRICAL SCHEMATIC, SD63000-SIZE, SHEET 2A CONTINUED.....	33
FIGURE 18. ELECTRICAL SCHEMATIC, SD63000-SIZE, SHEET 3	34
FIGURE 19. ELECTRICAL SCHEMATIC, SD63000-SIZE, SHEET 3 CONTINUED.....	35
FIGURE 20. ELECTRICAL SCHEMATIC, SD63000-SIZE, SHEET 1B.....	36
FIGURE 21. ELECTRICAL SCHEMATIC, SD63000-SIZE, SHEET 1B CONTINUED	37
FIGURE 22. ELECTRICAL SCHEMATIC, SD63000-SIZE, SHEET 2A	38
FIGURE 23. ELECTRICAL SCHEMATIC, SD63000-SIZE, SHEET 2A CONTINUED.....	39
FIGURE 24. ELECTRICAL SCHEMATIC, SD63000-SIZE, SHEET 3	40
FIGURE 25. ELECTRICAL SCHEMATIC, SD63000-SIZE, SHEET 3 CONTINUED.....	41
FIGURE 26. ELECTRICAL SCHEMATIC, SD63000-SIZE, SHEET 1D	42
FIGURE 27. ELECTRICAL SCHEMATIC, SD63000-SIZE, SHEET 1D CONTINUED.....	43
FIGURE 28. ELECTRICAL SCHEMATIC, SD63000-SIZE, SHEET 2A	44
FIGURE 29. ELECTRICAL SCHEMATIC, SD63000-SIZE, SHEET 2A CONTINUED.....	45
FIGURE 30. ELECTRICAL SCHEMATIC, SD63000-SIZE, SHEET 3	46
FIGURE 31. ELECTRICAL SCHEMATIC, SD63000-SIZE, SHEET 3 CONTINUED.....	47
FIGURE 32. ELECTRICAL SCHEMATIC, SD63000-SIZE, SHEET 1C.....	48
FIGURE 33. ELECTRICAL SCHEMATIC, SD63000-SIZE, SHEET 1C CONTINUED	49
FIGURE 34. ELECTRICAL SCHEMATIC, SD63000-SIZE, SHEET 2B.....	50
FIGURE 35. ELECTRICAL SCHEMATIC, SD63000-SIZE, SHEET 2B CONTINUED	51
FIGURE 36. ELECTRICAL SCHEMATIC, SD63000-SIZE, SHEET 3	52

FIGURE 37. ELECTRICAL SCHEMATIC, SD63000-SIZE, SHEET 3 CONTINUED.....	53
FIGURE 38. ELECTRICAL SCHEMATIC, SD63000-SIZE, SHEET 1D	54
FIGURE 39. ELECTRICAL SCHEMATIC, SD63000-SIZE, SHEET 1D CONTINUED	55
FIGURE 40. ELECTRICAL SCHEMATIC, SD63000-SIZE, SHEET 2B.....	56
FIGURE 41. ELECTRICAL SCHEMATIC, SD63000-SIZE, SHEET 2B CONTINUED	57
FIGURE 42. ELECTRICAL SCHEMATIC, SD63000-SIZE, SHEET 3	58
FIGURE 43. ELECTRICAL SCHEMATIC, SD63000-SIZE, SHEET 3 CONTINUED.....	59
FIGURE 44. ELECTRICAL SCHEMATIC, SD63000-SIZE, SHEET 1E.....	60
FIGURE 45. ELECTRICAL SCHEMATIC, SD63000-SIZE, SHEET 1E CONTINUED	61
FIGURE 46. ELECTRICAL SCHEMATIC, SD63000-SIZE, SHEET 2B.....	62
FIGURE 47. ELECTRICAL SCHEMATIC, SD63000-SIZE, SHEET 2B CONTINUED	63
FIGURE 48. ELECTRICAL SCHEMATIC, SD63000-SIZE, SHEET 3	64
FIGURE 49. ELECTRICAL SCHEMATIC, SD63000-SIZE, SHEET 3 CONTINUED.....	65

LIST OF TABLES

TABLE 1. HYDRAULIC MOTOR ASSEMBLY (PART NO. 63745), PARTS	11
TABLE 2. HYDRAULIC CYLINDER (PART NO. 63511), PARTS	13
TABLE 3. R-PROPORTIONING PUMP ASSEMBLY (PART NO. 63400-80), PARTS	15
TABLE 4. A-PROPORTIONING PUMP ASSEMBLY (PART NO. 63450-80), PARTS	17
TABLE 5. LUBE PUMP ASSEMBLY (PART NO. 63491-80), PARTS	19
TABLE 6. R-PRIMARY HEATER ASSEMBLY (PART NO. 63310-240 AND 63310-240-9KW), PARTS	21
TABLE 7. A-PRIMARY HEATER ASSEMBLY (PART NO. 63360-240 AND 63360-240-9KW), PARTS	23
TABLE 8. REVERSING SWITCH ASSEMBLY (PART NO. 18745-10-1), PARTS	24
TABLE 9. LUBE RESERVOIR HOSE ASSEMBLY (PART NO. 17585), PARTS LIST	25
TABLE 10. 70V AUTO POWER PACK (PART NO 63277), PARTS	27
TABLE 11. ELECTRICAL SCHEMATIC, PARTS LIST	66

WARRANTY

Gusmer Corporation (Gusmer) provides a limited warranty to the original purchaser (Customer) of Gusmer manufactured parts and equipment (Product) against any defects in material or workmanship for a period of one year from the date of shipment from Gusmer facilities.

In the event Product is suspected to be defective in material or workmanship, it must be returned to Gusmer, freight prepaid. If Product is found to be defective in material or workmanship, as determined solely by Gusmer, Gusmer will issue full credit to Customer for the freight charges incurred in returning the defective Product, and either credit will be issued for the replacement cost of the Product or a replacement part will be forwarded no-charge, freight prepaid to Customer.

This warranty shall not apply to Product Gusmer finds to be defective resulting from: installation, use, maintenance, or procedures not accomplished in accordance with our instructions; normal wear; accident; negligence; alterations not authorized in writing by Gusmer; use of "look alike" parts not manufactured or supplied by Gusmer; or Product used in conjunction with any other manufacturer's pumping or proportioning equipment. Further, the terms and conditions of this warranty shall not apply to services or repairs made to Product by any third party not authorized in writing by Gusmer. For such Product, a written estimate will be submitted to Customer at a nominal service charge, itemizing the cost for repair. Disposition of Product will be done in accordance with the terms stated on the written estimate.

The warranty provisions applied to product that are not manufactured by Gusmer will be solely in accordance with the warranty provided by the original manufacturer of the product.

GUSMER MAKES NO WARRANTY WHATSOEVER AS TO THE MERCHANTABILITY OF, OR SUITABILITY FOR, ITS PRODUCT TO PERFORM ANY PARTICULAR PURPOSE. CREDIT FOR, OR REPLACEMENT OF, PRODUCT DEFECTIVE IN MATERIAL OR WORKMANSHIP SHALL CONSTITUTE COMPLETE FULFILLMENT OF GUSMER OBLIGATIONS TO CUSTOMER. NO OTHER WARRANTY, EXPRESS OR IMPLIED ON ANY PRODUCT IT MANUFACTURES AND/OR SELLS, WILL BE RECOGNIZED BY GUSMER UNLESS SAID WARRANTY IS IN WRITING AND APPROVED BY AN OFFICER OF GUSMER.

Under no circumstances shall Gusmer be liable for loss of prospective or speculative profits, or special, indirect, incidental or consequential damages. Further, Gusmer shall have no liability for any expenses including, but not limited to personal injury or property damage resulting from failure of performance of the product, use of the product, or application of the material dispensed through the product. Any information provided by Gusmer that is based on data received from a third source, or that pertains to product not manufactured by Gusmer, while believed to be accurate and reliable, is presented without guarantee, warranty, or responsibility of any kind, expressed or implied.

Gusmer through the sale, lease, or rental of Product in no way expresses or implies a license for the use of, nor encourages the infringement of any patents or licenses.

To insure proper validation of your warranty, please complete the warranty card and return it to Gusmer within two weeks of receipt of equipment.

Revised 11/12/98

PROPORTIONING UNIT ASSEMBLIES

FINAL ASSEMBLY

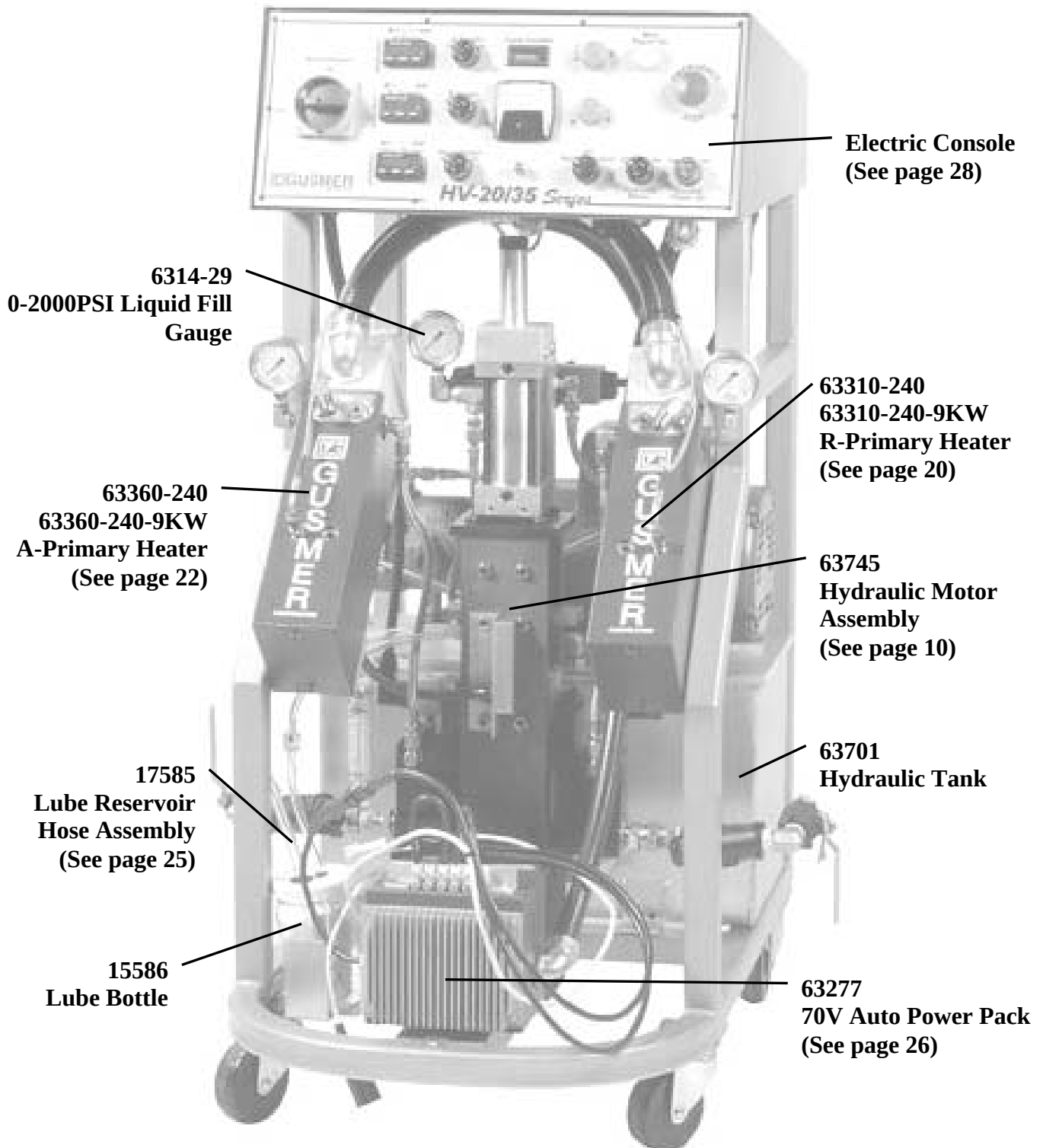
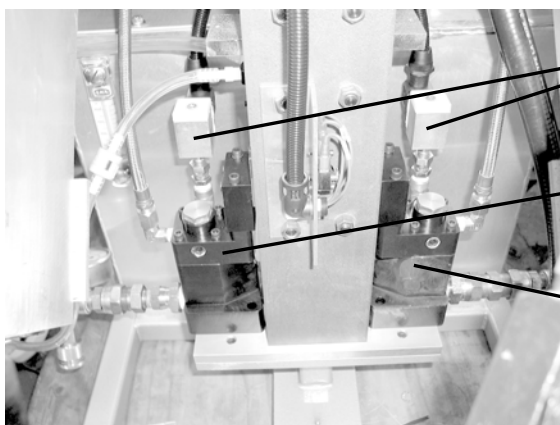


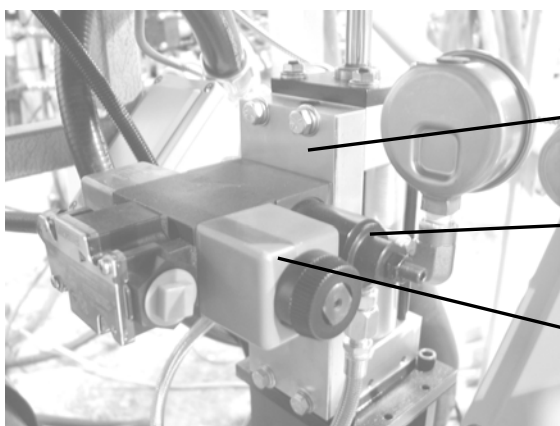
Figure 1. HV-20/35 Final Assembly



**6690-16-772200R (HV-20);
6690-16-763200R (HV-30)
Pressure Switch**

**63450-80
Iso Proportioning Pump
(See page 16)**

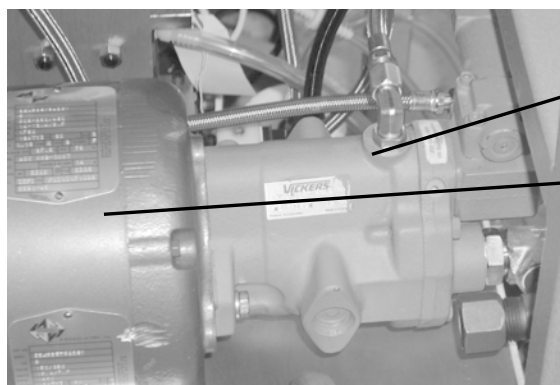
**63400-80
Resin Proportioning Pump
(See page 14)**



**6311-122
Hydraulic Subplate**

**6311-115
Pressure Reducing Valve**

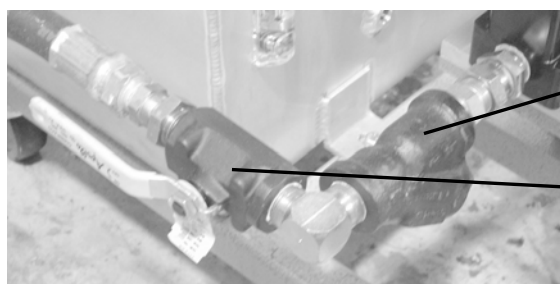
**6311-121-120
Directional Valve**



**6317-36
Hydraulic Pump**

**6691-45-KIT
5HP Motor, 3-Phase Units**

**6691-46-KIT
5HP Motor, 1-Phase Units**



**6312-30
Strainer**

**1433A-1
Ball Valve**

HYDRAULIC MOTOR ASSEMBLY

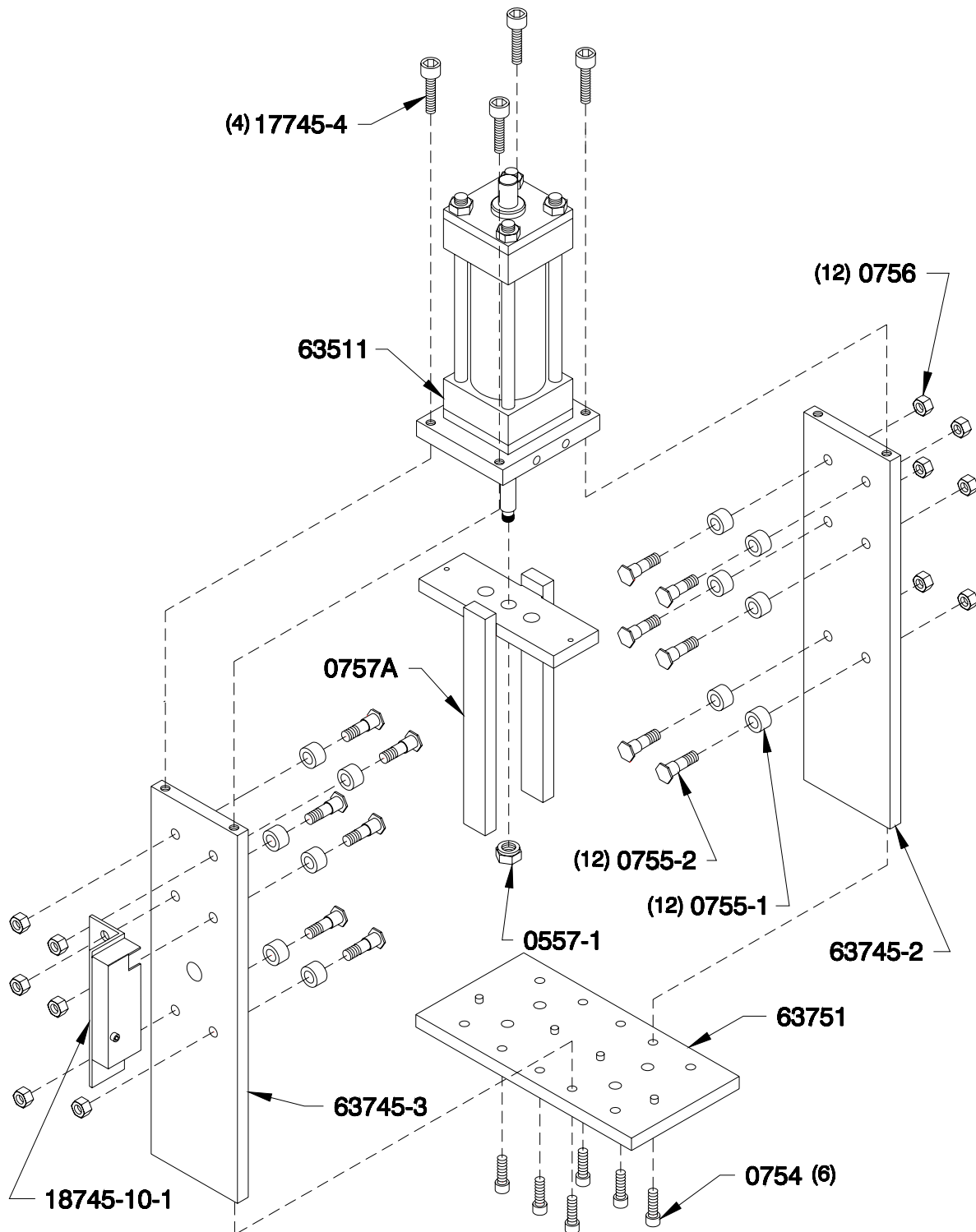


Figure 2. Hydraulic Motor Assembly (Part No. 63745), Exploded View

TABLE 1. HYDRAULIC MOTOR ASSEMBLY (PART NO. 63745), PARTS

Part Number	Description	Quantity
0557-1	Flex Top Jam Nut	1
0754	Socket Head Cap Screw	6
0755-1	Bearing	12
0755-2	Cam Roller Stud	12
0756	Hex Nut	12
0757A	Pump Yoke	1
17745-4	Socket Head Cap Screw	4
18745-10-1	Reversing Switch Assembly	1
63511	Hydraulic Cylinder	1
63745-2	Air Cylinder Upright	1
63745-3	Air Cylinder Upright-Switch Side	1
63751	Proportioner Base w/Dowel Pins	1

This diagram illustrates the exploded view of a mechanical assembly, showing the relationship between various components. The parts are labeled with their respective part numbers:

- 1501B-11-9**: (2) O-rings at the top of the main assembly.
- 1501B-10-7**: (2) O-rings below the top O-rings.
- 1501B-11-6**: (2) O-rings below the previous ones.
- 1501B-11-7**: (2) O-rings below the previous ones.
- 1501B-11-8**: (2) O-rings at the bottom of the top assembly.
- 1501B-11-1**: A large cylindrical component.
- 60501-10-2**: A ring component.
- 1501B-10-2**: A square flange component.
- 39501-1-1**: A square block component.
- 9452-15-2**: A small circular component.
- 0213-7**: (4) Small screws/bushings.
- 5829-7**: (4) Small screws/bushings.
- 18511-1**: A large square flange component.
- 15511-3**: A long threaded rod with a nut.
- 60501-10-6**: A ring component.
- 60501-10-5**: A ring component.
- 63501-1**: A long threaded rod with a nut.
- 60501-10-4**: A ring component.
- 60501-10-6**: A ring component.

The diagram uses dashed lines to indicate the assembly path and alignment of the components.

*** Torque to 100 Inch-Pounds**

TABLE 2. HYDRAULIC CYLINDER (PART NO. 63511), PARTS

Part Number	Description	Quantity
0213-7	Flange Nut	4
1501B-10-2	Retainer Plate	2
• ♦ 1501B-10-7	Rod Bushing	2
♦ 1501B-11-1	O-Ring	2
• ♦ 1501B-11-6	O-Ring	2
• ♦ 1501B-11-7	Back Up Ring	2
• ♦ 1501B-11-8	Rod Wiper	2
• ♦ 1501B-11-9	Shaft Seal	2
5829-7	Flat Washer	4
9452-15-2	Flush Seal Pipe Plug	2
60501-10-2	Cylinder Body	1
♦ 60501-10-5	U-Cup	2
♦ 60501-10-6	Back Up Ring	2
♦ 60501-10-4	Teflon Glass Wear Ring	1
15511-3	Hydraulic Cylinder Tie Rod (<i>Torque to 200 Inch-Pounds</i>)	4
18511-1	Hydraulic Cylinder Bottom Plate	1
39501-1-1	Port Block	2
63501-1	Hydraulic Piston	1

♦ *Hydraulic Cylinder Rebuild Kit (Part No. MK63511)*

• *Hydraulic Cylinder Bushing Kit (Part No. MK42511-1)*

PROPORTIONING PUMP ASSEMBLIES

Resin Proportioning Pump

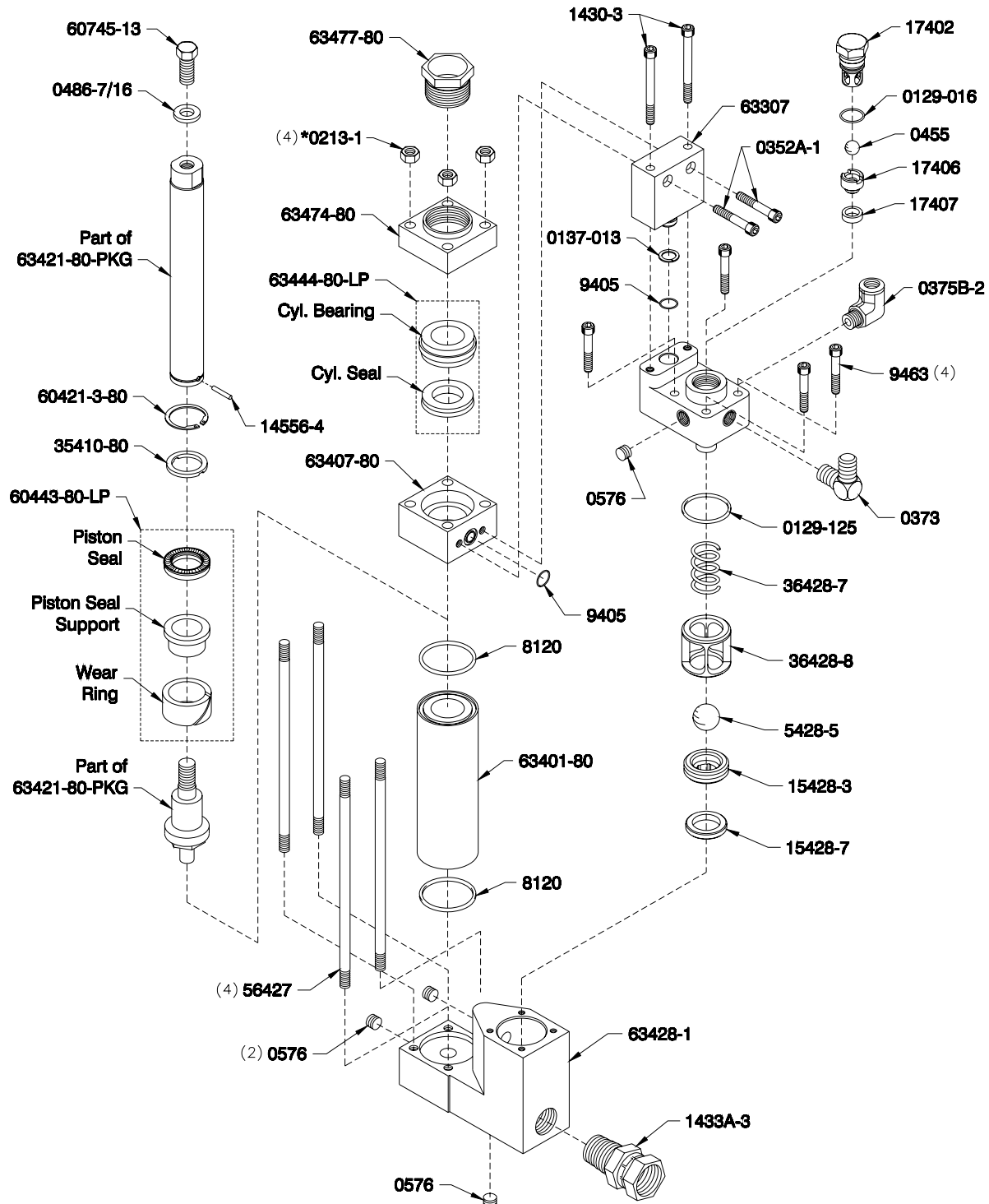


Figure 4. R-Proportioning Pump Assembly (Part No. 63400-80), Exploded View

* Torque to 10 FT-LBS

TABLE 3. R-PROPORTIONING PUMP ASSEMBLY (PART NO. 63400-80), PARTS

Part Number	Description	Quantity
0129-016	O-Ring	1
0129-125	O-Ring	1
0137-013	Back Up Ring	1
0213-1	Hex Nut	4
0352A-1	Socket Head Cap Screw	2
0373	Male Elbow	1
0375B-2	Street Elbow	1
0455	Valve Ball	1
0486-7/16	Washer	1
0576	Pipe Plug	4
1430-3	Socket Head Cap Screw	2
1433A-3	Swivel Union	1
5428-5	Valve Ball	1
8120	O-Ring	2
9405	O-Ring	2
9463	Socket Head Cap Screw	4
14556-4	Dowel Pin	1
15428-3	Valve Ball Seat	1
15428-7	Seat Seal	1
17402	Check Valve Retainer	1
17406	Check Valve Seat	1
17407	Check Valve Seal	1
35410-80	Piston Support Washer	1
36428-7	Spring	1
36428-8	Ball Check Sleeve	1
56427	Tie Rod	4
60421-3-80	Retainer Ring	1
60745-13	Hex Head Cap Screw	1
63307	Crossover Tube	1
63401-80	Pump Cylinder	1
63407-80	Outlet Block	1
63421-80-PKG	Piston Rod w/Head	1
63428-1	Lower Pump Base	1
63428-2	Upper Pump Base	1
63443-80-LP	Piston Lip Seal Set (<i>Piston Seal, Seal Support & Wear Ring</i>)	1
63444-80-LP	Cylinder Lip Seal Set (<i>Cylinder Bearing & Cylinder Seal</i>)	1
63474-80	Cylinder Top	1
63477-80	R-Retainer Nut	1

Iso Proportioning Pump

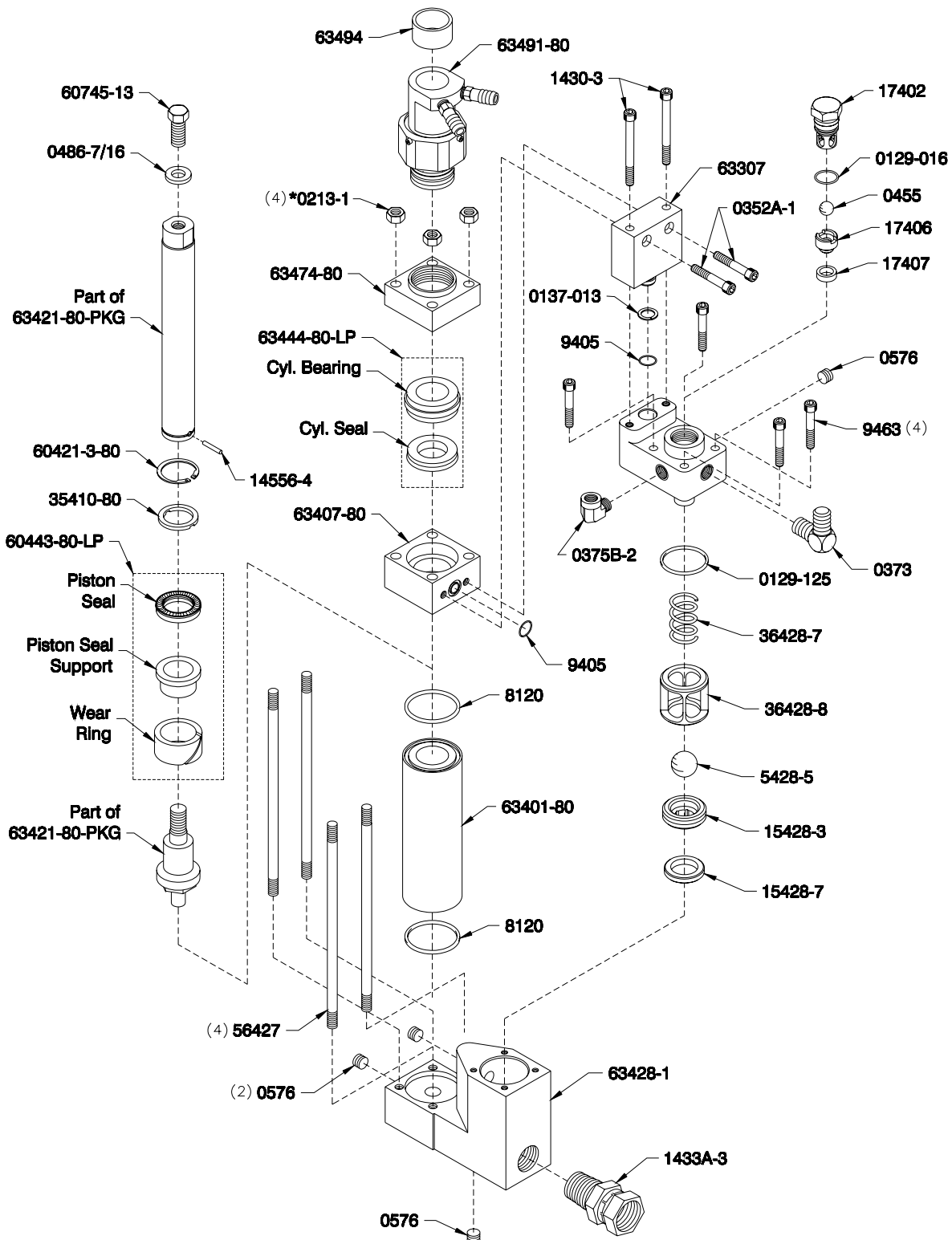


Figure 5. A-Proportioning Pump Assembly (Part No. 63450-80), Exploded View

* Torque to 10 FT-LBS

TABLE 4. A-PROPORTIONING PUMP ASSEMBLY (PART NO. 63450-80), PARTS

Part Number	Description	Quantity
0129-016	O-Ring	1
0129-125	O-Ring	1
0137-013	Back Up Ring	1
0213-1	Hex Nut	4
0352A-1	Socket Head Cap Screw	2
0373	Male Elbow	1
0375B-2	Street Elbow	1
0455	Valve Ball	1
0486-7/16	Washer	1
0576	Pipe Plug	4
1430-3	Socket Head Cap Screw	2
1433A-3	Swivel Union	1
5428-5	Valve Ball	1
8120	O-Ring	2
9405	O-Ring	2
9463	Socket Head Cap Screw	4
14556-4	Dowel Pin	1
15428-3	Valve Ball Seat	1
15428-7	Seat Seal	1
17402	Check Valve Retainer	1
17406	Check Valve Seat	1
17407	Check Valve Seal	1
35410-80	Piston Support Washer	1
36428-7	Spring	1
36428-8	Ball Check Sleeve	1
56427	Tie Rod	4
60421-3-80	Retainer Ring	1
60745-13	Hex Head Cap Screw	1
63307	Crossover Tube	1
63401-80	Pump Cylinder	1
63407-80	Outlet Block	1
63421-80-PKG	Piston Rod w/Head	1
63428-1	Lower Pump Base	1
63428-2	Upper Pump Base	1
63443-80-LP	Piston Lip Seal Set (<i>Piston Seal, Seal Support & Wear Ring</i>)	1
63444-80-LP	Cylinder Lip Seal Set (<i>Cylinder Bearing & Cylinder Seal</i>)	1
63474-80	Cylinder Top	1
63491-80	Lube Cup Assembly	1
63494	Spacer	1

LUBE PUMP ASSEMBLY

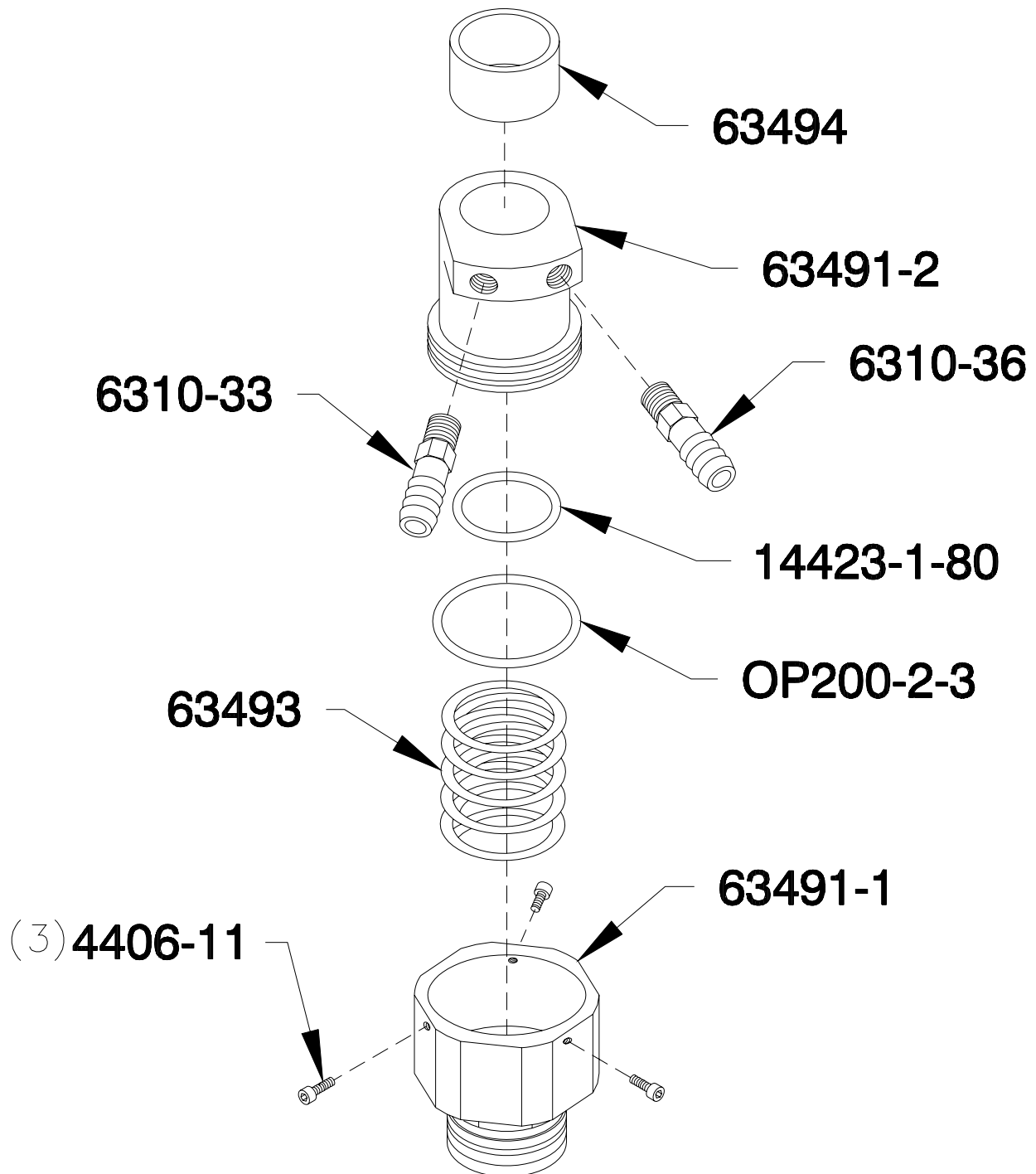


Figure 6. Lube Pump Assembly (Part No. 63491-80), Exploded View

TABLE 5. LUBE PUMP ASSEMBLY (PART NO. 63491-80), PARTS

4406-11	Socket Head Cap Screw	3
6310-33	Hose Barb	1
6310-36	Hose Barb	1
14423-1-80	O-Ring	1
63491-1	Lube Pump Cylinder	1
63491-2	Lube Pump Piston	1
63493	Spring	1
63494	Spacer	1
OP200-2-3	O-Ring	1

PRIMARY HEATER ASSEMBLIES

Resin Primary Heater

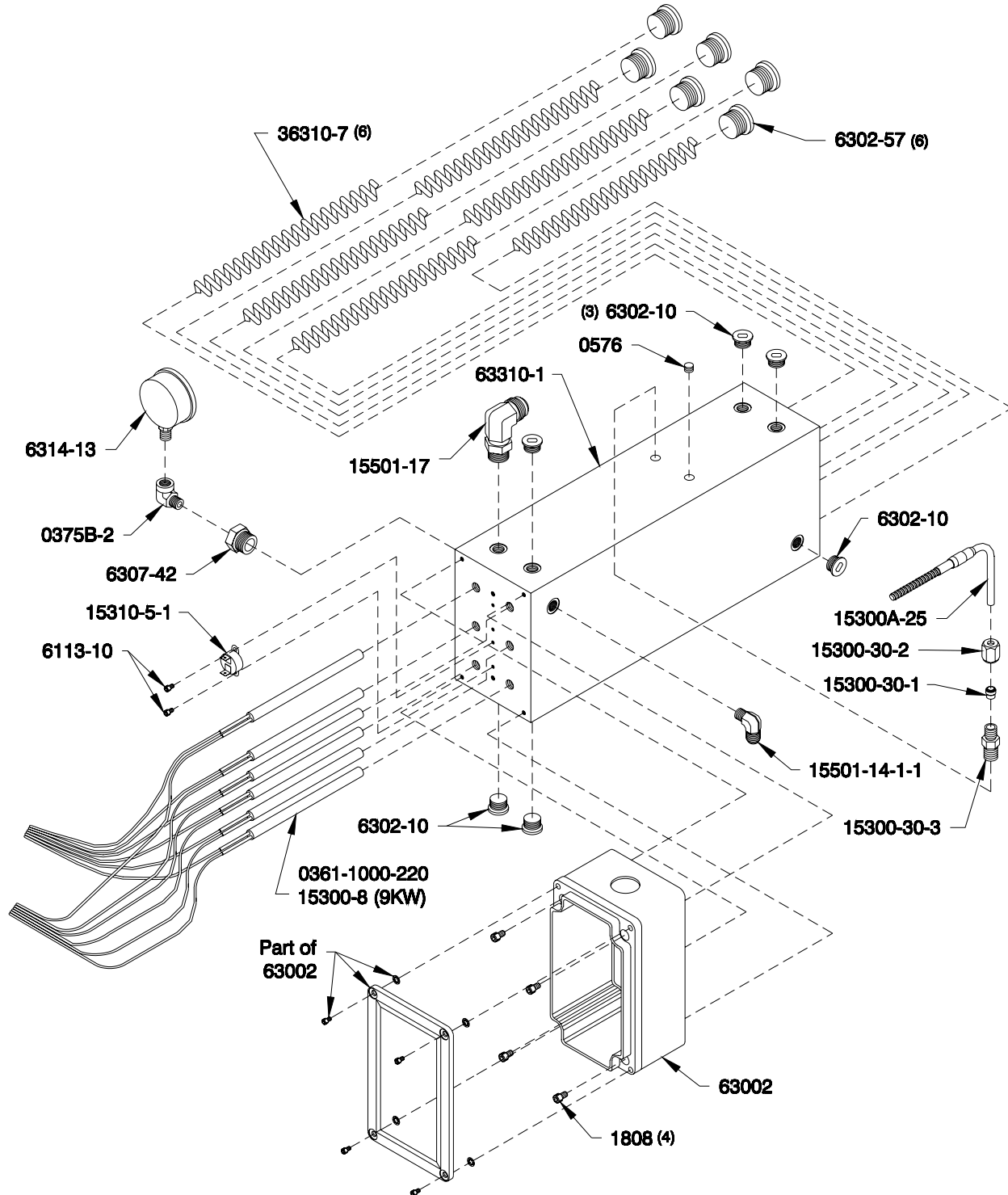


Figure 7. R-Primary Heater Assembly (Part No. 63310-240 and 63310-240-9KW), Exploded View

TABLE 6. R-PRIMARY HEATER ASSEMBLY (PART NO. 63310-240 AND 63310-240-9KW), PARTS

Part Number	Description	Quantity
0361-1000-220	Heating Element 1000W	6
15300-8	Heating Element 1500W(63310-240-9KW Only)	6
0375B-2	Street Elbow	1
0576	Flush Seal Pipe Plug	1
1808	Socket Head Cap Screw	4
6113-10	Button Head Cap Screw	2
6302-10	O-Ring Plug	6
6302-57	Hollow Hex Plug	6
6307-42	Pipe Adapter	1
6314-13	0-5000PSI Liquid Filled Guage	1
15300-30-1	Ferrule	1
15300-30-2	Nut	1
15300-30-3	1/4 Tube Body	1
15300A-25	Thermocouple Kit (Includes Nut and Ferrule)	1
15310-5-1	Thermostat	1
15501-14-1-1	O-Ring Elbow	1
15501-17	O-Ring Elbow	1
36310-7	Spring	6
63002	Box	1
63310-1	Preheater	1
63361	Preheater Cover (Not Shown)	1

Iso Primary Heater

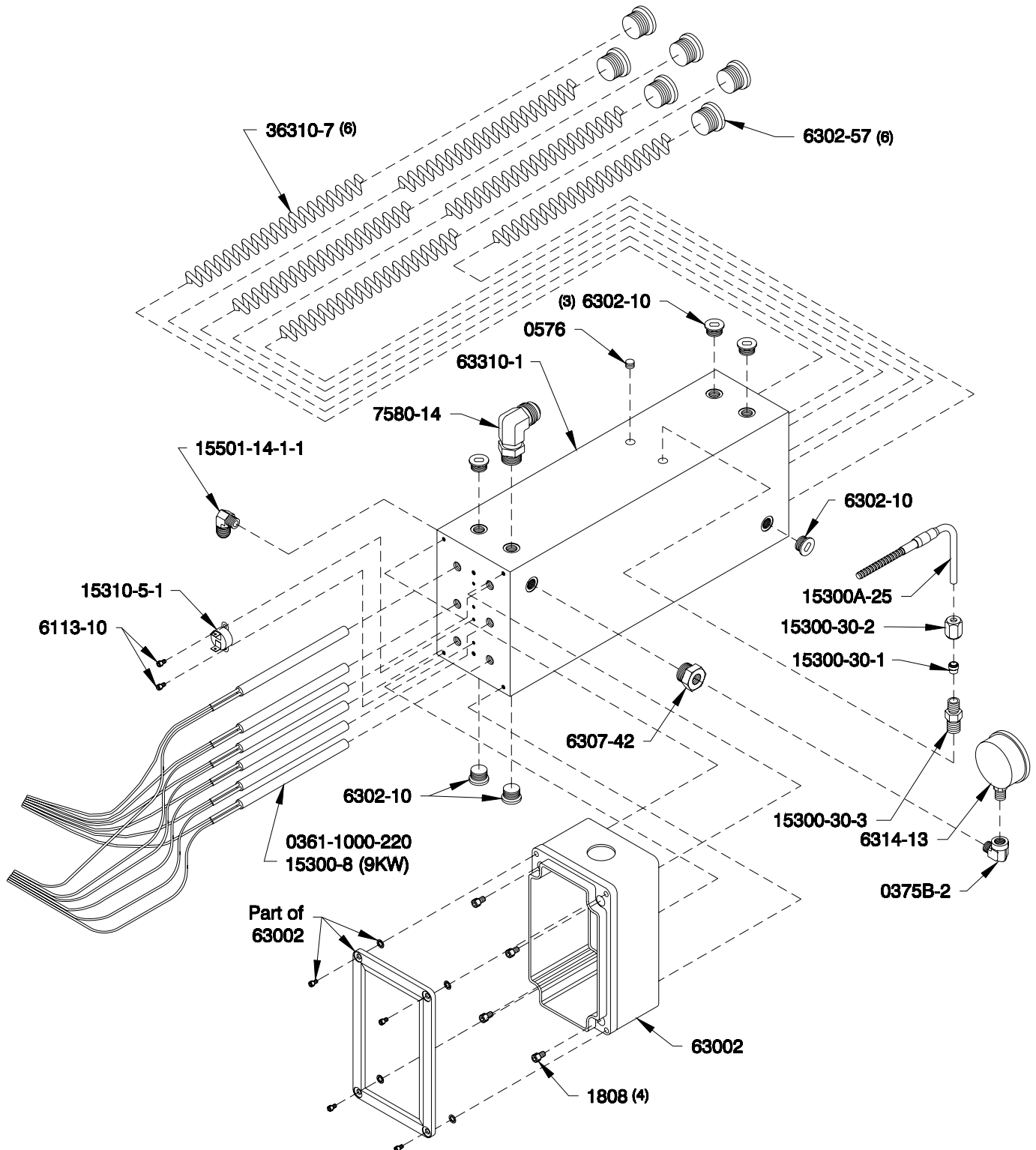


Figure 8. A-Primary Heater Assembly (Part No. 63360-240 and 63360-240-9KW), Exploded View

TABLE 7. A-PRIMARY HEATER ASSEMBLY (PART NO. 63360-240 AND 63360-240-9KW), PARTS

Part Number	Description	Quantity
0361-1000-220	Heating Element 1000W	6
15300-8	Heating Element 1500W(63360-240-9KW Only)	6
0375B-2	Street Elbow	1
0576	Flush Seal Pipe Plug	1
1808	Socket Head Cap Screw	4
6113-10	Button Head Cap Screw	2
6302-10	O-Ring Plug	6
6302-57	Hollow Hex Plug	6
6307-42	Pipe Adapter	1
6314-13	0-5000PSI Liquid Filled Guage	1
7580-14	O-Ring Elbow	1
15300-30-1	Ferrule	1
15300-30-2	Nut	1
15300-30-3	1/4 Tube Body	1
15300A-25	Thermocouple Kit <i>(Includes Nut and Ferrule)</i>	1
15310-5-1	Thermostat	1
15501-14-1-1	O-Ring Elbow	1
36310-7	Spring	6
63002	Box	1
63310-1	Preheater	1
63361	Preheater Cover <i>(Not Shown)</i>	1

REVERSING SWITCH ASSEMBLY

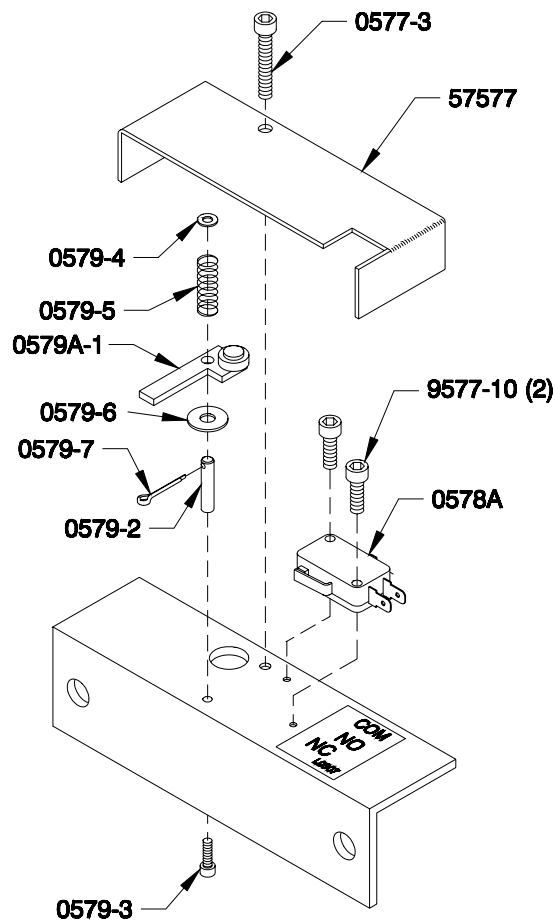
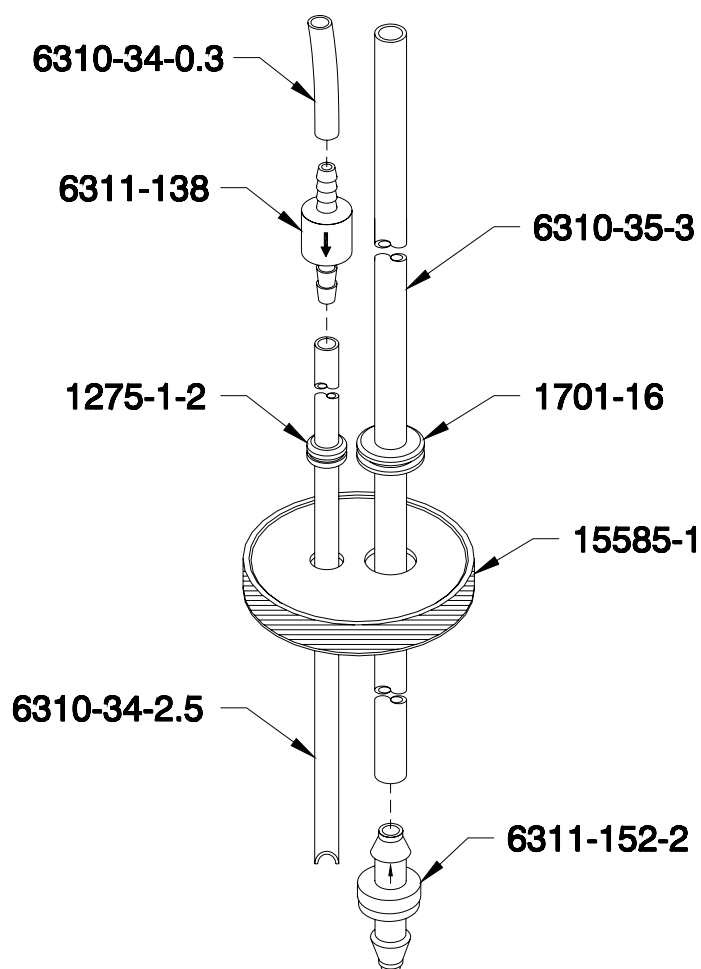


Figure 9. Reversing Switch Assembly (Part No. 18745-10-1), Exploded View

TABLE 8. REVERSING SWITCH ASSEMBLY (PART NO. 18745-10-1), PARTS

Part Number	Description	Quantity
0577-3	Socket Head Cap Screw	1
0578A	Reversing Switch	1
0579-2	Pivot Arm	1
0579-3	Socket Head Cap Screw	1
0579-4	Flat Washer	1
0579-5	Spring	1
0579-6	Fiber Washer	1
0579-7	Cotter Pin	1
0579A-1	Reversing Switch Lever	1
57577	Reversing Switch Cover Box	1
9577-10	Socket Head Cap Screw	2

LUBE RESERVOIR HOSE ASSEMBLY**Figure 10. Lube Reservoir Hose Assembly (Part No. 17585), Exploded View****TABLE 9. LUBE RESERVOIR HOSE ASSEMBLY (PART NO. 17585), PARTS LIST**

Part Number	Description	Quantity
1275-1-2	Rubber Grommet	1
1701-16	13/16 OD Grommet	1
6310-34-0.3	Urethane Tube	1
6310-34-2.5	Urethane Tube	1
6310-35-3	Urethane Tube	1
6311-138	Check Valve	1
6311-152-2	Lube Reservoir Check Valve	1
15585-1	Lube Bottle Cap	1

HOSE HEAT POWER PACK ASSEMBLY

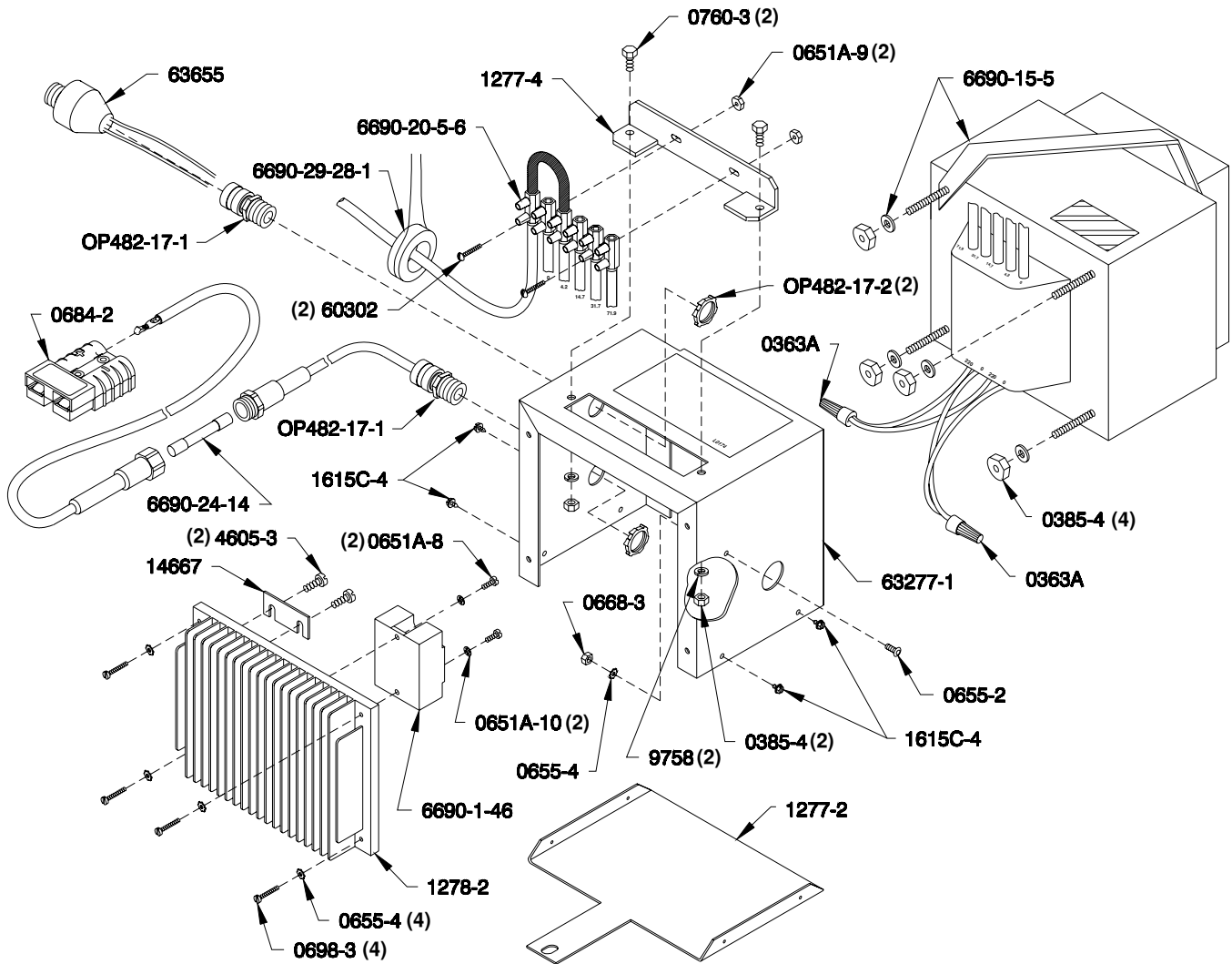


Figure 11. 70V Auto Power Pack (Part No 63277), Exploded View

TABLE 10. 70V AUTO POWER PACK (PART NO 63277), PARTS

Part Number	Description	Quantity
0363A	Insulating Wire Nut (2 Shown)	4
0385-4	Hex Nut	6
0651A-8	Pan Head Machine Screw	2
0651A-9	Hex Nut	2
0651A-10	Lockwasher	2
0655-2	Pan Head Machine Screw	1
0655-4	Lockwasher	5
0668-3	Hex Nut	1
0684-2	Power-Lock™ Connector Housing	1
0698-3	Pan Head Machine Screw	4
0760-3	Hex Head Cap Screw	2
1277-2	Bottom Cover	1
1277-4	Terminal Block Mounting Bracket	1
1278-2	Heat Sink	1
1615C-4	Sheet Metal Screw	4
4605-3	Pan Head Machine Screw	2
6690-1-46	Solid State Relay	1
6690-15-5	Transformer	1
6690-20-5-6	Terminal Block	1
6690-24-14	50 AMP Fuse	1
6690-29-28-1	Current Transformer	1
9758	Lockwasher	2
14667	Terminal Jumper	1
60302	Round Head Machine Screw	2
63277-1	Transformer Cover Box	1
63655	TSU Wire Assembly	1
OP482-17-1	Bushing	2
OP482-17-2	Locknut	2

ELECTRICAL COMPONENTS

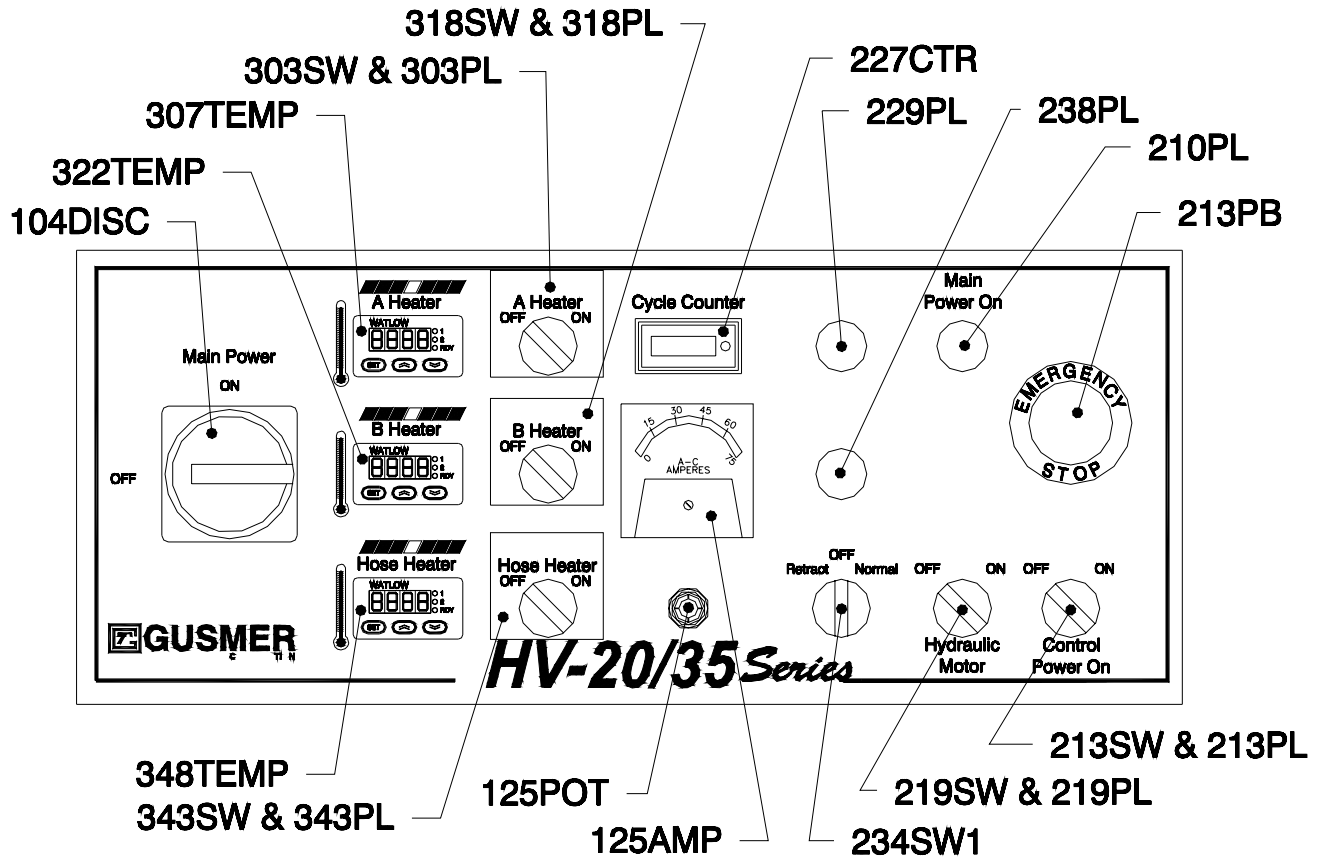


Figure 12. Electrical Components (Sheet 1 of 2)

Note: For schematic symbol part numbers and descriptions, see Table 11 on page 66.

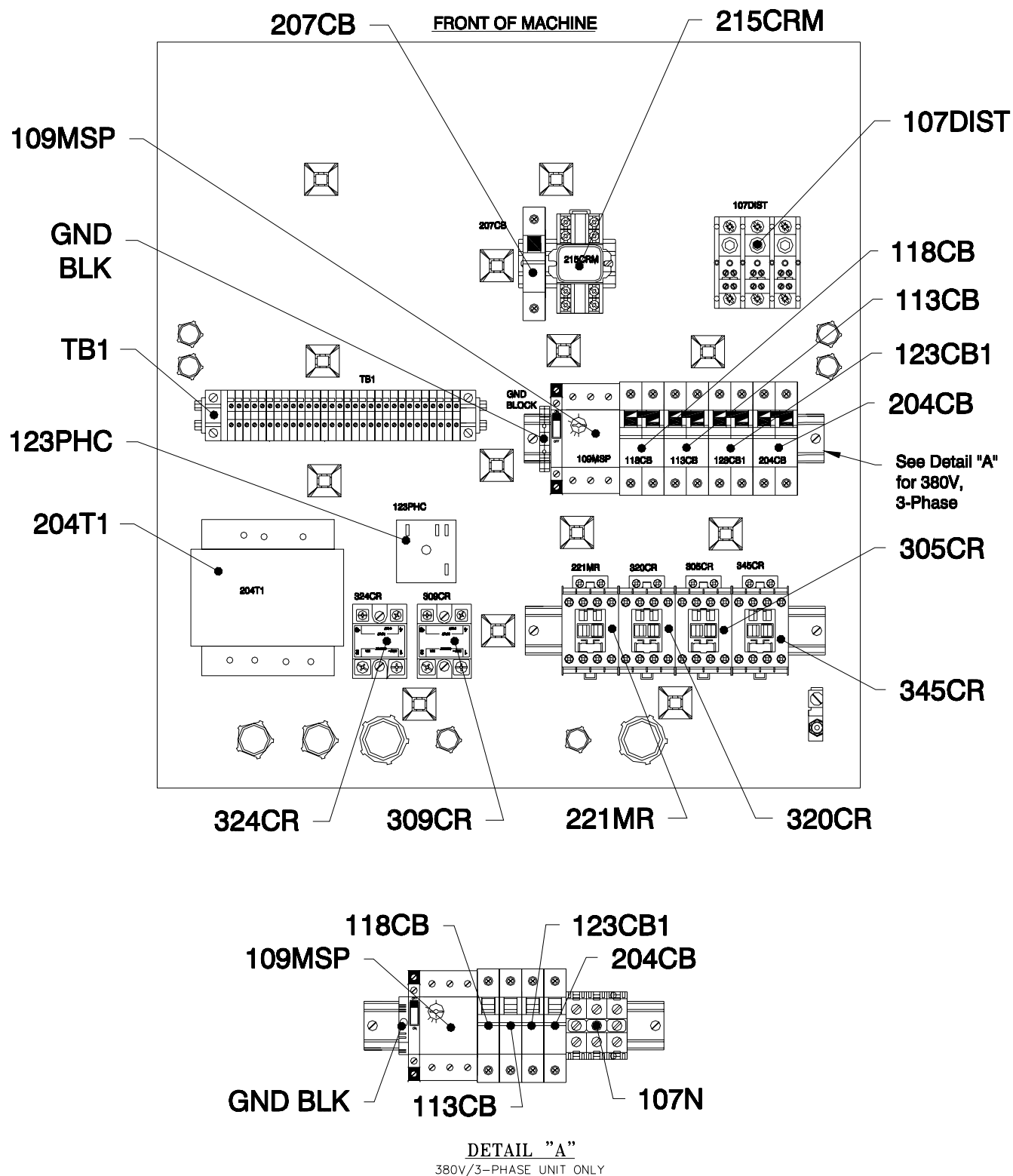


Figure 13. Electrical Components (Sheet 2 of 2)

Note: For schematic symbol part numbers and descriptions, see Table 11 on page 66.

ELECTRICAL SCHEMATICS

HV-20: 220 Volt, 1-Phase, 6KW

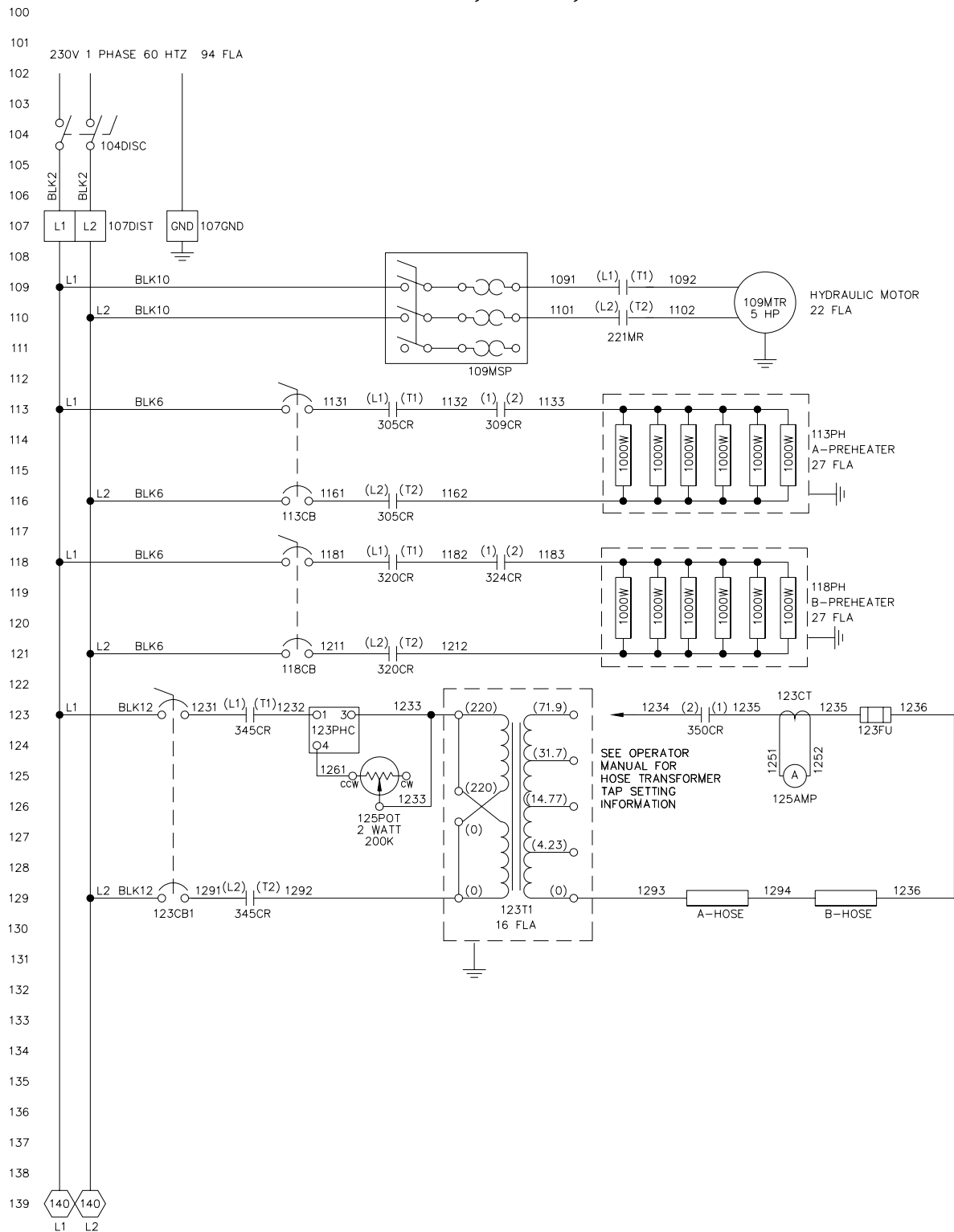


Figure 14. Electrical Schematic, SD63000-SIZE, Sheet 1A

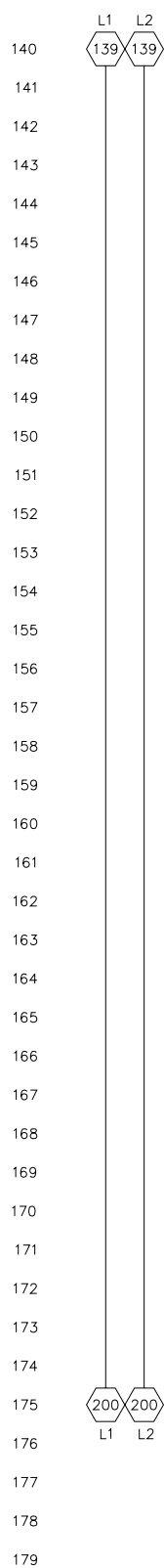


Figure 15. Electrical Schematic, SD63000-SIZE, Sheet 1A continued

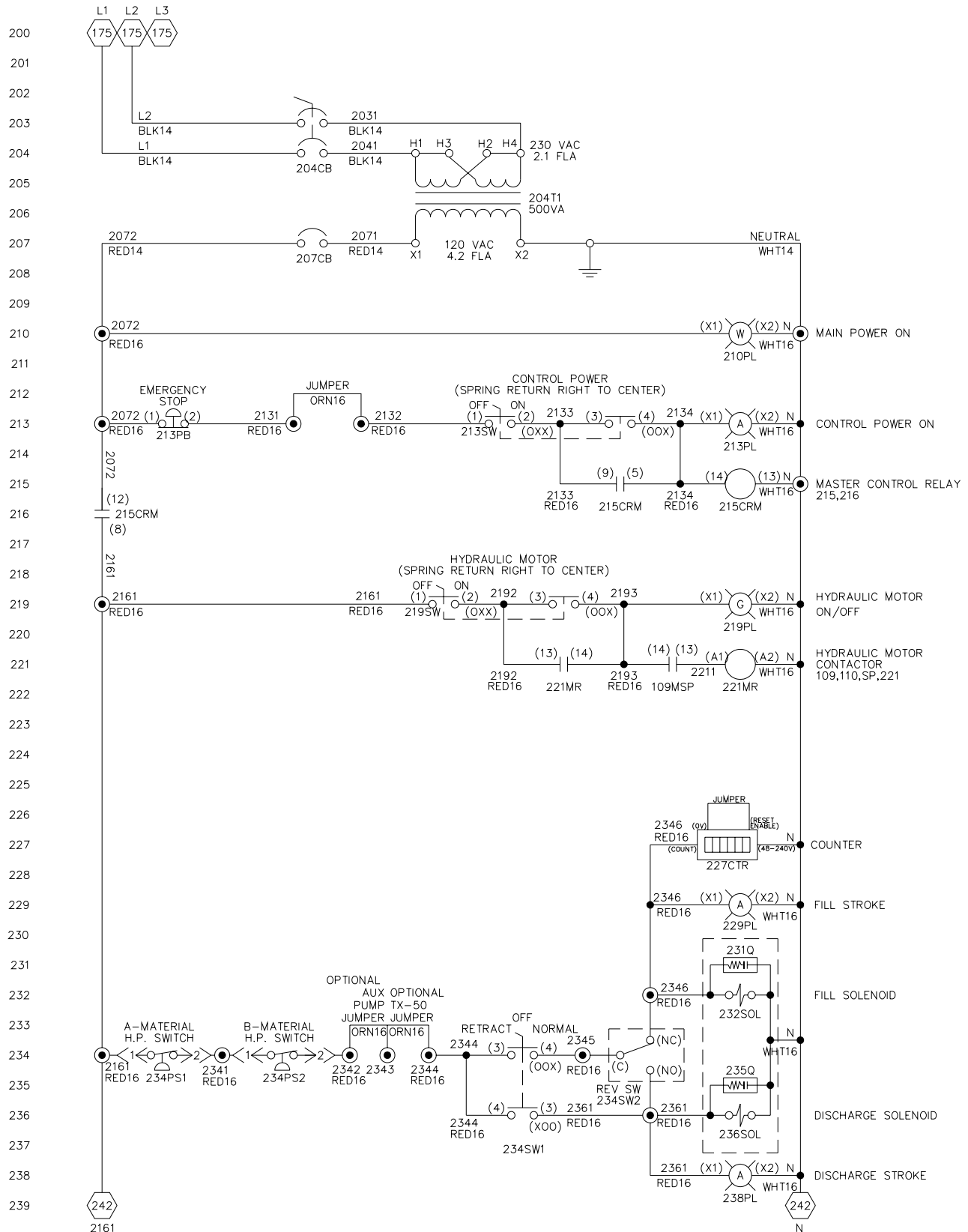


Figure 16. Electrical Schematic, SD63000-SIZE, Sheet 2A

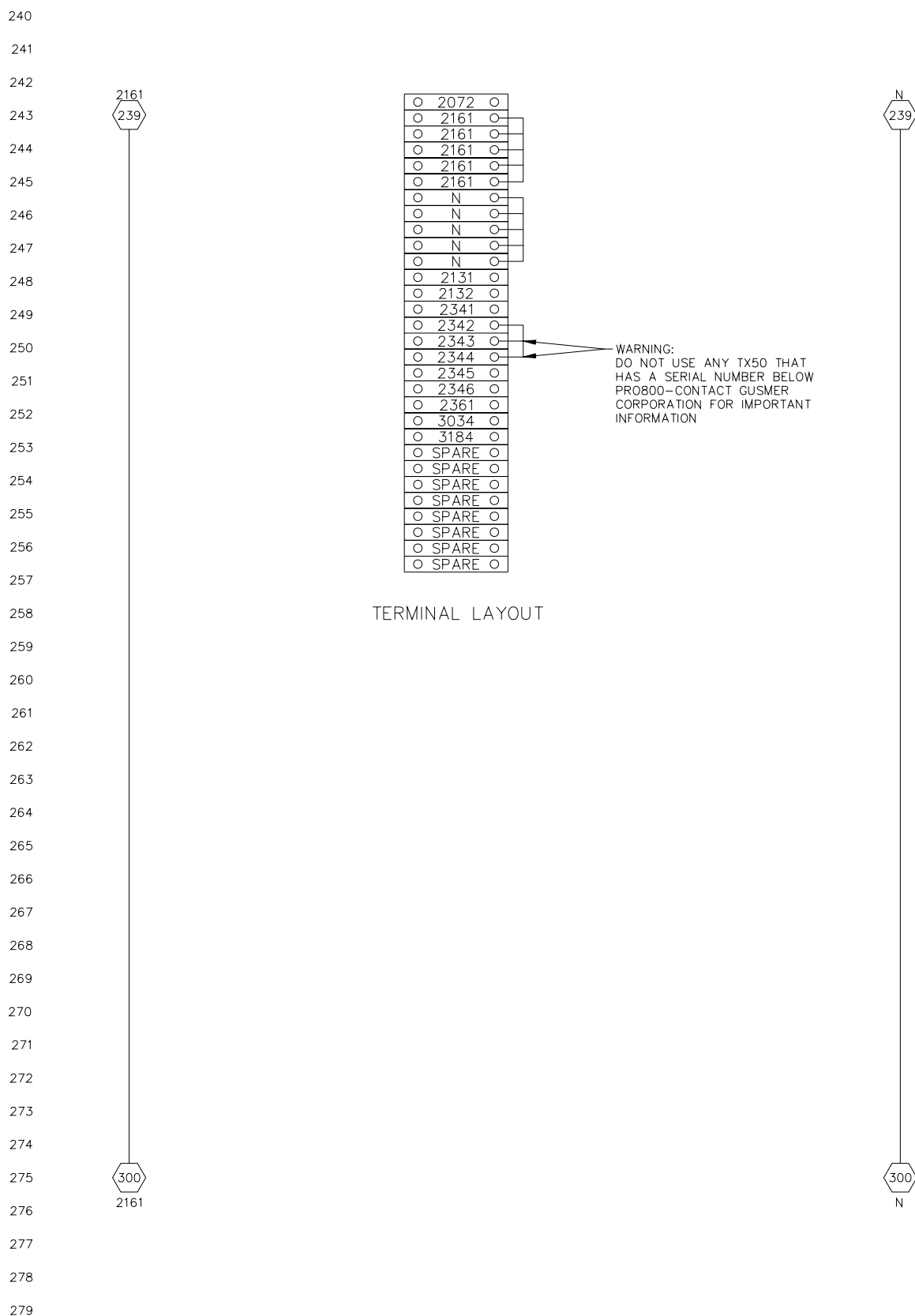


Figure 17. Electrical Schematic, SD63000-SIZE, Sheet 2A continued



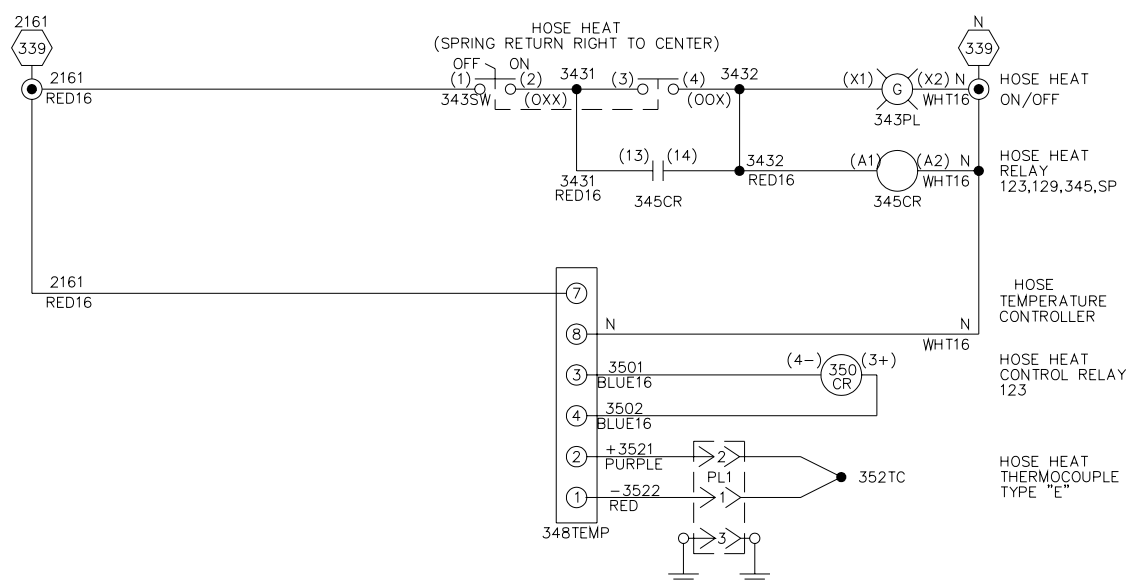


Figure 19. Electrical Schematic, SD63000-SIZE, Sheet 3 continued

HV-20: 220 Volt, 3-Phase, 6KW

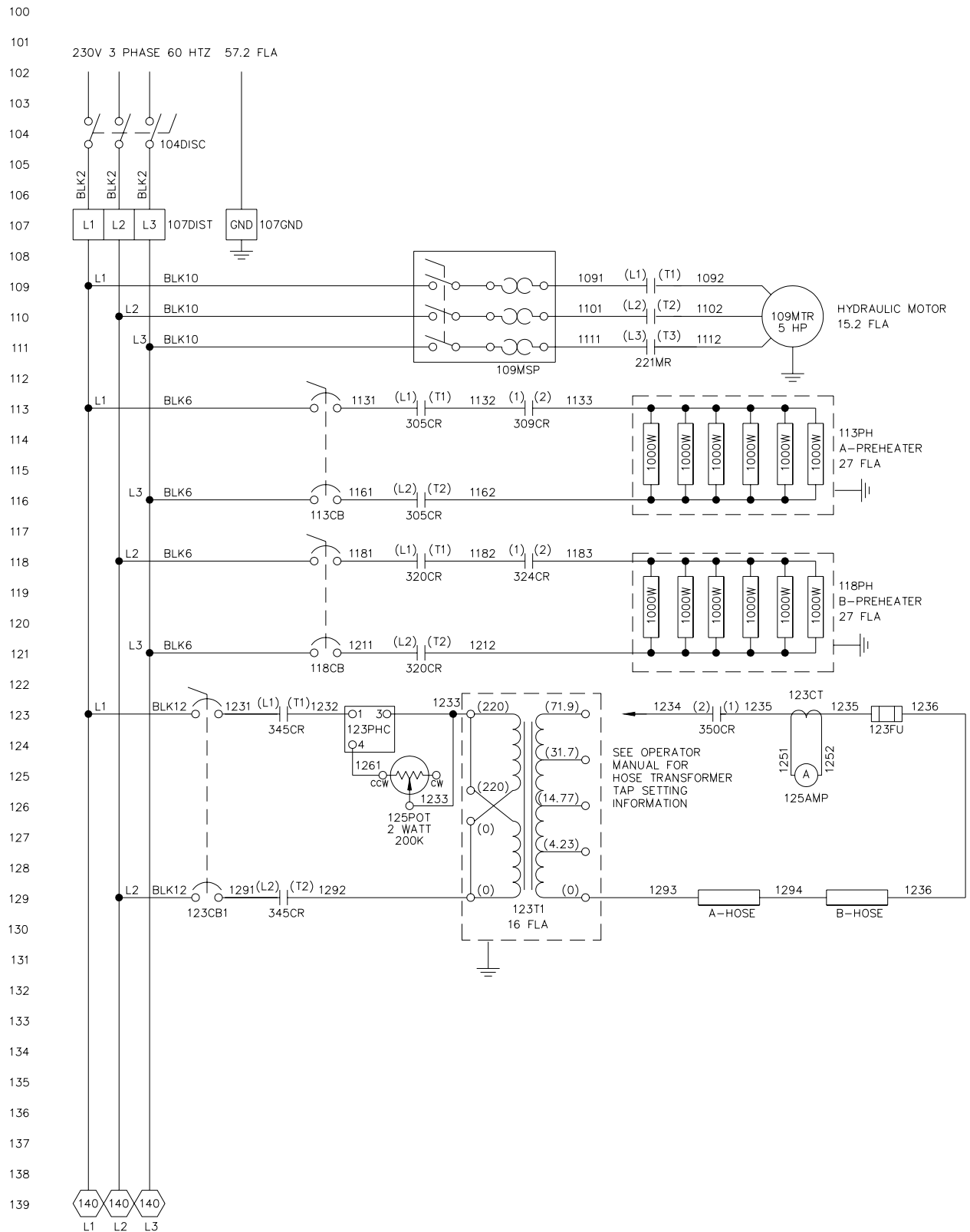


Figure 20. Electrical Schematic, SD63000-SIZE, Sheet 1B

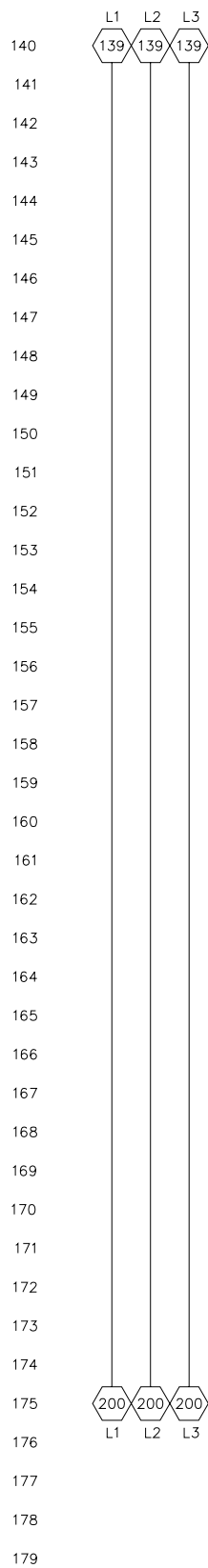


Figure 21. Electrical Schematic, SD63000-SIZE, Sheet 1B continued

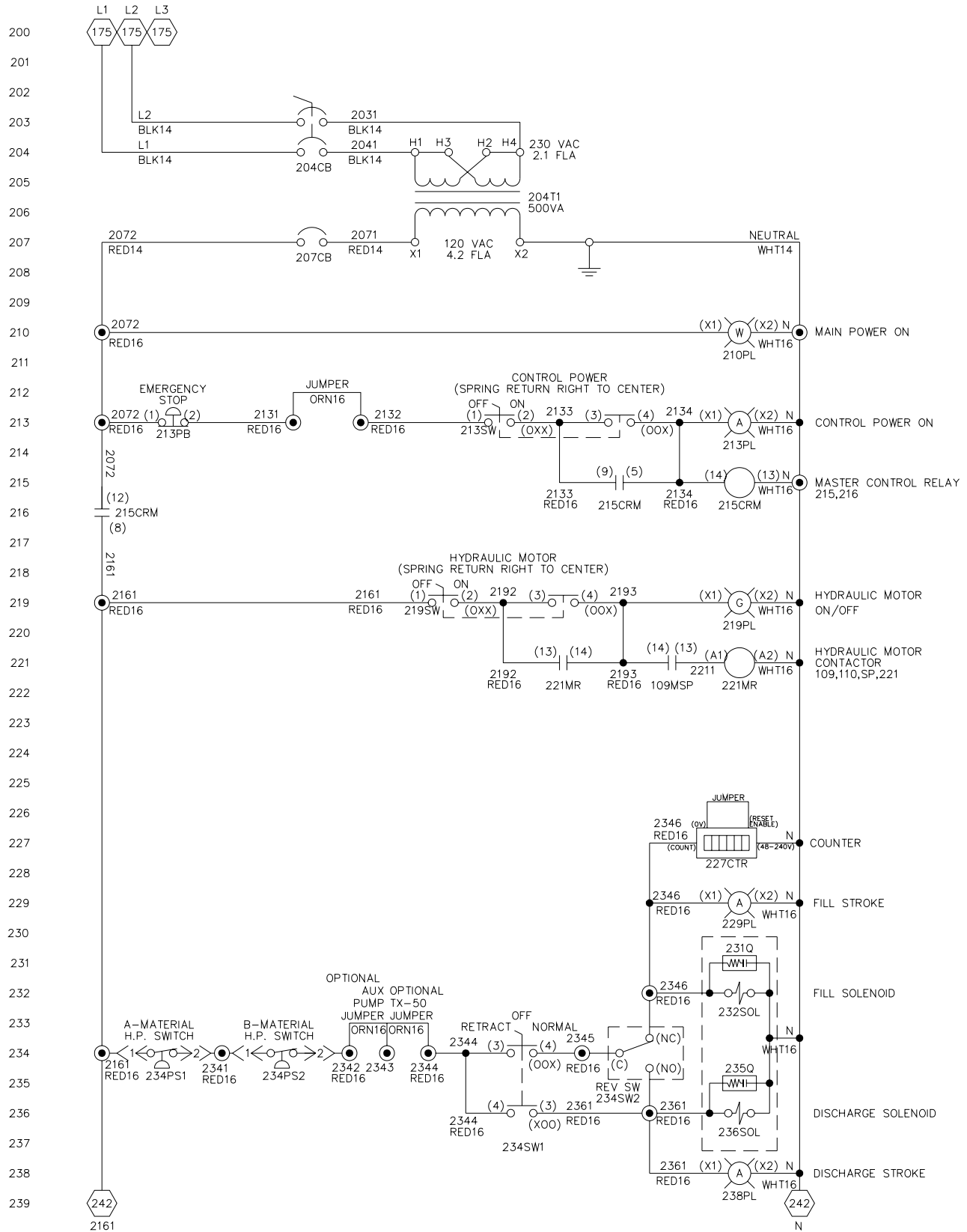


Figure 22. Electrical Schematic, SD63000-SIZE, Sheet 2A

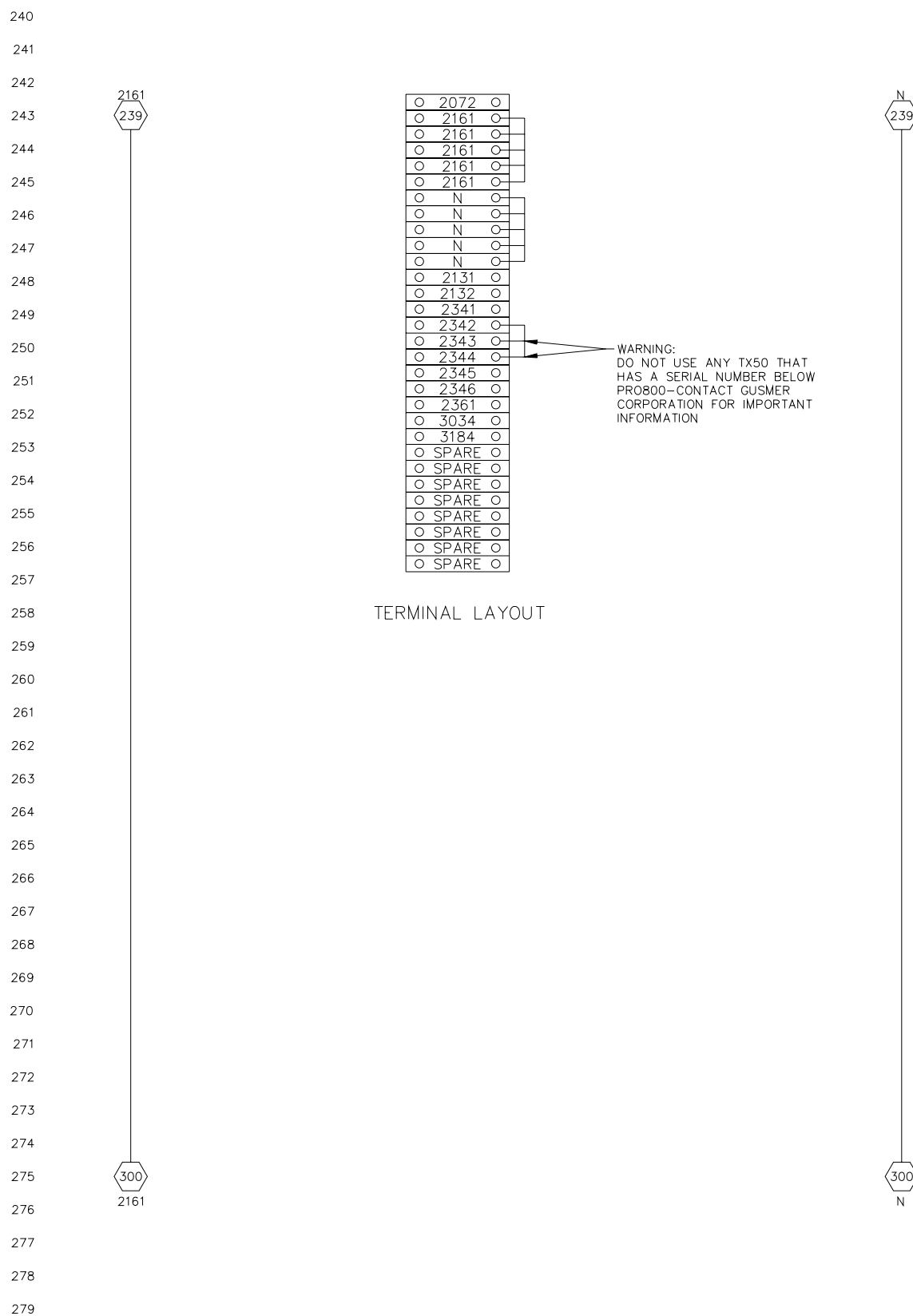


Figure 23. Electrical Schematic, SD63000-SIZE, Sheet 2A continued

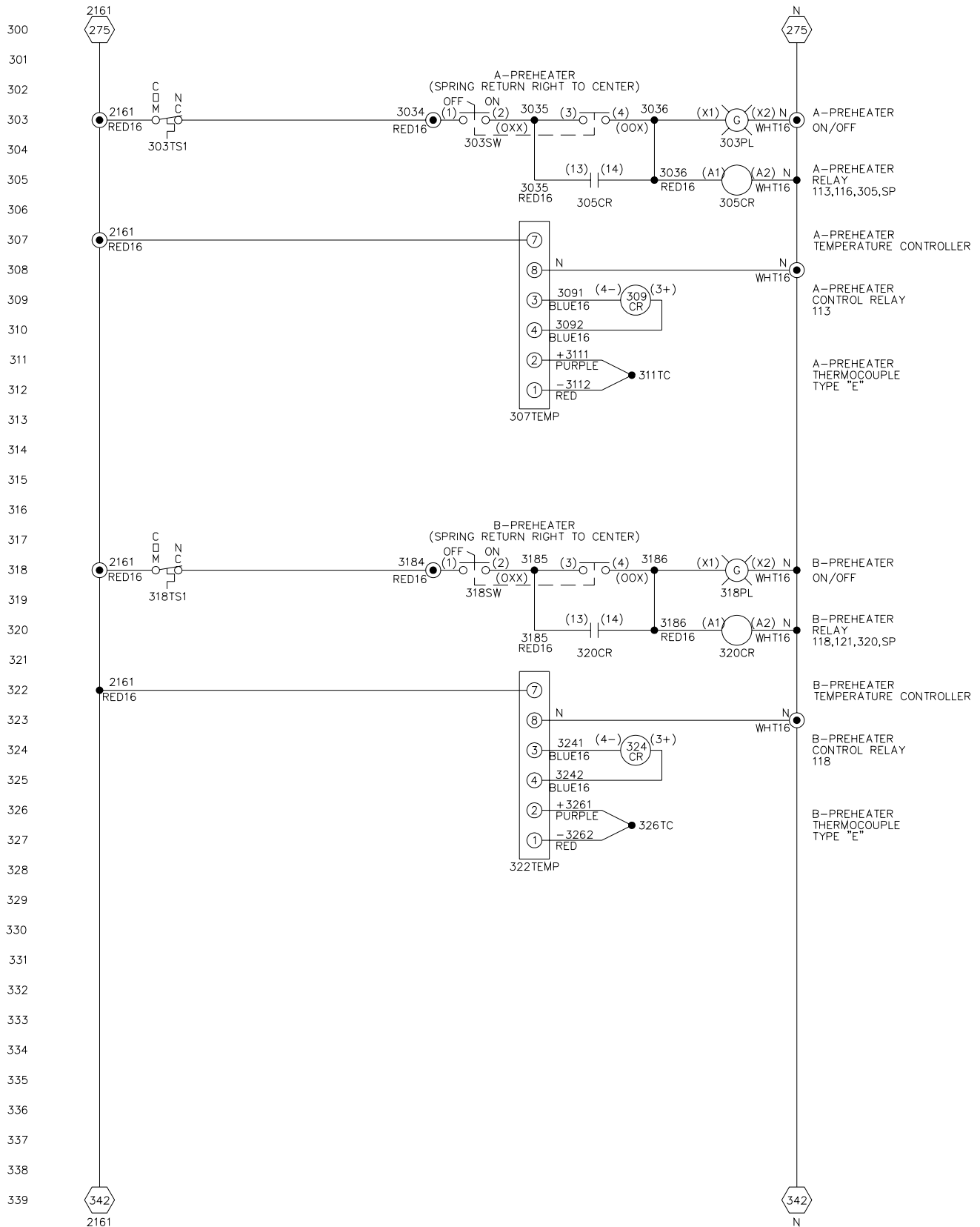


Figure 24. Electrical Schematic, SD63000-SIZE, Sheet 3

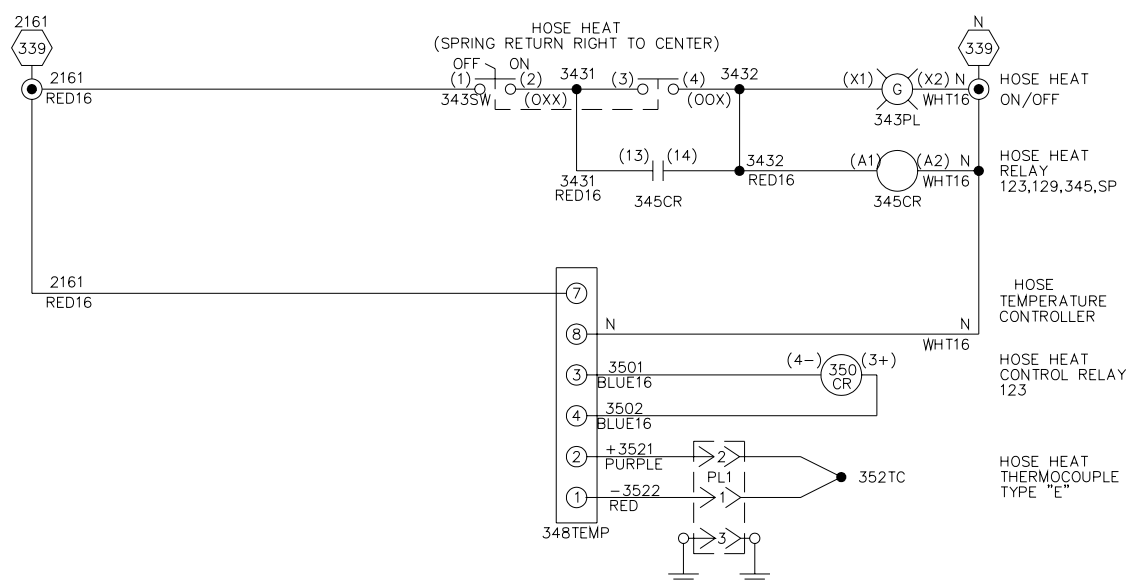


Figure 25. Electrical Schematic, SD63000-SIZE, Sheet 3 continued

HV-20: 220 Volt, 3-Phase, 9KW

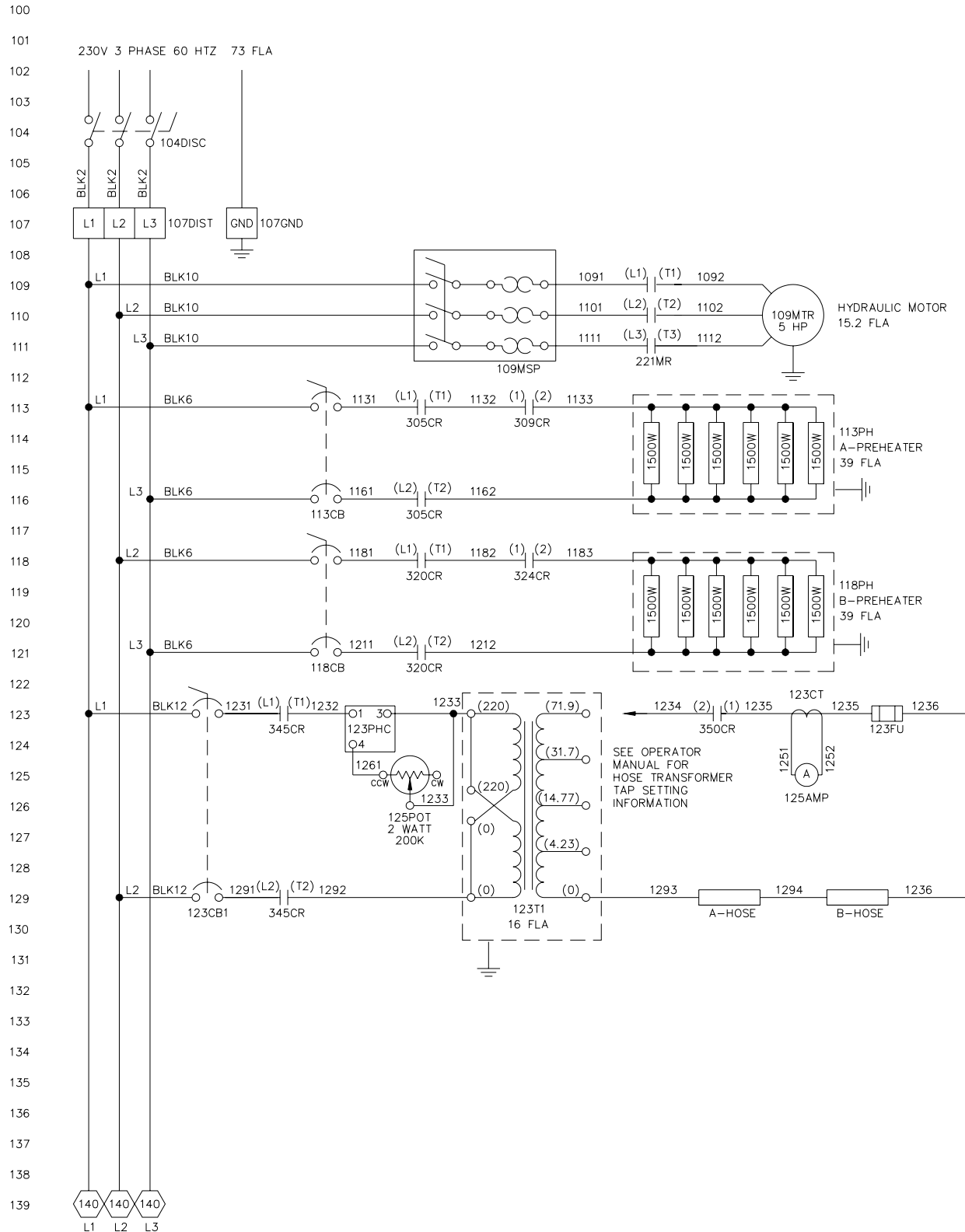


Figure 26. Electrical Schematic, SD63000-SIZE, Sheet 1D

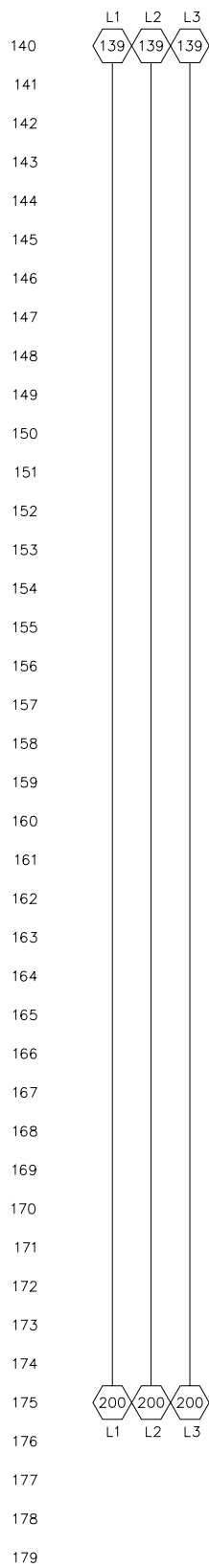


Figure 27. Electrical Schematic, SD63000-SIZE, Sheet 1D continued

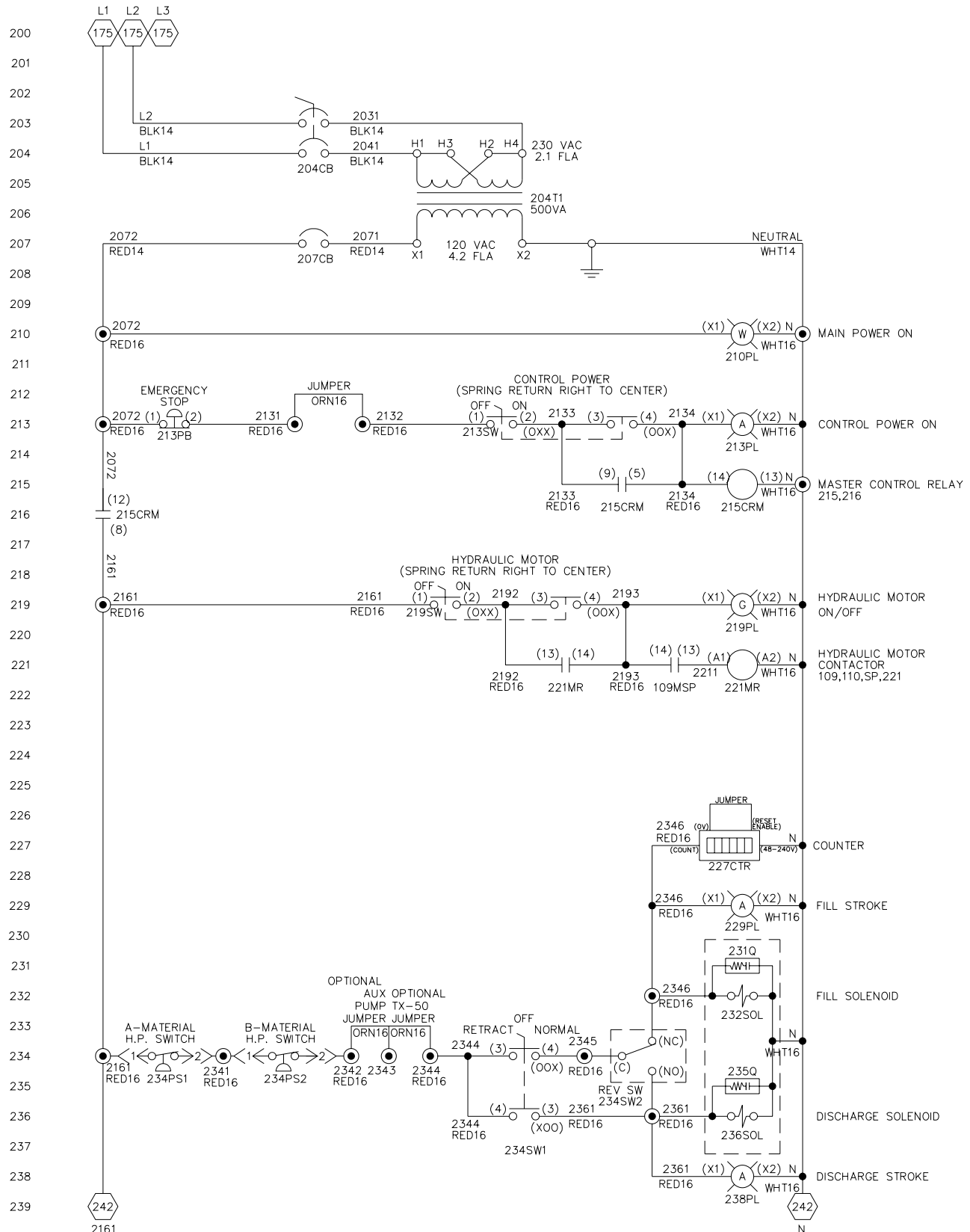


Figure 28 Electrical Schematic, SD63000-SIZE, Sheet 2A

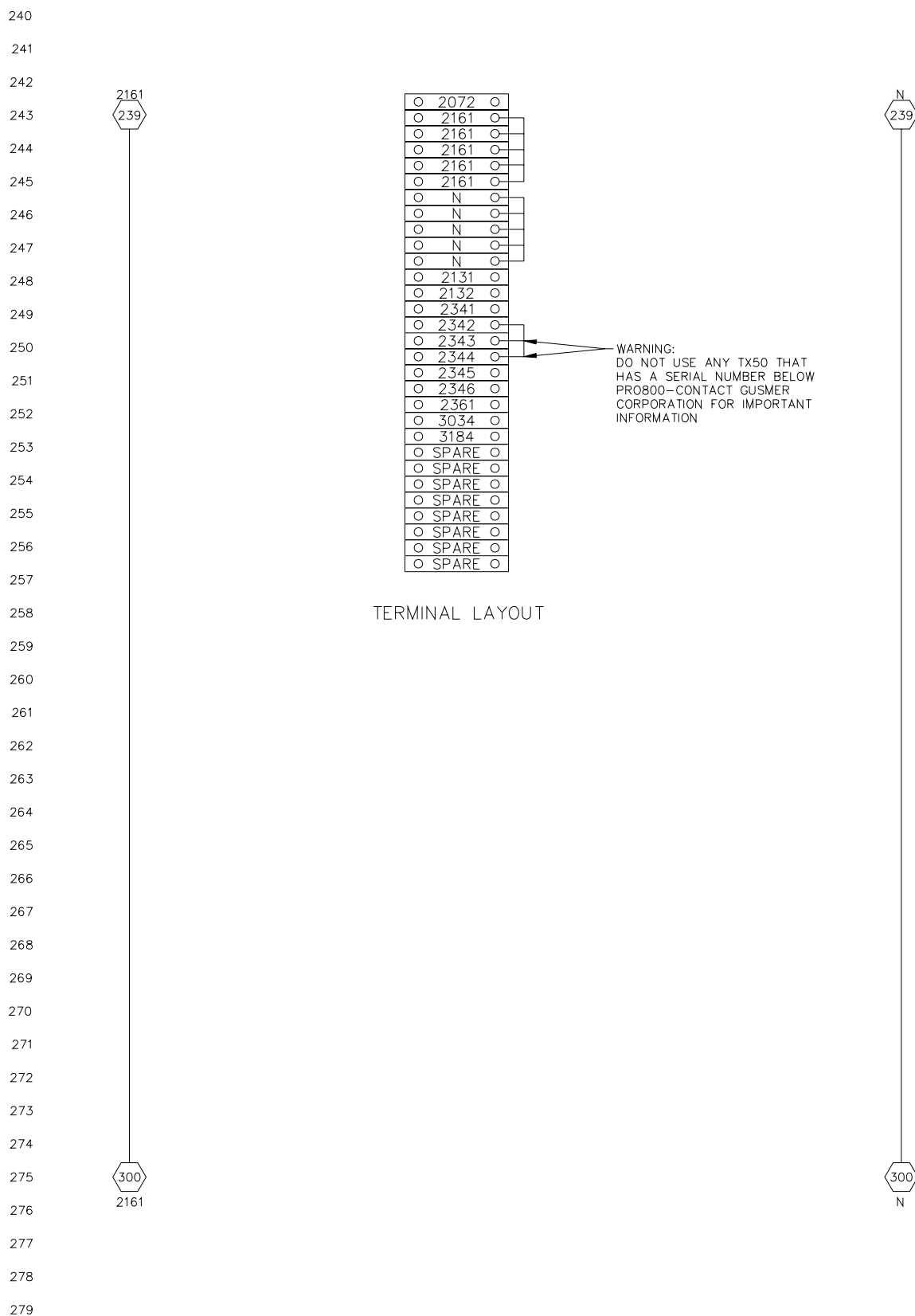


Figure 29. Electrical Schematic, SD63000-SIZE, Sheet 2A continued

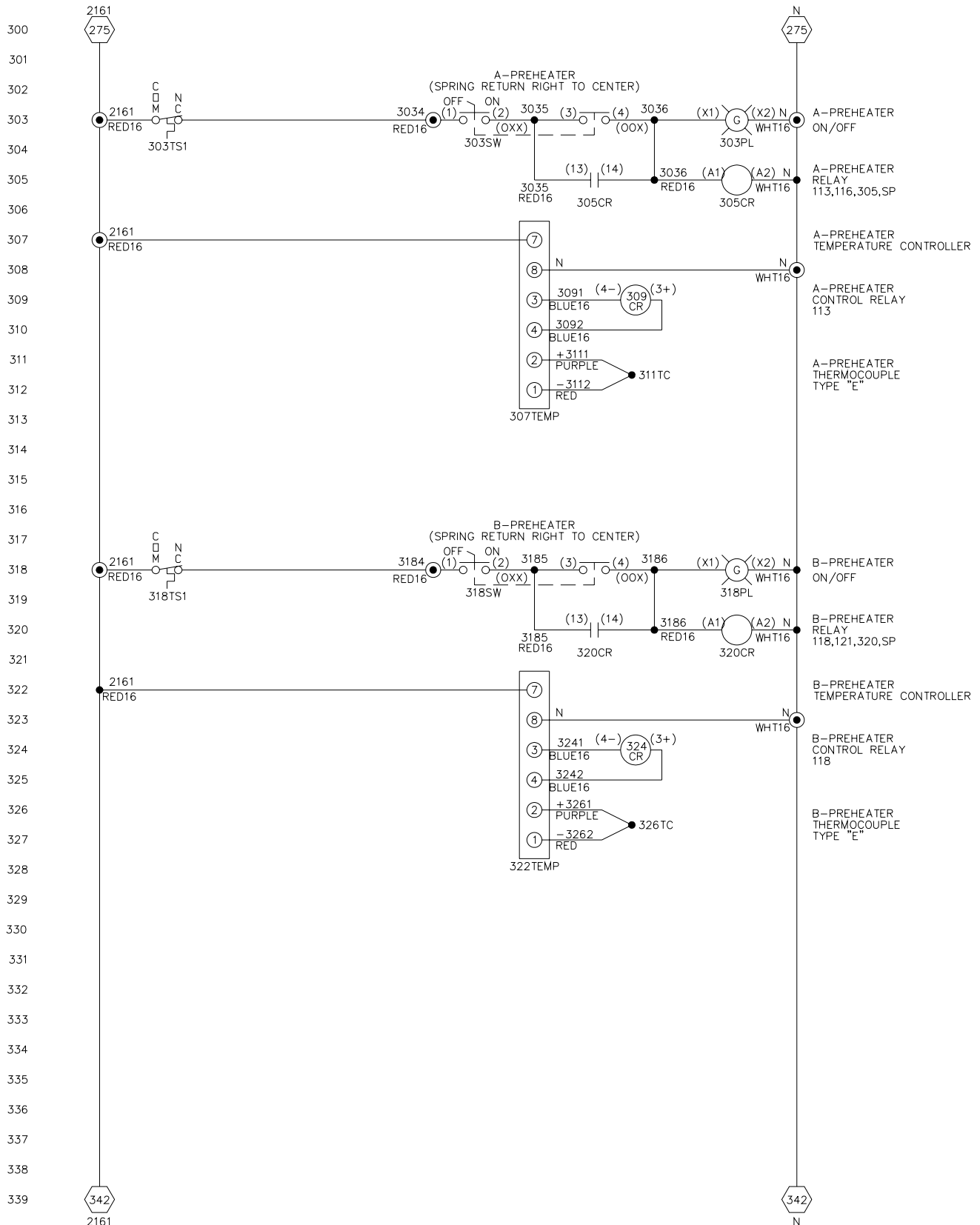


Figure 30. Electrical Schematic, SD63000-SIZE, Sheet 3

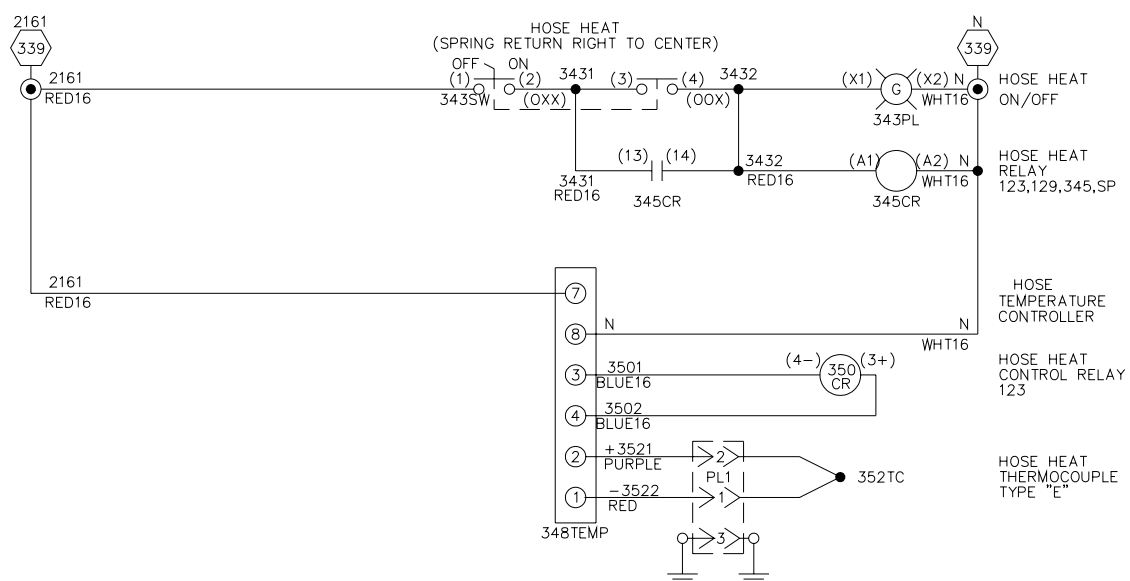


Figure 31. Electrical Schematic, SD63000-SIZE, Sheet 3 continued

**HV-20: 380 Volt, 3-Phase, 6KW;
HV-30: 220 Volt, 1-Phase, 6KW;
HV-30: 220 Volt, 3-Phase, 6KW**

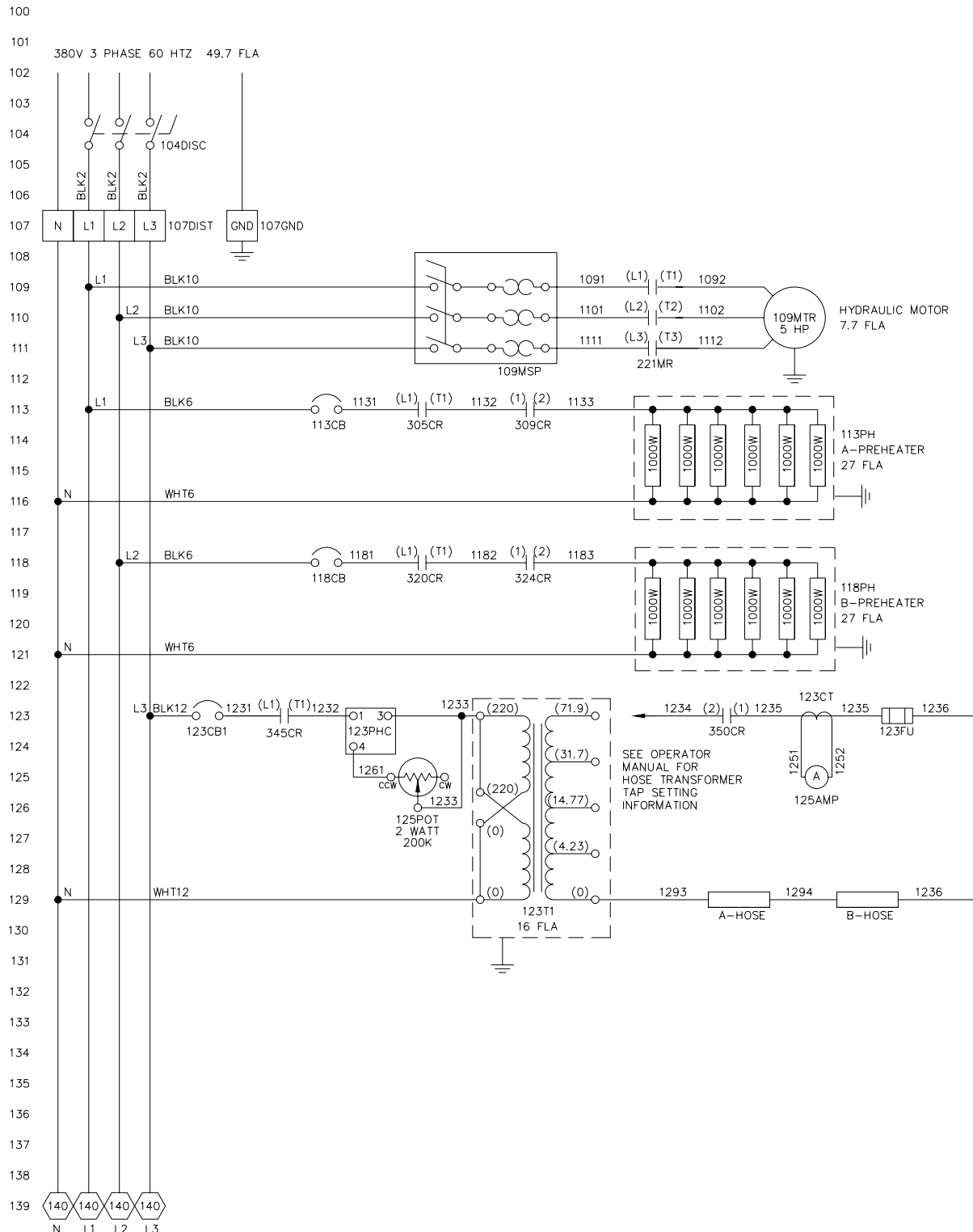


Figure 32. Electrical Schematic, SD63000-SIZE, Sheet 1C

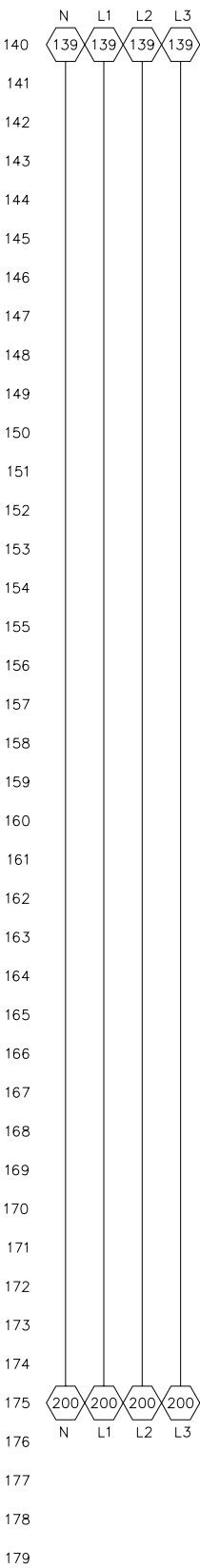


Figure 33. Electrical Schematic, SD63000-SIZE, Sheet 1C continued



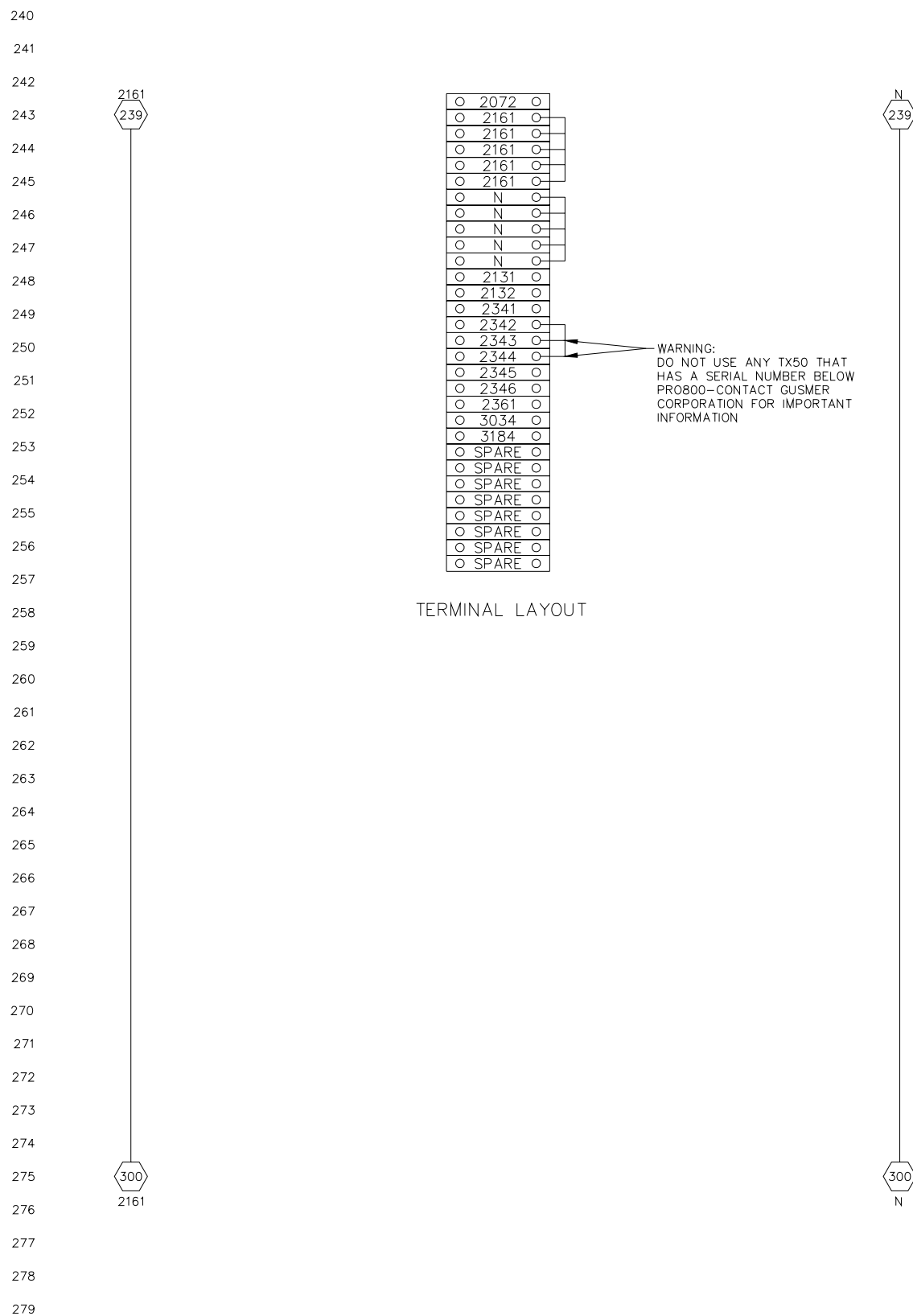


Figure 35. Electrical Schematic, SD63000-SIZE, Sheet 2B continued

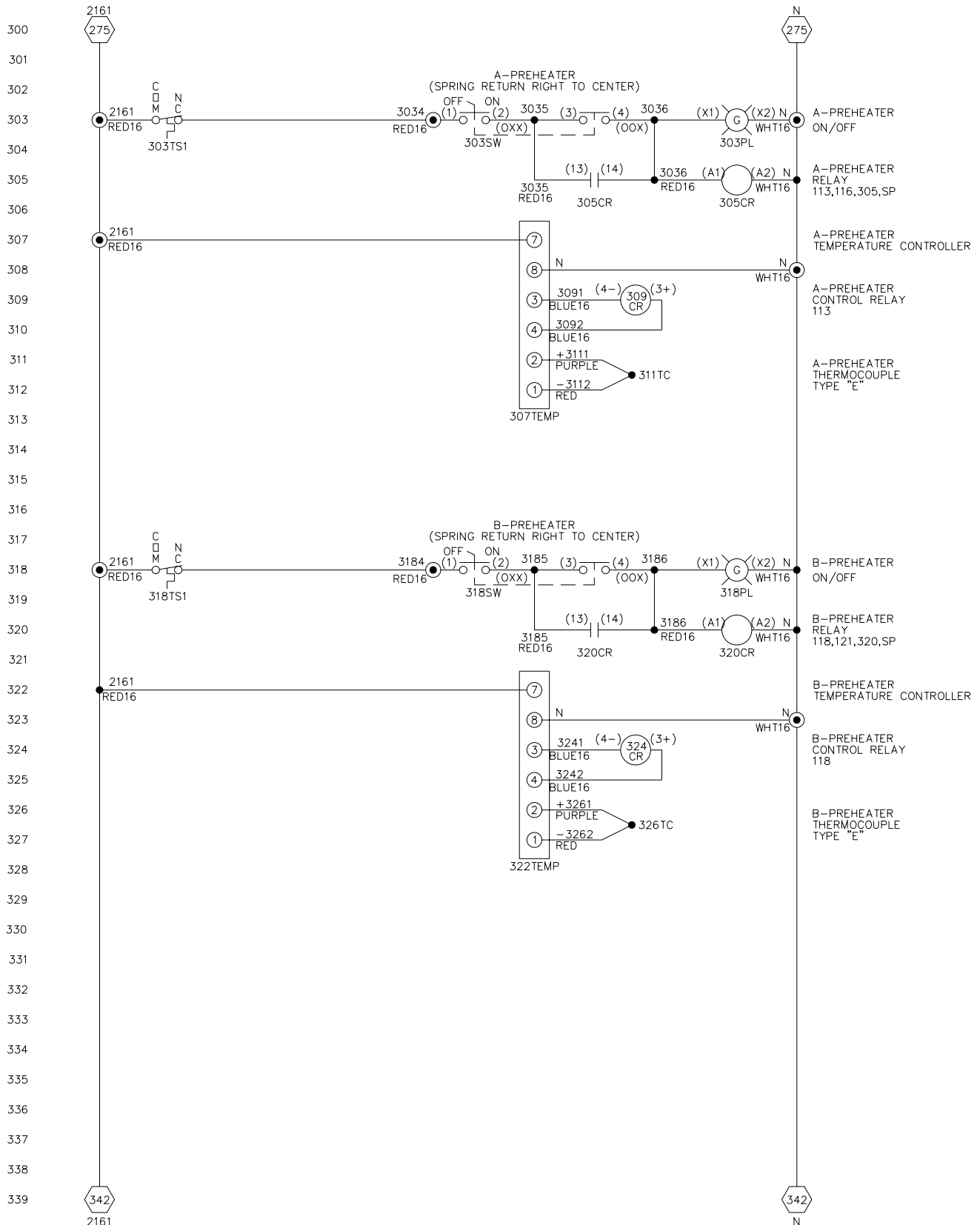


Figure 36. Electrical Schematic, SD63000-SIZE, Sheet 3

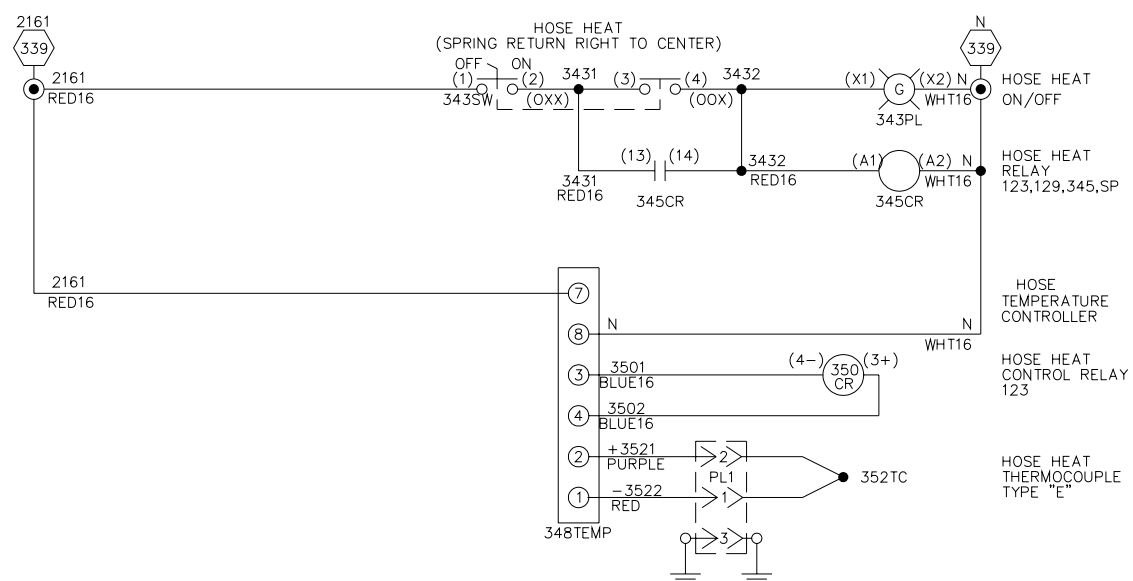


Figure 37. Electrical Schematic, SD63000-SIZE, Sheet 3 continued

HV-30: 220 Volt, 3-Phase, 9KW

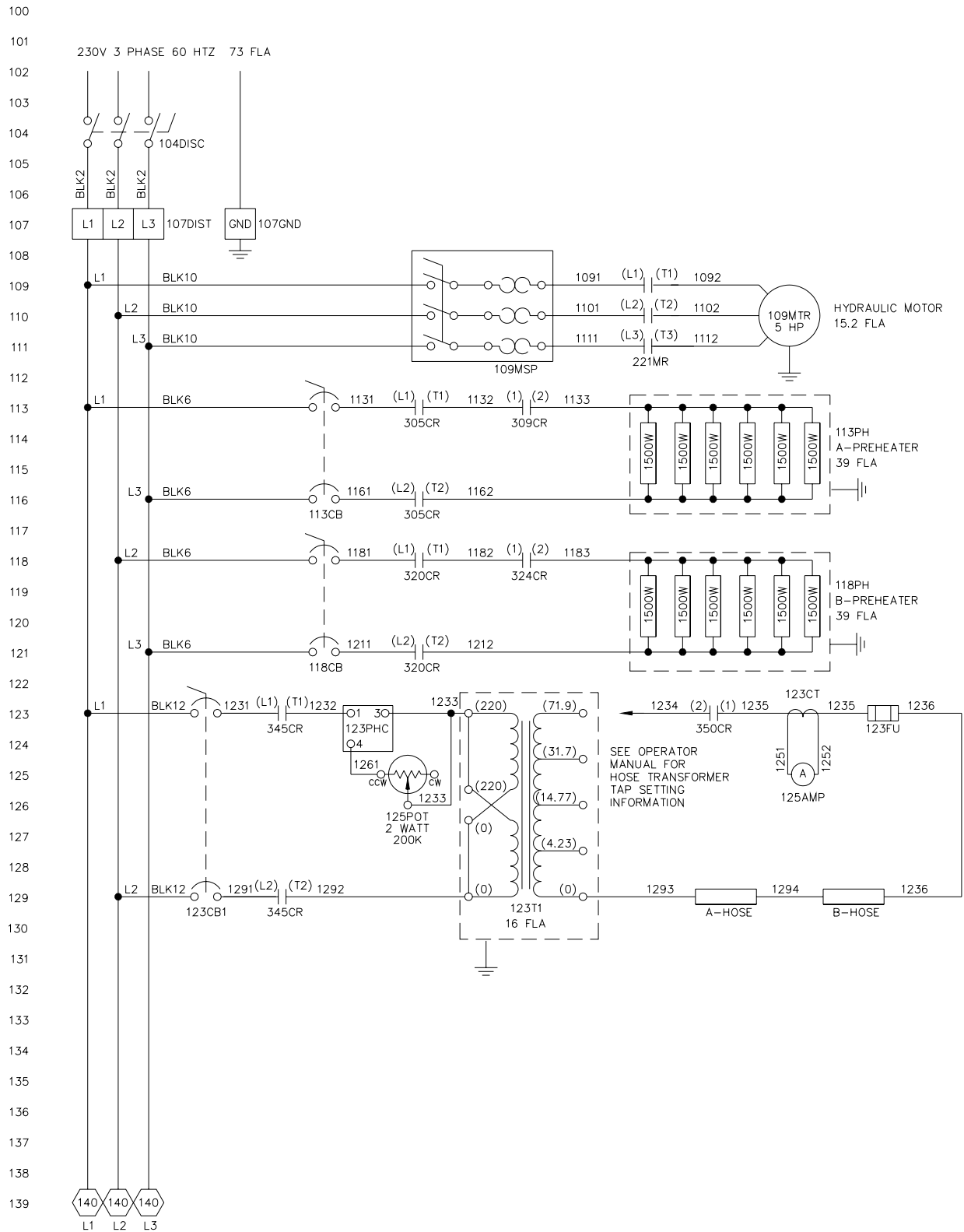


Figure 38. Electrical Schematic, SD63000-SIZE, Sheet 1D

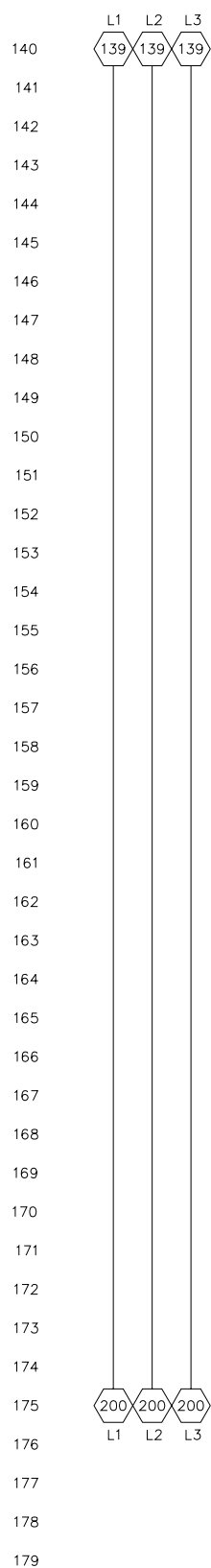


Figure 39. Electrical Schematic, SD63000-SIZE, Sheet 1D continued

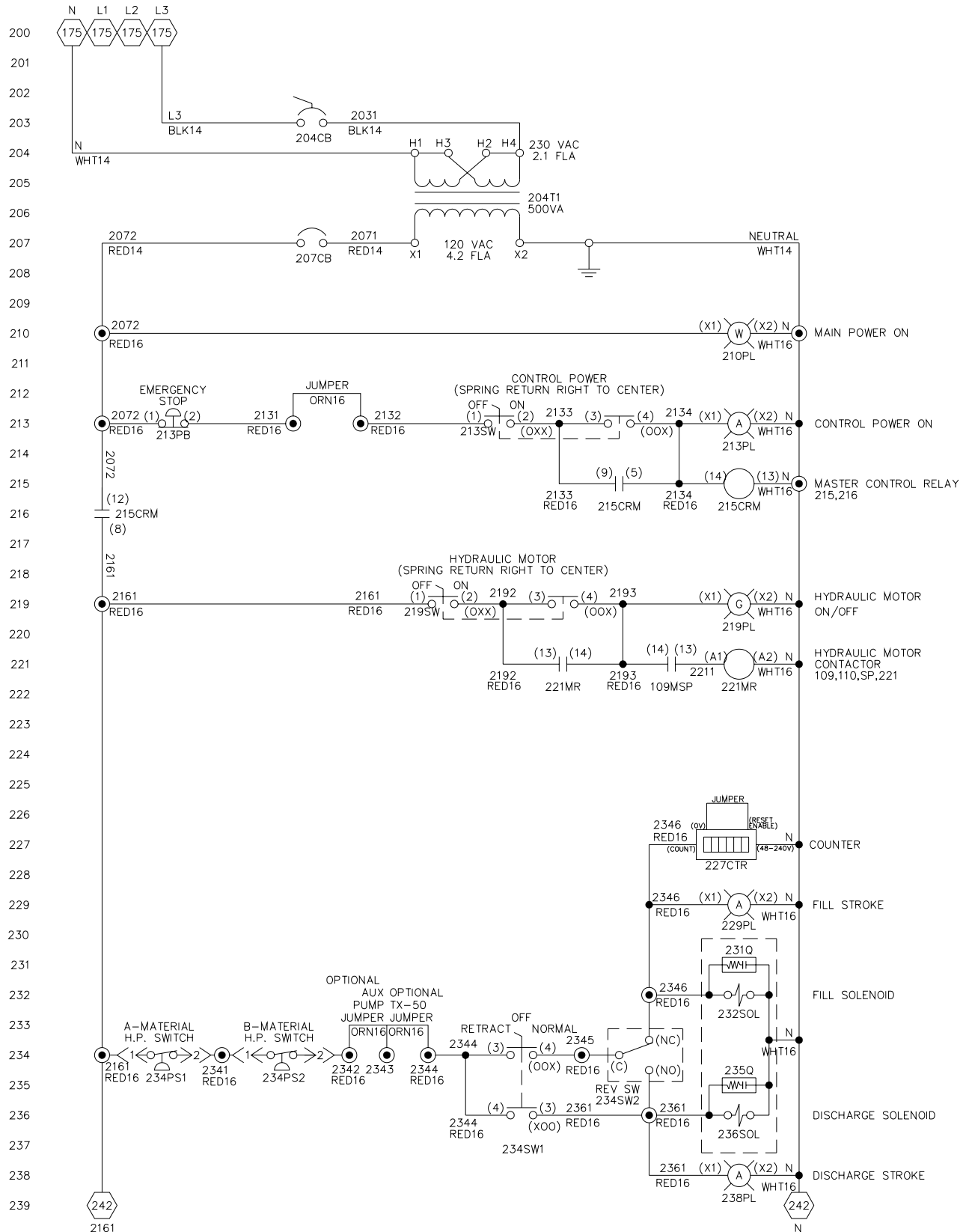


Figure 40. Electrical Schematic, SD63000-SIZE, Sheet 2B

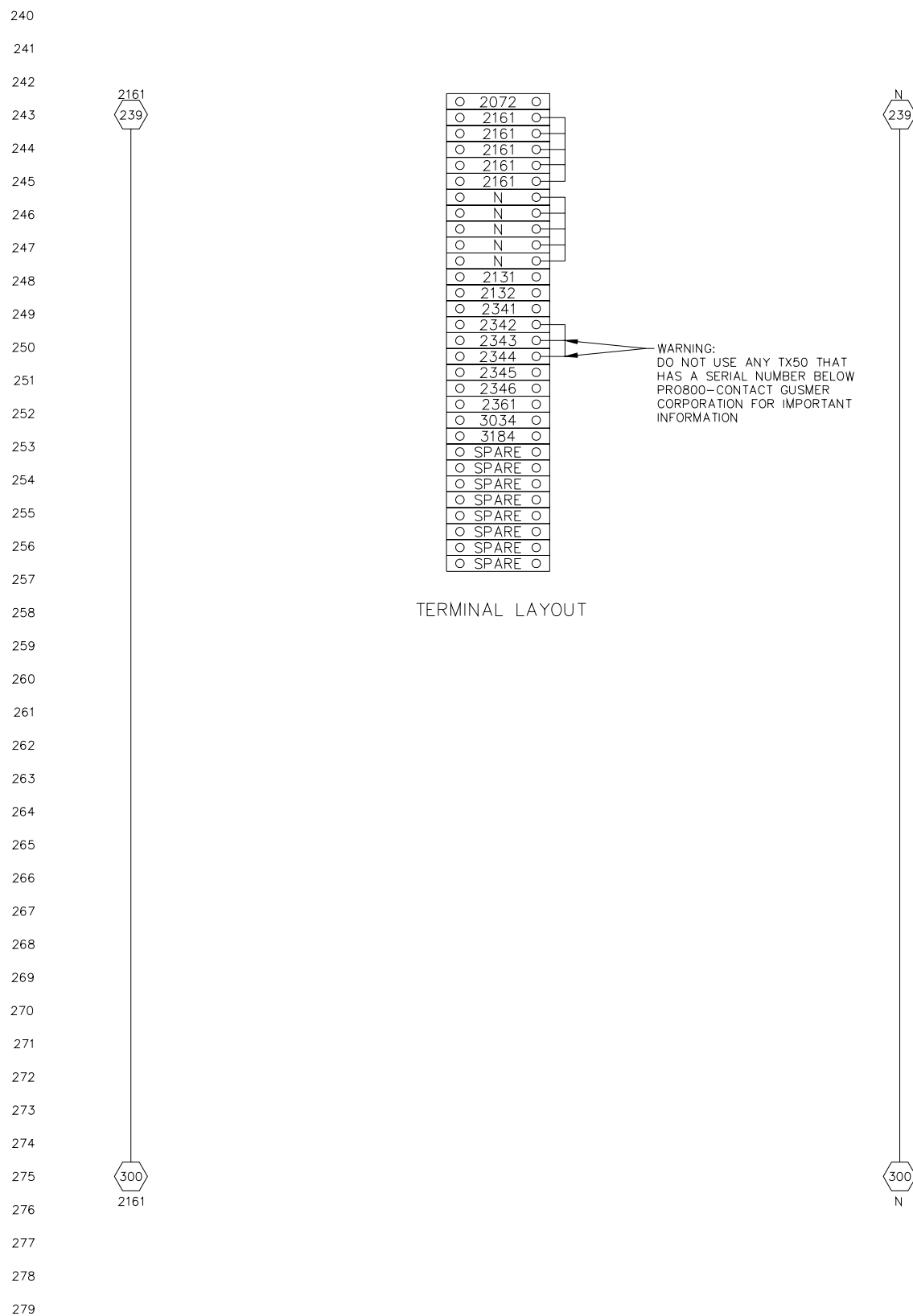


Figure 41. Electrical Schematic, SD63000-SIZE, Sheet 2B continued

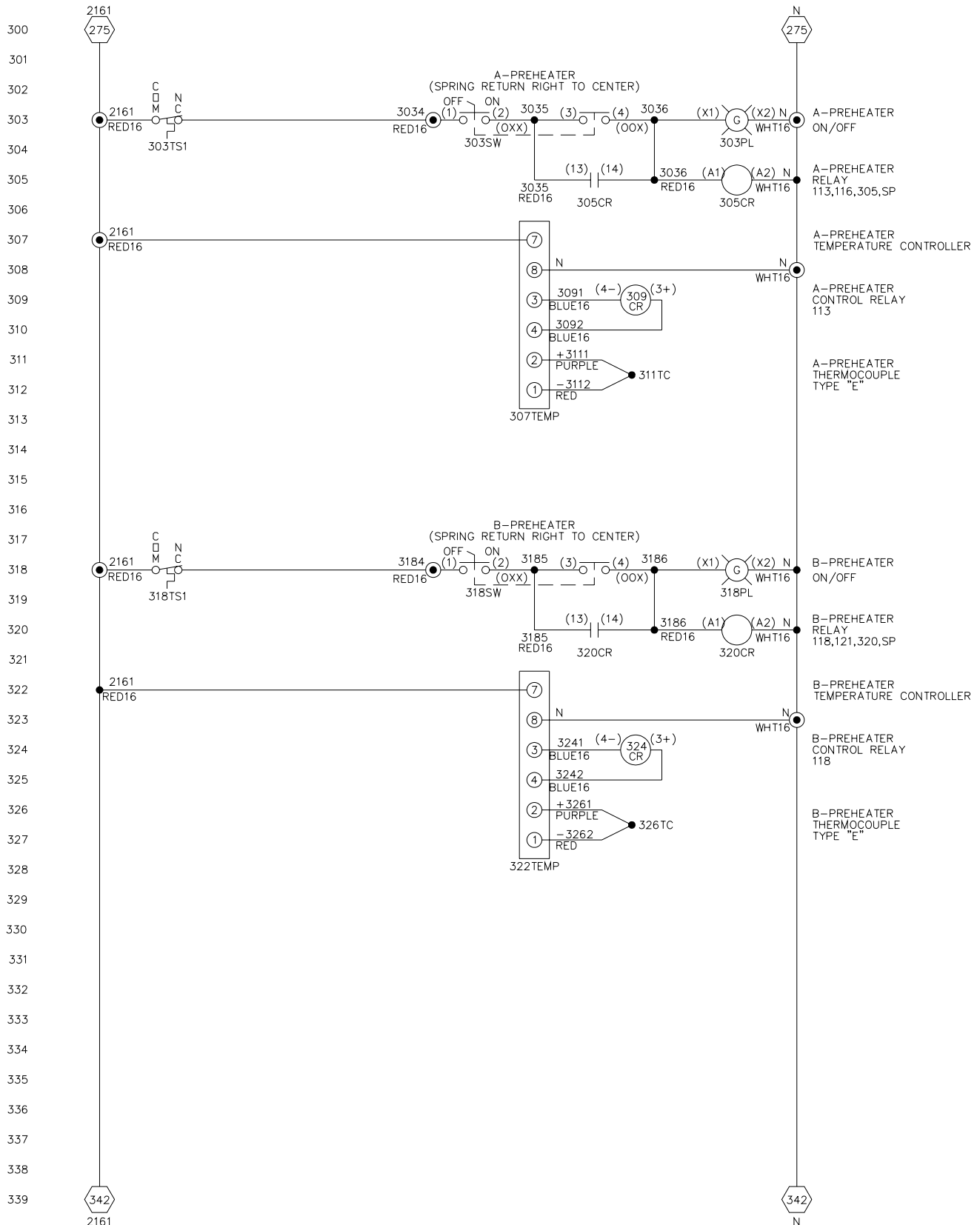


Figure 42. Electrical Schematic, SD63000-SIZE, Sheet 3

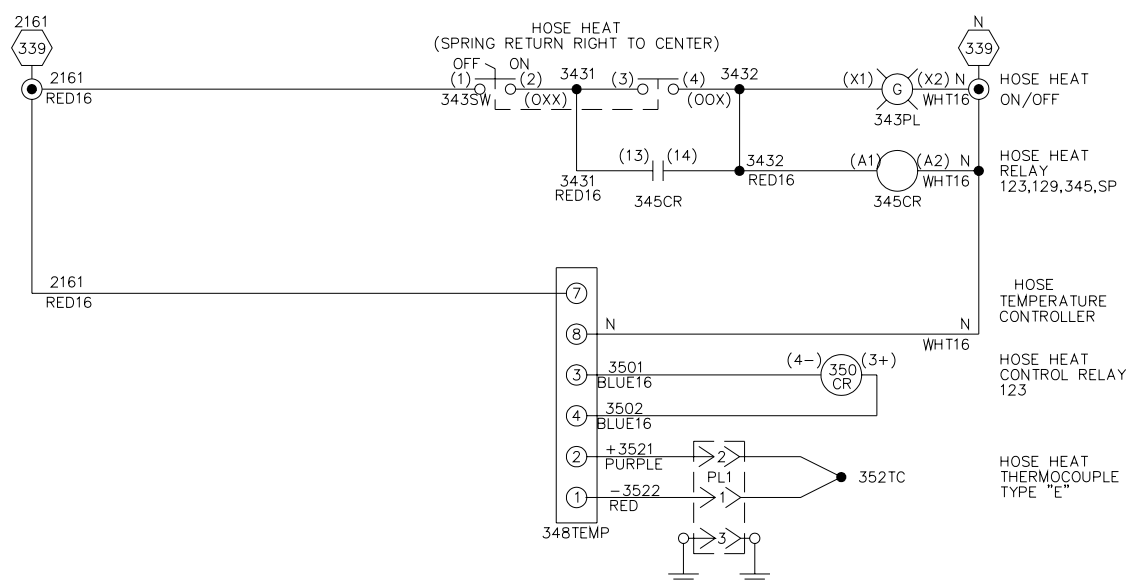


FIGURE 43. ELECTRICAL SCHEMATIC, SD63000-SIZE, SHEET 3 CONTINUED

**HV-20: 380 Volt, 3-Phase, 9KW;
HV-30: 380 Volt, 3-Phase, 9KW**

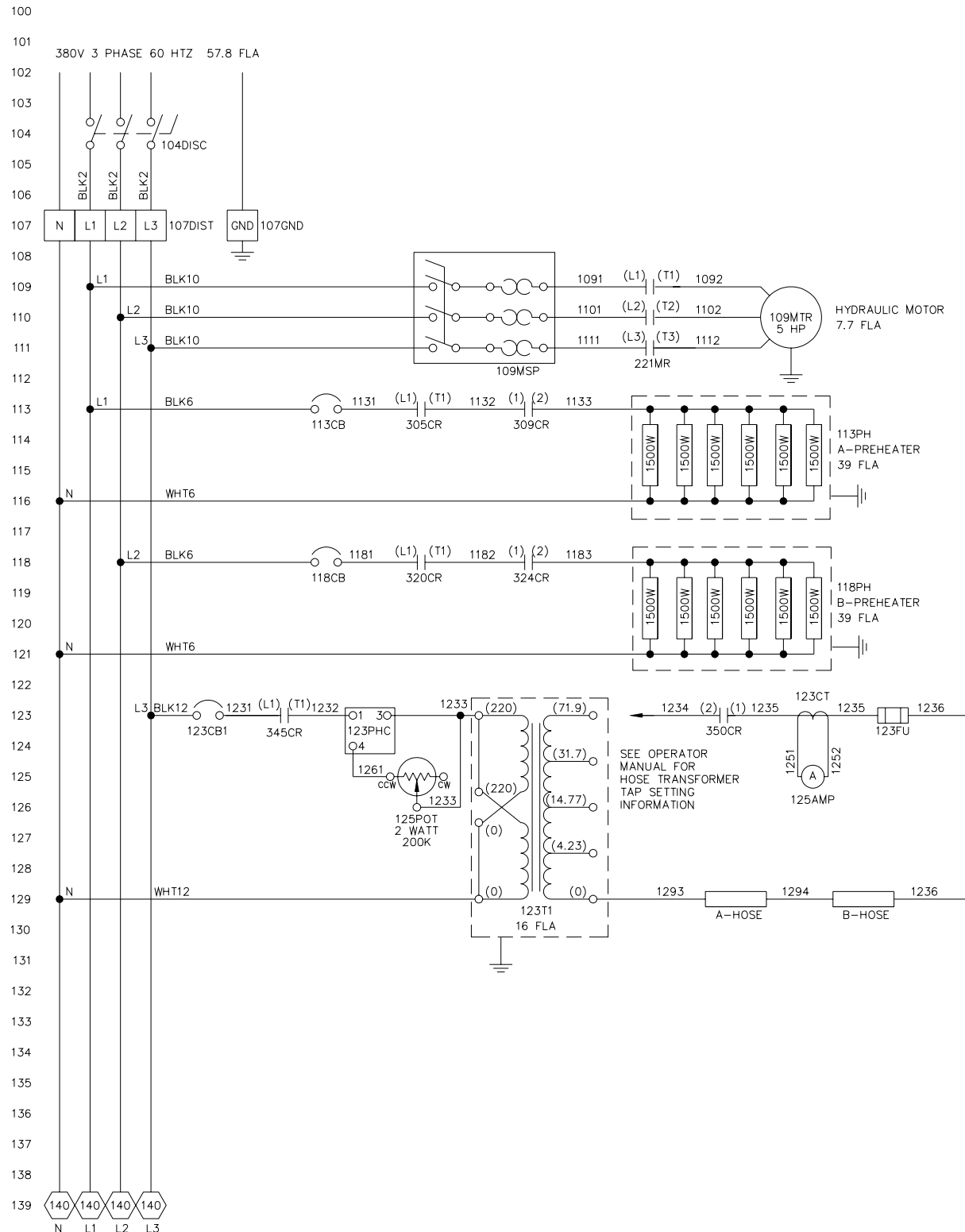


Figure 44. Electrical Schematic, SD63000-SIZE, Sheet 1E

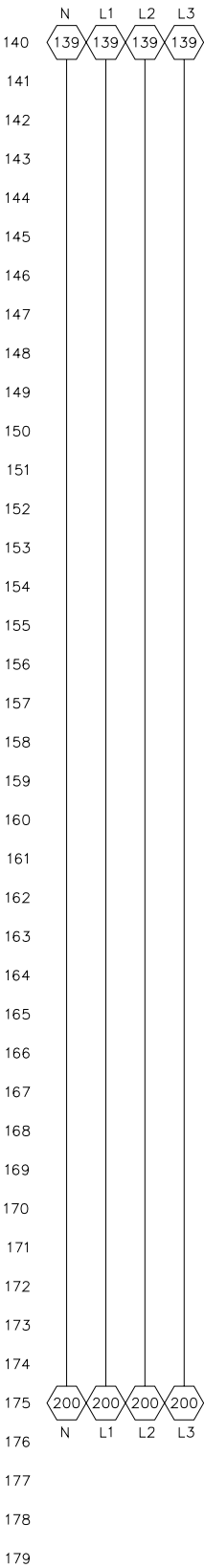


Figure 45. Electrical Schematic, SD63000-SIZE, Sheet 1E continued

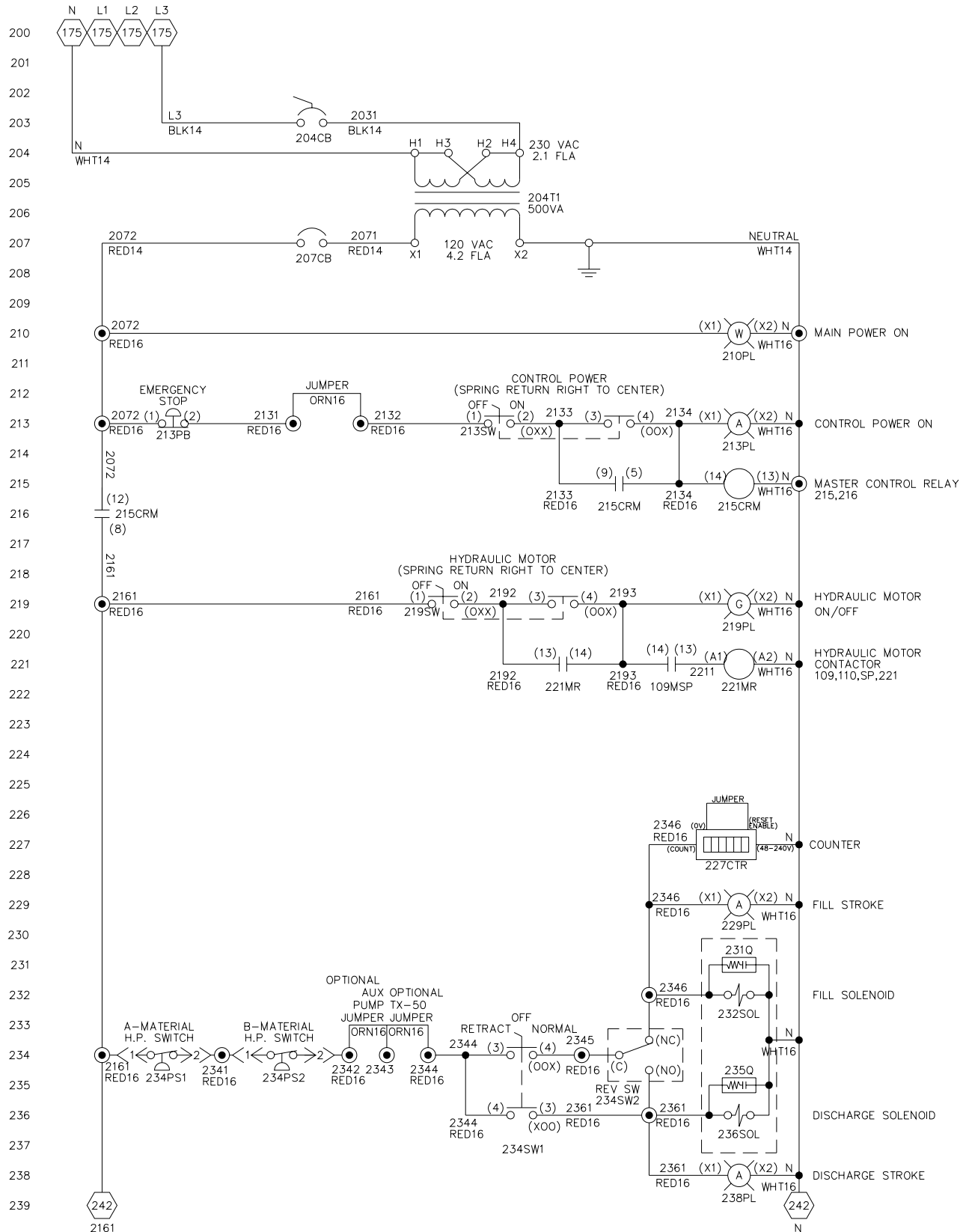


Figure 46. Electrical Schematic, SD63000-SIZE, Sheet 2B



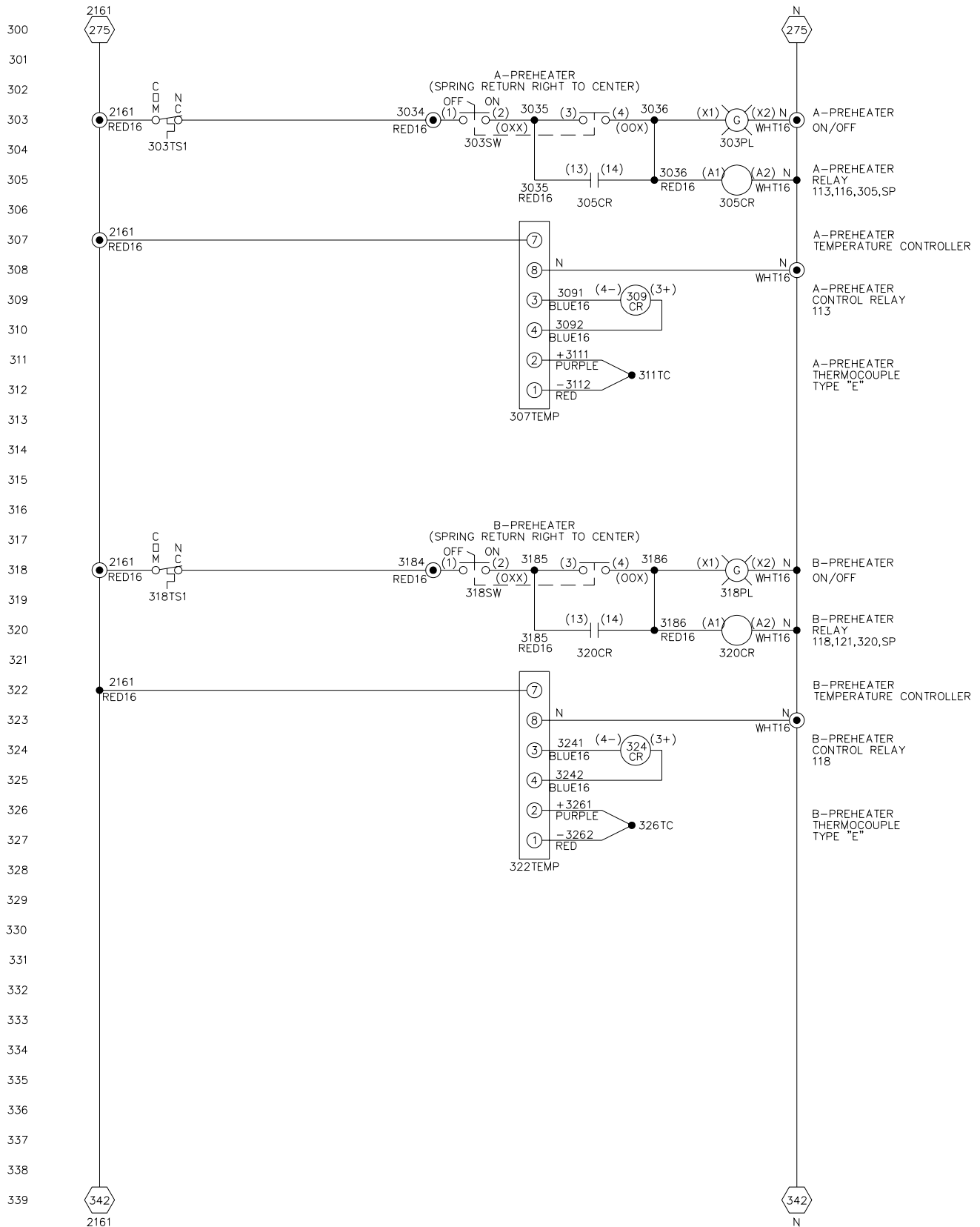


Figure 48. Electrical Schematic, SD63000-SIZE, Sheet 3

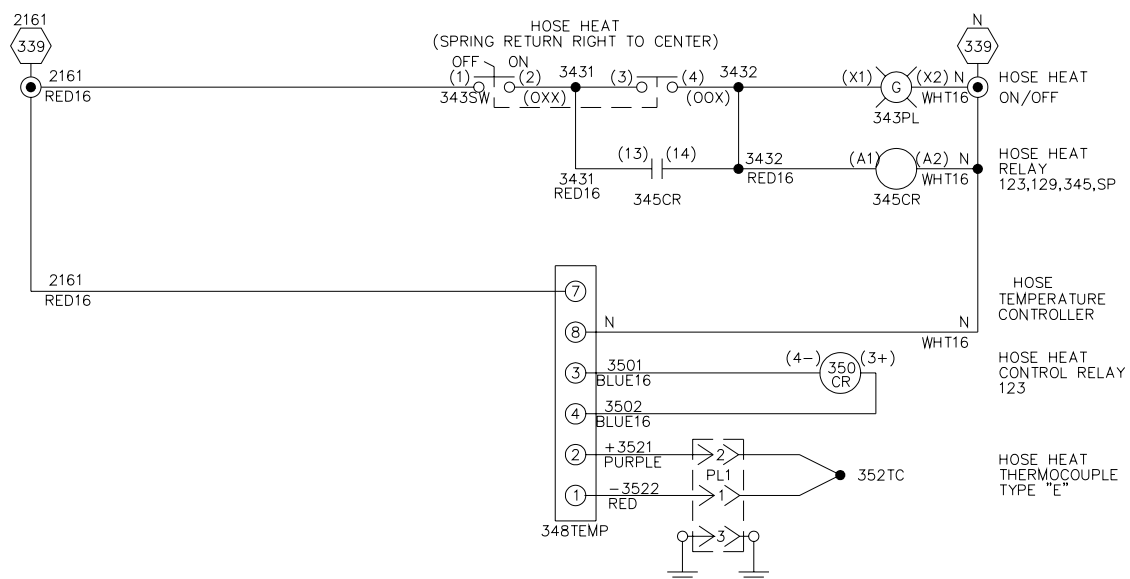


FIGURE 49. ELECTRICAL SCHEMATIC, SD63000-SIZE, SHEET 3 CONTINUED

TABLE 11. ELECTRICAL SCHEMATIC, PARTS LIST

Reference Letter	Part Number	Description	Quantity
104DISC	6690-16-143	Disconnect	1
	6690-16-144	Disconnect Handle	1
107DIST	6690-20-10-3	3 Pole Terminal Block	1
107GND	1645-1-1	Ground Terminal Block	1
107N	6690-20-28-13	Neutral Terminal Block	3
109MSP			
	6690-27-89	Motor Circuit Protector (1x220V)	1
	6690-27-88	Motor Circuit Protector (3x220V)	1
	6690-27-82	Motor Circuit Protector (3x380V)	1
109MTR			
	6691-46	5HP 1 Phase 60Hz Motor (1x220V)	1
	6691-45	5HP Three Phase 50/60 Hz Motor (3x220V)	1
	6691-45	5HP Three Phase 50/60 Hz Motor (3x380V)	1
113CB			
	6690-25-22	Circuit Breaker for 6000W Heater (1x220V)	1
	6690-25-22	Circuit Breaker for 6000W Heater (3x220V)	1
	6690-25-48	Circuit Breaker for 9000W Heater (3x220V, 9KW)	1
	6690-25-21	Circuit Breaker for 6000W Heater (3x380V)	1
	6690-25-28	Circuit Breaker for 9000W Heater (3x380V, 9KW)	1
113PH			
	0361-1000-220	1000 Watt Cartridge Heater (1x220V)	6
	0361-1000-220	1000 Watt Cartridge Heater (3x220V)	6
	15300-8	1500 Watt Cartridge Heater (3x220V, 9KW)	6
	0361-1000-220	1000 Watt Cartridge Heater (3x380V)	6
	15300-8	1500 Watt Cartridge Heater (3x380V, 9KW)	6
118CB			
	6690-25-22	Circuit Breaker for 6000W Heater (1x220V)	1
	6690-25-22	Circuit Breaker for 6000W Heater (3x220V)	1
	6690-25-48	Circuit Breaker for 9000W Heater (3x220V, 9KW)	1
	6690-25-21	Circuit Breaker for 6000W Heater (3x380V)	1
	6690-25-28	Circuit Breaker for 9000W Heater (3x380V, 9KW)	1
118PH			
	0361-1000-220	1000 Watt Cartridge Heater (1x220V)	6
	0361-1000-220	1000 Watt Cartridge Heater (3x220V)	6
	15300-8	1500 Watt Cartridge Heater (3x220V, 9KW)	6
	0361-1000-220	1000 Watt Cartridge Heater (3x380V)	6
	15300-8	1500 Watt Cartridge Heater (3x380V, 9KW)	6
123CB1			
	6690-25-24	Circuit Breaker (1x220V)	1
	6690-25-24	Circuit Breaker (3x220V)	1
	6690-25-23	Circuit Breaker (3x380V)	1
123PHC			
	6690-26-18	230V Phase Controller (1x220)	1
	6690-26-18	230V Phase Controller (3x220V)	1
	6690-26-18	230V Phase Controller (3x380V)	1
123T1	6690-15-28	Multi-Tap Hose Transformer	1
123CT	6690-29-28-1	Ammeter Current Transformer	1
125POT			
	6690-5-17-1	Potentiometer (1x220V)	1

Reference Letter	Part Number	Description	Quantity
	6690-5-17-1	Potentiometer (3x220V)	1
	6690-5-17-1	Potentiometer (3x380V)	1
125AMP	6690-29-28	Ammeter	1
204CB			
	6690-25-43	Circuit Breaker (1x220V)	1
	6690-25-43	Circuit Breaker (3x220V)	1
	6690-25-37	Circuit Breaker (3x380V)	1
204T1	6690-15-27	120VAC Control Transformer	1
207CB	6690-25-36	Circuit Breaker	1
210PL	6690-19-15-17	Light Base	1
	6690-19-15-19	Pilot Light	1
	6690-19-15-11	Mounting Latch	1
	6690-19-15-20	130V Incandescent Bulb	1
	6690-19-15-14	Clear Lens	1
213PB	6690-16-67	Red Mushroom Head Switch	1
	6690-19-15-11	Mounting Latch	1
	6690-16-59-1	Switch Block	1
	6690-16-60-1	Switch Block	1
213SW	6690-16-145	Amber Switch	1
	6690-19-15-11	Mounting Latch	1
	6690-16-59-1	Switch Block	1
	6690-16-60-1	Switch Block	1
213PL	6690-19-15-17	Light Base	1
	6690-19-15-20	130V Incandescent Bulb	1
215CRM	6690-1-57	Relay	1
	6690-1-58	Relay Base	1
219SW	6690-16-146	Green Lens	1
	6690-19-15-11	Mounting Latch	1
	6690-16-59-1	Switch Block	1
	6690-16-60-1	Switch Block	1
219PL	6690-19-15-17	Light Base	1
	6690-19-15-20	130V Incandescent Bulb	1
221MR	6690-27-68	Contactor	1
227CTR	6690-29-27	Digital Counter	1
229PL	6690-19-15-17	Light Base	1
	6690-19-15-19	Pilot Light	1
	6690-19-15-11	Mounting Latch	1
	6690-19-15-20	130V Incandescent Bulb	1
	6690-19-15-15	Amber Lens	1
231Q	6690-21-1	Quencharc	1
232SOL	6311-116-110-1	120VAC Coil	1
234PS1	6690-16-107	Pressure Switch	1
	6690-16-76-1	Din Connector	1
234PS2	6690-16-107	Pressure Switch	1
	6690-16-76-1	Din Connector	1
234SW1	6690-16-109	3 Position Switch	1
	6690-19-15-11	Mounting Latch	1
	6690-16-59-1	Switch Block	1
234SW2	0578A	Replacement Micro-Switch	1
235Q	6690-21-1	Quencharc	1
236SOL	6311-116-110-1	120VAC Coil	1

Reference Letter	Part Number	Description	Quantity
238PL	6690-19-15-17	Light Base	1
	6690-19-15-19	Pilot Light with out Lens	1
	6690-19-15-11	Mounting Latch	1
	6690-19-15-20	130V Incandescent Bulb	1
	6690-19-15-15	Amber Lens	1
303TS1	6690-7-26	Over Temperature Safety Switch	1
303SW	6690-16-146	Green Switch	1
	6690-19-15-11	Mounting Latch	1
	6690-16-59-1	Switch Block	1
	6690-16-60-1	Switch Block	1
	6690-19-15-17	Light Base	1
303PL	6690-19-15-20	130V Incandescent Bulb	1
	6690-27-68	Contactor	1
307TEMP	6690-26-22-7	Temperature Controller	1
	6690-26-22-7-C	Temperature Controller	1
309CR	6690-1-55	Solid State Relay	1
311TC		Thermocouple	1
318TS1	6690-7-26	Over Temperature Safety Switch	1
318SW	6690-16-146	Green Lens	1
	6690-19-15-11	Mounting Latch	1
	6690-16-59-1	Switch Block	1
	6690-16-60-1	Switch Block	1
	6690-19-15-17	Light Base	1
318PL	6690-19-15-20	130V Incandescent Bulb	1
	6690-27-68	Contactor	1
322TEMP	6690-26-22-7	Temperature Controller	1
	6690-26-22-7-C	Temperature Controller	1
324CR	6690-1-55	Solid State Relay	1
326TC		Thermocouple	1
343SW	6690-16-146	Green Lens	1
	6690-19-15-11	Mounting Latch	1
	6690-16-59-1	Switch Block	1
	6690-16-60-1	Switch Block	1
	6690-19-15-17	Light Base	1
343PL	6690-19-15-20	130V Incandescent Bulb	1
	6690-27-68	Contactor	1
348TEMP	6690-26-22-8	Temperature Controller	1
	6690-26-22-8-C	Temperature Controller	1
350CR	6690-1-46	Solid State Relay	1
352TC		TSU	1
	63655	TSU Replacement Plug Assembly	1

INSTRUCTION MANUAL DISCREPANCY REPORT

[illegible]

Instructions:

Complete the above fields of the form by following the instructions listed on the reverse side of this sheet and mail to:

Gusmer Corporation

One Gusmer Drive PO Box 2055

Lakewood, NJ 08701

Field Number	Field Title	Description
1	Date	Enter date report is submitted.
2	Name	Enter name of person making report.
3	IM Number	Enter the Part Number of the Instruction Manual from the title page.
4	Issue Number	Enter the Issue number of the Instruction Manual from the title page. If there is no issue number, enter NONE .
5	Date of Issue	Enter the date of Issue of the Instruction Manual from the title page. If there is no issue date, enter NONE .
6	Page Number	Enter the page number containing the discrepancy.
7	Discrepancy	Provide a brief description of discrepancy.

NOTE: You may send a marked copy of the page as an attachment to your submittal.